Stepping into the Same River Twice: Rapidly Changing Facts and the Appellate Process

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† The title comes from the philosopher Heraclitus's proposition that one can never step in the same river twice. Heraclitus posited that everything is in a constant state of flux, even that which seems stable on the surface. He illustrated his notion of perpetual change with the parable of the river: the water flows constantly, and so the water in which the first footstep falls has moved downstream by the time the second step is taken. See HERACLITUS, FRAGMENTS 17, 83-84 (T.M. Robinson trans., Univ. of Toronto Press 1986).

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In the Supreme Court oral argument in Reno v. ACLU—the case that struck down a federal statute regulating Internet indecency—Justice Scalia asked:

This is an area where change is enormously rapid. Is it possible that this statute is unconstitutional today, or was unconstitutional 2 years ago when it was examined on the basis of a record done about 2 years ago, but will be constitutional next week? . . . Or next year or in two years?

Scalia's suggestion of rapid change in cyberspace is widely accepted; indeed, it has become a cliché to assert that the computer and telecommunications industries—and particularly the Internet—are changing rapidly and continually. The last few years have witnessed enormous changes and

4. One somewhat amusing example of the expectation of continued future change is the fact that the Massachusetts Institute of Technology's business school recently buried an Internet time capsule, with the usual expectation that upon its opening people will marvel at how differently things were done
explosive growth in these areas, and it is not clear when or where these changes will end. Legal commentators and jurists have noted the pace of change in cyberspace and have suggested that courts and legislatures move slowly in light of the rapid changes. Commentators have largely ignored, however, the questions raised by Justice Scalia in the quotation above: How should a court respond if, in the case before it, the factual findings from a previous opinion are no longer valid?

What if, for example, factual findings regarding the Internet on which the Supreme Court relied in Reno v. ACLU are now outdated, such that the Communications Decency Act (CDA)—not a similar statute, but the CDA itself—merits new consideration as a possibly constitutional statute? Even more provocatively, what if some of those findings were outdated by the time the Supreme Court decided the case, and the changes in the months after the district court issued its findings weakened the case for unconstitutionality? This Article will discuss the issues raised by both possibilities, focusing on changes during the appellate process.

in that era (in this case, of course, the earlier era will be the year 1999). What is striking is that the date for opening the capsule is only five years hence (the year 2004). See Amy Harmon, It's @786. Do You Know Where Your Computer Is?, N.Y. TIMES, Mar. 7, 1999, § 4, at 2, available in LEXIS, News Library, NYT File; see also Earthweb, Inc. v. Schlack, No. 99 Civ. 10035, 1999 WL 980165, at *17 (S.D.N.Y., Oct. 27, 1999) (refusing to enforce a one-year noncompete agreement based in part on the fact that "[w]hen measured against the [information technology] industry in the Internet environment, a one-year hiatus from the workforce is several generations, if not an eternity").

5. For example, the Internet may replace television broadcasters—and, if so, those broadcasters may later regain preeminence—or the Internet may never replace broadcasters in the first place. It may be that houses end up with one telecommunications provider, see Denver Area Educ. Telecomm. Consortium, Inc. v. FCC, 518 U.S. 727, 776 (1996) (Souter, J., concurring) (suggesting that cable and telephone companies are competing "for control over the single wire that will carry both their services"), or there may be several; and, once again, it may be that one pattern is dominant for a while and then is replaced by another (and so on). Simply stated, every aspect of telecommunications is uncertain, and no one can have confidence about even the most basic conclusions about the size, the shape, or indeed the existence of the relevant markets and technologies.

6. The law professor most closely associated with this view is Lawrence Lessig. See, e.g., Lawrence Lessig, The Path of Cyberlaw, 104 YALE L.J. 1743, 1745 (1995) ("[I]f we had to decide today... just what the First Amendment should mean in cyberspace, ... we would get it fundamentally wrong."). The most prominent jurist espousing this position is Justice Souter, whose concurrence in Denver Area quoted this assertion by Professor Lessig and also stated that:

   Because we cannot be confident that for purposes of judging speech restrictions it will continue to make sense to distinguish cable from other technologies, and because we know that changes in these regulated technologies will enormously alter the structure of regulation itself, we should be shy about saying the final word today about what will be accepted as reasonable tomorrow.

518 U.S. at 777 (Souter, J., concurring).

7. The lone exception is a recent article that raises the issue but discusses it only briefly. See Charles Nesson & David Marglin, The Day the Internet Met the First Amendment: Time and the Communications Decency Act, 10 HARV. J.L. & TECH. 113, 125-30 (1996) (suggesting that the revivability doctrine might apply to the Communications Decency Act of 1996 in light of changing facts).


9. This Article focuses on the federal appellate system and the rules and procedures relevant to it. My analysis applies to state courts only insofar as state rules mirror the federal ones.
Consideration of these issues raises important and difficult questions about the functioning of the appellate process, the role of appellate courts, and the nature of precedent. These issues arise in the evaluation of the various choices available to appellate courts faced with potentially outdated factual findings from a trial court. The choices boil down to three basic options: the appellate court can remand the case, issue its opinion based on the facts as found below, or update the facts on its own. Remand seems the obvious option, but it is problematic where the facts are subject to continual change; the facts may change again between the new fact-finding and the issuance of the final appellate opinion, raising the prospect of indefinitely delaying appellate adjudication. Deciding the case immediately avoids this problem but creates another one: the appellate court’s opinion granting (or denying) forward-looking relief may be based on facts that no longer exist. Appellate updating of facts emerges as the most attractive option. It does require a greater expenditure of appellate resources, but the other options consume similar amounts of other judges’ time and energy; it does force appellate courts to find facts, but appellate courts are more willing and more able to do so than we might have thought.

No matter what option is chosen, however, a central consideration remains: Rapidly changing facts weaken the force of stare decisis by undermining the stability of precedents. Appellate opinions are only as robust as the facts on which they are based. When those facts evaporate, the opinion on which they rest is weakened as well. Courts could attempt to ignore this problem by refusing to reconsider decisions even if their factual underpinnings have been undermined, but that position is difficult to defend; if an opinion no longer has any factual basis, it is hard to see why it should continue to have legal force. Rapidly changing facts thus can undermine factual findings and in turn the opinions that rely on them; the result is a reduction in the period of time during which judicial opinions dealing with rapidly changing areas remain applicable, and perhaps a concomitant reduction in the degree to which people rely on such opinions for guidance.

Like the appellate cases on which it focuses, this Article will begin with the facts (here, the role that facts play in appellate cases) and then discuss the significance of those facts (here, for the appellate process). Part I of the Article briefly discusses the centrality of facts in judicial tests. Part II considers what should happen if facts change after the appellate process is complete, and the relevance in that context of forward-looking judicial determinations. Part III identifies situations where facts found by the trial court changed before an appellate court ruled. Part IV addresses various ways that appellate courts could respond to this possibility of factual change during the appellate process. Part V evaluates these approaches, concluding that appellate updating is the most attractive
approach. Part VI discusses the larger implications of rapidly changing facts for the appellate process and for the nature of precedent.

I. The Centrality of Facts in Judicial Tests

Judicial opinions are filled with assertions about the state of the world—not only recitations of the specific course of dealings between the parties, but also more general facts and predictions about the impact that a particular ruling will likely have on events in the future. In the Fourth Amendment context, for instance, federal courts eschew per se rules in favor of fact-specific determinations, such as whether or not a reasonable person questioned by a police officer "would feel free 'to disregard the police and go about his business.'" Examples also arise in First Amendment jurisprudence. The judicial test for restrictions on speech, for instance, depends very heavily on the availability of alternatives that would restrict less speech—and a judgment about the existence of such alternatives involves factual conclusions about the feasibility of various other forms of regulation. Among the tests that call for factual predictions, meanwhile, is the determination whether a particular interpretation of the First Amendment will have a chilling effect on future speakers.

Although these tests may seem needlessly fact specific, significant reliance on facts is almost inevitable in many situations. At the outset, the Supreme Court's long insistence that Article III requires that a federal court be presented with real parties who have a concrete dispute focuses federal courts on the actual situation of the parties and the real injury to the plaintiff. This is one way that legal rulings depend on underlying facts; but it is not the only way. Even if federal courts were willing to ignore

11. See, e.g., Reno v. ACLU, 521 U.S. 844, 874 (1997) (stating that statute's restriction on adult speech "is unacceptable if less restrictive alternatives would be at least as effective in achieving the legitimate purpose that the statute was enacted to serve"); Sable Communications, Inc. v. FCC, 492 U.S. 115, 126, 131 (1989) (striking down a speech regulation because it was not the least restrictive means of accomplishing Congress's compelling interest); see also Eugene Volokh, Freedom of Speech, Shielding Children, and Transcending Balancing, 1997 SUP. CT. REV. 141, 146-67 (commenting on the Court's examination of less restrictive alternatives to the CDA).
12. See, e.g., Reno, 521 U.S. at 871-72 (stating that the vagueness of a content-based regulation of speech "raises special First Amendment concerns because of its obvious chilling effect on free speech").
13. Scholars have discussed at length the constitutional pedigree and wisdom of this limitation. See generally Evan Tsin Lee, Deconstitutionalizing Justiciability: The Example of Mooness, 105 HARV. L. REV. 603, 636-43 (1992) (discussing interpretations of the Article III "Cases" or "Controversies" requirement); Robert J. Pushaw, Jr., Article III's Case/Controversy Distinction and the Dual Functions of Federal Courts, 69 NOTRE DAME L. REV. 447 (1994) (asserting that the terms "Cases" and "Controversies" are not interchangeable and that the distinction should be used to analyze the justiciability doctrines, including standing, ripeness, and mootness).
the specific history and circumstances of the parties (and one could argue that some facial challenges do just that), they would still find themselves depending on facts on the ground—the state of the world as it is.\textsuperscript{14}

To return to the example of free speech jurisprudence, courts could devise tests that did not rely so explicitly on the state of the world. But only the most absolutist tests would, in actual application, avoid a reliance on the facts on the ground. That is, one could say that any law regulating speech in any way was per se unconstitutional, and thereby perhaps avoid having to look at how the law operated. Furthermore, in order to keep facts out of the picture, the category of "speech" would need to be delimited as a pure question of legal theory. But any test that defined speech at least in part by the way it affects people would pollute the fact-free environment. Similarly, any test that looked at whether or not the law truly interfered with speech—much less examined the degree of such interference—would necessarily examine the actual operation of the law in the world as it exists.\textsuperscript{15} Even Hugo Black's "absolutist" position on the First Amendment\textsuperscript{16} required him to examine the statute's real-world impact in order to determine whether the challenged law abridged the right to free speech. Once he found such abridgement, he was inclined not to engage in any balancing of interests; but, in order to find the abridgement, he had to understand how the law operated and how people were likely to respond to it.\textsuperscript{17}

The state of the world is indispensable to most judicial inquiries that one can imagine. A legal determination about what constitutes a "speedy ... trial"\textsuperscript{18} ultimately rests in part on how trials actually work and thus

\textsuperscript{14} I use "on the ground" as a term of art that excludes highly specific facts pertaining to the interactions between the parties (e.g., who did what to whom); these historical facts will not change, and thus they are of limited relevance to this Article. More general facts about the world are subject to change, however, and are central to my argument.

\textsuperscript{15} The same is true of the question whether the regulated activity has the expressive elements of speech. Such a question is necessary unless courts create a definition of speech that does not depend on what people actually do.

\textsuperscript{16} See, e.g., Konigsberg v. State Bar, 366 U.S. 36, 61 (1961) (Black, J., dissenting) ("I believe that the First Amendment's unequivocal command that there shall be no abridgment of the rights of free speech and assembly shows that the men who drafted our Bill of Rights did all the 'balancing' that was to be done ... ").

\textsuperscript{17} See, e.g., New York Times Co. v. Sullivan, 376 U.S. 254, 295, 297 (1964) (Black, J., concurring) (asserting that the Constitution grants the press "an absolute immunity for criticism of the way public officials do their public duty," but also noting that the speech in question was "the kind of speech the First Amendment was primarily designed to keep within the area of free discussion," and that "[t]o punish the exercise of this right ... is to abridge or shut off discussion of the very kind most needed"); Adderley v. Florida, 385 U.S. 39, 47-48 (1966) (accepting time, place, and manner restrictions because the First Amendment does not mean that "people who want to propagandize protests or views have a constitutional right to do so whenever and however and wherever they please").

\textsuperscript{18} U.S. Const. amend. VI.
how speedy a trial can be. In the Second Amendment context, one could try to avoid reliance on facts by interpreting the amendment to create a legally absolute protection of the right to bear arms and defining the protected items in terms of legal categories of "arms," but one still would have to determine whether a host of newer weapons that emit projectiles (bazookas, flame throwers, etc.) constitute arms. There may be exceptions, of course. A constitutional formalist, for example, might define "executive power" based purely on legal theory, and might further conclude that any statute whose terms conferred any degree of such power outside the executive branch would violate the separation of powers.19 But such examples are relatively unusual. In the main, as Kenneth Davis put it more than half a century ago, application of legal tests "must depend on fact-finding."20

II. What If Facts Change After the Appellate Process Has Run Its Course?

Facts found by a trial court can do one of three things: they can remain the same (or change in legally irrelevant ways); they can change before the final appellate court issues its ruling; or they can change after such a final ruling.21 Before I address the tricky question of changes that occur before a final ruling, it is useful to focus on the significance of

19. This was Justice Scalia's position as the sole dissenter in Morrison v. Olson, 487 U.S. 654, 705-09 (1988) (Scalia, J., dissenting) (explaining that the challenged statute should have been invalidated based on the simple juxtaposition of the requirements of the statute and the constitutional separation of powers, eliminating the need for examination of the actual effects of the statute or the facts of its application).


There are, of course, varying degrees of fact specificity: some opinions rely heavily on particular facts, while others are less tethered to specific facts and are written more as broad pronouncements. Particularly interesting in this regard is Brown v. Board of Education, 347 U.S. 483 (1954). The opinion, as written, seemed to place great emphasis on empirical findings about the effects of segregated education. See id. at 494 & n.11; Scott Brewer, Scientific Expert Testimony and Intellectual Due Process, 107 YALE L.J. 1535, 1554-63 (1998). When a district court decided to reconsider Brown's factual findings, however, the Fifth Circuit promptly reversed, treating Brown as pronouncing a broad rule that did not rely on specific facts. See Stell v. Savannah-Chatham County Bd. of Educ., 220 F. Supp. 667 (S.D. Ga. 1963), rev'd, 333 F.2d 55 (5th Cir. 1964), cert. denied, 379 U.S. 933 (1964); see also infra note 190. That understanding of Brown is widely shared today, even though the opinion as written seems to be more fact specific. See, e.g., Rachael N. Pine, Speculation and Reality: The Role of Facts in Judicial Protection of Fundamental Rights, 136 U. PA. L. REV. 655, 723 n.307 (1988) (citing Stell for the proposition that "[n]o inferior federal court may refrain from acting as required by [Brown] even if such a court should conclude that the Supreme Court erred either as to the facts or to the law"); see also infra note 300.

21. The same, of course, is true for the statutes and constitutional provisions on which an opinion rests.
changes afterward, as the question is interesting in its own right and illuminates a number of important considerations regarding the appellate process. What should a court do if relevant facts change subsequent to its ruling such that, had the new facts existed at the time of the original adjudication, the court would have reached a different result? It turns out that the answer to this question depends on the nature of the facts upon which the appellate court relied.

A. The Importance of Prospectivity

Many judicial tests are backward looking: they focus on a set of historical events and ask whether, at the time they occurred, the parties took reasonable actions. Other tests draw factual conclusions about the world as it exists today or the world we can expect under a particular legal regime. Not surprisingly, this latter type of test is associated with cases involving declaratory and injunctive relief, rather than damages. For instance, the First Amendment test for restrictions on speech depends very heavily on the availability of alternatives that would restrict less speech, which entails factual conclusions about the feasibility of other forms of regulation and their effect on communication. Another relevant consideration in First Amendment cases is whether the speech regulation leaves open other channels of communication, which obviously focuses on the available means of communication. Such inquiries thus rely in part on the state of the art in communications—and the state of the art changes as the underlying technology changes.

This distinction between historical and current (or predictive) facts will often track the distinction between retrospective and prospective relief. If the court in the original adjudication issued retrospective relief only, it presumably relied on historical facts, and thus any new facts should not have any bearing on the case. The situation I am positing is one in which the facts were correctly found by the original court, but those facts later changed. Where the original facts were significant for the light they shed on a past interaction that was the basis of some damages claim, it is hard to see how a future change could be relevant; the historical facts

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22. I am referring to “adjudication” as a single process because I am postponing, until the next section, a discussion of the significance of a change in facts during the appellate process.
23. See supra note 10 and accompanying text.
24. See supra note 11 and accompanying text.
26. This should be distinguished from the situation where the facts were found incorrectly by the original court. The situation I am focusing on here is one in which there is no basis for impugning the facts as found at the time, but those facts have subsequently changed.
would have served as the basis for the relief, and those historical facts would not (indeed could not) have changed.27

Injunctive relief, in contrast, by definition involves future behavior. If such behavior no longer poses the same threat, the court should reconsider its prior conclusion and quite possibly reach a different conclusion. After all, an injunction is a continuing judicial order preventing (or compelling) certain actions that are prohibited (or required) by law. If an injunction is no longer legally justified because the basis for the legal reasoning no longer exists, then the issuing court is obliged to reject or modify it, as appropriate, once the parties bring the new facts to the court’s attention. This is obviously the case when the law that forms the basis of the injunction is modified in a relevant way, and there is no reason why a change in relevant facts should be different.

The one remaining category is declaratory relief; such relief is a bit more complicated, and those complications are relevant to larger issues in this Article. It may seem that, when a court declares a statute to be unconstitutional, or a practice to be inconsistent with a statute, it is simply issuing a ruling as of that date and telling the parties nothing about the future. In contradistinction to the continuing effect of an injunction, or the retrospective effect of a determination of liability for past acts, declaratory relief seems to focus not on future or past acts but instead on the present. The Declaratory Judgment Act, after all, is couched in the present, providing that a court “may declare the rights and other legal relations of any interested party seeking such declaration.”28

For better or worse, though, the force of declaratory relief—or, perhaps more accurately, the force as understood by all the relevant players (judges, litigants, affected third parties)—is not confined solely to the present. Congress created the Declaratory Judgment Act in order to eliminate uncertainty surrounding acts that might take place in the future.29 Indeed, unless the declaration does alter the status of the parties’ past actions (which is relatively uncommon), a limitation of declaratory relief to the present would render it meaningless; it would stand as a memento. Simply stated, in most cases the reason one would pursue declaratory relief is because of the ongoing force that such relief will have.30

27. This is not to suggest that historical facts can never have a prospective effect, but rather that such facts cannot change and thus cannot constitute the basis for a relevant transformation. See infra note 43 and accompanying text.
30. This point is buttressed by a consideration of the converse proposition, namely, that the prospect of someone later rejecting the continuing validity of the declaratory relief would not be troubling, because there would be no “continuing validity” in the first place. On this theory, even the losing party could later deny the validity of the ruling, because the ruling purported to tell the parties
The significance of prospectivity is heightened by the role of precedent. Not only does a judicial opinion resolve the litigants' dispute (and, if prospective relief is involved, bind their future actions), but also it gives guidance to the rest of us on related issues, and, importantly, that guidance operates on different levels of generality. An illustrative example of these different levels is *Red Lion Broadcasting Co. v. FCC,* a decision criticized as relying on an outdated notion that broadcast spectrum is uniquely scarce. In *Red Lion,* a radio station broadcast a program disparaging the author of a book critical of Barry Goldwater (who was then running for president). The book's author demanded that the station give him free air time to reply to this attack, and the station challenged the FCC rules that mandated their compliance with this request. The Supreme Court upheld the FCC's regulation, relying heavily on the scarcity of spectrum available for broadcasters in "the present state of commercially acceptable technology" (in contrast to the availability of newsprint). We do not, of course, understand *Red Lion* to instruct us only as to the constitutional status of an AM radio broadcast regarding Barry Goldwater. The case is understood to stand for broader principles that have become benchmarks in the regulation of broadcast: that a right-of-reply statute is permissible; and, more generally, that regulation of broadcasters is subject to fairly lenient judicial scrutiny. Then there are subsidiary conclusions, such as that regulations of print media merit more rigorous judicial scrutiny because print is not subject to the sort of scarcity that characterizes spectrum. Crucially (for purposes of this Article), all of these propositions rely on spectrum scarcity. Without that pillar, it is not at all clear what the Court would have done then or would do now regarding broadcast regulation. *Red Lion* remains as a precedent—supporting all the

32. See *infra* note 38 and accompanying text.
34. See id. at 388, 396-97.
35. See, e.g., Matthew L. Spitzer, *Controlling the Content of Print and Broadcast,* 58 S. CAL. L. REV. 1349, 1353 (1985) (citing *Red Lion* to support the proposition that "right-of-reply statutes are unconstitutional as applied to newspapers but that the same rules applied to broadcasters are completely acceptable").
36. See, e.g., Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622, 637-38 (1994) (citing *Red Lion* as supporting the position that spectrum scarcity justifies less rigorous First Amendment scrutiny of broadcast regulation than of the regulation of other media).
37. This is not to suggest that *Red Lion* is necessarily indefensible without the scarcity rationale. Most notably, Cass Sunstein and Owen Fiss have defended the result in *Red Lion* without embracing
propositions laid out above—despite the belief among many commentators and lower court judges that it rests on the outdated, and now incorrect, factual assertion that spectrum is unusually scarce. 38

It bears emphasizing, though, that elimination of the role of precedent would not eliminate the potential problems posed by changing facts; even absent any effect on nonparties, there would still be a concern about any continuing effect on the parties themselves. This point may perhaps be illustrated by the most prominent distinction between facts—namely, the one that Kenneth Davis drew between adjudicative facts ("[f]acts pertaining to the parties and their businesses and activities") and legislative facts (which "do not usually concern the immediate parties but are the general facts that help the tribunal decide questions of law and policy and discretion"). In light of the potentially wide-ranging ramifications (via precedent) of a factual finding that is not limited to the parties, changes in legislative facts may be particularly troubling. But even if the relevant fact

the notion that spectrum is uniquely scarce. See Cass R. Sunstein, Democracy and the Problem of Free Speech 48-51, 110 (1993) (suggesting that it is the economics of the market system, not the scarcity of the broadcast spectrum, that justifies regulation of broadcasters); Owen M. Fiss, Why the State?, 100 Harv. L. Rev. 781, 787-88 (1987) (enumerating the market restraints on the presentation of matters of public interest). My point is simply that Red Lion did rely on this rationale and thus jettisoning it would seem to call the ruling into question. The Supreme Court might ultimately reach the same result, but presumably it would have to find different grounds for such a holding. See infra text accompanying notes 48-50.

38. Some commentators believed that Red Lion was wrong when decided, on the theory that there is nothing special about spectrum that makes it any more scarce than any other resource. See R.H. Coase, The Federal Communications Commission, 2 J.L. & Econ. 1, 14 (1959). Others accept the proposition that spectrum was scarce when Red Lion was decided, but argue that subsequent developments (e.g., the ability to use smaller bits of the spectrum for broadcasting, the rise of new broadcasters, and the availability of communications via satellite and cable) have rendered Red Lion's conclusion no longer valid. See Glen O. Robinson, The Electronic First Amendment: An Essay for the New Age, 47 Duke L.J. 899, 903-04 (1998) (emphasizing the staleness of the notion of resource scarcity "despite the fact that its chief source of constitutional authority, Red Lion Broadcasting Co. v. FCC, is only thirty years old"); Telecommunications Research & Action Ctr. v. FCC, 801 F.2d 501, 508 n.4 (D.C. Cir. 1986) ("Broadcast frequencies are much less scarce now than when the scarcity rationale first arose[.] . . . and it appears that currently 'the number of broadcast stations . . . rivals and perhaps surpasses the number of newspapers and magazines in which political messages may effectively be carried.'" (second ellipses in the original) (citations omitted)).


40. Id.; see also Fed. R. Evid. 201 advisory committee note ("Adjudicative facts are simply the facts of the particular case. Legislative facts, on the other hand, are those which have relevance to legal reasoning and the lawmaking process, whether in the formulation of a legal principle or ruling by a judge or court or in the enactment of a legislative body."). As the citation above indicates, the 1975 amendments to the Federal Rules of Evidence adopted the legislative fact-adjudicative fact distinction for purposes of judicial notice. The notes to Rule 201 credit Kenneth Davis for this distinction. Id. (On judicial notice, see infra notes 299-301 and accompanying text.) Although facts posited by legislatures in hearings or in statutes are treated as a subset of legislative facts, the category of legislative fact focuses on the nature of the assertion and not its source. Moreover, as this Article will demonstrate, such legislative facts are often put forward by parties or amici in briefs or by an appellate court itself, see infra notes 270-298 and accompanying text.
pertains only to the course of dealing between the parties, and even if the fact has no precedential value, its alteration raises serious concerns where the case has a prospective effect. Under such circumstances, the outdated fact will live on, not via precedent but instead via the continuing direct legal force of the court’s decision. To pick a notable example: the questions whether Microsoft’s Windows operating system is separate from its Internet browser, or how seriously Microsoft’s integration of its browser into its operating system harms Netscape, are probably best understood as adjudicative facts, and they do not have any obvious broad precedential effect (in contrast to the finding of spectrum scarcity). But if findings on those questions become the basis for an injunction, and those findings become outdated, then the concerns identified in this Article would be implicated.

The foregoing thus suggests two basic requirements for factual changes to be relevant to this Article: the finding has to be subject to change, and the finding must have a prospective effect. The former requirement effectively eliminates historical facts; though it is possible for them to have a prospective effect, such historical facts, by definition, are not subject to change. The requirement of prospectivity, meanwhile, is satisfied whenever a ruling has a prospective effect; the role of precedent does not create the problem but merely enhances it.

B. The Significance of Factual Change

This discussion of the relevance of prospectivity and the categories of factual change lays the groundwork for us to answer the question of what should happen if facts change after the final appellate court has taken its final action. Where an opinion with a prospective effect focuses on facts

41. It should be noted that some findings may pertain only to the parties but nonetheless have a precedential effect. See infra note 43.
42. See discussion infra subpart III(B).
43. One example would be a finding that a particular school district had in the past discriminated against a plaintiff class based on race. This is a historical fact (and is probably best understood as an adjudicative fact, on the theory that it concerned the course of dealing in the past between a specific institution and a set of people defined by their race). Such a finding might nonetheless have a significant effect on subsequent cases involving different plaintiffs (perhaps of a different race): a later court might well conclude that the earlier finding of discrimination justified (and perhaps required) certain remedial actions that would not be justified absent that history. Thus the status of this finding as a historical and adjudicative fact would not deprive it of continuing significance.
44. In theory, the power of precedent could create prospectivity in a case that otherwise would be retrospective. There are two hurdles for such a phenomenon, however. First, the purely retrospective case must have a precedential effect; second, the retrospective case also would have to rely on current or predictive facts (because historical facts do not change). I confess that I can think of no purely retrospective cases that both have a precedential effect and rely on facts that might change in relevant ways. If, though, such cases exist, then they would present an additional avenue for the changes addressed in this Article.
that exist today—facts about the world as it is—those facts can change; and changes in those facts merit a reconsideration of the resulting legal conclusion. The same thing is true of predictions that form the basis of appellate rulings.\(^{45}\)

Any other conclusion would be difficult to defend. As Part I emphasized, underlying facts form the crucial foundations for the statements of law that we call the "holding." Where the holding has continuing force—that is, it informs parties about the legal status of actions they may take in the future—that holding relies on the continuing validity of the underlying facts. If the facts on which the opinion relied no longer describe the world, then the opinion purports to lay down the current status of the law but in fact misdescribes the world, and thus creates an intolerable tension. A decision nonetheless to treat a given opinion as if it had solid grounding would ignore the role that facts play in the judicial process. Judicial opinions are not proclamations of general principles from an ethereal body; they are situated in a particular factual context, and a transformation of that context necessarily affects the opinion that builds upon it.\(^{46}\) Thus, if relevant facts change after a case has worked its way through the system, a litigant should be allowed to bring a new case through that same system to reconsider the original ruling.\(^{47}\)

45. Perhaps the most famous recent example was the Supreme Court's assertion in *Clinton v. Jones* that the Paula Corbin Jones litigation against President Clinton was "highly unlikely to occupy any substantial amount of [the President's] time." *Clinton v. Jones*, 520 U.S. 681, 702 (1997). In a recent private lawsuit brought by a different woman who claims to have had a sexual relationship with the President (Dolly Browning), the President argued that based on his experience in the *Jones* litigation subsequent to the Supreme Court's ruling, the Supreme Court drastically underestimated the burden that civil litigation places on the President's time. See Memorandum of Points and Authorities in Support of Motion for Temporary Stay on Grounds of Presidential Immunity, Browning v. Clinton, No. 98-1991 (D.D.C.).

Some commentators have suggested that this prediction, though perhaps reasonable at the time, has been demonstrated by subsequent events to be flatly wrong and even laughable. See, e.g., Robert Trout, *Commentary, All Things Considered* (National Public Radio broadcast, Feb. 4, 1999) (stating that this prediction by the Court stands as "what may be the most misguided prediction of the century"); Michael C. Dorf, *The Supreme Court, 1997 Term—Foreword: The Limits of Socratic Deliberation*, 112 Harv. L. Rev. 4, 75 (1998) (suggesting reconsideration of *Clinton v. Jones* and *Morrison v. Olson* on the grounds that subsequent experience has called into question the Court's factual assertions in those cases). Whether or not one is persuaded by these arguments, it would be extremely troubling for the Supreme Court's assertion about the effect of the case on the President's time to be treated as unassailable, or even entitled to deference as a settled fact. It is just a fact (here, a prediction), and its arguable invalidation calls into question the holding that relies on it.

46. This is not to suggest that the newly invalid facts deprive the original opinion of all significance. The original opinion might function as a hypothetical that provides useful information: if the facts that no longer obtain were to reappear, then the legal rule would be X. But injunctions and declaratory judgments do not purport merely to inform the litigants about hypothetical worlds; they purport to apply to the one that actually exists. See *infra* notes 199-203 and accompanying text (discussing the problems attendant to a court's issuing an opinion that did not apply to the parties' dispute as it currently existed).

47. This can be contrasted with a situation in which a party believes not that the facts have changed, but that they were wrongly decided by the original court. In such circumstances, the ordinary
Reconsideration need not produce an overruling even if the facts have changed. The relevant court might find other bases to support the original position (or simply find that the remaining bases articulated in the original opinion are sufficient to support it).\textsuperscript{48} And if the court concluded the original holding was no longer supportable, it might declare that the original opinion is limited to its facts (and/or no longer relevant to the world) without overruling it; there would be no real difference between such a ruling and an outright overruling, so the difference would be largely a matter of atmospherics. To return to the example of Red Lion,\textsuperscript{49} a court faced with persuasive evidence that the broadcast spectrum was no longer scarce in a manner that distinguished it from other media might reach the same result for different reasons (e.g., because broadcast spectrum has been given free of charge\textsuperscript{50}); limit the case to its facts (which,
presumably, would never recur if one of the relevant facts was a now-discarded notion of spectrum scarcity); or simply overrule it entirely.

The Supreme Court has expressed agreement with the proposition that changes in underlying facts alter the status of the legal conclusions that rely on those facts. For instance, in Maine v. Taylor, the Court found that a Maine prohibition on the importation of live baitfish did not discriminate against interstate commerce (and thus violate the negative aspect of the Commerce Clause) because no acceptable testing procedures were available as an alternative to the ban. The Court then noted that, "if and when such procedures are developed, Maine no longer may be able to justify its import ban." This is not a new sentiment. In the 1931 case of Abie State Bank v. Bryan, the Court stated that "[a] police regulation, although valid when made, may become, by reason of later events, arbitrary and confiscatory in operation."

These quotations suggest that changes in relevant facts should prompt a reconsideration of the cases that rely on them. The Supreme Court, in fact, has so indicated: the standard litany of bases upon which the Court will reject one of its precedents includes changes in underlying facts. The Court's actual practice, however, has not been so clear. Commentators have identified three cases in which, they contend, the Supreme Court overruled one of its precedents because of changes in fact that undermined the precedent. These scholars may be correct that the decisions are best explained on this basis, but in none of the decisions did the Supreme Court actually state that it was squarely relying on the changes in fact. And, despite both the Supreme Court's statement that "the

52. Id. at 146, 146-51 (noting that the district court found that alternative testing did not exist, and stating that "the record probably could not support a contrary finding").
53. Id. at 147.
54. 282 U.S. 765 (1931).
55. Id. at 772.
56. See, e.g., Planned Parenthood v. Casey, 505 U.S. 833, 854-55 (1992) (plurality opinion) (suggesting that overruling can be appropriate when "facts have so changed, or come to be seen so differently, as to have robbed the old rule of significant application or justification").
58. Justice Taney's opinion for the Court in The Genesee Chief did note that the earlier case had been decided "when the commerce on the rivers of the west and on the lakes was in its infancy . . .
The broadcast industry is dynamic in terms of technological change; solutions adequate a decade ago are not necessarily so now, and those acceptable today may well be outdated 10 years hence. The many cases in which advocates have questioned the spectrum scarcity rationale from Red Lion, the Court has consistently ducked the question, employing an interesting avoidance technique in doing so: it has recognized the criticism of Red Lion's assertion of spectrum scarcity but stated that "[w]e are not prepared, however, to reconsider our longstanding approach without some signal from Congress or the FCC that technological developments have advanced so far that some revision of the system of broadcast regulation may be required."

Thus the Court has spoken fairly clearly about the possibility of factual change meriting reconsideration of a precedent, but its actions have...
not been as straightforward: it has never acknowledged that a set of facts was no longer valid and nonetheless refused to reconsider the case that relied on them, but it has also never relied on such factual changes as the dispositive factor commanding a reconsideration. Federal courts of appeals have done so on occasion, but we still await such action from the biggest fish in the sea. The absence of clearer action by the Supreme Court is unfortunate, because the principle is important. Courts rely on factual assertions in their opinions, and courts should revisit those opinions if the facts on which they rely are no longer valid.

One loose end deserves brief mention: in cases involving determinations of consistency with the Constitution, rather than a statute, there arises the question of how the legal system takes account of a perceived shift in facts. If the original decision declared the challenged law constitutional, then the matter is fairly straightforward; enforcement can continue, so a future victim of the regulation can simply challenge its constitutionality in the context of defending against the enforcement action. The difficulty is created by what we might call "springing constitutionality"—where the law was originally declared unconstitutional and later the facts supporting the invalidation evaporated. The ordinary answer—simply raise the issue in an enforcement proceeding—will not be available, because the law has been struck down and presumably no enforcement actions will be taking place.

Congress could attempt to repass the statute, but it appears that such an action would have no legal effect. At the same time, it would be

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62. For instance, in Chandler v. City of Dallas, 2 F.3d 1385 (5th Cir. 1993), and Daugherty v. City of El Paso, 56 F.3d 695 (5th Cir. 1995), the Fifth Circuit had held that drivers with insulin-dependent diabetes posed a direct threat to the health and safety of others as a matter of law (and thus that they could not bring employment discrimination claims arising from differential treatment based on their diabetes). In Kapche v. City of San Antonio, 176 F.3d 840 (5th Cir. 1999), the plaintiff brought an employment discrimination claim that was squarely covered by Chandler and Daugherty, and the district court accordingly rejected the claim. Id. at 840, 842. On appeal, however, the Fifth Circuit explicitly declined to follow these cases. The court, emphasizing "scientific advancements" such as "technological improvements which have significantly increased the ability of diabetics to monitor blood sugar levels and thereby prevent hypoglycemic reactions," stated that the factual underpinnings of its earlier decisions may have become invalid. Kapche, 176 F.3d at 846, 847. It then held:

Consequently, we conclude, the time has come for a reevaluation of the facts that supported our prior per se holdings in Chandler and Daugherty. To this end, we vacate the district court's grant of summary judgment in favor of the City and remand for a determination whether today there exists new or improved technology—not available at the time these cases were decided—that could now permit insulin-dependent diabetic drivers in general, and Kapche in particular, to operate a vehicle safely. Id. at 847.

63. The proposal for congressional repassage presupposes that the original, invalidated statute is no longer a duly enacted statute and thus must be repassed in order to be enforced. This implicates the question of what happens to a statute when it is invalidated by a court. Interestingly, there is near unanimity among courts and commentators that an invalidated statute simply becomes dormant, ready to be enforced as soon as a court finds that it is no longer invalid. Cf. William Michael Treanor & Gene B. Sperling, Prospective Overruling and the Revival of "Unconstitutional" Statutes, 93 COLUM.
problematic for a court, with no enforcement or other proceeding before it, simply to announce that one of its precedents was invalid. Such an action would seem to run afoul of the constitutional requirement that a federal court decide only "Cases" or "Controversies." A court cannot declare what the law is if the parties requesting the declaration are not part of an actual controversy, much less declare what the law is when there are no parties before it at all. That knocks out two branches of government, leaving the executive as the remaining candidate to instigate a reexamination of an invalidated law that may, through changes in facts, have become constitutional. This possibility has its own complications, but they are probably resolvable. It bears note, though, that even a relatively small

L. REV. 1902, 1915, 1908-17 (1993) (arguing for "non-revival" of statutes in a narrow class of cases, but acknowledging that their position runs counter to the position of the U.S. Supreme Court, state courts, and almost every other commentator); see also State v. O'Neil, 126 N.W. 454, 454 (Iowa 1910) ("It is, of course, well settled that a statute which has been held unconstitutional either in toto or as applied to a particular class of cases is valid and enforceable without re-enactment when the supposed constitutional objection has been removed, or has been found not to exist."). In the Legal Tender Cases, 79 U.S. (12 Wall.) 457, 553-54 (1870), for instance, the Court upheld, in full, the constitutionality of a statute that it had found unconstitutional as to preexisting obligations less than two years earlier in Hepburn v. Griswold, 75 U.S. (8 Wall.) 603, 625 (1869). The Court in the Legal Tender Cases never suggested that the statute had to be repassed by Congress, and its holding that the statute now applied fully to all obligations precluded such a conclusion. See Legal Tender Cases, 79 U.S. at 553. A more famous example—which included an explicit articulation of this position, rather than the silent resurrection of a statute as in the Legal Tender Cases—arose when West Coast Hotel Co. v. Parrish, 300 U.S. 379, 400 (1937) (upholding a statute establishing a minimum wage for women) overruled Adkins v. Children's Hospital, 261 U.S. 525, 559 (1923) (striking down a District of Columbia statute establishing a minimum wage for children and women). With Adkins overruled, the United States Attorney General concluded that the previously invalidated statute could be enforced, because its judicial invalidation had not abolished or repealed it. See 39 Op. Att'y Gen. 22, 22-23 (1937) ("[T]he courts have no power to repeal or abolish a statute, and ... notwithstanding a decision holding it unconstitutional a statute continues to remain on the statute books."). The Municipal Court of Appeals for the District of Columbia (the highest District of Columbia court) reached the same conclusion:

[A] law once declared unconstitutional and later held to be constitutional does not require re-enactment by the legislature in order to restore its operative force. ... [A] statute declared unconstitutional is void in the sense that it is inoperative or unenforceable, but not void in the sense that it is repealed or abolished .... Jawish v. Morlet, 86 A.2d 96, 97 (D.C. 1952). There seems, then, to be little point in a legislature reenacting a statute that has been struck down.


65. If an executive (whether state or federal) brought a prosecution against a defendant who violated a statute the substance of which had been declared unconstitutional, the defendant would have a powerful argument that a new prosecution would be prohibited under the Ex Post Facto Clause. Even if a court were inclined to find the statute constitutional, the absence of notice to the defendant would be fatal to the actual prosecution at issue, as the defendant would have had no way of knowing that his actions were illegal. Meanwhile, in noncriminal cases, there would be a possibility of preclusion. Once the relevant executive branch loses a case because the statute is declared unconstitutional, any attempt at reopening the case, even based on allegedly new facts, would likely be met by the immediate response that the issue had been conclusively resolved and thus could not be reopened.

66. For criminal cases, the answer would seem to be for the executive to announce that, at some future date far enough away to allow everyone to conform their actions to the invalidated law, it would
probability that we would lack a mechanism to reconsider an opinion based
on outdated facts raises the disturbing specter of a ruling having continuing
force but no factual basis.

Insofar as courts do, in fact, reconsider cases whose factual founda-
tions no longer exist, a concomitant possibility arises: because relevant
facts (particularly technological facts) may quickly become outdated,
overrulings—even of facial challenges like that in *Reno v. ACLU*67—may
occur only a few years (perhaps even months) after the original opinion
was decided. Such events will undercut the seeming permanence of appel-
late decisions. But that is the necessary result of a reliance on facts
combined with the possibility of changing circumstances. And, though the
prospect may be disturbing, it is less problematic than the alternative of an
opinion remaining in force long after its factual basis has ceased to exist.

III. Examples of Facts Changing Between Trial and Appellate Rulings

The previous section suggests that rapidly changing facts can weaken
precedents and require their reconsideration. When those factual changes
occur after the appellate process has run its course, there is no challenge
to the appellate process itself. By contrast, when facts change so rapidly
that some of the facts as found by the trial court may be outdated before
the appellate court issues its opinion, and when the process of change
shows no sign of abating in the near future, the challenge to the appellate
process is profound. When an appellate court rules in a case, we are
accustomed to thinking of that ruling as applying to the conditions that
obtain at the time of the ruling. We do not ordinarily assume that a
decision applies only to the facts at the time they were found by the trial
court (or finder of fact, if not the trial court). But, when the facts change
in material ways between the time that the facts are found and the appellate
court rules, then there is a very real danger that the ruling, at the time it
is issued, does not actually apply to the world as it exists.

On a number of occasions some potentially relevant facts have
changed68 in between the time that a lower federal court ruled and a

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68. Of course, changes in law, as opposed to fact, also have occurred between the time that a
lower court rules and an appellate court reviews that ruling. Such supervening legal decisions have
spawned a considerable jurisprudence of their own. See, e.g., Ashcraft v. Tennessee, 322 U.S. 143,
155-56 (1944); Vandenbark v. Owens-Illinois Glass Co., 311 U.S. 538 (1941); State Tax Comm’n v.
Van Cott, 306 U.S. 511 (1939); Gulf, Colorado, & Santa Fe Ry. v. Dennis, 224 U.S. 503 (1912); see
higher court issued its opinion. A declaration of war or peace, for example, can dramatically change the relations between parties in an international dispute. One such instance was Watts, Watts & Co. v. Unione Austriaca di Navigazione, in which a British corporation had sued an Austro-Hungarian corporation over nonpayment for coal. The Supreme Court dryly noted the impact of the United States's declaration of war against Austria-Hungary, stating,

Since the certiorari was granted, the relation of the parties to the court has changed radically. Then, as earlier, the proceeding was one between alien belligerents in a court of a neutral nation. Now, it is a suit by one belligerent in a court of a co-belligerent against a common enemy.

In light of the difficulties created by the declaration (i.e., no counsel could represent Austria-Hungary, as intercourse between citizens of the two nations was both illegal and physically impossible), the Court remanded the case for further proceedings to take place when, "by reason of the restoration of peace between the United States and Austria-Hungary, or otherwise, it may become possible for the respondent to present its defense.

Van Cott, 306 U.S. 511 (1939); Gulf, Colorado, & Santa Fe Ry. v. Dennis, 224 U.S. 503 (1912); see also United States v. Washington, 12 F.3d 1128, 1138 (D.C. Cir. 1994) (identifying a "supervening decision doctrine," which allows appellate courts to consider issues not raised at trial if there has been a supervening decision); United States v. Ochs, 842 F.2d 515, 521 (1st Cir. 1988) (noting a relevant intervening Supreme Court decision); Baird v. Benton County Bd. of Educ., 421 F.2d 700, 701 (5th Cir. 1970) (noting relevant intervening decisions by the Supreme Court and the Fifth Circuit); In re Elmore, 382 F.2d 125, 127 (D.C. Cir. 1967) (involving an intervening D.C. Circuit Court opinion); Zank v. Landon, 205 F.2d 615, 616 (9th Cir. 1953) (involving an intervening Supreme Court decision). The challenge to the appellate process presented by these cases is fairly minor compared to the challenge presented by continually changing facts, for two main reasons. First, and more important, appellate courts are accustomed to deciphering the significance of laws, new and old; though an appellate court might prefer that a lower court consider the legal question, there is no reason why a court would deem itself incapable of addressing a new legal question. New facts, on the other hand, place appellate courts in the position of making findings on their own—a circumstance to which they are largely unaccustomed (or at least one that they do not acknowledge). Second, it is unusual for one to have a reasonable belief that an area of law will be subject to continual change; usually, the expectation is that the change will not be reversed or modified significantly in the near future. As a result, considerations regarding the future, on which this Article focuses, are generally absent in cases involving changes in law. As this Article will discuss, however, a number of areas of endeavor raise the serious possibility of factual change for the foreseeable future.

69. See, e.g., Welch v. Shultz, 482 F.2d 780, 783 (D.C. Cir. 1973) (remanding a suit challenging a ban on contributions to North Vietnam in light of a peace agreement signed after the district court ruled); United States v. Arkansas Power & Light Co., 165 F.2d 334, 356-57 (8th Cir. 1948) (remanding for new fact-finding where the relevant contract was to continue in effect until six months after the end of World War II, and, after the district court ruled, the President proclaimed the cessation of hostilities); The Kaiser Wilhelm II, 246 F. 786, 787-88 (3d Cir. 1917) (taking judicial notice of changed facts, in particular the declaration of war and the United States's seizure of the relevant ship).

70. 248 U.S. 9 (1918).

71. Id. at 21.

72. Id. at 22.
Other, more prosaic events also can alter crucial facts. The successful conclusion of a collective bargaining agreement, for instance, has led appellate courts to remand to lower courts related labor disputes that the lower courts had adjudicated prior to the parties' agreement. Or the change in fact may be as simple a matter as the withdrawal of a lawyer whose inappropriate behavior had provoked the district court to dismiss his case.

In most of these cases, the appellate court (whether the Supreme Court or a court of appeals) has simply remanded the case for further proceedings in a lower court. That approach may be appropriate in cases in which there is little likelihood that relevant facts in the case will change again in the future in some relevant way. Once the parties have concluded a collective bargaining agreement, for example, the chances of the agreement being torn asunder and the same dispute arising seem remote. But what about situations where relevant facts not only have changed in the time since the lower court made its findings, but probably will do so again in the near future? In such situations a remand seems problematic, because there is every reason to suspect that the next time the case comes up through the appellate process the same concern about outdated facts will arise, thus raising the specter of an infinite judicial process.

As this Article has suggested, such a scenario is not far-fetched. It arguably occurs in the context of wars. During a war, the facts on the ground frequently are in a state of flux, and the duration of the war—and, therefore, of these continuing and unpredictable changes—is not estimable.

73. *Id.* at 22-23.
74. See *McLeod v. General Elec. Co.*, 385 U.S. 533, 535 (1967) (determining that, after the two sides in the labor dispute reached a collective bargaining agreement subsequent to the circuit court disposition, the "District Court should determine in the first instance the effect of this supervening event upon the appropriateness of injunctive relief"); *see also* *Firestone Synthetic Rubber & Latex Co. v. Potter*, 400 F.2d 897, 898 (5th Cir. 1968) (stating that because the strike had been settled, "the trial court should reconsider the necessity and appropriateness of injunctive relief in the light of these changed conditions"); *General Elec. Co. v. Local Union 191*, 443 F.2d 898, 901 (5th Cir. 1971) (remanding and instructing the district court to dismiss the case based on a prior collective bargaining agreement no longer in force).
75. See *Korn v. Franchard Corp.*, 456 F.2d 1206 (2d Cir. 1972). In *Korn*, the appellate court observed,

> The second . . . component in deciding to end Rule 23 status was the conduct of the plaintiff's attorney who the court thought had acted improperly . . .

> The former attorney, whose actions were severely criticized by the District Court, has withdrawn from all connection with or participation in the litigation. . . . Since our decision has to be forward-looking . . . we must take account of this new situation . . .

*Id.* at 1208.
76. The main exception to this phenomenon is cases where parties have presented evidence of mootness; frequently, appellate courts respond by simply declaring the case moot, rather than remanding for consideration of mootness. *See* discussion *infra* subsection V(C)(1)(a).
77. This possibility is discussed more fully *infra* notes 217-18 and accompanying text.
But the most prominent examples have arisen in other contexts, involving high technology industries like computers and also more mundane areas like metal manufacturing.

A. Reno v. ACLU

As was noted at the outset of this Article, the Internet has experienced enormous growth and change in the last few years; so it is perhaps fitting that the development of the Internet was central to the most notable recent example of change during the appellate process—Reno v. ACLU, which involved a First Amendment challenge to the Communications Decency Act (which regulated indecency on the Internet). Two provisions of the CDA were challenged: the "indecent transmission" provision, which prohibited the knowing transmission, by means of a telecommunications device, of obscene or indecent messages to any recipient under eighteen years of age, and the "patently offensive display" provision, which prohibited the knowing sending or displaying, by means of an interactive computer service, of patently offensive messages in a manner available to a person under eighteen.

Interestingly, the time that elapsed between the fact-finding by the trial court and the resolution in the Supreme Court was unusually brief in Reno v. ACLU (primarily because the legislation containing the CDA provided for expedited review by a three-judge district court, with an expedited appeal directly to the Supreme Court). The evidentiary hearings in the district court were in March and April of 1996; the district court's opinion was issued in June of that year. The Supreme Court heard oral argument in the case in March of 1997 and issued its opinion on June 26, 1997. So it was not much more than a year between the decision by the district court (containing its findings, many of which in turn were based on the parties' stipulations) and the Supreme Court decision—about as short a time between trial court findings and Supreme Court ruling as one is likely to find. And yet there is good reason to believe that, by June 26, 1997, some of the findings made by the district court were stale—becoming less and

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81. See 47 U.S.C. § 223 (1994 & Supp. III 1997) (providing for expedited review). In addition, it so happened that the timing of the district court decision and the petition for certiorari enabled the Supreme Court to grant certiorari and hear the case in the same term without any delay. By contrast, appeals court decisions frequently come down at a time when the petition for certiorari is not acted upon for months (e.g., if the petition arrives after the end of June, it is not considered until October), or, even worse for the parties, when there is too little time left in the current term to permit argument (e.g., beginning in January the Court grants cases for the following term, meaning that argument will not occur until October).
less tenable by the day, and arguably incorrect by the time the Supreme Court ruled—and subject to change in the future, as well.

One example arises out of the fact that the CDA created a statutory defense to prosecution for anyone who restricted access via an age verification system. The ACLU had persuaded the district court that although the World Wide Web allowed for age verification systems, the Internet outside the Web did not allow for such verification; that this world outside the Web encompassed important services, such as USENET newsgroups, listservs, and chat rooms; that such fora allowed for distinctive forms of communication unavailable on the Web; and thus that even with the statutory defense, the CDA prevented people from engaging in certain kinds of speech. These statements were correct when the district court made its findings (at a time when chat rooms and newsgroups did not exist on the Web). In the months between the district court hearing and the briefing in the Supreme Court, however, one of the ways the Internet changed was that newsgroups, listserv logs, and chat rooms began to mushroom on the Web. The distinctive speech offered by newsgroups, listservs and chat rooms was now available on the Web, where age verification was possible.

The government seized on this development in its briefs to the Supreme Court, arguing that this development changed the constitutional calculus. The problem for the government was that, because it occurred in the months since the district court hearing, this development was of course not contained in the district court’s findings. The ACLU emphasized this point, stating that,

[C]ontrary to the district court’s findings, [the government] simply asserts that effective screening of minors is possible for speakers using all modes of communication on the Internet. Thus, it asks this Court to take it on faith that it is technologically feasible to set up adults-only listservs, chat rooms, and newsgroups. But in the district court, the “Government offered no evidence that there is a reliable way to ensure that recipients and participants in such fora can be screened for age . . . .”

83. See Reply Brief for Appellants at 10, Reno v. ACLU, 521 U.S. 844 (1997) (No. 96-511) (“[A]ppellees’ concerns about the inability to engage in ‘distinctive’ forms of communication have largely become moot since the time of the [preliminary injunction] hearing. As we explain in our opening brief, since the time of that hearing, chat rooms and newsgroups have begun to proliferate on the Web.”); id. at 37-38 (“[S]ince the record was compiled at the preliminary injunction stage of the case, it has become clear that chat rooms, newsgroups, and mailing lists can be established on a Web site, where those who wish to post patently offensive material can avail themselves of the very same screening technologies that apply to the Web.”).
The government of course did not deny that it had offered no evidence at the trial level, but it wanted the Supreme Court to take cognizance of these developments. That desire was for naught: The Court ignored the government’s contentions of new developments and relied entirely on the district court’s factual findings, even pointedly noting that the government had failed to present evidence to the district court indicating that the screening was possible in newsgroups, listservs, and chat groups.  

Notably, the government could have pressed the age verification point further. As to the Web itself, the district court found that age verification would be “economically and practically unavailable” for noncommercial Web pages because “verification agencies would decline to process a card unless it accompanied a commercial transaction.” Once again, this finding probably accurately reflected the state of knowledge at the time that the district court made its findings. The source for the finding that verification agencies would require payment was the government’s own expert, and the district court pointedly stated that “[t]here was no evidence to the contrary.” In the months between those findings and the Supreme Court’s ruling, however, the market changed. Age verification services proliferated, and many of them followed an interesting economic model; they paid the referring sites, rather than the other way around. As Jeffrey Rosen noted in an article written in March of 1997 (shortly before Reno v. ACLU was argued in the Supreme Court), “since last June [of 1996, when the district court issued its opinion], the technology has changed in response to the market. . . . [The age verification] system is no longer ‘economically prohibitive’ for the Internet sites that use it.” Once again, however, the Supreme Court’s opinion makes no mention of these changes (much less their significance). On the contrary, the Court simply relied on the district court’s findings that age verification was economically prohibitive and thus effectively unavailable. Significantly, the Court’s opinion placed great weight on the economic unavailability of age verification for noncommercial web sites. This unavailability, in combination with the point noted above that newsgroups, chat rooms, and listservs were

85. See Reno, 521 U.S. at 855-56.
86. ACLU, 929 F. Supp. at 846.
87. Id.
89. Reno, 521 U.S. at 856-57. Interestingly, the Court explicitly qualified its statement by saying, “at the time of the trial, credit card verification was ‘effectively unavailable to a substantial number of Internet content providers.’” Id. (emphasis added) (quoting ACLU v. Reno, 929 F. Supp. 824, 846 (E.D. Pa. 1996)). This statement, and others like it, may suggest that the Court was relying on old facts despite any concerns that they might be outdated. This response to rapidly changing facts is discussed infra subpart V(A).
outside the realm of the Web, were critical to the Court's reasoning that the CDA's age verification defense was inadequate.  

What makes these rapidly changing facts especially tricky is that we cannot predict them with confidence; they may have moved in one direction in the recent past (rendering findings made a year or two earlier out of date) but, contrary to expectations, move in another direction in the near future. A nice example arises out of Reno v. ACLU. One of the government's main arguments was that the CDA was constitutional in light of FCC v. Pacifica Foundation. In that case, the Supreme Court had held that indecency regulation of broadcasts was subject to lenient First Amendment scrutiny, based in significant part on the invasive nature of broadcasting. The United States seized on this comparison, arguing that the Internet was similarly invasive. The district court squarely rejected this comparison, finding as a fact that "communications over the Internet do not 'invade' an individual's home or appear on one's computer screen unbidden." The Supreme Court embraced this finding, quoting it verbatim. In between the district court findings and the Supreme Court ruling, however, the market changed: "push" technology came on line. Such technology delivers content directly to the user without the user requesting it. The material is "pushed" by the provider onto computers, rather than having specific content chosen (or "pulled") by users. In other words, for a large number of users, communications did appear on their screens in the same sort of "unbidden" way that broadcasts appear, leading some commentators to suggest that this finding, too, had become outdated by the time the Supreme Court issued its ruling in Reno v. ACLU.

90. See Reno, 521 U.S. at 880. The findings from Reno v. ACLU discussed in the text are not the only ones that may have become outdated in the months between the district court fact-finding and the Supreme Court ruling. One that has been frequently singled out is the crucial finding that no effective blocking software existed. That was probably true at the time the district court so found, but it is not at all clear that it was still true at the time that the Supreme Court (relying on the district court's finding, see id. at 876) issued its ruling. See, e.g., Robinson, supra note 38, at 903-04, 938 n.238.

91. 438 U.S. 726 (1978); see also Reno, 521 U.S. at 864.

92. See Pacifica, 438 U.S. at 748 (noting that broadcast media are "uniquely pervasive" and "confront the citizen . . . in the privacy of the home," and that "[b]ecause the broadcast audience is constantly tuning in and out, prior warnings cannot completely protect the listener or viewer from unexpected program content"); see also Sable Communications, Inc. v. FCC, 492 U.S. 115, 128 (1989) ("Unlike an unexpected outburst on a radio broadcast, the message received by one who places a call to a dial-a-porn service is not so invasive or surprising that it prevents an unwilling listener from avoiding exposure to it.").


95. Reno, 521 U.S. at 869.

96. See Ranjit S. Mathoda, Government Power Over Internet Communications: Unborn Heirs of the CDA, 1997 B.C. INTELL. PROP. & TECH. F. 070902, ¶8 (visited May 26, 1999) <http://infoeagle.be.edu/bc_org/avp/law/st...g/iptf/commentary/content/1997070902.html> (quoting the
But here's the fun part: In June of 1997, the smart money was on push technology. Industry leaders predicted that the Web would move to a broadcast model, with push technology leading everyone to treat their computers as another source of broadcasts. In the time since then, however, the bloom has left the rose. The confident assumption that push would become the dominant paradigm has yet to materialize, and now many think it never will (but, of course, that could change, too). In fact, the leading purveyor of push is now used by fewer people than used it in 1997, so the district court finding quoted above may be more accurate today than it was when the Supreme Court ruled.

The point of these examples is not that an updated version of the facts necessarily would have fundamentally altered the Supreme Court's reasoning or its outcome, but simply that some of the facts on which the Court relied were stale, and this put the Court in a very difficult position. What is the significance of changes in the functions of the Web, age verification feasibility, or push technology? The Court did not bother to tell us, or even to acknowledge that the question existed. It ignored the issue, leaving us to wonder how courts should deal with such situations.

The Court was clearly aware of the problem of changing facts. Justice Scalia expressed his concern at oral argument in the quotation at the outset of this Article. His sentiments were not new. The district court in
ACLU v. Reno put the point sharply: "Because of the rapidity of developments in this field, some of the technological facts we have found may become partially obsolete by the time of publication of these Findings." 99

Justice O'Connor, in her partial concurrence and partial dissent, demonstrated an awareness of this issue. She was careful to note that her views applied "to the Internet as it exists in 1997" 100 and in "the present state of cyberspace," 101 and she peppered her separate opinion with the words "currently" and "today." 102 Her explicit statement that she was evaluating the Internet "as it exists today" 103 intimated that, in her view, developments in the near future might change the constitutional analysis. But it also revealed that she was taking into account the facts as they existed (or, more accurately, as she understood them to exist) at the time the Court was ruling, rather than the facts as they existed when the district court made its findings in 1996. 104

Experience has made it axiomatic to eschew dogmatism in predicting the impossibility of important developments in the realms of science and technology. Especially when the incentive is great, invention can rapidly upset prevailing opinions of feasibility. One may even generalize that once the deadlock in a particular field of inquiry is broken progress becomes rapid. Thus, the plastics industry developed apace after a bottleneck had been broken in the chemistry of rubbers. Once the efficacy of sulfanilamide was clearly established, competent investigators were at work experimenting with thousands of compounds, and new and better antibiotics became available in a continuous stream. A good example of the rapid change of opinion that often occurs in judgment of feasibility is furnished by the cyclotron. Only a few years ago distinguished nuclear physicists proclaimed the limits on the energy to which particles could be accelerated by the use of a cyclotron. It was suggested that 12,000,000-volt protons were the maximum obtainable. Within a year the limitations previously accepted were challenged. At the present time there are, I believe, in operation in the United States at least four cyclotrons which accelerate protons to energies of about 400,000,000 volts. One need not have the insight of a great scientific investigator, nor the rashness of the untutored, to be confident that the prognostications now made in regard to the feasibility of a "compatible" color television system will be falsified in the very near future.

101. Id. at 891.
102. Id. at 890, 891.
103. Id. at 891.
104. In fact, in contrast to the majority opinion, she noted the government's suggestion that chat rooms and newsgroups were available on the Web (though she characterized the state of affairs more
The majority opinion, by contrast, was not explicit about whether it was judging the Internet as of 1997 or as of the time of the trial. Although Justice O'Connor's separate opinion credits the majority opinion with looking at the Internet as it existed at the time the Court ruled, the matter is not so straightforward. In some places the Court spoke in the present tense, about what is "present in cyberspace" or "does not currently exist." In other places, however, the Court focused not on the current state of the Internet but instead on what the district court found and what existed at the time of trial. Notably, in its discussion of the availability of age verification the Court used the past tense, stating not that credit card verification is unavailable but rather that, "at the time of the trial, credit card verification was 'effectively unavailable.'"

B. United States v. Microsoft and the Future

We can also easily imagine future instances of factual transformations during the appellate process. The computer industry, for example, provides some nice hypotheticals of continual factual change. Market share in the computer software industry has proved quite volatile—much more volatile than most any other industry. One year Lotus had the dominant spreadsheet program; the next year its market share was plummeting at a furious rate. The same is true of other companies and products that once had seemingly commanding market shares and then suddenly faded away—names from long ago (i.e., the early- and mid-1990s) like Prodigy,
Visi-Calc, and Borland. Similarly, changes in underlying technology can have dramatic effects. The recent litigation between Sun Microsystems and Microsoft over the latter's use of Sun's Java programming language, for example, relies heavily on the current configuration of Microsoft's programs in concluding that Microsoft is violating a contract with Sun. As those configurations change, the existence of any contractual violation may change with it.


112. Id. at 112 (granting a preliminary injunction against Microsoft based upon finding it likely that Sun can establish that Microsoft violated an agreement between the parties in five of Microsoft's current software products).

A 1993 law review article illustrates how quickly the market (and, in fact, the whole structure of the wired world) can change. See Angela J. Campbell, Political Campaigning in the Information Age: A Proposal for Protecting Political Candidates' Use of On-line Computer Services, 38 VILL. L. REV. 517 (1993). That article advocated "passage of legislation requiring that large, commercial information services companies afford equal opportunities and reasonable access to political candidates." Id. at 522. In order to make sense of this proposal, one must remember all the way back to 1993. In that bygone era, a few on-line service companies (as they were then called) had created their own systems for members to chat with each other, send emails, and retrieve information; they did not allow their users to go directly on to the World Wide Web (not that there would have been much for their users to see; the World Wide Web was barely in existence). It was on this basis that Professor Campbell rested her crucial premise—that a few large companies controlled the flow of information via computer, dispensing proprietary information exclusively to their users (just like the few broadcast networks), and that the only alternatives were online bulletin boards. See id. at 522 ("This Article is concerned with access obligations imposed upon established commercial information services companies. These are the entities that provide services that are similar to broadcast companies."); id. at 534-45 (identifying bulletin boards as the only alternative to commercial services companies for computer users).

Now that America Online and CompuServe have given their users direct access to the Web, the proposition that regulation is necessary to break the providers' bottleneck on content seems untenable. But, at the time it was written in 1993, it correctly described the provision of information on-line. I have saved, however, the best for last: Campbell's article did not focus on America Online, which she listed as by far the smallest of the four major companies; the focus of the regulation, in her view, was to be the giants in the field—Prodigy, CompuServe, and GEnie (remember that one?). See id. at 523 n.15 (listing America Online as by far the smallest of the four major companies); id. at 537 ("[T]he application of the model statute should be limited to those service companies that function most like broadcasters: the major commercial on-line services, such as CompuServe and Prodigy."). Now, of course, America Online is the biggest of these services, by far (and in fact has acquired CompuServe). See, e.g., Andrea Petersen, Small Players Deluge Market with Free Disks, WALL ST. J., Aug. 3, 1999, at B1, available in 1999 WL-WSJ 5462968 (presenting a list of the biggest Internet service providers, with America Online's 17.6 million subscribers outstripping the next closest competitor's 1.8 million as well as Prodigy and CompuServe—who were not big enough to make the list).
Although many plausible examples arise from hypothetical cases involving the computer industry (e.g., after the trial court findings in an antitrust action against Westlaw, the market for legal services changes and Westlaw is overtaken by much cheaper Internet services), the most obvious current possibility is the antitrust case United States v. Microsoft Corp. The case against Microsoft rests on the contentions that Microsoft has utilized its monopoly position in operating systems to solidify its dominance and extend it to other areas (most notably, to the Internet browser market) to the detriment of competitors (most notably, the Netscape Navigator Internet browser). Two critical elements of this allegation are: first, that Microsoft has a monopoly in the market for personal computer operating systems and thus is subject to antitrust restrictions that would not apply to non-monopolists; and, second, that browsers are separate functions from operating systems. Microsoft has contested both of these assertions. It contends that its admittedly huge market share (Windows has a greater than 90% share of the market for Intel-compatible personal computer operating systems) does not constitute a monopoly. It also argues that its browser (Internet Explorer) and operating system are technologically intertwined, and that the integration of the two provides significant advantages in terms of functionality; given the benefits created by the integration of browser and operating system, and given the difficulty of separating the two, Microsoft argues, its bundling of its browser with its operating system is merely an example of the kind of competition that the antitrust laws allow. In issuing his findings of fact, Judge Thomas Jackson rejected these arguments. He concluded that Microsoft does enjoy monopoly power in a relevant market.

114. See Steve Lohr, Due Processor: Hey! Computers Go Faster Than the Courts, N.Y. TIMES, Apr. 26, 1998, at Sec.4, p.1, available in LEXIS, News Library, NYT File (noting the central disputes between experts as to whether the operating system and the browser are separate, and whether combining the two enhances functionality); Andrew Pollack, Debate Grows over the Role an Operating System Plays, N.Y. TIMES, July 20, 1998, at D1, available in LEXIS, News Library, NYT File.
115. See United States v. Microsoft Corp., Nos. CIV.A.98-1232 & CIV.A.98-1233, 1999 WL 1001107, at *9 para. 35 (D.D.C. Nov. 5, 1999) (findings of fact) ("Even if Apple's Mac OS were included in the relevant market, Microsoft's share would still stand well above eighty percent.").
118. See id. at *42 para. 154.
119. See id. at *50 para. 191. The validity of this assertion may be crucial. The Court of Appeals for the District of Columbia, in earlier litigation between Microsoft and the United States over the interpretation of a consent decree, noted the importance of determining whether an operating system
bundle its browser with its operating system represents an attempt by Microsoft to utilize its monopoly in operating systems to control the separate browser market.  

The problem is that both of these crucial assertions are subject to change in the years between the findings of fact and the final appellate ruling.  

Judge Jackson demonstrated an apparent awareness of the problem that changing facts can pose, as he went out of his way to state not only that Microsoft is a monopolist but that it is likely to retain its monopoly position in the future.  

Others, however, see things differently; they believe that Judge Jackson accurately described Microsoft's current dominance but greatly overstated the likelihood of it retaining its monopoly, even in the near term.  

Imagine (as seems likely) that Judge Jackson issues forward-looking relief (e.g., strictures on Microsoft's placement of Internet Explorer on its Windows system). Imagine further that Microsoft's worst fears come to pass, and some clever competitors

and a browser were separate products and stated that: "We think that an 'integrated product' is most reasonably understood as a product that combines functionalities (which may also be marketed separately and operated together) in a way that offers advantages unavailable if the functionalities are bought separately and combined by the purchaser." United States v. Microsoft Corp., 147 F.3d 935, 948 (D.C. Cir. 1998). The existence of technological advantages conferred by integration is thus central; and, as is discussed below, it is likely to change.


123. See, e.g., Andrew Leonard, Is Linux the Real Remedy?, SALON MAGAZINE (Nov. 6, 1999) <http://www.salon.com/tech/feature/1999/11/06/open_source/index.html> (noting that Eric Raymond, a leading Microsoft critic, agrees with Judge Jackson's findings about Microsoft's current position but argues that by the time the Supreme Court rules in the case, "Microsoft will already have been killed off by a host of factors, not least of which will be the growth of Linux—with or without government help"); Steven Levy, Judging Jackson by His Actions, NEWSWEEK, Nov. 22, 1999, at 68 (stating that Jackson's findings as to the benefits of the integration of browser and operating system, as well as Microsoft's dominance in operating systems were accurate when made but questionable as to future events); Declan McCullagh, Let the Market Beat Bill Gates (Nov. 11, 1999) <http://www.intellectualcapital.com/issues/issue318/item7203.asp> (contending that, because of the time that the appellate process will require and the insecurity of Microsoft's market position, Judge Jackson's findings will likely be overtaken by marketplace developments); Charles Piller, Microsoft's Peril Grows in Evolving Marketplace, L.A. TIMES, Nov. 7, 1999, available in 1999 WL 26193753 (cataloging threats to Microsoft's dominance).

124. Internal Microsoft documents (whose authenticity Microsoft has acknowledged) leaked to a Microsoft foe suggest ominously that Open Source Software (OSS), and, more specifically, Linux, represent a grave threat to Microsoft. See Eric S. Raymond, Halloween I—1.14 (visited May 30, 1999) <http://www.opensource.org/halloween/halloween1.html> (containing a Microsoft document that
create and effectively market a competing operating system, with the result
that Windows’s market share plummets from over ninety percent to less
than fifty percent by the time the Supreme Court is ready to issue its
opinion.125 Or (even more ominously for Microsoft) imagine that there
is an explosion of simple computers embedded in every imaginable house-
hold product, connected by a system that has no need for a gargantuan
operating system like Windows;126 in such a circumstance, Microsoft
might retain 90% of the market for "operating systems for Intel-compatible
personal computers" and still see Windows shrivel to insignificance
because everyone would be buying simple network computers rather than
Windows-based personal computers.127 In either of these events (a

says, inter alia: "OSS poses a direct, short-term revenue and platform threat to Microsoft"; "OSS is
long-term credible"; "Linux can win"). The possibility that Microsoft intended for these documents
to be made public, in order to help it in the pending antitrust trial (by giving credence to its
competitiveness concerns) is undercut by other statements in these documents (e.g., suggesting that
Microsoft "deny OSS products into the market") that raise the specter of the sort of anticompetitive
behavior that Microsoft has been at pains to refute in the antitrust trial. See also Eric S. Raymond, The
halloween-FAQ.html> (asserting that "[these documents are way too dangerous to Microsoft to have
been leaked deliberately").

125. Given the speed at which the computer market can change and the length of the appellate
process, this scenario is by no means implausible. See Amy Harmon, The Rebel Code, N.Y. TIMES
MAGAZINE, Feb. 21, 1999, at 34 (stating that "the Linux [operating system] has mutated in recent
months from geek fetish to a dark-horse challenger of Microsoft Windows"); McCullagh, supra note 110 (declaring that "[in just a few months, Linux has transformed itself from a hacker curiosity to a
platform exploding with more than 200% annual growth"); Hackers Rule, ECONOMIST, Feb. 20, 1999,
at 63 (reporting explosive growth in Linux and, more generally, the advantages that open source
software has over proprietary software). See generally John Markoff, Behind the Big Shift on Windows,
N.Y. TIMES, Apr. 9, 1999, available in LEXIS, News Library, NYT File (noting that Microsoft is
changing its strategy on Windows in response to competition, but also that with its new strategy,
"Microsoft is leaving itself vulnerable to competition").

126. For instance, Sun has introduced a new system called Jini which, Sun hopes, will leave
Windows with no role to play. See, e.g., Andrew Pollack, The Judicial System vs. the Operating
a concept known as distributed computing, Jini redefines the computer, its peripherals and other gadgets
as a community of devices functioning together within a dynamic network as a single virtual
machine.").

Jini is by no means the only threat in this regard. Another prominent example is Oxygen, a
research project at M.I.T. Laboratory of Computer Science whose goal is "to liberate the PC-centric
world it has occupied for the last two decades." John Markoff, A Project Aims to Unhitch Computing
From Its PC Harness, N.Y. TIMES, Apr. 5, 1999, at C1, available in LEXIS, News Library, NYT File; see also After the PC, ECONOMIST, Sept. 12, 1998, at 79 (noting the movement toward pervasive
computing and the dangers that it poses for Microsoft).

127. Lest this sound far-fetched, I should note that far wiser and more techno-savvy heads than
mine are predicting just such a transformation in the very near future. See, e.g., John Markoff, New
Product From Sun Microsystems Allows Supercomputing at Home, N.Y. TIMES, July 15, 1998, at C1,
available in LEXIS, News Library, NYT File ("[Distributed computing] could also shift the balance
of power in the computer industry. At a time when worried governments on three continents are
struggling to restrain Microsoft's iron grip on computing and its ambitions on the Internet, distributed
computing could level the playing field by shifting growth in high-tech industries to the millions of
consumer appliances that increasingly contain powerful embedded processors."); see also id.
decrease in market share or a shriveling of the market), the case against Microsoft would not seem to be moot, because the United States would still have a ripe claim against Microsoft. But a crucial fact underlying the suit—Microsoft's huge market share in the market for operating systems in the dominant sector of the consumer computer market—would have evaporated, leaving the arguments in favor of the judicially mandated relief weaker.  

("Advocates of a distributed computing philosophy believe that with the advent of high speed networking it is now possible to achieve the value of integration without submitting to the vast memory requirements or the complexity of the Windows operating system.").

In fact, one writer explicitly posited that "Sun's announcement of Jini suggests that the current pace of change could leave the legal system performing surgery on a beast that evolves from one species to another on the operating table." Pollack, supra note 114. Pollack noted that in 1982 the federal government acknowledged that, whatever the merits of its original charges brought against IBM in 1969, those charges had become "technologically irrelevant." Id. He then observed that the problems for the legal system posed by changing technology are much greater today, as the 1970s and 1980s "were days of relatively slow development of computer technology." Id. See generally Lohr, supra note 114 ("Business tactics that seemed questionable, even incriminating, yesterday can be rendered irrelevant tomorrow by the rapid pace of technological change. That certainly seems to be the lesson being learned in the government's marathon pursuit of Microsoft."); Jube Shiver, Jr., Changes in Industry Dim Relevance of Microsoft Trial, L.A. TIMES, Dec. 14, 1998, at A1 (noting the possibility that changes in technology and computer markets "could leave moot the overall allegation that Microsoft used its dominance in the software industry to stifle competition in Internet technologies").

128. This, in fact, is what likely would have happened had the last major antitrust case involving the computer industry—the United States' litigation against IBM—resulted in a judicial opinion resolving the case. The impetus behind the case was IBM's seemingly unstoppable stranglehold on the computer market, which at the time meant mainframe computers and workstations intended for sophisticated business uses. See Jay Dratier, Jr., Microsoft as an Antitrust Target: IBM in Software?, 25 Sw. U. L. Rev. 671, 673-681 (1996). As it turned out, at the very point when the district court would have been issuing its opinion and injunctive relief (the United States dropped the case in 1982, and presumably the district court opinion would have been issued within a few years if the case had not been dropped), the entire market was undergoing profound changes. Personal computers (then called microcomputers) were bursting on to the scene; IBM's power in mainframes and minicomputers no longer loomed so large, and its market share in the microcomputer market was dropping as a result of new competition. See Peter Huber, Loose Ends, 4 MEDIA L. & POL'Y 1, 7-8 (1995). The antitrust action against IBM would not have been moot, but it would have proved to be a bit ridiculous; the markets were changing in ways that left IBM as just one of many players, so the raison d'être of the case vanished.

The comparison between the Microsoft and IBM cases has been noted by several industry players. See, e.g., Rivlin, supra note 121 (noting that, by the time Judge Jackson issued his findings, entrepreneurs were no longer so worried about Microsoft but instead focused on Amazon.com and Yahoo: "By contrast, they look upon Microsoft with the same condescension with which Microsoft once looked down on IBM—as a bloated behemoth hopelessly overrun by innovation").

129. The weakness of the antitrust claim if Microsoft's market share declined to less than 50% would be obvious: Microsoft's stranglehold on the market would no longer exist, and thus the concerns about its leveraging of its position would be undercut. The lower Microsoft's market share, the less the concern about its leverage.

The status of the antitrust claim if Microsoft's market share remains but the market for personal computers disintegrates is a bit more complex. If the claim against Microsoft were a straightforward tying claim involving Windows and Internet Explorer, and if personal computers were treated as a separate market, then the fact that the market for personal computers shrank would not eviscerate the
Perhaps a more likely transformation is in the relationship between operating systems and browsers. As was noted above, Judge Jackson found that browsers and operating systems are separate products. He did not make the bold predictive claim that they would remain separate products, with good reason; we can be fairly confident that both browsers and operating systems will continue to mutate, as will the degree of integration between them. Microsoft and Netscape, as well as their competitors, are constantly updating their products. Change is the norm, and, in particular, products once seen as wholly separate from operating systems have been integrated into them (both for Windows and Apple's operating system).\(^3\)

The problem with the assertion that browsers are separate products (and thus that their integration into an operating system constitutes anticompetitive behavior) is that the functionality of their integration will likely increase over time.\(^1\) What happens when the case is on appeal and the appellate court must decide whether to affirm a grant of relief against Microsoft that is premised on a separation of functions that either has changed significantly or, perhaps, simply no longer exists?\(^2\)

In light of the constantly morphing nature of the market, the only prediction that I would make with any confidence about the Microsoft case on appeal is that, with respect to any forward-looking relief in that case, some of the relevant facts will likely have changed by the time the final appellate ruling is issued.\(^3\) The appellate court could, of course, antitrust claim as long as there continued to be significant sales of new personal computers; Microsoft would still have a monopoly in that market and would be using that monopoly power to tie its product to another. If, though, personal computers become dinosaurs that are no longer produced (or, more likely, are produced in smaller numbers as beefed-up alternatives to network computers), then the antitrust claim against Microsoft would be quite weak, because there would no longer be a relevant market in which tying was occurring. Separately, if the claim against Microsoft focused on predation against Netscape more generally (rather than tying specifically), and if Netscape managed to gain dominance in Web access via network computers, the case against Microsoft also would be weaker even if some market for personal computers remained.


131. See, e.g., Colton, supra note 110 (arguing that the Microsoft case will be overtaken by marketplace developments such as the integration of browsers and operating systems, because “[t]echnology . . . is moving fast and the browser and the desktop are merging”); Tom R. Halfhill, Good-Bye, GUI, Hello, NUI, BYTE, July 1997, at 60 (noting a trend toward the intertwining of Web browsers and operating systems); Steve Hamm, Does Everyone Do It?, BUS. WK., Nov. 2, 1998, at 30, 30-31 (noting the increasing integration of the operating system into a single environment).

132. Such change is already afoot. See Thomas A. Piraino, Jr., An Antitrust Remedy for Monopoly Leveraging by Electronic Networks, 93 NW. U. L. REV. 1, 5-6 (1998) (noting that greater integration of the Windows operating system and the Internet Explorer web browser undercuts the government's central argument in the case, and arguing that technological change, in the form of such integration, has already undermined the government's position).

133. Some, in fact, argue that such changes are already occurring, with more on the way. See, e.g., Thomas W. Hazlett & George Bittlingmayer, Befuddled by 'Internet Time': The Government's
respond by remanding the case to the trial court for updated findings, but during the time the case is on its way back those same facts, or other facts that had not previously changed, might become outdated.

C. Earlier Cases Not Involving Advanced Technology

Examples of rapidly and continually changing facts are not limited to current events or the world of technology; other instances of such change occurred in earlier eras and involved nothing particularly high tech. One prominent example was one of the biggest antitrust cases of the middle of the twentieth century—the Alcoa antitrust litigation. In 1937, the United States initiated an action contending that Alcoa was unlawfully maintaining a monopoly in the market for aluminum ingot. The very size and scope of Alcoa's business (and its alleged monopolization) produced a massive record, the result of a trial that lasted more than two years as all the evidence was brought together. It took another two years for the district judge to write his comprehensive opinion (which dismissed the government's complaint on the merits), the length of which—215 pages of the Federal Reporter—reflects the gargantuan size of the record.

On appeal, the government requested that the district court's ruling be reversed and that the Second Circuit issue a judgment that Alcoa be dissolved. In the years between the time that the trial ended in the district court and the case was heard on appeal in the Second Circuit, however, the aluminum industry, and Alcoa's role in it, changed significantly. The government by then owned plants that had a greater capacity than did Alcoa's plants, and two of Alcoa's rivals had also grown in size. Moreover, further changes in Alcoa's position were expected after the war ended (when the government would likely transfer its plants to other

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134. See United States v. Aluminum Co. of Am., 148 F.2d 416 (2d Cir. 1945).

135. See United States v. Aluminum Co. of Am., 44 F. Supp. 97 (S.D.N.Y. 1942); see also Aluminum Co. of Am., 148 F.2d at 421 (describing the huge size of the record and the length of both the trial and the oral ruling).

136. The relevant procedure provided for direct appeal to the Supreme Court, but four justices recused themselves, and it went instead to a panel of the Second Circuit. See Aluminum Co. of Am., 148 F.2d at 421.
owners). Both parties noted the changes and invoked them before the Second Circuit:

Alcoa argues that, when we look at the changes that have taken place—particularly the enormous capacity of [the government’s] aluminum plants—it appears that, even though we should conclude that it had “monopolized” the ingot industry up to 1941, [the government] now has in its hands the means to prevent any possible “monopolization” of the industry after the war, which it may use as it wills; and that the occasion has therefore passed forever which might call for, or justify, a dissolution: the litigation has become moot.138

The government, meanwhile, requested that the Second Circuit take cognizance of the intervening war by issuing the requested judgment of dissolution but ordering that its execution occur after war ended.139

The Second Circuit construed the parties’ briefs as requesting that the court take judicial notice of the new developments.140 But in the court’s eyes, the new evidence, even when in the form of government reports, was merely evidence; judicial notice seemed inappropriate because even the government report on aluminum “would not be conclusive, or more than evidence. . . . At most we could do no more than treat the report as newly discovered evidence, and send the issue back for another trial . . . .”141

The Second Circuit, in apparent recognition of the time and resources involved in a remand (and perhaps recognizing the danger that the facts might change again when the case was on appeal after such a remand), stated that it would not remand for a new trial.142 At the same time, however, the court recognized that its judgment would have a prospective effect and, therefore, that it would be problematic for it to be based on a set of facts that no longer existed.143 The Second Circuit attempted to be Solomonic by ruling that it would send the case back to the district court, not for a new trial but instead for a new proceeding regarding the remedies for Alcoa’s monopolization.

The government opposed this resolution, and with good reason. On remand, Alcoa predictably (and understandably) argued that, because it was no longer a monopolist, the appropriate “remedy” was for the district court to take no action against it—precisely the same result, of course, that would

137. See id. at 446-47.
138. Id. at 445.
139. See id.
140. See id.
141. Id. at 446.
142. See id.
143. See id. at 445 (noting that “the judgment in this action should speak from the time of its entry”).
have obtained if it had won its case before the Second Circuit. The district court agreed to hear new evidence so that it could determine "whether [Alcoa] still has a monopoly of the aluminum ingot market in the United States,"\(^{144}\) and the government failed in its attempt to prevent a new trial on this issue.\(^{145}\)

As one might expect, the subsequent district court opinion in the case, though technically simply a remand after a finding of liability, in fact denied virtually all the relief requested by the government because Alcoa no longer had a monopoly share.\(^{146}\) The district court retained jurisdiction for five years—the aluminum industry was still changing, after all—and in 1957, twenty years after the complaint had been filed, the government's application for a remedy was finally denied. During that twenty year period, the appellate courts had managed to issue exactly one opinion on the merits (the Second Circuit opinion discussed above); and that one opinion relied on a set of outdated facts to produce a holding (of monopolization) that proved hollow.

A more recent example (though one from a bygone era, technologically speaking) is *Universal City Studios, Inc. v. Sony Corp. of America.*\(^{147}\) In that case, the district court (in 1979) refused to grant declaratory or injunctive relief to copyright holders like Universal Studios against the makers of videocassette recorders (remember the Betamax?), based in significant part on its findings about how such recording devices were actually used by the general public.\(^{148}\) By the time the Supreme Court decided the case on appeal, however, five years had elapsed from the time that the district court made its findings, and VCR use had changed significantly. The studios attempted to bring to the Court's attention newer information about the way that VCRs were being used, which they believed considerably strengthened their case;\(^{149}\) but the Court ignored any and all

\(^{144}\) United States v. District Court for the Southern District of New York, 171 F.2d 285, 285, 286 (2d Cir. 1948).

\(^{145}\) See id.

\(^{146}\) See United States v. Aluminum Co. of Am., 91 F. Supp. 333, 415-16 (S.D.N.Y. 1950); see also Richard A. Posner & Frank H. Easterbrook, Antitrust Cases, Economic Notes, and Other Materials 628 (1981) ("[T]he decree finally entered [by the district court in the Alcoa case] seems the equivalent of a dismissal of the case. The explanation for this surprising outcome is that events overtook the tortoise-like progression of the government suit.").


\(^{148}\) *Universal City,* 480 F. Supp. at 436-39. This case demonstrates that private parties' foresight is no better than that of courts: Universal and the other studios opposed the introduction of VCRs because they believed that such devices would cannibalize their movie and broadcast markets; in fact, subsequent experience suggests that the studios' loss was fortuitous for them, as their profits from tape sales and rentals exceeded their wildest expectations (even as their preexisting markets continued to grow).

developments between 1979 and 1984, and decided the case (5-4) based on the facts that had been developed when VCR use was in its infancy.  

IV. Possible Responses to Rapidly and Continually Changing Facts

The preceding discussion raises the central question that this Article addresses: Given that the state of the world is changing rapidly in realms like telecommunications and cyberspace, and that we cannot be sure when this process of change will stop, how should the federal courts respond to such changes? In such situations, when there is reason to believe that the facts before an appellate court may be stale, what should the appellate court do?

A. Legislatures Refrain from Legislating in the First Place

One might attempt to preempt this messy issue by arguing that Congress and all other lawmaking bodies should not pass legislation in areas subject to rapid change, so that there would be no legislation that could then be the subject of litigation. The idea would be that legislatures refrain from legislating in rapidly changing fields and thus avoid the problems that courts face in adjudicating disputes about allegedly intrusive legislation by eliminating the source of the problem—the legislation.

At the outset, it must be stressed that this proposal is of course counterfactual; for better or worse, lawmakers do legislate and parties do bring litigation. But even assuming the implausible hypothetical of either universal restraint among lawmaking bodies or federal legislation that both abjured all forms of regulation and preempted all state regulation, the problem for the judiciary would remain because some of the troubling litigation would still exist. Some of the cases that could or do involve rapidly changing facts are based on legislation that is neither new nor aimed at cyberspace. The cases against Microsoft and Alcoa, for example, were applications of the Sherman Act (enacted over one hundred years ago), and some have interpreted Title VII as requiring Internet filters (if effective filters exist). The only way for lawmaking bodies


151. In order to have the desired effect, of course, the statutory language would have to be very broad (e.g., "No state shall promulgate a law affecting telecommunications or other areas subject to rapid change."). On preemption, see LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 1172-95 (3d. ed 1999).


to shut down all litigation that might present the issues raised in this Article would be for them to revise all their previous enactments by adding an exception for situations where facts are changing rapidly. Even indulging the proposition that legislators might so desire, how would this new legislation be phrased? That one could bring litigation only if the facts appeared to be settled? That if facts changed during the litigation, the case would instantaneously self-destruct (perhaps it would unripen, or the parties would lose standing)? The first option would eliminate too much litigation, and the second would raise serious concerns under Article III; both options demonstrate the absurdity of any legislative attempt at preventing litigation that involves rapidly and continually changing facts.

Finally, even as to new legislation, the proposal would be problematic. What if Congress (and the nation, and even law professors) believes that some new development must be stopped in its tracks in order to prevent an irreversible catastrophe? Absent constitutional constraints (like the First Amendment), does it really make sense to prevent Congress from acting? For those who believe in government intervention, rather than leaving developments to private parties and the market, potentially the most important time for intervention is when industries are in a state of flux; that is, when patterns are being created that might influence future developments, such that it is the government's point of greatest leverage. In addition, the Supreme Court opinion in Reno v. ACLU indicated that once a regulatory pattern becomes established, its very entrenchment may persuade some Justices that it is too late in the day for Congress to begin regulating out of the blue. In light of these considerations, legislatures intent on

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154. Many commentators, in fact, have suggested that path dependence—the condition obtaining when initial developments (e.g., how to design and control a network) will have a significant effect on later developments (e.g., how the network is used) by rendering some otherwise plausible later developments unlikely because of the cost of starting anew—applies particularly well to fast-changing fields like telecommunications and cyberspace. See, e.g., Mark A. Lemley & David McGowan, Legal Implications of Network Economic Effects, 86 CAL. L. REV. 479, 597-98 (1998); Joel P. Trachtman, Cyberspace, Sovereignty, Jurisdiction, and Modernism, 5 IND. J. GLOBAL LEGAL STUD. 561, 576-79 (1998).

155. One of the main ways that the opinion in Reno v. ACLU distinguished the Internet from broadcast was to emphasize that broadcast had been regulated since its inception, and the Internet had not. Id. at 867 (noting that while radio has traditionally been regulated, "the Internet, however, has no comparable history"). The implication of the distinction is that if Congress wants to regulate a new technology or means of communication, it should start regulating as soon as the innovation becomes widely used (as was the case with broadcast), rather than waiting until it gains mass acceptance (as was the case with the Internet by 1996 when Congress passed the Communications Decency Act). In other words, Reno v. ACLU suggests that, when a new technology becomes available, a legislature that believes in regulation should act quickly or lose its opportunity.
influencing future patterns might understandably choose to exercise their authority at the earliest possible stage.

It may be that the government's attempts at control are misguided, but that simply reflects the possibility that government control ultimately will be counterproductive. If one is willing to indulge the possibility that a reasonable legislature may legitimately seek to intervene in rapidly developing fields, however, delay becomes hard to justify.

B. Delay Adjudication Until the Facts Settle

The preceding discussion may seem to support a different possibility: If legislative restraint is undesirable and/or unworkable, judicial restraint is still possible. That is, the appellate court could delay adjudication until the facts stopped developing and the situation became calm. This could be achieved either by the court retaining jurisdiction and delaying resolution, or by its sending the case down to a lower court with instructions to await a stable environment. The obvious advantage of this proposal is that it allows courts to avoid expending valuable judicial resources only to find that the facts on which their opinions rest—and therefore the opinions themselves—are soon outdated. Rather than engaging in the futile exercise of chasing changing facts, the courts could simply wait out the changes until they settle down.

Such an approach may seem to gain support from the admonition articulated by Justice Souter in his concurrence in *Denver Area Educational Telecommunications Consortium, Inc. v. FCC*—namely that given the fast-changing nature of telecommunications, the judiciary might be well advised to heed the proposition, "First, do no harm." Justice Souter never intimated, however, that the judiciary refrain from deciding cases involving telecommunications, or even that the Supreme Court do so. Rather, he suggested that in the course of adjudicating cases in which the facts may change in the future, the Court should recognize the possibility

156. The latter course is, in fact, the one the Supreme Court adopted in *Watts, Watts & Co. v. Unione Austriaca di Navigazione*, 248 U.S. 9, 22-23 (1918). That case is not entirely apposite, though, in that the expressed reason for the Supreme Court's mandated delay was simply that the Austro-Hungarian respondent could not defend itself adequately, because both legal and practical barriers prevented intercourse between Austria-Hungary and the United States. *See id.* (directing delay until "it may become possible for the respondent to present its defense adequately"). Thus *Watts* did not justify delay based on the notion that unsettled facts complicated the courts' task in finding and applying the appropriate rule of law; it justified delay solely because of the practical concern that one side would not be adequately represented.


158. *Id.* at 778 (Souter, J., concurring) (quoting the Hippocratic Oath).

159. The Supreme Court could accomplish this by denying petitions for certiorari in cases where the facts seem likely to change, or, if the Court has already granted a petition and the facts then change, by dismissing the writ of certiorari as improvidently granted. On such possibilities, see infra notes 218 & 343.
of such change and thus not bind itself to any particular analysis; the Court, he said, should "be shy about saying the final word today about what will be accepted as reasonable tomorrow." His position was that, in recognition of the changes afoot, the courts issue opinions that allow for future developments, not that the courts decline to issue opinions at all.

In any event, the possibility of courts declining to adjudicate disputes until the facts settle seems unsatisfactory. Where facts are continually changing, it is not clear when, if ever, the facts will settle down. Waiting for a more certain time may mean waiting indefinitely. The practical result of this approach for litigants is an indefinite preservation of the status quo. A court cannot hide behind the pretense of not deciding, because not deciding has the practical effect of denying relief: either way, the litigant is subject to the allegedly illegal conduct or constraint for an unknown period of time. This effect is just as troubling when seen through the lens of the role of the legislature. Courts' refusal to decide effectively gets the judicial branch out of the business of reviewing laws. It simply cedes power to the political branches, removing the important check that is provided by the judiciary. That is, delaying adjudication has the effect of empowering the political branches and leaving the judicial process out of the picture; litigants with real concerns would find that the status quo would continue indefinitely, because the courts would be unwilling to act.

C. Remand, Issue the Opinion, or Update the Facts

Given, then, that lawmaking bodies do enact laws that apply to rapidly and continually changing areas of the world, that litigation does sometimes arise in which relevant facts are subject to such change, and that postponement of adjudication until facts settle cedes too much power to the political branches, the question remains: when an appellate court is faced with a credible assertion that relevant facts found by the trial court are no longer true, how should the appellate court respond?

160. Denver Area, 518 U.S. at 777 (Souter, J. concurring).

161. This is not to suggest that this less sweeping proposition ("do no harm" as counseling judicial flexibility, rather than inaction) is unassailable, but merely that it appears to be what Souter intended. The problem, as Justice Kennedy and some commentators have pointed out, is that it is not clear what the "do no harm" position is. See id. at 787 (Kennedy, J., concurring in part and dissenting in part); Gary D. Allison, Free Speech, Indecency and the Electronic Media: The Fragmentation of the Supreme Court, 32 TULSA L.J. 403, 427 (1997). It could indicate, as Justice Souter's vote in the case suggests, that a court should refrain from striking down a statute absent a particularly compelling case to do so; or it could counsel in favor of invalidating a questionable statute, in order to avoid the danger of trampling upon individual rights. See Denver Area, 518 U.S. at 777 (Kennedy, J., concurring in part and dissenting in part). Simply stated, it is not clear how we should construe the relevant "harm": is it the harm of invalidation or the harm of rights-chilling? To put the point somewhat differently, the "do no harm" dictum privileges a default position, but it is not clear what that default position should be—and therefore "do no harm" is indeterminate.

162. One might be tempted to say that the appellate court should move slowly or take small steps, but that is inapposite in this situation; whether it moves slowly or quickly, with little or big steps, it
The most obvious choice is for the appellate court to remand the opinion. The simplest way to do so would be for the appellate court to refrain from issuing an opinion and simply remand the case to the original fact-finder so that it can update the facts that it found. A more time-intensive alternative (from the appellate court's perspective) would involve the appellate court issuing an incomplete opinion, deciding what it can and remanding the rest. Arguably, this is similar to what the Supreme Court does when it announces a rule of law that it does not apply because the facts made relevant by the rule of law are not sufficiently clear to permit a determination by that Court.

A different possibility would be for the appellate court to issue its opinion without updating the facts. The simplest method would entail the appellate court issuing an opinion noting that its decision is based on the facts as found by the trial court without consideration of any factual developments since that time. In other words, the appellate court would render a decision as of the time that the trial court found the facts.

In light of the obvious drawback to this proposal—that the appellate court may issue a final opinion that relies on an outdated version of the facts—an appellate court might be tempted to consider a different possibility: issue an opinion based on the old facts that would not be a final resolution of the dispute between the parties, but rather would be a tentative first cut subject to later modification. The appellate court could issue an opinion laying out its initial view, with instructions to the fact-finding court that it should revisit the opinion if the assertions of factual change alleged by one or more of the parties proved to be correct. At first glance this system may seem an attractive way to avoid some potential disadvantages of other possibilities. Rather than either accepting the parties' assertions and remanding, or rejecting them and simply issuing a final opinion, this option provides a middle course whereby the appellate court need not determine whether the alleged new facts actually exist but can still issue an opinion. More generally, this proposal allows the appellate court to issue an opinion (thus avoiding the deadweight loss of an appellate court expending its resources without issuing any ruling) while recognizing the possibility of change; the appellate court would be acknowledging that the facts might be different, but would still be providing guidance.

still must figure out what to do about the facts that have changed. The appellate court will have a live case before it, and it must decide how to handle it.

163. This option should be distinguished from two slightly different possibilities: first, an appellate court could issue an opinion but retain jurisdiction so that it could immediately consider any new facts; this is discussed infra note 165. Second, the appellate court could issue an incomplete opinion, finally deciding what it could and remanding the remainder; this is discussed infra in the text accompanying note 219.
Upon closer inspection, however, this proposal has little to recommend it, because the notion of a “tentative opinion” is an oxymoron under Article III. If the opinion is not intended to resolve the parties’ dispute, then it would be a mere advisory opinion. Appellate courts are not in the business of giving good advice, but rather are charged with ruling on pending cases or controversies; if an opinion is not binding on the parties and does not issue an actual judgment, it is hard to see how it could be construed as anything other than an advisory opinion. If, on the other hand, the opinion is intended to resolve the parties’ dispute (as seems more probable), then it is not clear what the modifier “tentative” adds to the nix. It could not mean that the opinion would somehow become final and unreviewable once the district court got a chance to review any new submissions, because of course the parties would have the right to appeal from any new determination made by the district court. Perhaps it could be thought to underscore that the opinion may have to give way if the facts actually have changed, but the possibility of the parties reentering district court upon issuance of this opinion would not be affected by the suggestion of tentativeness; either the opinion would not resolve their dispute (in which case it would be advisory), or it would resolve it (in which case the parties would be in the same position as if the appellate court had issued an ordinary opinion deciding the matter without updating the facts). The possibility of a tentative opinion, then, either runs afoul of Article III or collapses into the possibility of the appellate court simply issuing its opinion without updating the facts.

The proposals discussed so far are all variations on a theme—an appellate court sending the case away without addressing the significance of any alleged factual changes. The appellate court can remand the case for development of new facts, decide the case despite the suggestion of new facts, or try to take some sort of half-measure that would not represent a final decision but would have the result of sending the case back down to the fact-finder. But whichever of these routes it chooses, the appellate court would manage to avoid its own determining (much less weighing) of any new facts and would leave any further work to be done by lower courts.

As was suggested above, the appellate court could also take a different tack: rather than send the case elsewhere, the appellate court could retain jurisdiction and determine the new facts on its own. A mechanism would be that, when a party asserts that relevant facts have changed in the time since the original fact-finding, the appellate court would accept presentations from the parties on the existence and significance of such changes, and then make its own determination about them.\textsuperscript{164} The advantage of

\textsuperscript{164} Section V(C)(3), infra, discusses at greater length how such updating of facts might be done.
this proposal is that it allows the appellate court to rule on the controversy as it exists; none of the other proposals do the same, because they provide for either sending the case back to lower courts without resolution or deciding the case based on stale facts. This proposal, in other words, allows an appellate court to do exactly what courts normally do when parties before them present a live controversy: issue an opinion resolving their dispute.\footnote{165}

V. Merits and Demerits of the Various Options

Thus we have three basic choices: the appellate court could simply decide the case based on the old facts; it could remand the case back to the trial court for further fact-finding; or it could update the facts on its own\footnote{166} and then issue its opinion. How do we choose among them?

We could start (and end) with theories of appellate adjudication. For instance, if our only consideration is that appellate courts correct trial court errors, then an appellate court should ignore any changes in facts and simply issue its opinion based on the facts as found by the district court.\footnote{167} The only relevant inquiry would be whether the district court, based on the evidence before it, erred in its findings of fact or law; post-trial developments would not affect how the district court should have

\footnote{165. A slightly different possibility would combine aspects of the two options discussed immediately above (updating the facts and issuing a tentative opinion): rather than issue a tentative opinion and send the case to the district court, the appellate court could issue an opinion and then allow the parties to present to the appellate court any facts that developed after the trial court fact-finding. The idea would be that the appellate court, in its initial resolution of the case, could avoid the messiness of updating the facts found below; any updating could then be limited to facts that the court’s opinion made relevant.

Such a limited updating has some advantages. Before any final ruling from the appellate court, the parties would not know what facts the court would find relevant and thus would likely bring forth every fact that might potentially be relevant. After the court issued a preliminary ruling, the parties would have a much better sense of which facts the court would consider relevant and which it would not; as a result, they could limit their submissions—and the court could limit its consideration—simply to those facts.

This procedure I am proposing may sound unorthodox, but in fact both the Federal Rules of Appellate Procedure and the Rules of the Supreme Court allow for it. Both sets of rules permit the parties to submit motions for rehearing after the court has issued its opinion. \textit{See} FED. R. App. P. 40; S. CT. R. 44. It is true that appeals courts rarely, and the Supreme Court almost never, actually grant one of these requests, but the procedure is readily available if the relevant players invoke it and take it seriously. It would also have a side effect (salutary, in my view) of getting courts in the habit of reviewing their decisions when it turns out that they assumed a fact or facts that are inaccurate.

\footnote{166. Such updating might be done with the assistance of a special master. \textit{See infra} notes 346-60 and accompanying text.

\footnote{167. Leon Green took this position (or one almost as absolute). \textit{See} LEON GREEN, JUDGE AND JURY 392-94 (1930) (advocating “a more serious trial and an informal checking up on the trial court’s work” instead of “a more or less preliminary trial and a serious appeal” in the hope that this would simplify judicial administration); \textit{see also} Charles Alan Wright, \textit{The Doubtful Omniscience of Appellate Courts}, 41 MINN. L. REV. 751, 778-81 (1957) (objecting to the expansion of appellate review and the consequent expense, delay, and mistrust of trial judges engendered by this usurpation of power).}
decided at the time. Picking this theory, then, yields a clear answer to the question of how an appellate court should respond to rapidly changing facts. We could, of course, choose this theory of adjudication, but that has the flavor in this context of picking one’s conclusion.

At the other extreme, we might say that the exclusive focus of appellate adjudication (indeed, all adjudication) should be on doing justice between the parties. If so, it would seem that the only priority for all courts, appellate and otherwise, should be getting the facts right. Thus, just as a focus on error correction resolutely points toward an appellate court deciding the case based on the old facts, so this consideration resolutely points against that option; after all, if the focus is on the parties and recognizing the true state of affairs, then the court must take into account the new factual developments. Once again, though, there is the question of arbitrariness and result orientation; why focus on justice between the parties and nothing else?

Other theories of appellate adjudication, meanwhile, operate at a higher level of abstraction and thus are not so resolutely conclusive in all situations; perhaps unsurprisingly, they are fairly indeterminate. For instance, a commonly expressed view is that, while trial courts should focus on doing justice between the parties, appellate courts should try to maintain coherence in the law. This view was ably articulated by Judge Posner in Mucha v. King. The case involved a question that the Supreme Court still has not resolved—the standard of review for mixed questions of law and fact. Posner’s opinion squarely addressed this unresolved issue (holding that appellate courts need not review de novo mixed questions of law and fact). In so doing, Posner suggested that an appellate court’s “main responsibility is to maintain the uniformity and coherence of the law, a responsibility not engaged if the only question is the legal significance of a particular and nonrecurring set of historical events.”

In most cases, this will be an argument against appellate fact-finding—as it was for Posner in Mucha. In the case of rapidly changing facts,


169. Mucha v. King, 792 F.2d 602 (7th Cir. 1986).

170. Id. at 605; see also Salve Regina College v. Russell, 499 U.S. 225, 233 (1991) (suggesting that “deferential review of mixed questions . . . is warranted when it appears that the district court is ‘better positioned’ than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of legal doctrine”); infra text accompanying notes 335-39.

171. Mucha v. King, 792 F.2d at 605-06.
however, the argument frequently may cut the other way. The sort of facts that might be subject to rapid and relevant change often will not be "a particular and nonrecurring set of historical events." They often will have future significance, and often will have applications beyond the four corners of the case before the court. And, in light of the role of precedent, such broader facts may influence the resolution of other cases (witness the potential significance of Reno v. ACLU's findings about the Internet, and the actual long-term significance of Red Lion's finding of spectrum scarcity). In other words, though they are not questions of law, some of these facts may be as central to the uniformity and coherence of the law as straight legal questions are.

Maybe appellate action on changing facts should depend on which appellate court is deciding. Rulings issued by courts of appeals are simply not as influential as Supreme Court opinions. Not only does the Supreme Court cover more territory, but its opinions are more widely read, digested, and followed by judges, by members of the executive and legislative branches, and by members of the public. This consideration, however, could lead to two different conclusions. We might say that accurate, updated fact-finding is more important in the Supreme Court, because their decisions are more closely watched and followed; we need to have accuracy because the stakes are so high, both for the parties and, more important, for future litigation. Or we might contend that updated fact-finding is less important in the Supreme Court, because the Supreme Court decides issues, not cases; the Supreme Court is making broad pronouncements anyway, so the facts are not as important.172

Instead of the top-down approach of starting with a broad theory, we might instead employ a bottom-up approach that compares each possibility to the ordinary course of adjudication and to each other. Such an approach allows us to bring into focus not only Article III but also systemic considerations, such as efficiency and relative institutional capabilities, that provide metrics by which we can compare among the alternatives. This Article will adopt such an approach, on the theory that it will give us a fuller picture of the choice between the options. Thus I will assess the relative strengths and weaknesses of each approach; in the course of doing so, the answers suggested by the various considerations—and the trade-offs between those considerations—will become clearer.

A. Issue the Opinion Based on the Facts As Found by the Trial Court

Should the appellate court simply rely on the possibly outdated facts found by the district court and issue an opinion? Deciding the case based

172. Of course, that raises some awkward points: are we saying that the Supreme Court ignores the command of Article III to be rooted in the facts? That it should?
on old facts avoids the danger that the appellate court never gets to issue a ruling (or, perhaps more likely, issues an opinion only when facts have settled and thus it is too late for the appellate court to play a role in the development of the relevant field of endeavor). At the same time, deciding the case based on old facts has, or seems to have, some advantages over appellate updating of the facts.

One seeming argument for issuing the opinion without updating the facts is that it would encourage the parties to bring all their factual arguments in one venue. The idea is that an appellate court’s willingness to find facts will turn the trial court’s adjudication into a mere warm-up. The way to force the parties to present all their evidence to the trial court is for the appellate court to refuse to consider factual assertions. That way, the parties know that their submissions will be considered by the district court no matter what, so they have no incentive to sandbag and instead have an incentive to make their best case to the district court. If the goal is merely not to reward such sandbagging, then this would be an argument for remanding for additional fact-finding; if the goal is to penalize this behavior, then it becomes an argument for deciding the opinion without further fact-finding of any sort.

Although this may make sense in ordinary cases, it has little weight in the context of this Article. The facts at issue are, by hypothesis, new; the parties could not have raised them before the district court, because they did not yet exist (or exist in that form). So there is no point in giving the parties an incentive to submit these facts, because such submission would have been impossible.

A more plausible advantage of an appellate court deciding based on old facts would arise if the appellate court were inclined to issue an opinion that would render the outdated facts, and therefore their updating, irrelevant. If the Supreme Court were, say, to replace a particular First Amendment test with one that was less fact dependent and on that basis planned to disregard facts that the parties (operating under the existing regime) had thought relevant, the most efficient action for the Court to take would be to decide the case and lay out the rule of law; any time spent updating facts would just be wasted.

The strength of this argument is diminished by the consideration that receiving new facts that prove to be irrelevant need not take up a huge amount of an appellate court’s time. If a judge or justice knows that she plans to apply lenient scrutiny, she need not detain herself on the intricacies of narrow tailoring. Judges do this all the time with respect to existing facts—that is, they spend little time on portions of briefs discussing matters that the court would reach only if it adopted a test that the particular judge is not inclined to adopt—and there is no reason to believe that judges would have any more difficulty with respect to newly developed facts. Still, the
extra briefing is a cost for the system, particularly for the parties. And, short of a more fundamental change in the way that appellate courts decide cases (e.g., a routine practice whereby the appellate court simply tells the parties what issues it finds important or troubling), those costs will remain.

The discussion above may seem to miss the main advantage of deciding a case based on the facts below: it allows the court simply to issue its opinion in the ordinary manner, without taking any special fact-finding actions that might tax the court's resources. In so treating a case in which the facts have changed as it would treat any other case, this option may seem to conserve both the courts' and the parties' resources.

These benefits shrink upon closer inspection, however, and in fact highlight potential problems with an appellate court deciding the case based solely on the record that was developed by the district court. The problems arise from the possibility that the opinion issued by the appellate court relies on facts that no longer exist, and thus is outdated on the day it is issued. We can explore one problem this creates by examining the two basic possible scenarios of what happens next: either the district court reconsiders the newly issued appellate opinion, or it does not.

We can imagine how the various possibilities might play out. If an appellate court issues relief that operates prospectively (whether couched as injunctive or declaratory relief\(^173\)), but facts relevant to the holding have changed, the losing party would likely enter the district court seeking reconsideration.\(^74\) By hypothesis, one or more parties would have put forth a credible claim that crucial facts had changed since the original fact-finding, and the appellate court would have ignored that suggestion. As soon as the appellate opinion was issued, therefore, the losing party would presumably return to the court that originally issued the relief and request that the court reconsider the issuance (or nonissuance) of the relevant injunctive and/or declaratory relief.

If the district court were willing to reconsider the prior ruling in light of the changed circumstances, the appellate court's issuance of its opinion without considering new facts would have achieved very little. It would not save judicial resources or the parties' resources if, upon issuance of the appellate opinion, the parties immediately go back to the district court requesting that it reopen the injunction based on new facts. The parties would then present all their arguments to the district judge; and the judge would have to reacquaint herself with the old facts (and, of course, digest the new facts) with sufficient depth to allow her to compare the new and

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173. See supra subpart II(A).

174. It is, of course, possible that the losing party would abandon hope and thus refrain from seeking reconsideration—particularly if it seemed probable that the district court would grant no relief (based either on preclusion or on the notion that it would be improper for a lower court to reconsider a decision made by a higher court). See infra notes 176-93 and accompanying text.
old facts. Even as to the appellate courts' resources, considered alone, there is no reason to expect any savings: once the district court issued its ruling, the parties would then proceed back up the chain of appeal, and the appellate court would have to familiarize itself with the case anew.\textsuperscript{175} The litigation, in other words, would never end; it would just change venue.

This discussion, though, raises the specter of an even more significant drawback for the proposal that appellate courts issue opinions based on old facts: the district court \textit{might not} be willing to reconsider the injunctive/declaratory relief, on the theory that such relief had been blessed (or rejected) by a higher court. If so, the cost of an appellate decision based on old facts could be quite high.

How might this happen? First, any litigant who sought to reopen a judgment would be faced with a suggestion of preclusion—that the matter had already been fully and finally litigated, and so was not subject to further review. Presumably, the movant would respond by arguing that she should be granted relief under Rule 60(b) of the Federal Rules of Civil Procedure, which allows a court to relieve a party from a final judgment if, among other things, "it is no longer equitable that the judgment should have prospective application."\textsuperscript{176} This language obviously does not mention new facts, but the Supreme Court has suggested that Rule 60(b) applies to new factual developments.\textsuperscript{177} Alternatively, an aggrieved party

\textsuperscript{175} An appellate court with discretionary jurisdiction—\textit{i.e.}, the Supreme Court—could avoid this expenditure of energy by denying certiorari the second time around, but this possibility has serious shortcomings of its own. \textit{See infra} note 218.

\textsuperscript{176} \textit{Fed. R. Civ. P.} 60(b)(5). A movant might also invoke Rule 60(b)(2), which provides for relief if there is newly discovered evidence that could not have been discovered during the original trial. The weight of authority, however, is that "[n]ewly discovered evidence must be of facts existing at the time of trial," and the new evidence relevant here would, by hypothesis, not have existed at the time of trial. \textit{See 11 Charles Alan Wright et al., Federal Practice and Procedure § 2808 (2d ed. 1995); see also} Johnson v. Offshore Express, Inc., 845 F.2d 1347, 1358 (5th Cir. 1988) ("'Newly discovered evidence' under Rule 60(b)(2) . . . must be evidence of facts existing at the time of the original trial."). For the situations addressed in this Article, then, Rule 60(b)(5) is the more likely vehicle.

\textsuperscript{177} \textit{See} Rufo v. Inmates of Suffolk County Jail, 502 U.S. 367, 384 (1992) ("A party seeking modification of a consent decree may meet its initial burden by showing a significant change either in factual conditions or in law."); Agostini v. Felton, 521 U.S. 203, 215 (1997) (citing the \textit{Rufo} holding that a Rule 60(b) motion can be granted on the grounds of evidence of a significant change in either factual conditions or the law). One potential loose end is that these cases arose in the context of consent decrees and injunctions, rather than declaratory relief. But Rule 60(b) is not limited to particular kinds of relief (it focuses on judgments with "prospective application"). And, as this Article has argued, declaratory relief often has a prospective effect, so the principle would seem to apply to that relief as well. \textit{See} Wright et al., \textit{supra} note 176, § 2863 n.13 ("Relief seems to be possible under [Rule 60(b)] from the prospective operation of a declaratory judgment."). After all, it would seem strange for a district court to inform a litigant both that it could not challenge declaratory relief after it had been issued (because Rule 60(b) did not apply to such relief) \textit{and} that such relief was binding upon that party prospectively. (And, of course, if the court said that the relief was not binding upon that party
could argue that she should be permitted to bring her suit anew because the new factual developments rendered preclusion inappropriate.\textsuperscript{178} Neither of these arguments would be a knock-down winner: Rule 60(b) is too vague, and the threshold applied to new facts in order to avoid preclusion is too muddled, to offer certainty.\textsuperscript{179} Given, though, that the factual change, by hypothesis, casts doubt upon the issuance (or nonissuance) of prospective relief, there is a reasonable chance that the movant would be able to renew her suit. It should be noted, however, that if a district court was not willing to reopen an opinion that was based on outdated facts (or if the losing party decided the chances of success were too slim and thus did not seek reconsideration in the district court in the first place), then the cost of an appellate court deciding the case based on the facts as found by the district court would be disturbingly high. The intolerable tension discussed in Part II in the context of facts that change after the appellate process is complete—that the opinion lays down the current status of the law but in fact misdescribes the world as it has come to exist after the opinion was issued\textsuperscript{180}—would apply here as well; the appellate opinion would never have applied to the parties' actual dispute, yet it would bind them into the indefinite future.

Assuming that the moving party overcomes the suggestion of preclusion, a second potential obstacle quite possibly would produce a similar result in the district court: The court might find no preclusion but nonetheless conclude that it was unable to grant any relief. The district court might consider it improper for a lower court to reconsider the factual basis for the decision of a higher court, as such reconsideration would of course entail a reconsideration of the opinion that relied on those facts. That is, the district court might conclude that it was the prerogative of the appellate court that issued the original opinion (or a higher court) to prospectively, then the party could simply treat the declaratory relief as a dead letter on the theory that the facts had changed, and prepare for a new lawsuit on the issue.)

\textsuperscript{178} See, e.g., Southeast Fla. Cable, Inc. v. Martin County, 173 F.3d 1332, 1336 (11th Cir. 1999) (concluding that because underlying facts had changed, res judicata did not apply); 18 CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 4417 (1981); RESTATEMENT (SECOND) OF JUDGMENTS § 24 cmt. f (1980) ("Material operative facts occurring after the decision of an action with respect to the same subject matter may in themselves, or taken in conjunction with the antecedent facts, comprise a transaction which may be made the basis of a second action not precluded by the first.").

\textsuperscript{179} See WRIGHT ET AL., supra note 178, § 4417 (discussing different approaches to assessing whether factual change is sufficient to render preclusion inappropriate).

The nonmoving party might try to argue that the changes were not actually new because they had occurred while the case was on appeal. This argument should lose, as long as the parties attempted to bring the new facts to the appellate court's attention. After all, the reason for the new suit would be that the appellate court had refused to consider those new facts, so preclusion would mean that the movant attempted to put forward facts as diligently as possible but nonetheless never got her bite at the apple.

\textsuperscript{180} See supra text accompanying notes 45-67.
reexamine either its holding or the facts that provided the underpinning of the holding. Or the district court might be willing to make new factual findings, but not be willing to change the relief granted even if the new factual findings, absent the previously issued appellate opinion, would lead to a different outcome. Such reasoning would flow from the notion that a lower court is bound by the decisions of a higher court—even if they are outdated or otherwise wrong—until such time as the higher court abandons its precedent.\textsuperscript{181}

Such a position gains some support from the Supreme Court’s precedents themselves. In a number of cases, the Supreme Court has chastised lower courts that have anticipated Supreme Court overruling of a decision; the Court has made it clear that it, and not any lower court, has the authority to reject its decisions.\textsuperscript{182} As the court recently stated in \textit{State Oil Co. v. Khan},\textsuperscript{183} even if the original opinion suffers from "'infirmities, [and]... increasingly wobbly, moth-eaten foundations,'... it is this Court's prerogative alone to overrule one of its precedents."\textsuperscript{184}

Arguably, factual changes are different: the lower court would not be ruling that the legal reasoning in the original appellate opinion was invalid and had to be rejected, but rather would simply be ruling that changed facts resulted in a different outcome under the preexisting legal analysis. To put the point somewhat differently, one could argue that the lower court would not be rejecting the earlier precedent but would simply be distinguishing it, because its factual pattern did not apply anymore. In addition, the appellate court, by hypothesis, would not have made its own factual findings but would merely have accepted findings from lower courts; one might contend that the lower court would really be reconsidering the finding that it (or a coequal court) originally made, even if that finding had been the basis for a higher court's opinions. These arguments, however, are by no means irrefutable: one might respond that rejecting a key underpinning of a decision but "leaving the reasoning in place" is effectively a rejection of that case and thus must be left to the issuing court (or one above it), because the opinion would no longer apply to the world. Relatedly, one might contend that key factual assertions (especially

\textsuperscript{181} Some commentators reject this proposition, \textit{see}, \textit{e.g.}, John M. Rogers, \textit{Lower Court Application of the "Overruling Law" of Higher Courts}, 1 \textit{LEGAL THEORY} 179, 181 (1995), whereas others embrace it, \textit{see}, \textit{e.g.}, Larry Alexander, \textit{Constrained by Precedent}, 63 S. CAL. L. REV. 1, 4 (1989). This debate, though interesting, does not concern me here; my point is that, whether or not they \textit{should}, some lower courts likely will defer not only to the legal conclusions but also to the underlying factual assertions made by a higher court.

\textsuperscript{182} \textit{See} Rodriguez de Quijas v. Shearson/American Express, Inc., 490 U.S. 477, 484 (1989); \textit{Agostini}, 521 U.S. at 237.

\textsuperscript{183} 522 U.S. 3 (1997).

\textsuperscript{184} \textit{Id.} at 20 (quoting Khan v. State Oil Co., 93 F.3d 1358, 1363 (1996)).
assertions that are not specific to the parties) should be understood as part of the holding and thus be entitled to deference.\textsuperscript{185}

For purposes of this Article, what is important is not the question of which understanding of precedent is preferable, but rather the possibility that some lower courts may be swayed by the argument that they are not free to reconsider the factual underpinnings of a decision by a court that is above them in the hierarchy. Would, for example, some lower courts consider themselves bound by the findings in \textit{Reno v. ACLU}\textsuperscript{186} upon which the Supreme Court relied, and thus be unwilling to reconsider the constitutional status of the CDA in light of, for instance, the fact that the obstacles to age verification on the Internet existing in 1996 are considerably diminished today?\textsuperscript{187} It appears that some lower courts consider

\begin{numberedlist}
\item \textsuperscript{185.} The Supreme Court appears to have so treated its own factual assertions in other contexts. One example is the historical record surrounding \textit{Chisholm v. Georgia}, 2 U.S. (2 Dall.) 419 (1793), which had allowed a citizen of South Carolina to bring a suit against the state of Georgia in federal court, and the enactment of the Eleventh Amendment (which prohibited suits against states by citizens of another state). In \textit{Principality of Monaco v. Mississippi}, 292 U.S. 313 (1934), the Supreme Court stated that \textit{Chisholm} "created such a shock of surprise that the Eleventh Amendment was at once proposed and adopted." \textit{Id.} at 325. Justice Souter's dissent in \textit{Seminole Tribe of Florida v. Florida}, 517 U.S. 44 (1996), however, cited numerous historical sources indicating that the reaction to \textit{Chisholm} had not been one of surprise or outrage, and that the Eleventh Amendment was not immediately thereafter adopted. \textit{Id.} at 106 n.5, 106-14 (Souter, J., dissenting). This historical fact was important to \textit{Seminole Tribe} (which involved the question of congressional abrogation of state immunity from suit that was not grounded in the text of the Eleventh Amendment) because the majority had contended that \textit{Chisholm} violated a widely understood principle of state immunity from all suits in federal court, \textit{see id.} at 69—an assertion that was necessary to the majority's position in light of the conceded inapplicability of the Eleventh Amendment; the majority claimed that \textit{Chisholm} was an aberration and was universally regarded as such by the Framers' generation.

The majority in \textit{Seminole Tribe} did not respond to the dissent's historical sources with its own historical material; rather, it simply asserted that \textit{Chisholm} had created a shock of surprise, and its only support for that statement was the dictum from \textit{Monaco}. \textit{Id.} at 69. As Justice Souter pointed out:

\begin{quote}
The Court's response to this historical analysis is simply to recite yet again Monaco's erroneous assertion that Chisholm 'created such a shock of surprise that the Eleventh Amendment was at once proposed and adopted.' . . . Monaco's \textit{ipse dixit} that Chisholm created a 'shock of surprise' does not make it so. This Court's opinions frequently make assertions of historical fact, but those assertions are not authoritative as to history in the same way that our interpretations of laws are authoritative as to them.
\end{quote}

\textit{Id.} at 106 n.5 (Souter, J., dissenting). In other words, the Court felt no need to respond with historical sources because the statement from an earlier precedent (even one decided more than 100 years after \textit{Chisholm}) was good enough. Apparently, the historical question was to be treated as settled by the \textit{Monaco} decision; and if it would be so treated by the Supreme Court, then a fortiori a lower court should so treat the Court's rendition of history as well.

\item \textsuperscript{186.} 521 U.S. 844 (1997).

\item \textsuperscript{187.} The district court that granted a preliminary injunction against the new Internet indecency act—the Child Online Protection Act, 47 U.S.C. § 231 (Supp. 1999)—was somewhat coy on this issue. \textit{See ACLU v. Reno}, 31 F. Supp. 2d 473, 475 (E.D. Pa. 1999). The district court made its own findings but also emphasized findings relied upon by the Supreme Court in \textit{Reno v. ACLU}, pointedly noting, for example, that "the Supreme Court adopted the district court's finding that 'existing technology did not include any effective method for a sender to prevent minors from obtaining access
themselves so constrained in related contexts. To return to the example of *Red Lion*, the U.S. Court of Appeals for the D.C. Circuit has on several occasions suggested the invalidity of *Red Lion*'s notion of spectrum scarcity, but the D.C. Circuit has also stated that it will defer to the Supreme Court's finding absent further word from the Court itself. In fact, in the most recent of these cases, the D.C. Circuit, apparently treating the Supreme Court's assertion of spectrum scarcity as an integral part of the Court's holding, explicitly stated that it was not free to reexamine the scarcity doctrine, relying on the language from *State Oil v. Khan* quoted above.

What is the harm of a lower court refusing to reconsider the relief granted (or denied) by a ruling of a higher court, whatever the lower court's jurisdiction is? It is certainly true that a lower court is not free to ignore the rulings of courts of higher jurisdiction, but it is not clear that such rulings are necessarily final. The Supreme Court has repeatedly asserted that it is not free to reconsider its own decisions, but this does not mean that lower courts are not free to reconsider their own decisions. In fact, the Supreme Court has repeatedly stated that it is not free to reconsider its own decisions, but this does not mean that lower courts are not free to reconsider their own decisions.

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The most famous counter-example, *Stell v. Savannah-Chatham County Board of Education*, 220 F. Supp. 667 (S.D. Ga. 1963), rev'd, 333 F.2d 55 (5th Cir. 1964), cert. denied, 379 U.S. 933 (1964), has a subsequent history that, if anything, supports the D.C. Circuit's position on *Red Lion*. *Stell* came nine years after *Brown v. Board of Education*, in which the Supreme Court had supported its conclusion that segregation "generates a feeling of inferiority" among African-Americans by stating that "this finding is amply supported by modern authority" and citing seven publications. 347 U.S. 483, 494 & n.11 (1954). In *Stell*, the district court refused to order a school board to dismantle a segregated school system because the court revisited *Brown's* factual assertions about the effects of segregated education and found them untenable. The district court justified its reconsideration of the effects of segregation as follows:

> Whether Negroes in Kansas believed that separate schooling denoted inferiority, whether a sense of inferiority affected their motivation to learn and whether motivation to learn was increased or diminished by segregation was a question requiring evidence for decision. That was as much a subject for scientific inquiry as the braking distance required to stop a two-ton truck moving at ten miles an hour on dry concrete.

> The Supreme Court put at rest any residual question on the nature of its inquiry when it indicated its reliance on scientific information: "Whatever may have been the extent of psychological knowledge at the time of Plessy v. Ferguson, this finding is amply supported by modern authority." The teachings of psychology in 1896, in 1954, or in 1963 are inquiries requiring evidence in the same sense as repeated determinations of "seaworthiness." Actually, the non-legal authority to which the Court referred was neither testimonial nor documentary in character but came from a "Brandeis" type brief filed directly in the Supreme Court by the National Association for the Advancement of Colored People. *Stell*, 220 F. Supp. at 678. The Fifth Circuit quickly reversed the district court, stating:

> We do not read the major premise of the decision of the Supreme Court in the first *Brown* case as being limited to the facts of the cases there presented. We read it as proscribing segregation in the public education process on the stated ground that separate but equal schools for the races were inherently unequal. This being our interpretation of the teaching of that decision, it follows that it would be entirely inappropriate for it to be rejected or obviated by this court.

*Stell*, 333 F.2d at 61.
court’s reasoning? For litigants, they would have to go through the motions (literally and figuratively) at the district court with no possibility of actually winning; and only after this exercise—and perhaps another in the court of appeals, if the issuing court was the Supreme Court—would they appear before a court that would consider itself able to reconsider the case. This would be extremely costly for litigants, who would have to fund futile litigation in lower courts before they were given the green light to seek actual redress in the issuing court. For that issuing court, nothing would be saved, because it would still have to deal with the case. And for the lower courts, a significant amount of time and energy would be spent sending the case up the appellate ladder, with nothing to show for it. In addition to all of those considerations, there is the problem of extending the life of outdated facts. Remember that during all of this period, the old, outdated opinion will be on the books. Findings made by the district court in year $X$ will not only last to year $X + 2$ (when the appellate court issues its opinion relying on those findings), but until $X + 4$ (when the appellate court finally issues its second opinion). If the findings were indeed invalid by year $X + 2$, it would be quite troubling for a ruling that rests upon such findings nonetheless to remain in force for two more years of litigation, working its way up the appellate chain. The concern about the continued force of obsolete factual findings would apply here, too; the outdated opinion would have force until the appellate court got around to seeing the case again.

The danger that appellate courts are issuing opinions based on stale facts also raises a separate, but related, jurisprudential concern. At the

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191. It may make little difference to the litigants, as a practical matter, whether the reasoning is based on preclusion or on the role of lower courts in the hierarchy; either way, the lower court would refuse to grant the moving party any relief and she would then have to appeal.

192. The situation would be even worse if the district court were unwilling even to make any new factual findings (much less to reconsider the appellate opinion’s result), on the theory that the findings in the original litigation had been accepted, and therefore insulated from lower court scrutiny, by the appellate opinion. See supra text accompanying note 181. In such a situation, the litigant would have to litigate all the way up to the issuing court only to find that the issuing court would likely refrain from making its own findings but instead would remand to the district court, this time clarifying that it can, in fact, make new findings. Only then (we are probably up to year $X + 5$ or so) would the litigant get a chance to persuade a court that the factual findings made years earlier were no longer valid.

193. There are ways of avoiding this problem: most obviously, the appellate court could make it clear that, if a subsequent district court found the factual underpinnings of the appellate court’s opinion to be invalid, the district court could reconsider those facts and the ruling on which it rested. This could be achieved either by the appellate court so stating in its opinion or by remanding the case to the district court; either way, the appellate court would thereby clarify that district court reconsideration of the case and its crucial underpinnings would be permissible.

Such an outcome would avoid the dangers of an entrenched opinion relying on a set of invalid facts, but it would simply leave us back in the position that I noted at the outset of this discussion: the litigation continues in another forum, and thus this possibility does not do much for the conservation of either judicial or private resources. See supra text accompanying note 175.
outset, it should be noted that, depending on the way that the facts have changed, the case could be moot.\textsuperscript{194} If, for example, Microsoft stopped selling its Windows operating system because Windows had lost so much market share that it was no longer profitable, a court would likely find the antitrust case against Microsoft moot.\textsuperscript{195} This is particularly interesting because a determination about mootness requires the court to weigh the likelihood of the challenged action occurring in the future—specifically, whether there is a "reasonable expectation" of the alleged harm recurring.\textsuperscript{196} That is, a decision about mootness obliges a court to weigh facts on its own and make its own determination about the likelihood of particular events. Thus, any time there is a credible suggestion of mootness, from any source,\textsuperscript{197} judges must gather the new facts and make

\textsuperscript{194} The Supreme Court has stated on numerous occasions that Article III of the Constitution does not permit federal courts to hear moot cases. See, e.g., \textit{Lewis v. Continental Bank Corp.}, 494 U.S. 472, 477 (1990) ("[F]ederal Courts may adjudicate only actual, ongoing cases or controversies."); \textit{Liner v. Jafco, Inc.}, 375 U.S. 301, 306 n.3 (1964) ("Our lack of jurisdiction to review moot cases derives from the requirement of Article III of the Constitution under which the exercise of judicial power depends upon the existence of a case or controversy."). The proposition that adjudication of moot cases is inconsistent with Article III is widely, but not universally, accepted on the Court. The lone dissenter is Chief Justice Rehnquist, who suggested in \textit{Honig v. Doe}, 484 U.S. 305 (1988), that the Court reconsider its position that Article III squarely forbids the adjudication of moot cases. He contended that "while an unwillingness to decide moot cases may be connected to the case or controversy requirement of Art. III, it is an attenuated connection that may be overridden where there are strong reasons to override it." \textit{Id.} at 331 (Rehnquist, C.J., concurring). Interestingly (for purposes of this Article), he argued that "we should adopt an additional exception to our present mootness doctrine for those cases where the events which render the case moot have supervened since our grant of certiorari or noting of probable jurisdiction in the case." \textit{Id.} at 331-32.

No Justice joined Rehnquist's opinion in \textit{Honig}, however, and none has taken up his call to reconsider whether mootness has constitutional underpinnings. See Pushaw, \textit{supra} note 13, at 457. Apparently, all the other Justices see no reason to disturb the longstanding doctrine that Article III prevents federal court adjudication of moot cases.

195. One exception to the mootness doctrine is that a case will not be moot if the defendant voluntarily ceases the challenged behavior but is free to return to it at any time. This exception does not apply, however, "if the defendant can demonstrate that 'there is no reasonable expectation that the wrong will be repeated.'" \textit{United States v. W.T. Grant Co.}, 345 U.S. 629, 633 (1953) (quoting \textit{United States v. Aluminum Co. of Am.}, 148 F.2d 416, 448 (2d Cir. 1945)). If Microsoft stopped selling Windows because the market for it had dried up, the appellate court would then have to determine whether there was a reasonable expectation of a Windows revival (and, of course, of Microsoft's allegedly illegal practices with respect to Windows).

196. \textit{See} \textit{Spencer v. Kemna}, 523 U.S. 1, 17 (1998); \textit{Lewis}, 494 U.S. at 481; Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc., 484 U.S. 49, 66 (1987); \textit{Honig}, 484 U.S. at 319-20 \& 318 n.6; \textit{W.T. Grant Co.}, 345 U.S. at 633 (all stating that a claim is moot absent a "reasonable expectation" that harm would recur).

197. The Supreme Court has consistently held that it has no power to hear a moot case, \textit{see supra} note 194, so it does not matter who raises the issue of mootness; \textit{and} all parties are obliged to raise it if it might be relevant, even if the parties believe that the case is not moot. \textit{See} Board of License Commissioners of the Town of Tiverton v. Pastore, 469 U.S. 238, 240 (1985); Arizonans for Official English v. Arizona, 520 U.S. 43, 68 n.23 (1997). Anyone—a party, an amicus, the Court acting on its own, a taxi driver—can raise a question of mootness, and the Court then considers the matter for itself.
a finding based on them.\textsuperscript{198} And, to return briefly to the issue of efficiency, if an appellate court looks at the facts and then determines that a case is not moot, it has already invested the time to consider the significance of the new facts; in such a situation, the additional cost of taking those facts into account in its decision on the merits seems relatively small, particularly in comparison to the deadweight loss that would result if the court nonetheless relied solely on the original facts and then left the district court to start all over again with a new fact-finding.

In most situations, however, it seems likely that mootness per se will not be an issue. Still, there is a lurking issue of the role of federal courts, an issue that has both prudential and constitutional implications.\textsuperscript{199} Simply stated, acceptance of stale facts seems inconsistent with the whole notion of prospective relief. The appellate court would be saying not that a given law or practice was illegal at the time, but that it had been illegal in the past. Take the possibility I suggested in Part III regarding Microsoft’s market share for personal computer operating systems dropping precipitously from over ninety percent to less than fifty percent. The case would not, as a technical matter, be moot. There would still be a concrete dispute, and the parties would have a stake in that dispute (unless the United States were to concede that no controversy remained because of Microsoft’s loss of market share). The United States has a ripe antitrust claim against any market participant that the United States believes is violating the law; even if a company’s market share were only five percent

\textsuperscript{198} Appellate courts can, of course, remand to lower courts for consideration of mootness, see United States v. Chesapeake & Potomac Tel. Co., 516 U.S. 415, 416 (1996) (remanding for consideration of whether the case was moot in light of the newly enacted Telecommunications Act of 1996), although in many cases the Supreme Court simply decides the mootness issue for itself rather than send the case to a lower court to make this determination. See discussion infra subsection V(C)(1)(a).

Significantly, even when the appellate court remands for consideration of mootness, it still must make the determination whether the new facts present a sufficiently credible claim that mootness is an issue. Mootness is raised in many cases, and it would be ridiculous for an appellate court to send every case about which someone has suggested mootness (because, as noted above, mootness is a constitutional issue that can be raised by anyone) to a district court for consideration of the issue. Similarly, it would be absurd (and inconsistent with the constitutional basis for mootness) for an appellate court to ignore allegations of mootness and simply decide the case without considering the issue of mootness. The bottom line, therefore, is that even when it remands for consideration of mootness, the appellate court gets sufficiently involved with the facts to determine whether or not a remand is appropriate.

\textsuperscript{199} It bears noting that state courts are not subject to Article III, even when adjudicating federal law claims. See, e.g., United States Dept’ of Labor v. Triplet, 494 U.S. 715, 721 (1990) (holding that state courts are not bound by Article III); Asareo Inc. v. Kadish, 490 U.S. 605, 617 (1989) (noting that “[a]lthough the state courts are not bound to adhere to federal standing requirements, they possess the authority . . . to render binding judicial decisions that rest on their own interpretations of federal law”); New York State Club Ass’n v. City of New York, 487 U.S. 1, 8 n.2 (1988) (“[T]he special limitations that Article III of the Constitution imposes on the jurisdiction of the federal courts are not binding on the state courts.”).
of the market, the United States would have a justiciable claim against it. The problem in such a situation, of course, is that the government would now have a losing (but ripe) claim. The case against Microsoft, then, would not be moot, but a crucial fact underlying the suit—Microsoft’s huge market share in the market for operating systems—would have evaporated, leaving the arguments in favor of the judicially mandated relief very weak.

Would it really make sense for an appellate court to affirm the district court’s ruling by relying on the facts as developed by the district court (when Microsoft was still riding high)? What would such an appellate ruling mean? That as of the time the district court ruled, forward-looking relief was appropriate, even though such relief is inappropriate now? And what would be the legal effect of such a ruling? Given the changes suggested in the previous paragraph, the hypothetical appellate court ruling would seem to be dead on arrival. If it were injunctive relief, Microsoft would enter district court the next day and either would find that it could not get the injunction modified (which raises the problems of entrenchment discussed above) or, more likely, would be able to get the injunction modified in short order. Similarly, if it were declaratory relief, Microsoft would have a strong argument that it could ignore the declaration immediately, as the declaration would no longer apply to the real world. It would seem, then, that the appellate ruling would be mainly of historical interest; the appellate court would be telling the fact-finder that, given a certain state of affairs, certain forms of relief are appropriate. But in light of the fact that the state of affairs no longer existed, the appellate court might as well opine on other disputes the parties had in the past (perhaps it could revisit the question whether the original version of Windows 3.1 should have been modified).  

As the preceding discussion suggests, issuing an appellate opinion with prospective effect based solely on outdated facts seems to confound our notion of what judicial opinions are. Deciding a case in that situation has the flavor of issuing an opinion just for the sake of getting one’s views out on paper. In this way, it raises the same kinds of concerns that advisory opinions do. The appellate court would be issuing an opinion in a now-

200. Cf. Broadway Delivery Corp. v. United Parcel Serv. of Am., 651 F.2d 122, 129 (2d Cir. 1981) (rejecting a jury instruction that a market share of less than 50% was sufficient to find no monopoly).

201. One way of thinking about this is to imagine that Congress passes a statute giving anyone subject to a particular time-specific harm (say, the Y2K fears that our computer-reliant society will collapse into chaos at the beginning of the year 2000) the right to an injunction to prevent that harm (requiring Y2K remediation before January 1, 2000), and that the statute specifically had no sunset provision. If a district court issued an injunction based on this law in December of 1999 to allay someone’s fears, and the case was then appealed, what would any appellate decision issued in the year 2000 mean?
hypothetical "case." It might provide some guidance to its readers, but, as was noted above, as a legal matter it would probably be dead on arrival. Thus, with respect to the parties, it would seem to constitute little more than useful insights.

This relates to one other point, namely that appellate decisionmaking based on stale facts from below undercuts the role of appellate courts. Think about the shelf life of an appellate opinion that is based on stale facts. The opinion would remain controlling only until a new court (probably the same district court that made the original findings) had a chance to consider the new facts; that would be measured in days or weeks. And think about the larger significance of this fact: rather than the appellate opinion remaining in effect until the facts changed again, it would be a new opinion from the district court that would control until further change occurred. The design of our federal system assumes that there are advantages to appellate decisionmaking; it could reside final authority in district courts but does not. But an appellate court decision based on old facts, in the face of new facts, effectively means that the controlling decisions will, almost all the time, be issued by district courts. The only exception will be the brief period of time when the district court is


203. The Second Circuit's opinion in United States v. Aluminum Co. of Am., 148 F.2d 416 (2d Cir. 1945), provides an interesting case study. As was discussed in subpart III(C), the Second Circuit wrote an opinion finding that Alcoa was monopolizing the aluminum ingot market, even though factual changes postdating the trial court's fact-finding had substantially weakened (if not eviscerated) the monopolization claim, but the court also remanded to the district court for consideration of the new facts in structuring the relief that would be granted. See id. at 445. On remand, the district court, faced with the serious problems discussed in this Article inherent in issuing prospective relief based on facts that no longer exist, understandably chose to gather and evaluate the new evidence about Alcoa's current monopolization; when that new evidence revealed that Alcoa no longer had its monopoly, the district court ordered no relief. See United States v. Aluminum Co. of Am., 91 F. Supp. 333 (S.D.N.Y. 1950). The district court's opinion thus effectively (and unsurprisingly) left the Second Circuit's opinion with no real impact on the parties.

What, then, did the Second Circuit's opinion actually do? It did not apply to Alcoa's current situation. It did not resolve the parties' dispute as it then existed (remember, in fact, that both parties requested that the Second Circuit take the new facts into account in issuing its opinion). It did not even give any guidance to the parties, the district court, or the world at large about the effect of antitrust laws on Alcoa's current practices. The most that the opinion did was simply to lay out guidance that might apply to other parties in other situations. That is, like any opinion, it could be read by future lawyers as indicating that when conditions X, Y, and Z exist, an antitrust action will be viable. But ordinary opinions that so state do so in the context of a concrete dispute that they are resolving; the guidance is a by-product of the resolution of the dispute. Here, there was no meaningful resolution. The Second Circuit opinion proved to be guidance for the sake of guidance. It functioned, in other words, as valuable advice regarding potential future developments—fine for lawyers, management consultants, and psychics, but problematic for Article III courts.
considering the new facts brought before it. By contrast, if the appellate court updates the facts, its opinion will be controlling for however many months or years it takes for the facts to change in a relevant way; its opinion will not last forever, but at least it will control for a nontrivial period of time.

These potential drawbacks of an appellate court issuing its opinion based on the facts as found by the district court would be mitigated to the extent that the appellate court could determine that, even though some of the facts were outdated, the opinion did not rest on those facts and thus the factual changes would not undercut the opinion. That is, the appellate court could minimize the problems addressed above if it made sure that its opinion did not rely on the facts that might have changed. The catch, of course, is that this would require that the appellate court familiarize itself with the assertions of factual change, so that it will know which findings may be infirm; and the time the appellate court spends familiarizing itself undercuts the main rationale for deciding based on old facts in the first place—namely, that it would save the appellate court’s time. The more time that the appellate court spends ensuring that its opinion will not be outdated, the less the appellate court actually is relying on the record below and the less sense it makes for the court to decide the opinion based on those old findings.

This point relates to one final consideration: When an appellate court issues an opinion—whether based on new facts or old—its investment of time and energy is quite considerable. If that opinion relies on stale facts, then the appellate court is expending a large quantity of resources to produce an outdated opinion that likely will be immediately reopened. For an added increment of resources which often will be small relative to the total resources expended, the court could instead issue an opinion that actually applied to the parties’ current situation, and that settled the dispute (at least until the facts changed again sometime in the future). 204

B. Remand

As was mentioned above, remanding to the trial court is an obvious choice. Why remand? The main arguments for remanding are related: the trial court has more expertise in fact-finding as a general matter; 205 it has a greater ability to find facts because it can hold oral hearings and judge witness credibility; 206 and it has more familiarity with the underlying

204. See infra notes 341-57 and accompanying text.
205. See Anderson v. Bessemer City, 470 U.S. 564, 574 (1985) (“The trial judge’s major role is the determination of fact, and with experience in fulfilling that role comes expertise.”).
206. See, e.g., JOHN MONAHAN & LAURENS WALKER, SOCIAL SCIENCE IN LAW 122 (4th ed. 1998); Brewer, supra note 20, at 1543 (suggesting that “[a]ppellate courts are not institutionally
facts of the case at hand because it has already seen the witnesses and resolved factual disputes at the trial level.\textsuperscript{207}

The first two arguments rely on the perceived disparity between the abilities of district courts and those of appellate courts, as well as the perceived value of evidentiary hearings. They are the best arguments for remanding and, not coincidentally, the best arguments against appellate updating of facts. Those issues are considered at some length in the next section, so, in the interest of economy and clarity of analysis, I will bracket consideration of these advantages of remanding until then. It bears mentioning, though, that district court judges are not the only actors to whom expertise and the ability to hold hearings would be attributed: the same is true of special masters.\textsuperscript{208}

The third argument for remanding—based on the trial court’s familiarity with the facts of the particular case as a result of seeing live witnesses and resolving factual disputes—is unaffected by the potential existence of a special master, because it privileges the actual fact-finder from the original case. It should be noted, however, that it will not always apply: many cases (especially those raising significant constitutional or statutory issues) are decided via summary judgment based on the briefs and memoranda submitted to the trial court, with no formal gathering of evidence or resolution of factual disputes;\textsuperscript{209} indeed disputes regarding material facts would preclude summary judgment.\textsuperscript{210}

The significance is that, where the trial court has not weighed and evaluated disputed facts, the trial judge may have no greater familiarity with the facts than do the appellate judges who have the briefs and record before them. The perceived benefits of seeing live witnesses will not apply if there was no oral hearing that the judge attends; she, like the appellate judges, will decide based on a cold record. So the apparent advantages of

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\item\textsuperscript{207} Another potential argument—that remanding eliminates any incentive for the parties to withhold some of their factual submissions at the trial level in the hope of getting a more favorable response from the appellate court than they would expect from the trial court—is discussed in subpart V(A), supra.
\item\textsuperscript{208} See infra note 351 and accompanying text.
\item\textsuperscript{209} Trial courts that grant summary judgment often write opinions that include findings of fact, but those findings usually summarize a set of facts that the parties do not dispute (because, of course, disagreement would preclude summary judgment), rather than actually decide between disputed factual assertions. See Wright et al., supra note 176, § 2716.
\item\textsuperscript{210} See Fed. R. Civ. P. 56(c) ("The judgment sought shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact . . . "); Fed. R. Civ. P. 50(a) ("Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 . . . "). See generally Celotex Corp. v. Catrett, 477 U.S. 317 (1986) (putting forward a broad interpretation of the authority to enter summary judgment).
a trial judge who has the intimate knowledge of the facts that is associated with live witnesses and resolution of disputed facts simply will not exist in many cases.

I should emphasize that these considerations mitigate the strength of the argument based on familiarity, but by no means do they eviscerate it. The argument based on familiarity retains force in the many cases in which the district court held a hearing and/or weighed and resolved disputed facts. And even in cases involving no hearing or weighing, the district judge on some occasions may spend much more time immersing herself in the facts than the appellate court would likely do in gaining enough familiarity with the case to determine whether remand is appropriate. In such circumstances—assuming that the original fact-finder is available\(^{211}\)—remand thus sends the case back to a judge who is more familiar with the case, and lets appellate judges focus on their own specialty.\(^{212}\)

There are, however, two separate countervailing considerations that render remanding less attractive. First, it may not be a good use of the appellate court’s resources (not to mention judicial resources more generally\(^{213}\)). Matched against the benefit of sending the case away for the messy job of fact-finding, there is a potential cost to remanding any time an appellate court does it: rather than issue a final opinion in the case, it sends it back to the district court, knowing that the case may come back again (when the appellate court will have to familiarize itself with the case all over again). In those situations in which the fact-finding would not be terribly time consuming for the appellate court, the cost of remand may outweigh the benefit: remanding means foregoing the opportunity to resolve the entire case then and there;\(^{214}\) instead, there will be a new

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211. Of course, the appellate court or the chief judge of the district court may prefer that a different judge handle the case on remand. This occurs, for example, when there is some reason to doubt the district judge who originally handled the matter. See, e.g., Barnett v. City of Chicago, 141 F.3d 699, 701, 706 (7th Cir. 1998) (expressing annoyance at the fact that the district court allowed a 48 day trial and took a year to render a decision), on remand, 17 F. Supp. 2d 753, 755 (N.D. Ill. 1998) (noting that the case had been remanded to him as opposed to the original trial judge). In cases where the facts changed after the original facts were found, such changes presumably would not call into question the district judge’s competence or good faith in making the original findings.

212. Indeed, in most cases in which factual changes took place while a case was pending before an appellate court, the court did, in fact, remand the case to the lower court for further fact-finding. See supra notes 69-76 and accompanying text.

213. See infra text following note 344.

214. There are two complicating factors: first, the possibility that neither party will appeal the trial court’s judgment on remand; and second, the chance that after the appeals court finally resolves the case, further factual change leads to the filing of a new lawsuit on roughly the same sort of time frame as a remand would entail, anyway. The first possibility reduces the cost of remanding (because it gets rid of the case); the second possibility also reduces the cost of remanding (relative to the cost of appellate updating) because, either way, the appellate court would soon hear a case raising the issues (whether the original case after remand or a new case after a final appellate ruling). Further
proceeding in the trial court and, quite possibly, a new appeal up the chain (and perhaps an entirely new cycle of the appellate court familiarizing itself with the case and then remanding, if the facts have changed again). So if the fact updating can be done fairly quickly, then doing so may conserve appellate resources.

The second, and bigger, problem with remanding is similar to the danger of postponing adjudication. Not only are the changes rapid but, by hypothesis, they are continual, with no clear ending point. Thus remand to the fact-finder raises the possibility of an infinite loop: the trial court (or other fact-finder) makes findings; the case goes back to the appellate court, where briefs are written and argument is scheduled; in the months between the issuance of the factual findings and the issuance of the appellate opinion, relevant facts (whether the same facts that changed before or facts that had not changed the last time around) change again, necessitating another remand; and so on. After all, think of the Internet, or computer software, or voice communications; is there any basis for confidence that the next twenty-four months will see fewer changes than the previous twenty-four did? If not, then why does remanding make any sense? Relevant facts changed as the case was on its way up the first time, and there is no reason to conclude that those same facts would not change again—or that other facts, that previously had not changed, would not change during the second interval of time.

complicating the analysis is the fact that each possibility is just that—a possibility—whereas, with respect to the second scenario, the existence of the current case is a certainty.

215. This, of course, would be an instantiation of the infinite loop, discussed immediately below.

216. The Supreme Court arguably engages in this cost-benefit calculation: sometimes—especially when it can be done on a cold record—the court finds facts on its own rather than remanding. The problem is that it does so without routinized procedures; it just makes its own findings or accepts them from the briefs. My proposal would regularize that process. See infra section V(C)(1); discussion infra last two paragraphs of section V(C)(3).

217. An appellate court might try to mitigate this problem by remanding the case to the district court for expedited factual updating. Appellate courts have no control over district courts or district judges, so the appellate court has to hope that the district judge will move with all deliberate speed. And it should be noted that district courts' responses to such requests for expedient expedite have been uneven. Compare Chamber of Commerce of United States v. Reich, 57 F.3d 1099, 1101 (D.C. Cir. 1995) (remanding for expedited consideration), and Chamber of Commerce of United States v. Reich, 74 F.3d 1322, 1325 (D.C. Cir. 1996) (issuing the opinion only eight months after expedited remand), with Connor v. Coleman, 431 U.S. 407, 410-13, 426 (1977) (recounting multiple occasions on which the district court had not moved with sufficient alacrity despite the Supreme Court's repeated ordering of expedite consideration, and again ordering expedited consideration), and Connor v. Finch, 440 U.S. 612, 614-21 (1979) (Marshall, J., dissenting) (recounting the same history and noting that "[t]he case now comes before us for the eighth time, after the District Court chose to ignore our directive, issued nearly 22 months ago, that it resolve this controversy expeditiously").

Moreover, unless the appellate court is willing to streamline its own procedures, the expedited process below might not make much difference. A big part of the problem, after all, is the time it takes after the district court completes its work. (And, of course, if the appellate courts' procedures were streamlined, the problem of changing facts would occur less often in the first place. See infra text
In light of the danger of an infinite loop, remand seems problematic. First, by indefinitely delaying appellate involvement in the merits, a remand means appellate courts are on the sidelines as industries are transformed; trial courts are involved, and appellate courts have no role. Thus, whatever benefits appeals are thought to produce—and the existence of an appeal as of right to the courts of appeals as well as a discretionary petition to the Supreme Court suggests a belief that such benefits exist—would be lost; no appeals court would ever get to the merits. This seems troubling. As long as the judiciary is going to be involved, how does it make sense to have only a district court consider the issue?

This point is related to a second problem with remanding, namely that we would lose the unifying role served by appellate courts and, in particular, by the Supreme Court. An important function of appellate review is to resolve conflicts among lower courts, to provide uniformity and thereby fairness to litigants and the people more generally. If lower courts are split on an issue, appellate review is essential in order to avoid a crazy quilt of different rules in different jurisdictions. Once again, keeping the merits away from appellate courts prevents that from happening.

accompanying note 361.) It should be remembered that Reno v. ACLU involved expedited review (and no intervening court of appeals), but even then the facts changed in the time between the district court’s findings and the Supreme Court’s opinion. See supra notes 81-97 and accompanying text.

With respect to ordinary cases in the Supreme Court, even if it expedites its proceedings, and even if the district court does the same, the Supreme Court must also hope that the court of appeals moves with alacrity. This problem can be mitigated if the Court sends the case directly to the district court, and the Court has done so on at least one occasion. In Rees v. Peyton, 384 U.S. 312 (1966), when presented with questions about a capital defendant’s mental competence, the Supreme Court stated: “W[e] shall retain jurisdiction over the cause in this Court and direct the District Court to determine Rees’ mental competence . . . . The District Court will hold such hearings as it deems suitable . . . and will report its findings and conclusions to this Court with all convenient speed.” Id. at 314. Such a procedure effectively treats the district court as a glorified special master and raises jurisdictional questions of its own. The subsequent history of this case is not terribly encouraging, however: the Court never acted on the case and finally dismissed the certiorari petition in 1995, 29 years after its order for an expedited hearing—and after Rees’ death. See Rees v. Superintendent of Va. State Penitentiary, 516 U.S. 802 (1995).

218. These problems apply to other possibilities: that the Supreme Court denies certiorari in cases involving facts that may be subject to dramatic change, or that the Court, after having granted certiorari in a case, dismisses the writ of certiorari as improvidently granted if the facts change subsequent to the grant of certiorari. At the outset, it should be noted that these approaches could not resolve the problem addressed in this Article, because litigants have an appeal as of right to federal courts of appeals; so, even if the Supreme Court took these actions to avoid the cases, circuit courts could not do the same.

More fundamentally, though, this tactic has the drawbacks listed above in depriving litigants of Supreme Court review of issues that would otherwise merit such review. (If the case does not otherwise merit review, then this approach would not come into play, because the Court would deny certiorari anyway.) And, in the case of disagreement among lower courts (which is the most common basis for the Court to grant certiorari), it would thwart what is probably the best reason to have a Supreme Court: namely, its ability to resolve disputes among lower courts and thus provide for uniformity in the application of legal rules.

In addition to all these disadvantages, the proposal for denial or post-grant dismissal has problems all its own. Once the Supreme Court grants certiorari, it expends considerable resources in
Third, and finally, an infinite remand loop would constitute a poor use of judicial resources, as the remanding court would have to become sufficiently familiar with the facts to order a remand on every occasion that it remanded. A large number of judges would look at the case, but decision on the merits would be confined to just the district court judge; all the time spent by the appellate judges would be for naught.

This relates to a close variant in the face of factual change—the appellate court issuing an incomplete opinion, deciding what it could and remanding the rest. This proposal will make the most sense in cases where the facts that allegedly have changed are fairly peripheral and/or where the appellate court is inclined to apply a legal standard different from the one applied by the district court; in this latter situation, the incomplete opinion would avoid a potential drawback of a remand with no opinion—namely, that on remand the district court focuses on issues that the appellate court considers irrelevant.

The issuance of an incomplete opinion would not resolve the infinite loop problem, however: the appellate court would have laid out general principles but left the crucial issuance of the holding—the application of the legal rule to the facts as they have developed—to the district court; and if those facts continued to change, then the next time they arose to the appellate court they would again be stale and require a new remand.

In addition, the more crucial the facts are that are subject to change, the less confident the appellate court can be that its articulated rule will actually cover the factual situation as it is developing. In other words, the opinion might fire at the wrong target (because, of course, the target has moved), which likely would translate into a waste of time for the appellate court and the parties, as the appellate opinion would not in fact give guidance in the particular case.219 The way for the appellate court to avoid that problem is for it to familiarize itself with the facts that have preparing to review the case. If the Court then dismisses the writ as improvidently granted, it has wasted all the time it spent on the case up to that point. In addition, of course, the time spent in determining that the facts had changed would likely be nontrivial, and that time also would be wasted. See Honig v. Doe, 484 U.S. 305, 332 (1988) (Rehnquist, C.J., concurring) (complaining that “unique resources—the time spent preparing to decide the case by reading briefs, hearing oral argument, and conferring—are squandered in every case in which it becomes apparent after the decisional process is underway that we may not reach the question presented”). Meanwhile, if the Court seeks to avoid this problem by denying certiorari in the first place to those cases that might present changing facts, it will inevitably deny some cases where the facts would not have proved to be so unstable. The only way to avoid such false positives would be for the Court to examine the development of the facts very carefully before it granted certiorari; but, in that case, it would be engaging in an expenditure of significant resources in making such determinations, time that would be wasted if the Court ultimately declined to grant certiorari.

219. The opinion may provide guidance for others, but the degree to which that seems satisfactory will depend on one’s acceptance of the notion that appellate courts should provide guidance, rather than resolve disputes. See supra notes 199-203 and accompanying text.
allegedly changed, so that it can be sure that the opinion it issues would cover the situation even if circumstances had changed as alleged. But once the appellate court has spent that time so familiarizing itself with the allegations of new facts, the time that would be required for the appellate court to make its own findings has diminished (since a significant portion of that endeavor is the familiarization with the allegedly new circumstances), weakening the argument for sending any part of the case back to the district court in the first place.

C. Update the Facts at the Appellate Level

The final option would involve the appellate court updating the facts on its own, rather than remanding to a lower court or accepting the stale findings from below. The obvious objection to this proposal is straightforward: in contrast to district courts, appellate courts are not in the business of finding facts. Appellate courts frequently remand cases and of course issuing opinions is their stock in trade; but they are removed from the world of fact-finding and have no expertise in it. Fact-finding, it might plausibly be argued, is and should be left entirely to trial courts.

The most forceful exponent of this view has been the U.S. Supreme Court, which has emphasized the district court’s ability to judge the credibility of witnesses as well as, more generally, their familiarity with (and thus expertise in) engaging in fact-finding. On this basis, the Court has rejected opinions by circuit courts that reconsidered factual determinations made at the trial court level: “Duplication of the trial judge’s efforts in the court of appeals would very likely contribute only negligibly to the accuracy of fact determination at a huge cost in diversion of judicial resources.” In so holding, the Court has relied upon Rule 52(a) of the Federal Rules of Civil Procedure, which provides that “[f]indings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous.”

Even in cases where the district court failed to make some of the factual findings that the circuit court deemed relevant—and thus appellate fact-finding would not be duplicative and Rule 52(a) would not apply

220. See United States v. General Motors Corp., 384 U.S. 127, 141 n.16 (1966) (emphasizing “the trial court’s customary opportunity to evaluate the demeanor and thus the credibility of the witnesses”); Anderson v. City of Bessemer City, 470 U.S. 564, 574 (1985) (noting that “[t]he trial judge’s major role is the determination of fact, and with experience in fulfilling that role comes expertise”).

221. Anderson, 470 U.S. at 574-75. The Court’s next sentence seemed to convey its exasperation: “[T]he parties to a case on appeal have already been forced to concentrate their energies and resources on persuading the trial judge that their account of the facts is the correct one; requiring them to persuade three more judges at the appellate level is requiring too much.” Id. at 575.

222. FED. R. CIV. P. 52(a).
because there would be no relevant findings to set aside—the Supreme Court has rejected circuit court fact-finding. Thus, in cases like Pullman-Standard v. Swint\textsuperscript{223} and Icicle Seafoods, Inc. v. Worthington,\textsuperscript{224} the Court rebuked\textsuperscript{225} circuit courts that made their own factual findings on matters not reached by the district court rather than remanding to the district court for further fact-finding at the trial level.\textsuperscript{226}

Despite these statements, the reality—as revealed by Supreme Court cases—is a good bit more complex. The Court may castigate other courts for engaging in appellate fact-finding, but it has been willing to engage in conduct that seems difficult to describe otherwise. Simply stated, the Supreme Court has been willing to find facts in certain situations. Thus, appellate fact-finding is not as radical as it may sound; in fact, a number of lines of precedent support it.

Commentators have written at length on the Supreme Court's willingness to engage in fact-finding, and I will not duplicate their efforts here.\textsuperscript{227} I will, however, highlight a few notable instances of Supreme Court fact-finding to show that the practice occurs in a variety of situations.

1. \textit{When Has the Supreme Court Found Facts?—}As an initial matter, it bears emphasis that, Rule 52(a) notwithstanding, the Supreme Court

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\footnotetext{223} 456 U.S. 273 (1982). The Court stated:

When an appellate court discerns that a district court has failed to make a finding because of an erroneous view of the law, the usual rule is that there should be a remand for further proceedings to permit the trial court to make the missing findings. . . . Likewise, where findings are infirm because of an erroneous view of the law, a remand is the proper course unless the record permits only one resolution of the factual issue.

\textit{Id.} at 291-92.

\footnotetext{224} 475 U.S. 709 (1986). Again, the Court chided:

If the Court of Appeals believed that the District Court had failed to make findings of fact essential to a proper resolution of the legal question, it should have remanded to the District Court to make those findings. If it was of the view that the findings of the District Court were "clearly erroneous" within the meaning of Rule 52(a), it could have set them aside on that basis. If it believed that the District Court's factual findings were unassailable, but that the proper rule of law was misapplied to those findings, it could have reversed the District Court's judgment. But it should not simply have made factual findings on its own.

\textit{Id.} at 714.

\footnotetext{225} The Court's language has at times been harsh. \textit{See} Pullman-Standard, 456 U.S. at 293 ("Proceeding in this manner seems to us incredible . . . . "). In light of the Court's willingness to engage in fact-finding on \textit{its} own, \textit{see infra} section V(C)(1), it seems that the Court doth protest too much.

\footnotetext{226} \textit{See} Lee, supra note 168, at 256-61 (discussing Pullman-Standard and Icicle Seafoods as the main examples of Supreme Court cases that restricted appellate fact-finding).

\end{footnotes}
sometimes weighs contested facts on its own, without deference to the fact-finder’s ability to look witnesses in the eye. A recent example is *Hurley v. Irish-American Gay, Lesbian & Bisexual Group of Boston, Inc.*, where the Court articulated its “constitutional duty to conduct an independent examination of the record as a whole, without deference to the trial court.” Why did not the Court follow the conventions regarding deference to a fact-finder? “This obligation rests upon us simply because the reaches of the First Amendment are ultimately defined by the facts it is held to embrace.”

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229. *Id.* at 567.

Lest there be any confusion arising from the fact that this case came out of a Massachusetts state court, the Court stated flatly that “[e]ven where a speech case has originally been tried in a federal court, subject to the provision of Federal Rule of Civil Procedure 52(a) that ‘[f]indings of fact ... shall not be set aside unless clearly erroneous,’ we are obliged to make a fresh examination of crucial facts.” *Id.* (ellipsis in original). Thus, in *Hurley*, the Court conducted its own review of the Boston Saint Patrick’s Day parade and concluded, in direct conflict with the trial court, that it had an expressive character. *Id.* at 568-70.

230. *Id.* at 567.

*Hurley* is neither novel nor an outlier. In a number of First Amendment cases, the Supreme Court has made the same point. For instance, after stating that “we cannot avoid our responsibilities by permitting ourselves to be completely bound by state court determination of any issue essential to decision of a claim of federal right, else federal law could be frustrated by distorted fact finding,” the Supreme Court in *Cox v. Louisiana* simply ignored important factual findings made by the courts below (there, Louisiana state courts) and reached its own findings—which conflicted with the state court findings—based on its reading of the record. 379 U.S. 536, 545 n.8 (1965) (quoting Haynes *v.* Washington, 373 U.S. 503, 515-16 (1963) (quoting Stein *v.* New York, 346 U.S. 156, 181 (1953))). *Compare* *State v. Cox*, 244 La. 1087, 1097 (1963) (“Unmistakably, ... [the protesters’] activities resulted in an obstruction of the street”), rev’d, *Cox v. Louisiana*, 379 U.S. 536 (1965), with *Cox*, 379 U.S. at 541 (stating flatly, based on its reading of the record, that “[t]he group did not obstruct the street”); *see also* *Bose Corp. v. Consumers Union of United States, Inc.*, 466 U.S. 485, 508 n.27, 499 (1984) (“First Amendment questions of ‘constitutional fact’ compel [us to conduct a] de novo review.”); *NAACP v. Claiborne Hardware Co.*, 458 U.S. 886, 915 n.50 (1982); *Jacobellis v. Ohio*, 378 U.S. 184, 189-90 (1964) (Brennan, J.); *New York Times Co. v. Sullivan*, 376 U.S. 254, 285 (1964); *Edwards v. South Carolina*, 372 U.S. 229, 235 (1963) (all stating that the Court would make an independent examination of the record); *Steven Alan Childress, Constitutional Fact and Process: A First Amendment Model of Censorial Discretion, 70 TUL. L. REV. 1229, 1326 (1996)* (“No one seems to dispute that the independent judgment rule, where it applies, at least requires that the conclusion drawn from the record be made independently and thus without deference.”).

Courts of appeals, similarly, have applied their own independent review of trial court findings when the facts are central to the legal analysis. *See, e.g.*, *Bery v. City of New York*, 97 F.3d 689 (2d Cir. 1996). In *Bery*, the Second Circuit found such a review necessary:

In the present case, since appellants seek vindication of rights protected under the First Amendment, we are required to make an independent examination of the record as a whole without deference to the factual findings of the trial court. Such a “fresh examination of crucial facts” is necessary even in the face of the “clearly erroneous” standard of factual review set forth in Rule 52(a), F.R.Civ.P. *Id.* at 693 (citations omitted) (quoting *Hurley*, 515 U.S. at 567); *see also* *Don’s Porta Signs, Inc. v. City of Clearwater*, 829 F.2d 1051, 1053 n.9 (11th Cir. 1987) (“In cases involving first amendment claims, an appellate court must make an independent examination of the whole record.”); L. Steven Grasz, *Critical Facts and Free Speech: The Eighth Circuit Clarifies Its Appellate Standard of Review for First Amendment Free Speech Cases*, 31 CREIGHTON L. REV. 387, 398-401 (1998) (discussing the
This practice is not limited to the First Amendment; in other contexts as well, the Supreme Court has conducted an independent review of the record, giving no deference to the trial court.\textsuperscript{231} In \textit{Kyles v. Whitley},\textsuperscript{232} for example, the Supreme Court conducted an independent review of the facts and weighed them differently from every other court that looked at the case, including state courts, a federal district court, and a federal court of appeals.\textsuperscript{233} Not only did the Court in \textit{Kyles} examine the evidence anew,\textsuperscript{234} but, like a trial court after an evidentiary hearing, it drew its own conclusions as to what the evidence established—\textsuperscript{235}—which is also
known as fact-finding. In fact, the Court even made judgments as to witness credibility.\textsuperscript{236}

\textit{a. Cases involving a suggestion of mootness.—}Hurley and the other cases discussed immediately above are significant because they demonstrate the willingness of the Supreme Court to reject the notion that the process of determining facts is solely the province of a trial court. Despite all the advantages that a trial court may be thought to possess as to the gathering of factual material in the record and the determination of what factual conclusions that material supports, the Supreme Court nonetheless sometimes takes over part of this function—the determination of the factual conclusions—for itself. This contradicts any suggestion that the Court considers itself disabled from examining a cold record, without the benefit of an evidentiary hearing or indeed any live witnesses, and making its own findings based on that record. Still, these cases are distinguishable from the situation addressed in this Article, as they did not involve an appellate court gathering facts on its own, but rather merely reviewing the facts already present in the record. An independent examination of the record is one thing, it might be argued, but the finding of new facts is a quite different matter. Fact-finding, though, is exactly what appellate courts frequently do when there is a suggestion that a case has become moot. That is, appellate courts—in particular the Supreme Court—have actually found new facts when there have been changes since the trial court that may have rendered the case moot.

One prominent example is \textit{DeFunis v. Odegaard},\textsuperscript{237} a case in which Marco DeFunis had contended that the University of Washington Law

\begin{quote}
The dissent would rule out any suspicion because Beanie was said to have worn a “tank-top” shirt during his visits to the apartment; we suppose that a small handgun could have been carried in a man’s trousers, just as a witness for the State claimed the killer had carried it. Similarly, the record photograph of the homemade holster indicates that the jury could have found it to be constructed of insubstantial leather or cloth, duct tape, and string, concealable in a pocket.

\textit{Id.} at 449 n.18 (citations omitted).

\textsuperscript{236} See \textit{id.} at 443 & n.14 (assessing the credibility of a witness named Smallwood); \textit{id.} at 441-42 (discussing the credibility of a witness named Williams).

This is not to suggest that all of the members of the Court found this detailed review appropriate. Justice Scalia, joined by three other Justices, criticized the majority, asserting, [T]he Court not only grants certiorari to consider whether the Court of Appeals (and all the previous courts that agreed with it) was correct as to what the facts showed in a case where the answer is far from clear, but in the process of such consideration renders new findings of fact and judgments of credibility appropriate to a trial court of original jurisdiction.

\textit{Id.} at 457 (Scalia, J., dissenting). This point did not occupy much of Scalia’s dissent, however; the bulk of his opinion was devoted to a point-by-point response to the facts delineated in the majority opinion. See \textit{id.} at 461-75 (Scalia, J., dissenting).

\textsuperscript{237} 416 U.S. 312 (1974).
School’s admissions criteria discriminated against him on account of his race in violation of the Equal Protection Clause of the Fourteenth Amendment. By the time DeFunis’s case made it to the Supreme Court, he was in his third year of law school (having been admitted by order of the trial court). The Supreme Court became aware that he was in his final year at the school and asked the parties to brief the question of mootness; both sides contended that it was not moot (because the school reserved the right to challenge DeFunis’s continuation at the school if he lost). The Court, though, seized on a statement that DeFunis’s lawyer made at oral argument to the effect that DeFunis had enrolled in his final semester, combined it with the law school’s earlier statement that it would not cancel DeFunis’s registration for any given semester, and concluded that the case was moot because DeFunis was the only plaintiff and “it is evident that he will be given an opportunity to complete all academic and other requirements for graduation.” In other words, the Court received new facts, weighed those facts on its own (and in a manner that conflicted with the views of both parties), and came to its own conclusion about the implications of those facts for the case before it. Interestingly, four Justices dissented from the Court’s disposition, but they did not challenge the Court’s willingness to receive and weigh new facts or to issue a ruling based on them. The dissenters argued that the Court had drawn the wrong conclusion from the facts, not that its enterprise was problematic. In their view, the case was not moot because “[a]ny number of unexpected events—illness, economic necessity, even academic failure—might prevent [DeFunis’s] graduation at the end of the term.”

DeFunis is by no means unusual. When a party presents an appellate court with new facts that raise a question of mootness, the court frequently considers the evidence on its own and makes its own determination about mootness, rather than remand to a lower court for this determination.

238. Id. at 314.
239. Id. at 315.
240. Id. at 317.
241. Id. at 348 (Brennan, J., dissenting). Justice Douglas also wrote a dissenting opinion, but his opinion focused on the merits of DeFunis’s claim. See id. at 320 (Douglas, J., dissenting).
242. See, e.g., Board of License Comm’rs v. Pastore, 469 U.S. 238, 239 (1985) (per curiam) (dismissing the case as moot after certiorari had been granted because the Court “learned that the Attic Lounge has gone out of business”); Iron Arrow Honor Soc’y v. Heckler, 464 U.S. 67, 72 (1983) (per curiam) (finding, based on its own interpretation of a letter from a university president, “that there was ‘no reasonable likelihood’ that the University [would] later change its mind” and thus concluding that the case was moot); Communications Workers of Am. v. Southern Bell Tel. & Tel. Co., 419 F.2d 1310, 1311 (5th Cir. 1970) (per curiam) (finding that supervening factual changes that had occurred since the district court’s ruling rendered the case moot and contending that “[a]ny further relief from this Court would be an advisory opinion”). It should be noted, though, that sometimes appellate courts do remand for further factual findings when there is a suggestion of mootness based on new facts. See, e.g., Concerned Citizens v. Sills, 567 F.2d 646, 649 (5th Cir. 1978) (remanding the case to the district
In some of these situations, the appellate court has made such determinations based solely on new facts presented by a party in a brief or at oral argument. DeFunis's registration status at the University of Washington Law School is one good example. Another example is from *Iron Arrow Honor Society v. Heckler,* a case in which an all-male "honor" society had sued the federal government over a federal regulation prohibiting its use of university property. While the case was pending in the court of appeals, the president of the university wrote a letter stating that the society would no longer be permitted to use university property, regardless of the outcome of the suit. The federal government raised the issue of mootness (because relief from federal regulations would not help the society if the university decided on its own to deny the society use of university property). In the court of appeals, the society argued that the case was not moot, and the court agreed. The society made the same argument in the Supreme Court, and the federal government responded by requesting not that the Court find the case moot, but that it remand the case for an evidentiary hearing. The Court, however, weighed the significance of the letter on its own, without the benefit of any factual findings by a lower court or special master, and relied on the letter in finding the case moot. Justice Brennan argued to no avail in dissent that "the issue of mootness is sufficiently dependent on uncertain factual issues concerning the University's present intention and future conduct" to merit an evidentiary hearing.

In *Honig v. Doe,* the Court went as far as deciding the question of mootness based on evidence raised for the first time at oral argument. The issue in the case was the application of the Education of the Handicapped Act to two emotionally disabled students who had been indefinitely suspended from state schools, and the United States contended that both of the respondents were sufficiently old (twenty-four and twenty years old) that they would not benefit from a ruling in their favor. The Court agreed with the United States' contention as to the twenty-four-year-old, who was three years older than the maximum age at which the Act court that had abstained based on pending state prosecutions, because the appeals court was told at oral argument that the state prosecutions had been terminated).


244. Id. at 69-70. Actually, the letter was written after the Supreme Court had granted, vacated, and remanded the case for reconsideration in light of an earlier Supreme Court decision. That is, the case was on remand from the Supreme Court to the court of appeals. Id. at 69.


246. *Iron Arrow,* 464 U.S. at 73 n.2, 74 n.3 (Stevens, J., dissenting).

247. Id. at 73 (Brennan, J., dissenting).

applied to a student. But, as to the twenty-year-old (Jack Smith), the Court found that the case was not moot because there was a reasonable likelihood that he would want to finish high school if given the chance. Because the issue had not been raised before oral argument in the Supreme Court, neither the court of appeals nor the district court had considered the question of whether Smith would want to return to high school. The Court was writing on a clean slate. Notably, in doing so it did not rely on anything from the record below. The Court cited three reasons for its conclusion regarding the likelihood of Smith wanting to finish school: first, his pursuit of the litigation revealed an interest in his education; second, "[a]s a disabled young man, he has as at least as great a need of a high school education and diploma as any of his peers"; and, finally, at oral argument "his counsel advise[d] us that he is awaiting the outcome of this case to decide whether to pursue his degree."

Thus the Court made its own judgment about the factual question of whether Smith would likely want to return to school. Moreover, its basis for this factual conclusion is quite striking. The Court relied in significant part on a broad statement about the value of education and a factual assertion made by his lawyer at oral argument. Better yet, the lawyer's assertion was not subject to any sort of examination or verification. Best of all, the same lawyer in the same discussion at oral argument also said she "cannot represent whether in fact either of these students will ask for further education from the Petitioners." The Court was thus left with a somewhat ambiguous factual situation, but made its conclusions anyway. Even Justice Scalia, who dissented from the conclusion that Smith's case was not moot (because Justice Scalia was unpersuaded by the reasons discussed above), did not suggest a remand; he drew his own factual conclusion—that Smith had not established a reasonable probability of his return to school—and advocated a finding that Smith's case was indeed moot.

b. Other fact-finding contexts.—In addition to the mootness cases, the Supreme Court has found facts and drawn conclusions from them in other kinds of cases. In *Brendale v. Confederated Tribes & Bands*,

249. *Id.* at 318-19 n.6.
250. *Id.* at 319 n.6.
251. *Id.*
252. *Id.* (citing transcript of oral argument).
253. *Id.* at 337 (Scalia, J., dissenting) (quoting transcript of oral argument).
254. *Id.* at 337-38 (Scalia, J., dissenting). Scalia also argued that the Court applied too lenient a standard ("reasonable expectation" rather than "demonstrated probability") in evaluating the suggestion that Smith would return to school. *Id.* at 336-37 (Scalia, J., dissenting).
for example, the district court had divided the Yakima Indian Reservation into "closed" and "open" areas, distinguishing the two based in significant part on the fact that only tribal members were permitted in the closed area. At oral argument, Mr. Brendale's lawyers "represented that a decision by the Bureau of Indian Affairs in April 1988, after the Court of Appeals issued its opinion here, has reopened the roads in the closed area to the public." The Court (and the announcement of its judgment) was splintered. The important aspect for our purposes is that both of the opinions that announced the judgment of the Court not only accepted this development as a new fact but also reached their own conclusions about its significance: Justice White's opinion found that the changed circumstances (the opening of the road to nonmembers) fatally undermined the district court's finding that the reservation had "closed" versus "open" areas; Justice Stevens's opinion, meanwhile, stated flatly that "the fact that nonmembers may now drive on these roads does not change the basic character of the closed area . . . ." Interestingly, no member of the Court suggested that the Court remand the matter to the district court so that it could consider, in the first instance, exactly what had happened to the road and the significance of such developments.

But singling out this one case does not do justice to the broader category, as there are a number of different contexts in which the Supreme Court has found facts (often without explicitly so stating), and then relied on them. One example in this regard is quite familiar yet worthy of note: original jurisdiction cases in the Supreme Court. In its earliest years, the Court held a number of trials in which it did all the fact-finding (Marbury v. Madison was a trial in the Supreme Court, after all). Such original jurisdiction cases continue to arise to this day—most as suits between states, but sometimes in other contexts. When such cases come before

257. 492 U.S. at 415 n.2 (White, J.).
258. Justice White, joined by three other Justices, issued an opinion that announced the judgment of the Court as to the status of the "open" land. Justice Stevens, joined by one other Justice, announced the judgment of the Court as to the status of the "closed" land. Seven of the nine Justices did not distinguish between "open" and "closed" land, but Stevens's opinion as to the closed land reached the same result as the remaining three Justices (in an opinion by Justice Blackmun), and thus was the majority result as to the closed land; he joined Justice White's opinion as to the open land, so Justice White announced the Court's judgment on that matter.
259. Id. at 415 n.2 (White, J.).
260. Id. at 439 (Stevens, J.).
261. 5 U.S. (1 Cranch) 137 (1803).
262. A particularly interesting example is United States v. Shipp, 214 U.S. 386 (1909). The background to that case was that the Court agreed to hear the appeal of a capital defendant and ordered that his execution be stayed. Id. at 403-05. When news of the Supreme Court's order reached Chattanooga, Tennessee (where the defendant was incarcerated), a mob broke into the jail and lynched the defendant. Id. at 404-05. Both President Roosevelt and the Supreme Court sent investigators to
the Court, it acts as a finder of fact, with no findings from a lower court to which it grants deference.\textsuperscript{263} The Court customarily refers these cases to a special master for fact-finding,\textsuperscript{264} but that reinforces, rather than weakens, my point; the Court has created mechanisms it can utilize to find facts (and, as will be discussed in the following section, special masters might be a useful tool in the context of rapidly changing facts, as well).\textsuperscript{265}

The Supreme Court construes its authority as giving it the discretion to refuse to hear most original jurisdiction cases, thereby allowing it to avoid serving as the trier of fact.\textsuperscript{266} Nonetheless, the Court has granted a hearing in most cases;\textsuperscript{267} whatever the Justices may consider to be the deficiencies of initial review in the Supreme Court, those deficiencies have not led them to try to eliminate all, or even most, original jurisdiction cases from their docket.\textsuperscript{268} Admittedly, this fact may be of limited significance: it may be that the Justices believe that they cannot deny review to more cases without suffering some sort of institutional harm. But holding aside their willingness to hear original jurisdiction cases, these cases still demonstrate that the Court can find facts, with no apparent ill effects. They receive facts in the briefs and get a chance to address questions of fact at oral argument; though such interchanges might seem amusing in a chamber as lofty as the Supreme Court, they are no different from similar

\textsuperscript{263} See United States v. Texas, 339 U.S. 707, 715 (1950) ("The [Supreme] Court in original actions, passing as it does on controversies between sovereigns which involve issues of high public importance, has always been liberal in allowing full development of the facts."); Oklahoma v. Texas, 253 U.S. 465, 471 (1920) (directing that testimony be taken); Rhode Island v. Massachusetts, 37 U.S. (12 Pet.) 657, 733 (1838) (stating that in original jurisdiction cases the Court may ascertain facts with or without a jury, at its discretion).


\textsuperscript{265} The significance of special masters, and the usefulness of invoking them when evidentiary hearings are appropriate, is discussed infra notes 346-60 and accompanying text.

\textsuperscript{266} See Wyoming v. Oklahoma, 502 U.S. 437, 450, 450-51 (1992) (observing that the Court has "imposed prudential and equitable limitations upon the exercise of [its] original jurisdiction" (quoting Maryland v. Louisiana, 451 U.S. 725, 739 (1981))); James E. Pfander, Rethinking the Supreme Court's Original Jurisdiction in State-Party Cases, 82 CAL. L. REV. 555, 565-66 & n.36 (1994) (observing that the Court frequently uses its discretion to avoid cases that come under its original jurisdiction).

\textsuperscript{267} See Vincent L. McKusick, Discretionary Gatekeeping: The Supreme Court's Management of Its Original Jurisdiction Docket Since 1961, 45 MICH. L. REV. 185, 188-89 (1993) (noting that the Court denies a hearing to slightly less than half of its original jurisdiction cases).

\textsuperscript{268} See id.
interchanges between lawyers and judges in trial courts. The Justices manage to write their opinions and engage in spirited debates, despite having to involve themselves more directly in the messy world of facts.

Wholly apart from original jurisdiction cases, moreover, the Supreme Court sometimes engages in fact-finding. That is, even in ordinary cases involving appellate jurisdiction where it is not obliged to find facts, the Supreme Court has frequently found and relied on particular facts in its rulings.

If this proposition seems strange, it is only because the practice has become so commonplace that we no longer consider it remarkable. For instance, it is difficult to characterize a judicial determination of the Framers' understanding of a particular constitutional provision or phrase as anything other than a question of fact. The significance of those

269. My personal favorite was an interchange between the Justices and a lawyer in *Louisiana v. Mississippi*, 516 U.S. 22 (1995)—illustrative not only because the Justices managed to conduct a factual inquiry (despite the laughter from an audience amused by the nature of the examination), but also because at least one of the Justices had done his own research in the matter, and, like a good trial judge, had specific questions at hand designed to probe the factual assertions that the lawyer was presenting to the Court. The following is a sample of the oral argument (including a question from a Justice that reflects research into the issue of the existence of poplar trees on what Louisiana had claimed to be submerged land):

QUESTION: So you disagree as a matter of fact with your opponent's statement that for several months each year it was 40 feet below high water.
MR. McCARTNEY: Yes.
QUESTION: Well, where were you all when you were in the boat?
MR. McCARTNEY: Well—
(Laughter.)
QUESTION: Didn't you row among—
(Laughter.)
QUESTION: Didn't you row among the treetops with Mr. Keyser?
MR. McCARTNEY: We rowed among treetops, but there was also water—dry land above the water.
QUESTION: I mean, where was—that what was mixing me up. As I read these and I had my law clerk check into it, I did think there was an awful lot of evidence this is one place, and there are big poplar trees 80 feet around or something, or they're very, very broad, big trees. I don't know how you could plant these trees if it's underwater all the time.
But he just said you went out on a boat, and there you were, sailing over the island 40 feet below you under the water. What happened on that boat?
MR. McCARTNEY: Well, what happened was that a part of the time—we motored, we didn't actually row.
(Laughter.)
MR. McCARTNEY: We motored among the trees over that portion of the island that was inundated at that particular time of the year, and the master was there, and viewed the island, and heard the evidence, and read the cases, and reached the conclusion, correctly, that this is a land mass that has the degree of permanence that qualifies as an island, and that qualifies as a feature that determines boundary.


270. *See* Alden v. Maine, 119 S. Ct. 2240, 2247-54 (1999) (determining what various members of the founding generation understood states' immunity from suit to encompass); cf. RONALD
determinations (that is, what weight should be accorded to the Framers’ understanding) is a question of law; but the actual determination of the Framers’ subjective understanding is as much a question of fact as is the question of what the drafter of a contract understood a given provision to mean. The obvious difference between the inquiries involved in determining the Framers’ beliefs versus those of a contract’s drafter is that, in the former case, there is little that a trial court could do that an appellate court could not; evidence of the Framers’ understanding or belief can be presented in briefs, with no need for the sort of credibility determinations that best justify the role of a trial court in examining witnesses. Whether or not this is actually true, it is beside the point that I am making here that appellate courts do engage in fact-finding. The possibilities that some forms of fact-finding—in particular, those that would not require credibility determinations—are better suited to appellate courts than are other forms, and that appellate courts are more likely to engage in fact-finding that does not necessarily require credibility determinations, do not affect the fact that appellate courts are willing to do some fact-finding in the first place.

Furthermore, any putative prohibition on appellate courts engaging in the sort of fact-finding that does ordinarily involve witness testimony—albeit a battle of expert witnesses over the viability of a particular description of the world—is one riddled with exceptions. Appellate—

DWORKIN, LAW’S EMPIRE 14 (1986) (“The participant’s point of view envelops the historian’s when some claim of law depends on a matter of historical fact: when the question whether segregation is illegal, for example, turns on the motives either of the statesmen who wrote the Constitution or of those who segregated the schools.”).

271. See 3 ARTHUR LINTON CORBIN, CORBIN ON CONTRACTS § 554 (1960); 4 SAMUEL WILLISTON, A TREATISE ON THE LAW OF CONTRACTS § 616 (3d ed. 1961) (both stating that construction of a contract and of the drafter’s intent is a question of fact); cf. Antilles S.S. Co. v. Members of Am. Hull Ins. Syndicate, 733 F.2d 195, 204 (2d Cir. 1984) (Newman, J., concurring) (disagreeing with Corbin and Williston regarding whether contract construction is a question of fact, but agreeing that it is a question of fact when extrinsic evidence, of intent or otherwise, is relied on).

272. It is not at all clear that, in plumbing the Framers’ understanding and beliefs, there is no room for a trial court. The Supreme Court frequently quotes materials from the Framers’ era that, in modern trials, must be authenticated—letters, notes, diaries, etc.—in determining the Framers’ understanding. Some historians might, if given a chance in an evidentiary hearing, question the degree to which a particular writing reliably reveals a particular person’s beliefs or understanding. Just as a modern letter written by a contract’s drafter might be self-serving or otherwise assailable as to its probative value, the same might be true of some materials from the Framers’ era. In fact (to pick one example among many), some historians mistrust much of what James Madison wrote after the Constitution’s ratification as attempts to recast certain constitutional provisions. And yet, to my knowledge, no appellate court has ever suggested that it would recommend, much less give deference to, an evidentiary hearing in which a trial court could make findings on the degree to which various historical materials accurately reflected the beliefs of the Framers. The sort of inquiry that is routine—and in fact considered to be essential—in reviewing materials regarding other sets of drafters is deemed to be unnecessary (perhaps bordering on the ridiculous) when it comes to the Constitution’s drafters.

273. These possibilities do, though, give us guidance about what sort of appellate fact updating makes the most sense. See infra section V(C)(2).
indeed Supreme Court—fact-finding in this context has a long history. The Court has, for example, put forward broad, but testable, empirical assertions without deigning to cite any support (and with no obvious source of support), in cases stretching from the early eighteenth century to today.  

In other situations the Court does rely on authorities (and its assertions are usually less sweeping), but those authorities are not factual findings from a trial court but rather material simply presented to the Supreme Court (generally in briefs to the Court). Some of the Court’s most famous opinions made such findings: In Muller v. Oregon, the Court, following the lead of the famous “Brandeis brief,” upheld a maximum-hour

274. See, e.g., Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1, 190 (1824) (justifying its construction of the word “Commerce” in the Constitution by stating baldly that “[a]ll America understands, and has uniformly understood, the word ‘commerce,’ to comprehend navigation”). One hundred years later, in Jay Burns Baking Co. v. Bryan, the Court announced,

There is no evidence in support of the thought that purchasers have been or are likely to be induced to take a 9 and a half or a 10 ounce loaf for a pound (16 ounce) loaf, or an 18 and a half or a 19 ounce loaf for a pound and a half (24 ounce) loaf; and it is contrary to common experience and unreasonable to assume that there could be any danger of such deception.

264 U.S. 504, 517 (1924). This blithe assertion, not surprisingly, has been subject to much criticism. See, e.g., Kenneth C. Davis, Judicial Notice, 55 COLUM. L. REV. 945, 956 (1955) (“The Court found its ‘common experience’ neither in the record nor in specific extra-record sources; the ‘common experience’ came from vague impressions and a priori judgment.”).

275. For example, in Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), the Court held that construction of a patent, though it may seem like a question of fact appropriate for a jury, is actually within the exclusive province of judges. Id. at 372. In reaching that conclusion, it seems fitting that the Court baldly stated that “[t]he construction of written instruments is one of those things that judges often do and are likely to do better than jurors unburdened by training in exegesis.” Id. at 388. And in response to the suggestion that patent construction cases frequently entail credibility determinations, the Court simply announced that “our own experience with document construction leaves us doubtful that trial courts will run into many cases like that.” Id. at 389. No support was cited for either assertion.

A somewhat ironic example dealing with juries arose in Reynolds v. United States, 98 U.S. 145 (1878). The Court, in advising a reviewing court on how to approach the issue of juror impartiality, asserted (with no support) “the fact we have so often observed in our experience, that jurors not unfrequently seek to excuse themselves on the ground of having formed an opinion, when, on examination, it turns out that no real disqualification exists.” Id. at 156; see also, e.g., Kumho Tire Co. v. Carmichael, 119 S. Ct. 1167, 1175 (1999) (announcing, without citation, that astrology is a discipline that “lacks reliability”); Ingraham v. Wright, 430 U.S. 651, 677 (1977) (asserting that “because paddlings are usually inflicted in response to conduct directly observed by teachers in their presence, the risk that a child will be paddled without cause is typically insignificant”); Mathews v. Eldridge, 424 U.S. 319, 342 (1976) (“[T]he hardship imposed upon the erroneously terminated disability recipient may be significant. Still, the disabled worker’s need is likely to be less than that of a welfare recipient.”).

276. 208 U.S. 412 (1908).

277. Louis Brandeis, then a practitioner, filed a brief in defense of the maximum-hour law for women that contained two pages of legal argument and 110 pages of sociological and economic data. See Muller, 208 U.S. at 419. The brief is widely considered to be the first in the history of the Supreme Court that brought in extra-record sources like social science evidence. It relied heavily on such studies and the views of numerous doctors; and, as it turned out, the Court was persuaded and
law that applied to women "without questioning in any respect the decision in *Lochner v. New York;*" the crucial difference, according to the Court, arose from the litany of "facts" it found demonstrating that women were weaker than men and thus could not handle the long hours that men could. Then there was footnote eleven of *Brown v. Board of Education,* in which the Court supported its conclusion that segregation "generates a feeling of inferiority" among African-Americans by stating that "this finding is amply supported by modern authority" and citing seven publications. And in *Roe v. Wade,* the Court relied not on studies but on its own research in making a slew of findings on its own.

These more famous cases may tend to overshadow, and thus obscure, the Court's routine reliance on facts that it finds on its own. An example of the latter, picked simply because it is recent, is *Bragdon v. Abbott,* adopted the result that Brandeis advocated. See *Erickson & Simon,* supra note 227, at 13-14; *Philippa Strum, Louis D. Brandeis: Justice for the People* 121 (1984); *Monahan & Walker,* supra note 206, at 4-11.

278. *Muller,* 208 U.S. at 423.
279. *Id.* at 421-22.
281. *Id.* at 494.
282. *Id.* at 494 & n.11.
284. For instance, the Court announces that "[A]bortion in early pregnancy... is now relatively safe." *Id.* at 149. Does the Court rely on trial court findings for this proposition? Of course not; "[a]ppellants and various amici refer to medical data indicating that abortion in early pregnancy, that is, prior to the end of the first trimester, although not without its risk, is now relatively safe." *Id.* According to the Court, Stoics believed, and most Jews believe, that life does not begin until live birth. *Id.* at 160. How does the Court know that? From scholarly sources, of course. Physicians, by contrast, focus on conception, live birth, or viability; it must be so, because the medical dictionaries and textbooks say so. *Id.* at 160 & n.59. Those sources also tell us when viability occurs. *Id.* The Catholic Church believes that life begins at conception; "[s]ubstantial problems for precise definition of this view are posed, however, by new embryological data that purport to indicate that conception is a 'process' over time, rather than an event, and by new medical techniques such as menstrual extraction, the 'morning-after' pill, implantation of embryos... and even artificial wombs." *Id.* at 161. What is the source for that wisdom? Scholarship, not findings below. *Id.* at 161 n.62.

Many commentators have criticized the Court for relying on medical authorities in *Roe v. Wade.* Professor Laurence Tribe, for example, complained that the Court grounded its decision "on a quicksand of someone else's expertise," rather than on more enduring constitutional values (such as putting women and men on an equal footing). See Laurence H. Tribe, *Seven Deadly Sins of Straining the Constitution Through a Pseudo-Scientific Sieve,* 36 HASTINGS L.J. 155, 169 (1984).

Others have expressed support for the Court's use of extra-record facts but have criticized its failure to give the parties a chance to challenge them. See Kenneth Culp Davis, *Judicial, Legislative, and Administrative Lawmaking: A Proposed Research Service for the Supreme Court,* 71 MINN. L. REV. 1, 10 (1986); see also Henry J. Friendly, *The Courts and Social Policy: Substance and Procedure,* 33 U. MIAMI L. REV. 21, 37 (1978) (saying of the fact-finding in *Roe* that "[i]f an administrative agency, even in a rulemaking proceeding, had used similar materials without having given the parties a fair opportunity to criticize or controvert them at the hearing stage, reversal would have come swiftly and inexorably").
a case with voluminous findings of medical fact. In addition to six extensive paragraphs of factual findings based entirely on medical literature on the nature of HIV and AIDS, the Court relied largely on medical publications (and rejected the significance of evidence actually in the record below) in stating, with admirable honesty, that "our evaluation of the medical evidence leads us to conclude that respondent's infection substantially limited her ability to reproduce."

Not only does the Court inform us about medical and social science issues such as the nature of HIV and what makes for effective psychotherapy, but it also makes findings about matters of technology.

286. Id. at 633-37.
287. Id. at 641 (rejecting the significance of evidence in the record suggesting that antiretroviral therapy can lower the risk of perinatal transmission to about 8%).

Of particular interest was the Court's charge to the lower court in Bragdon. The Supreme Court noted that it declined to grant certiorari on the question whether the doctor who refused to treat the HIV-positive patient raised a genuine issue of fact for trial. "As a result, the briefs and arguments presented to us did not concentrate on the question of sufficiency in light all of the submissions in the summary judgment proceeding. . . . [F]ull briefing directed at the issue would help place a complex factual record in proper perspective." Id. at 654. Thus, the Court stated: "We conclude the proper course is to give the Court of Appeals the opportunity to determine whether our analysis of some of the studies cited by the parties would change its conclusion that petitioner presented neither objective evidence nor a triable issue of fact on the question of risk." Id. at 655.

The irony of this result is quite rich, particularly for those who believe that appellate courts should not find facts: The Supreme Court has weighed the facts on its own and made its own findings ("our analysis of some of the studies . . ."), but it has refrained from drawing legal conclusions based on those facts; such application of the law will be left to other courts.

288. Id. at 639 (emphasis added). The Court justified this conclusion as follows:

First, a woman infected with HIV who tries to conceive a child imposes on the man a significant risk of becoming infected. The cumulative results of 13 studies collected in a 1994 textbook on AIDS indicates that 20% of male partners of women with HIV became HIV-positive themselves, with a majority of the studies finding a statistically significant risk of infection.

Second, an infected woman risks infecting her child during gestation and childbirth, i.e., perinatal transmission. Petitioner concedes that women infected with HIV face about a 25% risk of transmitting the virus to their children. Published reports available in 1994 confirm the accuracy of this statistic.

Id. at 640 (citations omitted).

289. See Jaffee v. Redmond, 518 U.S. 1, 10 & n.9 (1996) ("Effective psychotherapy . . . depends upon an atmosphere of confidence and trust in which the patient is willing to make a frank and complete disclosure of facts, emotions, memories, and fears. . . . [T]he mere possibility of disclosure may impede development of the confidential relationship necessary for successful treatment.") (citing "studies and authorities cited in the Brief for American Psychiatric Association et al. as Amici Curiae 14-17, and the Brief for American Psychological Association as Amicus Curiae 12-17"); see also Edward Imwinkelried, The Rivalry Between Truth and Privilege: The Weakness of the Supreme Court's Instrumental Reasoning in Jaffee v. Redmond, 518 U.S. 1 (1996), 49 HASTINGS L.J. 969, 974 (1998) (identifying the Court's assertions about the importance of nondisclosure for effective psychotherapy as the "linchpin" of Jaffee's reasoning, and asserting that the studies cited by the Court "do not support the majority's generalization that patients will not make the necessary revelations to psychotherapists without the protection of an evidentiary privilege").

A recent example of a case involving scientific evidence is United States v. Scheffer, 523 U.S. 303 (1998), in which the Court did not rely on a factual finding by the court below that polygraphs
In the 1996 cable indecency case *Denver Area Educational Telecommunications Consortium, Inc. v. FCC*, for instance, the plurality opinion's many assertions about cable television—such as that cable television broadcasting "is as 'accessible to children' as over-the-air broadcasting"—relied solely on relevant publications (mainly dealing with the cable industry). Similarly, in *Turner Broadcasting System, Inc. v. FCC*, the plurality opinion relied almost entirely on sources were unreliable, and instead looked at the studies on its own and came to its own conclusion that there was no consensus. See id. at 307, 309.

291. Id. at 744 (plurality opinion). Likewise, the Justices proclaimed:

> We have no empirical reason to believe, for example, that sex-dedicated channels are all (or mostly) leased channels, or that "patently offensive" programming on non-sex-dedicated channels is found only (or mostly) on leased channels. To the contrary, the parties' briefs (and major city television guides) provide examples of what seems likely to be such programming broadcast over both kinds of channels.

*Id.* at 761-62. The opinion relied on publications and materials submitted to the FCC by private parties (much like briefs submitted to a court) to support their assertion that:

Municipalities generally provide in their cable franchising agreements for an access channel manager, who is most commonly a nonprofit organization, but may also be the municipality, or, in some instances, the cable system owner. Access channel activity and management are partly financed with public funds—through franchise fees or other payments pursuant to the franchise agreement, or from general municipal funds.

292. *Denver Area* was a challenge to an FCC rulemaking. Such challenges are presented directly to the Court of Appeals for the District of Columbia, and that court defers to findings made by the FCC. Thus, the appropriate findings to which the Supreme Court would defer would be the findings of the FCC. But in *Denver Area*, the Court proved just as willing to make its own findings as in cases where the facts have been shaped by a district court.

In fact, some kinds of appellate fact-finding may be more common in appeals from agencies. Agencies are not Article III courts and are not limited by Article III, so matters that arise under Article III may be considered fully for the first time on appeal. The obvious example is standing. An appeal from an agency to a court of appeals marks the first occasion when constitutional standing will be a dispositive issue. The court of appeals, in other words, will make the initial determination on standing. And, though the existence of standing is a question of law, the tests for standing rely heavily on factual determinations (such as whether there is an injury in fact to the plaintiff). This puts the court of appeals in a structural position akin to a trial court. Perhaps unsurprisingly, courts of appeals in this position sometimes find themselves making findings of fact. See, e.g., *Center for Auto Safety v. National Highway Traffic Safety Admin.*, 793 F.2d 1322, 1333 (D.C. Cir. 1986) (finding standing to challenge lifting of fuel efficiency requirements because those requirements would cause manufacturers to alter the fuel efficiency of their vehicles); *id.* at 1345 (Scalia, J., dissenting) (contesting this assertion); see also James E. Brown, Note, *Civil Procedure—Standing and Direct Review in Appellate Court—Center for Auto Safety v. National Highway Traffic Safety Administration, 793 F.2d 1322 (D.C. Cir. 1986)*, 60 Temp. L.Q. 1045, 1062 (1987). Brown observes:

> The court of appeals in *Center for Auto Safety* resolved the factual disputes on the issue of standing without the aid of findings of fact on this issue either from a district court or from the agency..... Indeed, in *Center for Auto Safety*, the resolution of the standing question turned on a factual finding made by the court of appeals.

*Id.* On the application of this Article's analysis to cases where the fact-finder was an administrative agency, rather than a federal district court, see infra note 320.

293. 512 U.S. 622 (1994) (addressing the constitutionality of a federal statute mandating that cable operators carry local broadcast stations).
outside the record as support for its factual assertions about cable television. In other places—including the crucial (and contested) assertion that most viewers' use of their systems made cable into a bottleneck—the plurality cited no support whatsoever. Even though the bottleneck assertion relies on the role that cable television actually plays in viewers' lives (at least their viewing lives) and thus seems to be an issue of fact, the Court saw no need either to cite findings below or to remand for findings if appropriate ones did not exist. The Court clearly saw itself as fully capable of reaching its own conclusions about cable's role vis-à-vis its subscribers.

294. See id. at 628 (citing a 1993 article for the Court's assertion that "[n]ewer systems can carry hundreds of channels, and many older systems are being upgraded with fiber optic rebuilds and digital compression technology to increase channel capacity"); id. at 655 ("[T]here appears little risk that cable viewers would assume that the broadcast stations carried on a cable system convey ideas or messages endorsed by the cable operator. Indeed, . . . it is a common practice for broadcasters to disclaim any identity of viewpoint between the management and the speakers who use the broadcast facility." (citations omitted)); id. at 628 (citing Television and Cable Factbook (1994) for the plurality's assertion that "[m]ore than half of the cable systems in operation today have a capacity to carry between 30 and 53 channels").

Some of these sources were published after the district court issued its opinion; others were available to the district court, but the Supreme Court relied directly on them rather than on findings by the district court. The district court, in turn, had relied heavily on congressional findings and some assertions of its own. See Turner Broad. Sys., Inc. v. FCC, 819 F. Supp. 32, 46 (1993) (citing congressional findings on dangers posed to local broadcasting by the cable industry); id. (asserting, without citation, that "cable holds the future of local broadcasting at its mercy").

On courts' reliance on legislative findings in First Amendment cases, see Note, Deference to Legislative Fact Determinations in First Amendment Cases After Turner Broadcasting, 111 HARV. L. REV. 2312 (1998); William E. Lee, Manipulating Legislative Facts: The Supreme Court and the First Amendment, 72 TUL. L. REV. 1261 (1998).

295. The plurality squarely stated that "[t]he must-carry provisions . . . are justified by special characteristics of the cable medium: the bottleneck monopoly power exercised by cable operators and the dangers this power poses to the viability of broadcast television." Turner Broad. Sys., 512 U.S. at 661; see also id. at 669-70 (Stevens, J., concurring) ("The must-carry provisions are amply 'justified by special characteristics of the cable medium,' namely, 'the bottleneck monopoly power exercised by cable operators and the dangers this power poses to the viability of broadcast television.'") (quoting the plurality opinion).

296. Some of the briefs before the Court in Turner squarely contended that cable was not, in reality, a "bottleneck" because, for example, viewers could easily acquire a switch that allows them to change from broadcast to cable with the push of a button. See Reply Brief for Appellants Discovery Communications, Inc. and the Learning Channel, Inc. at 10, Turner Broad. Sys., (No. 93-44); see also Lee, supra note 294, at 1311 n.361 (listing five independent reasons why Justice Kennedy's bottleneck argument is faulty).


298. The district court did not find as a fact that cable was a bottleneck, but it did refer to Congress's assertion that cable was a bottleneck. See Turner Broad. Sys., 819 F. Supp. at 40. The fact that Congress so contended would undercut the claim that a court had found this fact on its own if the court was deferring to Congress's finding. Although that did happen in the district court (which pointed out on numerous occasions that it was deferring to Congress's findings), the Supreme Court did not intimate that its finding of a cable bottleneck reflected a congressional finding. The Court presented the conclusions as its own, without any suggestion that it was adopting those of another body. In fact, nowhere in the section of the opinion finding bottleneck status did the opinion even mention Congress. Turner Broad. Sys., 512 U.S. at 623-24, 661.
Thus, rather than remand, the Court has found all sorts of facts by relying on sources outside the record below, including bare assertions by parties in briefs, research by authorities outside of the adjudication, and their own personal sense about the state of the world. This is not to suggest that its actions were improper. It may be that these findings would not have benefited from evidentiary hearings, or that the benefit of such an evidentiary hearing would be outweighed by the resources expended (whether via remand or via a hearing in the Supreme Court). It might be that if the Court could not draw such conclusions, it would remand so many cases that it might take ten years for it to issue a final opinion on the merits. The point simply is that, despite what the ordinary rules of procedure might suggest, the Supreme Court has seen fit to draw its own factual conclusions.

c. Is this just judicial notice?—Some might object that I am being too fastidious, because what was really going on in these cases is that the Supreme Court was simply taking judicial notice of these facts, without actually saying so. The problem with such a notion is that it begs the question of what "judicial notice" means in this context. Ordinarily, judicial notice is appropriate with respect to facts that are not subject to reasonable dispute. The assertions discussed above do not seem to fall into that category, however; almost all of them seem eminently contestable. I am sure that some would argue that the factual assertions in Muller and Turner are obviously correct, but I am equally sure that many reasonable people would contest them. Moreover, the facts asserted by the Supreme Court could, by and large, be subject to studies that in turn could be the subject of fact-finding. A trial court could, for example, receive evidence on the question of the effect of segregation on African-American children, or the preconditions necessary for effective psychotherapy.

299. See Fed. R. Evid. (201)(b) (specifying that "[a] judicially noticed fact must be one not subject to reasonable dispute in that it is either (1) generally known within the territorial jurisdiction of the trial court or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned"). "Judicial notice"—at least as that term is used in Rule 201 of the Federal Rules of Evidence—does not apply to legislative facts, arguably leaving courts with more flexibility in determining how to take notice of legislative facts. See Fed. R. Evid. (201)(a) ("This rule governs only judicial notice of adjudicative facts."). Whether or not courts are in some sense authorized (by this omission in the Federal Rules of Evidence or otherwise) to take judicial notice of disputable legislative facts, it does not change the substance of the court's action; and that substance, as is discussed in the text, appears to entail the finding of facts that are subject to reasonable dispute and appropriate for a formal evidentiary process.

300. Indeed, this is exactly what happened in Stell v. Savannah-Chatham County Board of Educ., 220 F. Supp. 667 (S.D. Ga. 1963), rev'd, 333 F.2d 55 (5th Cir. 1964), cert. denied, 379 U.S. 933 (1964), in which the district court revisited Brown's factual assertions about the deleterious effects of segregation and found that the evidence actually pointed in the opposite direction. See id. at 678; see also supra note 190. Interestingly, the Fifth Circuit, in reversing, did not contend that the findings in
Under these circumstances, we may consider the Supreme Court's assertions to be judicially noticeable, but in so doing we have construed the term to encompass factual assertions that are subject to reasonable dispute and more exhaustive fact-finding. We would be defining "judicial notice," in other words, to include much of the fact-finding that is discussed in this Article. We could call such a process "judicial notice" or "fact-finding" or "spelunking," but the substance of it would be the same: the Court would be drawing its own conclusions on contestable issues of fact that could instead be the subject of fact-finding below. Thus the larger significance of these cases is that the Court was willing to find facts despite their contestability and provability.301

_Brown_ were unassailable, but rather suggested that the Supreme Court announced a broad rule that did not depend on any particular set of facts. See _Stell_, 333 F.2d at 61. The Fifth Circuit was probably correct insofar as it was deciphering the real reasons underlying _Brown_; but, as commentators have noted, the actual language of the _Brown_ opinion (as distinguished from what we may assume to have been its underlying reasoning and purpose) does, by its terms, indicate some reliance on a set of factual assertions about the effects of segregation. See _Brewer_, supra note 20, at 1554-63.

301. One potential response is that the Court _thought_ these facts were indisputable and thus took judicial notice, even though other persons might not have so concluded. One problem with this suggestion is that the Court knows how to say "judicial notice." See, e.g., Whitmore v. Arkansas, 495 U.S. 149, 159 (1990) ("We can take judicial notice of the fact that writs of habeas corpus are granted in only some cases, and that guilty verdicts are returned after only some trials."); Block v. Rutherford, 468 U.S. 576, 588-89 (1984) ("We can take judicial notice that the unauthorized use of narcotics is a problem that plagues virtually every penal and detention center in the country."); Brown v. Board of Educ., 344 U.S. 1, 3 (1952) (per curiam) ("This Court takes judicial notice of a fourth case, which is pending in the United States Court of Appeals for the District of Columbia Circuit, _Bolling_ et al. v. _Sharpe_ et al . . ."). Similarly, the Court knows how to disclaim the propriety of judicial notice. See, e.g., Board of Educ. v. Allen, 392 U.S. 236, 248 (1968) (stating that the Court could not determine, "based solely on judicial notice" that "the processes of secular and religious training are so intertwined that secular textbooks furnished to students by the public [are in fact] instrumental in the teaching of religion"); Witherspoon v. Illinois, 391 U.S. 510, 517-18 (1968) ("We simply cannot conclude, either on the basis of the record now before us or as a matter of judicial notice, that the exclusion of jurors opposed to capital punishment results in an unrepresentative jury on the issue of guilt or substantially increases the risk of conviction."). Why, then, didn't the Court say so in the cases discussed above? A standard rule of statutory construction is that, where a legislative draftsman sometimes uses a term (demonstrating her familiarity with it), her failure to use it in other comparable situations is significant. See, e.g., Russello v. United States, 464 U.S. 16, 23 (1983) (citing the well-known canon of construction that "where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion"). The missing references to "judicial notice" are analogous, casting doubt on the suggestion that the Court intended to take judicial notice in these cases.

A more fundamental problem with this focus on what the Supreme Court Justices thought, however, is that it proves little. If they thought that judicial notice was appropriate but recognized that the facts so noticed might reasonably be disputed, then, as I just noted, they have engaged in fact-finding and have simply used a different term to describe it. If the Justices believed not only that judicial notice was proper but also that the facts they announced could not be disputed by reasonable people, then the category of such indisputable facts must be very broad indeed; their operational definition of noticeable facts would thus seem to encompass a broad swath of facts that have an objective element but could be disputed by some, and thus judicial notice would effectively encompass many of the facts that heretofore had been thought subject to evidentiary fact-finding only.
It is also interesting to reflect on why we might want to refer to the Court's assertions as judicial notice (despite the Court's failure to so identify its actions). Presumably, it is because we assume that admitting that the Court is not taking judicial notice is admitting illegitimate judicial acts; fact-finding, as we are taught from our earliest days in law school, is reserved for trial courts. But that perspective may not give the Court enough credit. Perhaps the Court is making a reasoned determination that appellate fact-finding is appropriate where the alternative is a remand that will require a considerable amount of time and resources for a benefit that seems slight; and that, of course, is what this Article suggests as well.

2. The Benefits of Trial Court Fact Gathering.—The obvious rejoinder to the previous parts of this section is that they may establish that the Supreme Court is willing to find facts and does find facts, but they do not demonstrate that appellate courts should find facts. There are significant arguments against appellate updating (and in favor of trial court factual determinations); and, it might be argued, such arguments are dispositive even in situations where facts have changed since the original findings by the district court and may be subject to continual change in the future.

One argument against appellate updating of facts is that fact-finding by trial courts is valuable because it also serves as a screening and focusing device, weeding out the weak cases and clarifying the issues for appeal. The appellate court can exercise its energies focusing on the few cases that seem to merit review by that exclusive body, secure in the knowledge that all the other cases have already been heard and that the issues it hears have been refined by trial courts that have waded through the unfocused and/or bloated filings the parties originally submitted. The winnowing and focusing function suggested here is probably overstated however. Parties are entitled to an appeal as of right to a federal circuit court, so there is obviously no winnowing function there. And on appeal parties can (and do) put forward every possible mistake that the trial court may have made. Even if the trial court did try to focus the proceedings, it cannot control

302. After all, the fact that the Court has looked at facts in the past does not necessarily justify it in doing so. Many of the cases discussed above have been controversial. The debates over the legitimacy of the findings in Muller v. Oregon, 208 U.S. 412 (1908), and footnote 11 of Brown v. Board of Educ., 347 U.S. 483 (1954), for example, continue to this day. See Dean M. Hashimoto, Science as Mythology in Constitutional Law, 76 OR. L. REV. 111, 139 (1993); Thomas Koenig & Michael Rustad, The Supreme Court and Junk Social Science: Selective Distortion in Amicus Briefs, 72 N.C. L. REV. 91, 106 (1997). And some examples cited above, such as Kyles v. Whitley, 514 U.S. 419 (1995), triggered angry dissents from justices who believed that the Court was inappropriately arrogating unto itself the authority to find facts (although, in the Kyles case, the dissent spent more time putting forward its own version of the facts, see supra note 236).

303. If the filings were focused and concise at the trial court level, then no trial court focusing function would be necessary or even useful.
what the parties submit on appeal, and quite possibly the attempted focusing itself may be challenged by parties who believe that they should have been able to present other issues.\textsuperscript{304}

The more weighty arguments against appellate updating are also the strongest arguments in favor of remanding: that trial courts have more expertise in fact-finding than do appellate courts; and, relatedly, that district courts have an enhanced ability to find facts because they can hold oral hearings and thereby judge credibility.\textsuperscript{305}

The expertise argument assumes that appellate courts are unaccustomed to fact-finding; but, as the previous section shows, they find facts all the time. To be fair, though, those facts are generally found based on briefs and record material—\textit{i.e.}, based on a cold record, absent the oral evidentiary process. Thus we might amend the expertise argument to say that district courts have greater expertise in finding facts pursuant to oral hearings. This dovetails nicely with the second advantage—that district courts have the ability to hold such hearings.

Even as reconfigured, the arguments based on expertise in holding hearings and the ability to hold hearings remain serious considerations—ones that, in ordinary cases (\textit{i.e.}, where there is no concern on remand about an infinite loop) would present a powerful argument against appellate updating of facts. There are countervailing considerations, however, that loom large in the situations on which this Article focuses.

At the outset, it should be noted that, if hearing witnesses really is crucial, appellate courts could do so. There is no law of nature that prevents the appellate court itself from empaneling and hearing from witnesses. As matters currently stand, appellate courts do not hear witnesses, but that is of course a reversible choice. (After all, Justices are \textit{judges} as well.) But the stronger argument is that an oral evidentiary process often will not be necessary, or even particularly advantageous, in the first place.

For some kinds of facts it is not clear that live witnesses will add much to the paper record; the ability of a court to see witnesses live, rather than rely solely on papers, may not confer a significant benefit.

\textsuperscript{304} A larger problem lies in the posture of the case. When facts have changed as the case is on appeal, the appellate court already has the case before it. If the appellate court is limited to the facts presented at trial, it may not be deciding the actual dispute between the parties; the appellate court may issue an opinion, but that opinion will (if the facts have changed) be outdated on the day it is issued. If the case then winds back to the trial court, the district court will not only be the first court to consider the new facts as they apply to the parties, it may be the only court to do so (because of the danger that they will change again after the second fact-finding). So deferring to the winnowing and refining functions of a district court may result in the appellate court sitting on the sidelines. If the appellate court wants to let another court find the facts, it may never get a chance to adjudicate the case as it then exists; thus, the appellate court either acts without winnowing or only when it is too late.

\textsuperscript{305} See \textit{supra} notes 205-06 and accompanying text.
Importantly, it seems likely that many of the facts that are subject to rapid and continual change will fall into this category. The reason for this lies in the nature of the kinds of facts that are likely to undergo rapid and continual change. For many purely historical facts (e.g., who did what to whom), hearing witnesses may be helpful, in particular because the finder of fact can make credibility determinations. The facts that might be subject to continual change, however, are likely to be different. Such facts generally will not be specific to a finite interaction between a given set of parties but instead will pertain to the world as it exists in operation. Moreover, such facts will often be what I have called technological facts—the understanding of which presupposes a fairly nuanced familiarity with the technology at issue; examples, as I suggested above, might be how the World Wide Web is configured, how effective Internet filters might be, or whether a browser is separate from an operating system. The significance of these points is that, as a number of commentators have suggested, the oral adversarial process might generate more heat than light. Those who testify on technological and scientific matters will have submitted their findings—and the crucial data and methodology backing up those findings—in writing. The most effective questioners—both as to methodology and credibility—are likely to be others familiar with the science or technology, not generalist judges and lawyers; and those other scientists will usually respond (and respond

306. See supra note 82 and accompanying text.  
307. See supra note 90.  
308. See supra notes 114-20, 130-33 and accompanying text.  
309. See, e.g., Joseph Sanders, From Science to Evidence: The Testimony on Causation in the Bendectin Cases, 46 STAN. L. REV. 1, 47 (1993) (stating that, in cases relying on expert witnesses, “cross-examination becomes a ritual that does little to clarify the strengths and weaknesses of a witness’[s] testimony”); John S. Applegate, Witness Preparation, 68 TEXAS L. REV. 277, 311 (1989) (“While the adversary system touts the effectiveness of cross-examination for revealing the truth, there is little empirical support for this conclusion.”).  
310. The suitability of some forms of testimony to written presentation was crucial in Mathews v. Eldridge, 424 U.S. 319 (1976), in which the Court ruled that a pretermination evidentiary hearing for a recipient of disability benefits was not necessary, as a constitutional matter, because of the adequacy of the pretermination written procedures. Id. at 344-46. The Court emphasized that a written, rather than oral, medical determination of impairment was sufficient in light of the nature of the inquiry (i.e., because it relied on reports, tests, and X-rays). Id. at 345 (“The conclusions of physicians are often supported by X-rays and the results of clinical or laboratory tests, information typically more amenable to written than to oral presentation.”); see also id. at 344 n.28 (“The value of an evidentiary hearing, or even a limited oral presentation, to an accurate presentation of [certain worker characteristics] to the decisionmaker does not appear substantial.”).  
311. Interestingly, the Supreme Court’s case law on standards for the admissibility of expert testimony lends some support to this proposition. In a line of cases on the admissibility of such testimony beginning with Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), and extending to last term’s Kumho Tire Co. v. Carmichael, 119 S. Ct. 1167 (1999), the Court has stressed the relevance of “general acceptance” within the “relevant scientific community,” as well as whether the theory or technique has been subjected to peer review and publication. Daubert, 509 U.S. at 585, 584, 593, 592-94; see also Kumho Tire, 119 S. Ct. at 1175-76 (quoting from Daubert). The Court could have opened the door wide to all forms of self-proclaimed “expert” testimony, leaving the judge
more effectively) with their own written submissions. Lawyers and judges might be able to find questions that will trip up the witnesses, but that may shed no light on the validity of the underlying scientific assertions at issue. In fact, examination and cross-examination in this context may do more harm than good, as it might give the lawyers and judge an illusion of understanding.

If this last point is correct, this may be a reason to prefer appellate fact-finding, because appellate judges (assuming that they do not utilize procedures to hear witnesses) will not have been misled by the showmanship of examination and cross-examination. Even if examination does not do any harm, if it also confers no benefit then there would be reason to prefer appellate fact-finding. After all, there would be three or nine judges reviewing the submissions and reaching conclusions about what they actually indicate, rather than just one. The consequences of either of

312. As David Faigman noted:

Good scientific research simply does not depend on the credibility of individual witnesses. If the question is whether the declarant made a statement under a belief of impending death, the nurse’s credibility might be critical, and this presumably can best be assessed in person. In contrast, whether a series of six epidemiological studies support the conclusion that the relative risk associated with silicone implants exceeds 2.0 for connective tissue disorders does not entail the same sort of credibility assessment. The science must be evaluated on the merits and as reported, in most cases, in the literature.

313. See, e.g., Edward V. Di Lello, Note, Fighting Fire with Firefighters: A Proposal for Expert Judges at the Trial Level, 93 COLUM. L. REV. 473, 496-97 (1993) (“[M]odern expert testimony has strayed so far from traditional testimony that it is no longer recognizable as such, but is rather a form of professional advocacy. As such, the assertion of partisan experts might be better evaluated in written form.”).


315. See Faigman, supra note 312, at 979 (“Contrary to the arguments against appellate courts’ competency, arguably appellate judges are better positioned than trial judges (and trial judges better than juries) to decide scientific disputes that transcend particular cases.”); Randolph N. Jonakait, The Standard of Appellate Review for Scientific Evidence: Beyond Joiner and Scheffer, 32 U.C. DAVIS L. REV. 289, 317-18 (1999) (arguing that “[t]he trial court does not have a privileged position over the appellate court in admitting scientific evidence] because appellate judges can have direct access to the scientific material”).

316. Judge Friendly noted several potential advantages of appellate panels, chief among them that “the give and take of discussion may produce a result better than any single mind could reach. [And]
these conclusions are considerable; they would suggest that there is no real reason for appellate courts to remand to trial courts for fact-finding, even if the facts are not subject to further change. One need not accept this broad proposition, however, to accept the narrower proposition advanced in this Article that whatever are the benefits of trial court fact-finding, they may be outweighed by the costs involved in a remand. Put another way, even if it is wrong to suggest that there are no benefits to trial court fact-finding, the benefit does not appear to be very great (and, perhaps ironically, the empirical evidence on the advantages conferred by oral examination is inconclusive). Thus the presence of significant countervailing considerations (here, that facts are in a state of flux) may be sufficient to command a different presumption about who should be the fact-finder.

This is not to suggest that appellate courts always (or even usually) draw appropriate conclusions from the paper record that is presented to them. Commentators have accused appellate courts of misconstruing the material presented to them in a number of cases, and their accusations may well be apt. The point, instead, is that it is not clear that district courts will do a better job of wading through material bearing on facts about the world. To return to a previous example, why should an appellate court defer to a trial court's interpretation of briefs and memoranda on, say, whether Internet filters successfully filter out sexual material, or whether cable is a bottleneck? What does the trial court know that the appellate court does not? The answer may be "a bit," because the trial court had whatever advantage might be conferred by an adversarial fact-finding hearing (if it held one); but that advantage may be outweighed when the facts are subject to rapid and continual change, for the reasons outlined in this Article.

That is, the disadvantages of the appellate
collegial review tends to eliminate or curtail decisions based on impermissible factors." Henry J. Friendly, Indiscretion About Discretion, 31 EMORY L.J. 747, 757 (1982).

317. See, e.g., Edward H. Cooper, Civil Rule 52(a): Rationing and Rationalizing the Resources of Appellate Review, 63 NOTRE DAME L. REV. 645, 650 (1988) (noting that "[t]here is room still to wonder whether the opportunity to evaluate the demeanor of witnesses at trial actually enhances the fact-finding process").

318. See Robert H. Miller, Comment, Six of One Is Not a Dozen of the Other: A Reexamination of Williams v. Florida and the Size of State Criminal Juries, 146 U. PENN. L. REV. 621, 623-31 (1998) (arguing that, in cases involving the minimum size of juries, the Supreme Court has misinterpreted and misapplied relevant studies); Michael J. Saks, Ignorance of Science Is No Excuse, TRIAL, Nov.-Dec. 1974, at 18, 18 (asserting that, in Williams v. Florida, "the law’s confrontation with some relatively simple empirical questions was simply an embarrassment").

319. On the possibility of a trial court not holding such a hearing and not having greater familiarity with the facts than an appellate court would, see supra notes 209-10.

320. This discussion, and indeed the Article as a whole, refers to the original fact-finder as a district court or trial court. As was noted above, though, on some occasions the fact-finder is not an Article III court but instead an administrative agency; the agency makes the determination, and the parties appeal from there to a federal court (normally a court of appeals). Although the Supreme Court has never confronted the issue discussed in this Article, it has suggested, in a somewhat analogous
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This sort of distinction among facts—here, focusing on the ones that would require evidentiary hearings or otherwise consume lots of appellate resources—is in many ways analogous to the Supreme Court’s own practices. In *Lockhart v. McCree*, the Court suggested, in dictum, a willingness to treat some facts differently on appellate review. The respondent in *Lockhart* had argued that the Supreme Court should defer to the lower court findings that “death qualification” of jurors produces conviction-prone juries. The Court stated that “[b]ecause we do not ultimately base our decision today on the invalidity of the lower courts’ ‘factual’ findings, we need not decide the ‘standard of review’ issue. We are far from persuaded, however, that the ‘clearly erroneous’ standard of Rule 52(a) applies to the kind of ‘legislative’ facts at issue here.” Unfortunately, the Court has not returned to this issue in any other case, so its suggestion of nonpersuasion for a certain class of facts has never been adopted.

context, that agency actions should be remanded if there are allegations that the facts changed during the agency’s processes. See *Interstate Commerce Comm’n v. Jersey City*, 322 U.S. 503, 514 (1944). While a full discussion of the courts’ role in taking account of new facts in administrative cases would require another article, a few preliminary points can be made. On the one hand, there are similarities between appellate review of agencies and district courts. Agency fact-finding can be a very time-consuming process, and the delays that occur after the agency has completed its work (i.e., when the case is awaiting decision by the reviewing court) can be quite substantial. Moreover, the jurisprudential concerns involved in an Article III appellate court issuing a forward-looking opinion that relied on outdated facts would exist whether the original finder of fact was an Article III court or not. On the other hand, there are significant differences. An agency typically operates under a grant of policymaking authority, pursuant to which it wields primary responsibility for implementing a regulatory program. This circumstance gives special force to the argument that the agency should, in general, be allowed to speak first on factual matters. Relatedly, the difference in expertise between appellate courts and agencies is likely to be much greater than the difference between appellate courts and district courts. See *Far East Conf. v. United States*, 342 U.S. 570, 575 (1952). Additionally, the position of appellate courts is complicated by the concept that agency rulemakings are analogous to legislation by a legislative body, as opposed to agency adjudications that are treated as analogous to judicial decisionmaking. See *RLC Industries Co. v. Commissioner of Internal Revenue*, 58 F.3d 413, 417-18 (9th Cir. 1995) (discussing the distinction between agency rulemaking and agency adjudication).

321. In this way, the analysis is similar to the test for determining how much process is required before a constitutionally protected benefit can be terminated. See *Mathews v. Eldridge*, 424 U.S. 319, 335 (1976) (outlining the three factors to consider in a due process inquiry). The *Mathews* inquiry asks whether, in light of the claimant’s interests, the increased accuracy to be gained from additional procedures is outweighed by the costs of such procedures. See *id*. There was no dispute that additional procedures (in *Mathews*, a pretermination evidentiary hearing) would confer some benefit, but the Court doubted that such benefit would be sufficient to justify the additional cost involved. See *id.* at 344-46.


323. See *id.* at 168 n.3.

324. *Id.* at 173.

325. *Id.* at 168 n.3.

326. This language from *Lockhart* raises a question: Would a Supreme Court holding that appellate courts should not defer to trial courts on legislative facts, but should instead find such facts on their
In addition, *Lockhart*’s suggestion is at odds with cases in which the Court has taken an uncompromising position on appellate fact-finding, denominated as such. 327 Some circuit courts had held that they could exercise de novo review of district court findings that were not based on credibility determinations. 328 The Supreme Court squarely repudiated

but no cigar. Such a rule would be both broader and narrower than the appellate fact updating considered in this Article. It would be broader because I am not arguing that the Court routinely find legislative facts on its own, but rather that it do so only when the facts are subject to continual change. The burden of persuasion on an article writer would be higher if one were to extend that rule to ordinary cases, because the justification of the potentially high costs of remand would be absent.

Perhaps more important, though, routine appellate finding of legislative facts might not encompass some of the facts that are subject to change and that, in my view, might merit appellate updating. Consider the question whether Microsoft’s operating system and its browser are separate products. My reading of the categories suggests that this fits comfortably into neither category, but that it is probably better understood as an adjudicative fact. *See* text accompanying note 42. If so, such a fact would not be included in the *Lockhart dictum* as available for appellate updating, and the problems identified in this Article would remain. In the alternative, one could consider this to be a legislative fact, but, in so doing, one would then be treating that category so broadly that it would likely encompass, for instance, most (if not all) the facts in the Microsoft case about the nature of its and its competitors’ products; and because those facts are the essence of the case for injunctive relief, it would mean that appellate courts would essentially be holding a new trial all over again (and that, of course, would dramatically raise the cost of appellate courts finding legislative facts and thus make the entire procedure much less attractive).

Part of the difficulty in determining the effect of a rule of nondeference to legislative facts is that the distinction between legislative and adjudicative facts is fairly murky. As Charles Alan Wright and Kenneth Graham have noted, once one moves beyond paradigmatic examples there is wide disagreement—even between Kenneth Davis, who originated the distinction, and the Reporter for the Federal Rules of Evidence, who adopted the distinction for Rule 201. The categories simply are not very clear. *See* 21 CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE § 5103 (2d ed. 1987).

327. One could try to harmonize *Lockhart*’s dictum with the cases in which the Supreme Court rejected a distinction among facts by noting that the *Lockhart* dictum had referred to the “‘factual’ findings”—the quotation marks around the word “factual” perhaps suggesting that, in the Court’s view, these were not really questions of fact at all. One problem with this reading is that in the same footnote the Court subsequently referred, twice, to this sort of “‘legislative’ fact,” putting the word “legislative” in quotation marks but not the word “fact.” *See Lockhart*, 476 U.S. at 168 n.3. Presumably, if it meant to suggest that these were not really facts, it would have put quotation marks around the word “fact.”

If, though, the Court was attempting to suggest that these were not really facts, it lends support to the argument that the Court is willing to engage in a practice that seems indistinguishable from fact-finding, even if the Court is calling it by a different name. If the Court wants to characterize these sorts of determinations as mixed questions of law and fact—or even as questions of law—and then consider them de novo, they are effectively “finding” the answers to those questions. We could then achieve appellate fact-finding simply by recharacterizing legislative facts as mixed questions of law and fact. I think that such an approach is dishonest, because I think that such legislative facts are deemed to be facts with good reason. But perhaps *Lockhart* reveals a suggestion (thus far not implemented) to consider legislative facts de novo via a semantic distinction. (Unfortunately, if *that* is what we interpret the Court as doing, then we are back to interpreting *Lockhart* in a way that is in tension with cases like *Bessemer City* and *Pullman-Standard*.)

328. *See* Orvis v. Higgins, 180 F.2d 537, 539 (2d Cir. 1950); Lydle v. United States, 635 F.2d 763, 765 n.1 (6th Cir. 1981); Swanson v. Baker Indus., Inc., 615 F.2d 479, 483 (8th Cir. 1980). As the Supreme Court remarked in *Anderson v. Bessemer City*, “[t]his theory has an impressive genealogy,
that practice in Anderson v. Bessemer City, concluding that there was no basis for distinguishing among facts.

At the same time, however, the Court has acknowledged that the line between questions of law and questions of fact is sufficiently nebulous that it is often up to the courts to choose their characterization. And, in Miller v. Fenton, the Court noted that "the fact/law distinction at times has turned on a determination that, as a matter of the sound administration of justice, one judicial actor is better positioned than another to decide the issue in question." The Court then embarked on an extensive discussion applying this principle, noting, for example, that allocation as fact was appropriate where "the issue involves the credibility of witnesses and therefore turns largely on an evaluation of demeanor," whereas

[If] the relevant legal principle can be given meaning only through its application to the particular circumstances of a case, the Court has been reluctant to give the trier of fact's conclusions presumptive force and, in so doing, strip a federal appellate court of its primary function as an expositor of law.

The "vexing nature of the distinction between questions of fact and questions of law" has also led the Court to dump some questions into having first been articulated in an opinion written by Judge Frank and subscribed to by Judge Augustus Hand, see Orvis v. Higgins... But, as the Court also noted in Anderson, Rule 52(a) of the Federal Rules of Civil Procedure apparently rejected the notion that findings not based on credibility could be subject to de novo appellate review; by its terms, it applies to all findings of fact. See id. at 474; see also Martin B. Louis, Allocating Adjudicative Decision Making Authority Between the Trial and Appellate Levels: A Unified View of the Scope of Review, the Judge/Jury Question, and Procedural Discretion, 64 N.C. L. Rev. 993, 1000 (1986).

This is not to suggest that Rule 52(a) applies to the proposal put forward in this Article; the rule covers appellate review of existing findings of fact. See FED. R. CIV. P. 52(a) ("Findings of fact... shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses."). Rule 52(a) thus does not apply to the updating of facts, but the rule, as interpreted by the Supreme Court, obviously provides no support for the distinction mentioned here, either.


Rule 52(a) broadly requires that findings of fact not be set aside unless clearly erroneous. It does not make exceptions or purport to exclude certain categories of factual findings from the obligation of a court of appeals to accept a district court's findings unless clearly erroneous. It does not divide facts into categories... Id. at 287.

330. It is perhaps ironic that in one of the cases in which the Court harshly rebuked a circuit court for applying de novo review to what the Court deemed to be a question of fact, the Court in the next breath noted "the vexing nature of the distinction between questions of fact and questions of law." Pullman-Standard, 456 U.S. at 288.

the category of mixed questions of law and fact—a wonderfully mushy classification. And the review applied to such mixed questions is (perhaps fittingly) indeterminate: unlike the standard of review for questions of law and questions of fact, the standard of review applied to mixed questions varies; “deferential review of mixed questions of law and fact is warranted when it appears that the district court is ‘better positioned’ than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of legal doctrine.”

The logic of the Court’s reasoning—which frankly focuses on the relative positions of trial and appellate courts—would seem to allow for appellate updating. The considerations in this Article are not purely based on expertise; as I have suggested, also relevant is the concern that the appellate court be able to issue an opinion (i.e., avoid an infinite loop), and that it issue an opinion that actually applies to the world as it exists (i.e., avoid an opinion based on outdated facts). But the considerations enunciated by the Court—for example, the focus on an appellate court’s “primary function as an expositor of law”—seem to encompass this kind of concern.

We could try to characterize as questions of law or as mixed questions the sort of rapidly changing situations discussed in this Article. It seems more honest, however, to acknowledge that even in the blurry world of such categories the sort of situations on which we are focusing probably constitute “facts,” but to argue that such categorization is not dispositive as to the illegitimacy of their finding by an appellate court in these circumstances. After all, although the Supreme Court has repeatedly stated that all facts are found by trial courts and subject to clearly erroneous review, it has nonetheless been willing to find facts on its own.

The point of these arguments is not that either credibility determinations or the winnowing and focusing function is valueless; on the contrary, in many situations they may be of great value. The arguments for an enhanced role for district court fact-finding (either by relying on the facts as found and leaving any updating for a further action in the district court, or by remanding) simply have less force in the context addressed in this Article.

337. Fenton, 474 U.S. at 114.
338. See supra notes 220-26 and accompanying text.
339. See discussion supra section V(C)(1).
340. This context can be seen as one example of the larger category of situations where there is reason to doubt the findings below. For instance, an appellate court may have concerns about the good faith of the trial court. This should be rare, but in fact frequently came up in the desegregation decisions. For example, when James Meredith challenged the refusal of the University of Mississippi
But, a skeptical reader might ask, wouldn't the appellate updating just described constitute a big waste of resources? The answer is no, although its contours change depending on whose resources are at issue.

If we focus on saving appellate courts' resources, the argument against appellate updating would be at its strongest: updating would require that the appellate court devote extra time to a case (sifting through a paper record takes some time), and that case might well be overtaken by new facts in a matter of years or perhaps months. An appellate court concerned about its resources thus might be tempted to focus instead on cases that do not take extra time and will have a longer shelf life.

The matter, though, is not quite so simple. With respect to remanding, as was noted above, if the factual updating would not be terribly time consuming, then it might save the appellate court's time simply to engage in that updating and then issue its final opinion, rather than hearing it a second time on its way back up from the district court. There is, of course, the possibility of a new case being filed once the facts change again, but that should be compared to the certain existence of the remanded case in the district court.

And if the facts keep changing, remanding to admit him, the district court made relatively few findings of fact in rejecting his claim, other than the rather remarkable ones that "there is no custom or policy now, nor was there any at the time Plaintiff's application was rejected, which excluded qualified Negroes from entering the University," and that "the University is not a racially segregated institution." Meredith v. Fair, 202 F. Supp. 224, 227 (S.D. Miss. 1962), rev'd, 305 F.2d 343 (5th Cir. 1962). On appeal, the Court of Appeals for the Fifth Circuit rejected these findings and, rather than remand for new findings (as would ordinarily occur), simply concluded that "[r]ead 1350 pages in the record as a whole, we find that James Meredith's application for transfer to the University of Mississippi was turned down solely because he was a Negro." _Id._ at 361. The appeals court thus seemed to treat the district court's findings as the clock that strikes thirteen—that is, an event that not only seems patently incorrect but also makes one question all that has come before. And, of course, remand for further fact-finding would be pointless, because the district judge might simply make the same (or perhaps additional) untrustworthy findings.

The reason that neither deference nor remand seems appropriate in the Meredith situation is that there was good reason to doubt the accuracy of the facts found. The same rationale applies in the situation discussed in this Article: if a party makes a credible argument that the facts have changed since the trial court found them, then, by definition, the party has cast a shadow over those findings. Unlike the situation above, remand is not out of the question (because we are assuming that the district judge's findings were correct at the time they were found); but, as we have already discussed, remand does not diminish the problem of inaccurate findings unless one assumes that the next X months will see less change than the previous X months—an assumption that seems problematic with respect to any of the rapidly changing industries discussed in this Article. Thus, for different reasons, an appellate court would be faced with problematic facts found by the district court and a significant likelihood of equally inaccurate facts if the case were remanded or decided on old facts, with future district court action to come. Such circumstances seem sufficiently similar to that of the bad-faith judge that a similar result seems warranted—namely, appellate fact-finding (or, more precisely, fact updating).

The calculus is complicated by both the chance of a new case being filed and of the remanded case not being appealed. _See supra_ note 214.
means that every time the case comes up on appeal, the remanding court would have to familiarize itself with the facts in order to determine whether a remand was appropriate; judges would spend time on the case but produce nothing. With a bit more energy expended, they could produce a useful opinion. With respect to deciding the case based on old facts, meanwhile, the chances of the case not returning to the appellate court are probably greater: in the case of remand, the district court would update the facts as long as one of the parties did not surrender or settle; in the case of deciding based on old facts, the case would enter district court only if the losing party decided to revive its lawsuit and the district court found that preclusion was inapplicable, and we might imagine that the odds of a successful new filing are lower than the odds of a continuation of the case on remand. At the same time, however, the investment of resources by the appellate court would also be greater: rather than remanding, the appellate court would have issued an opinion in the case, which requires lots of resources. As with remand, deciding the case based on old facts might be shortsighted for the appellate court (ignoring the concerns of other courts and the parties), because, with a bit more effort, the court could decide the case as it exists and then have a breather until the facts change again and a new case is filed. If we focus exclusively on appellate resources, then, the argument against appellate updating is less than overwhelming.

But an exclusive focus on appellate resources seems overly narrow, anyway. Even if we put a higher value on appellate courts’ time, we should put some weight on district courts’ time. And, once we do so, the calculus changes: Remand loses much of its appeal (pardon the pun). In addition to the considerations listed above, remand entails the additional cost of forcing another court (the district court) to familiarize (or refamiliarize) itself with the case so that it can update the facts instead of the appellate court doing so. As between appellate fact-finding and issuing the opinion without new fact-finding, it would be a closer question; but,

343. Of course, the Supreme Court (but not the courts of appeals) can reduce the chance of seeing the case again to zero by simply refusing to grant certiorari when it comes back. But by the same token the Court could deny certiorari or dismiss its writ of certiorari as improvidently granted with respect to the original case and thus avoid seeing it the first time. These possibilities would probably save the Court’s time, but at the cost of losing its role at the top of the appellate system. See supra note 218. Still, I must concede that, if the Supreme Court’s time is our only focus, the Court might be well advised to deny any and all cases with facts that might have changed or will likely change in the future. And given the difficulty of figuring out which cases would have such facts (absent a fairly close examination of the case that would require the devotion of resources), such a Supreme Court should probably just deny certiorari in all cases involving prospective relief, thereby avoiding any possibility of relevant facts changing.

344. See supra text accompanying notes 176-79.
given the strong possibility that the parties would immediately go to the
district court if an outdated ruling was issued by the appellate court, it
would seem that the better course would be to update the facts and thus end
the litigation (for months or years, anyway).

If, though, we take an even broader view and consider not only judi-
cial resources but also private (in particular, the parties’) resources, then
the argument for updating is stronger. After all, it is certainly a waste for
the parties to bounce around from one court to another (whether as part of
a remand or in response to an outdated opinion). Presumably, they would
prefer to make fewer stops at courthouses rather than more; and, given the
role assigned to appellate courts at the top of the heap, it would make sense
to have an appellate court play the traditional role as the court that issues
the final opinion.

There is still one problem: the discussion above has focused on situa-
tions where the appellate court might reasonably engage in fact-updating
without having to hold an evidentiary hearing or otherwise spend a huge
amount of time on it. What about situations in which the fact-finding
would be extremely resource intensive and/or would really require an oral
evidentiary process in order for the fact updating to be properly done? In
those circumstances, wouldn’t appellate updating be quite unattractive?

At the outset, it bears noting that, if we do not value appellate courts’
time more highly than district courts’ time, then the concern about
resource-intensive fact-finding melts away. But, assuming that we do
value appellate courts’ time more highly, there is another option for
appellate updating of the facts: the appellate court could send the matter to
a special master. Appellate courts already utilize special masters in a
variety of situations (for example, the Supreme Court routinely refers
original jurisdiction cases to them), and, as a practical matter, gives
them deference that is substantially similar to the deference they give to
district courts. Notably, the Federal Rules of Appellate Procedure

345. If we value appellate courts’ and district courts’ time equally, then nothing would be saved
by a remand no matter how time consuming the fact-updating process might be; just as many resources
will be expended by the district court in updating the facts as would be spent by the appellate court.
The way to conserve judicial resources, of course, would be for no court to engage in such a time-
intensive factual updating, and instead simply to leave the case in limbo. But such a failure to
adjudicate seems indefensible, particularly where the duration and course of future changes (and thus
the length of time that the case might be in limbo) is not clear. See supra subpart IV(B).

346. See supra note 264 and accompanying text.

347. Because a special master is not an Article III judge, the Constitution prevents the master from
being vested with final decisionmaking authority. See Northern Pipeline Constr. Co. v. Marathon Pipe
a special master’s findings of fact shall be accepted unless clearly erroneous, see FED. R. CIV. P.
53(e)(2), but the Federal Rules of Appellate Procedure do not so provide, see FED. R. APP. P. 48, and
the Rules of the Supreme Court do not even provide for special masters at all (much less the level of
provide for special masters but the Rules of the Supreme Court do not; the Court sends original jurisdiction cases to special masters in apparent reliance on its general authority to use appropriate procedures in deciding cases, and the same authority would probably apply here.

Recall that two crucial arguments against appellate courts' updating of the facts were that district courts have greater expertise in finding facts and have the ability to hold hearings. Both of those advantages apply to special masters as well. Special masters can be, and frequently are, federal trial judges, and they can and do hold oral hearings. Thus the arguments do not distinguish remanding from an appellate court requesting that a special master update the facts.

Despite the neutralization of these two advantages, in ordinary cases sending a case to a special master still would not seem preferable to a remand: if the original district judge was available (and desirable for deference they would receive). Federal appellate courts are not obliged, then, to give any particular level of deference to a special master's findings, and instead have some discretion in the matter. Although they sometimes mention that they are free to disregard a special master's findings, appellate courts generally defer to special masters' findings in much the same way that they defer to a district court's findings, sometimes invoking Rule 53 of the Federal Rules of Civil Procedure, but usually without invoking any particular authority. See Maryland v. Louisiana, 451 U.S. 725, 765 (1981) (noting "the appellate-type review which this Court necessarily gives to [a special master's] findings and recommendations"); United States v. Raddatz, 447 U.S. 667, 683 n.11 (1980) (noting the regularity with which the Court accepts the special master's findings); Demjanjuk v. Petrovsky, 10 F.3d 338, 340 (6th Cir. 1993) (stating that Rule 53 required that it defer to the special master's findings unless clearly erroneous); WRIGHT ET AL., supra note 176, § 4054 ("[I]t seems both inevitable and appropriate that the Court should approach the [special master's] findings with a tacit presumption that they should be accepted absent a strong contrary showing in the record.").


349. Although the Court routinely sends original jurisdiction cases to special masters, the Rules contain only one reference to special masters, and that is in a housekeeping rule on briefs (it mentions the filing of exceptions to the "Report of Special Master"). SUP. CT. R. 33(1)(g)(v), (vi), (vii) & (ix). No substantive Rule even mentions special masters, much less delineates the role of the special master or explicitly authorizes the use of a special master.

350. The matter is not free from doubt. See Dorf, supra note 45, at 57 n.296 ("It is unclear whether the Court has the authority to appoint special masters in cases outside its original jurisdiction."). Assuming that the rules currently do not provide for special masters (either in cases of fact updating only or in all cases, including original jurisdiction matters), the obvious response is that those Rules can be changed (and are changed frequently). There is nothing talismanic or sacred about them.

351. See, e.g., Illinois v. Kentucky, 480 U.S. 903 (1987); California v. Arizona, 441 U.S. 959 (1979); Colorado v. New Mexico, 441 U.S. 902 (1979) (all appointing a United States district judge as the special master); NLRB v. A-Plus Roofing, Inc., 39 F.3d 1410, 1420 (9th Cir. 1994) ("We . . . refer this matter to the chief judge of the Northern District Court of California with directions to appoint a district judge to serve as special master."); United States v. Charmer Indus., Inc., 722 F.2d 1073, 1076 (2d Cir. 1983) (summarizing the actions of the district court judge appointed to preside as special master). In fact, in some cases the court of appeals has appointed the district judge from the case below as the special master. See, e.g., Continuum Co. v. Incepts, Inc., 883 F.2d 333, 335 (5th Cir. 1989); United States v. Daly, 720 F.2d 819, 821 (5th Cir. 1983).

352. See supra note 217 (on Connor v. Coleman) and note 340 (on Meredith v. Fair).
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a remand, and if the district judge had become quite familiar with the facts, then sending the case back to her would avoid the time and energy required for a new fact-finder (here, the special master) to become similarly familiar with the facts.

Where rapidly changing facts are involved, however, timing (and timeliness) concerns loom large and thus two aspects of special masters that would not be of great benefit in ordinary cases take on particular significance. First, appellate courts can control special masters more easily than they can district courts. Special masters are appointed as adjuncts to the appellate court, and they are under the supervision of that court. District judges, by contrast, are not under the supervision of an appellate court; they are not under clear control at all, except by the chief judge of the district. Insofar as district judges are "supervised," then, it is by a colleague (the chief judge); special masters, on the other hand, are supervised by the court that chose them, in a clear relationship of inferiority. As a result, we might reasonably expect that special masters would be more responsive to the wishes of the appellate court. Second, appointing a special master allows the appellate court to proceed with the case alongside the special master's fact-finding, saving valuable time. The appellate court can not only retain jurisdiction on the case but continue to work on aspects of the case that are not affected by the rapidly changing facts, even as the special master is updating the facts that have changed.

In light of these advantages—and, of course, the related dangers of an infinite loop on remand or issuing an outdated opinion based on old facts—sending the case to a special master seems somewhat more attractive. The appellate court would have the benefit of the main advantages of remanding (sending the case to an experienced fact-finder who could hold evidentiary hearings) while minimizing the danger that the fact-updating process would take so long that the facts would be stale again when the case returned to the appellate court.

353. Cf. supra notes 209-12 and accompanying text.
354. There might seem to be another reason to remand: the appellate court can give greater deference to the findings of a district court, and thus to expend less time and energy in reviewing such findings. As was noted above, however, in practice the Supreme Court generally gives similar deference to district judges and special masters, so the putative advantage does not really exist. See supra note 347. In fact, the flexibility inherent in the Supreme Court choosing how much, as a practical matter, to defer to special masters is arguably an advantage for the special master regime.
355. See supra note 217.
356. Admittedly, the evidence for this proposition is largely anecdotal; I am not aware of any statistically valid evidence on this point. I think, though, that it does not require a leap of faith to posit that actors who are under more direct control are likely to be responsive to the wishes of those above them in the hierarchy.
357. The temptation for an appellate court to send all cases involving rapidly changing facts to a special master would be obvious: the court could let another entity take the first crack at fact updating
3. How Might the Updating Be Done?—A salient question remains: Assuming that it might be viable in theory for an appellate court to update facts when they have changed, how might it be accomplished in practice?

We can easily imagine how an appellate court might implement the proposals to remand or to issue the opinion immediately, as that happens all the time. (And, of course, we can also imagine the procedures a district court would use to find the facts on remand, since that, too, happens all the time.) But procedures for appellate updating are not so obvious; and, if they are unduly cumbersome, then appellate updating will not be an attractive option. So how might an appellate court actually undertake the updating of facts when there is a credible assertion that facts have changed?

There are, of course, many different procedural routes that an appellate court might take; the following seems a straightforward and workable solution. The process could begin with either a party or the appellate court itself suggesting that one or more relevant facts have changed in the months since the fact-finding by the district court. If the court made the suggestion of factual changes, it could ask each party to address the question of their existence. If a party made the suggestion (as would usually be the case, presumably), it would do so in a filing that detailed its basis for alleging that facts had changed; if the opposing party disagreed that the facts had changed, or thought that they had changed but that the moving party's characterization of those changes was inaccurate, the opposing party would file a response (or a motion of its own). The

and then consider those findings. As the analysis in this Article indicates, such a tactic would be unfortunate: in many cases, it will make more sense for the appellate court simply to update the facts on its own.

It also bears mentioning that where the facts and the legal determination bleed into one another, it may be problematic for the court to make the legal determinations on its own while looking to another entity for the factual determinations. See, e.g., Dorf, supra note 45, at 57 ("[T]he [Supreme] Court cannot simply delegate the task of factfinding to special masters or other adjunct entities, because the resolution of factual questions in the sense that usually concerns us cannot be neatly separated from the articulation of norms."). Scott Brewer makes a somewhat similar argument, namely that the same person(s) should both find facts and apply them—or, in Brewer's words, that "the same legal decisionmaker wear two hats, the hat of epistemic competence and the hat of practical legitimacy." Brewer, supra note 20, at 1681.

These arguments would counsel against an appellate court sending the factual determinations to a special master, because considering another's findings (even without any formal deference) is different from making those findings on one's own. But for that very reason these arguments would also counsel against remanding and in favor of appellate updating of facts. Deference to factual determinations but not legal determinations by a trial court would seem even more troubling (because of the formal deference); so, unless we subvert the judicial hierarchy by placing trial courts at the top, it would seem that appellate courts should make their own factual determinations, in at least some cases, rather than leave those determinations for another decisionmaker.

358. In so alleging, the parties would presumably inform the appellate court of the evidence on which they relied in making their assertion of factual change. This would help the appellate court in determining whether to send the case to a special master (if the evidence required credibility
appellate court would make the legal determination whether there was a credible allegation of factual change that merited further consideration (which inquiry would include, of course, a determination of whether the allegedly changed facts were important to the outcome of the case).

At this point, the reader may begin to wonder whether the procedure described is so cumbersome and detailed that it would be unworkable. But the procedure described so far is the one that appellate courts routinely use when there is a suggestion of mootness (once again, either from the court itself or from a party).\(^{359}\) This is not surprising, as mootness based on factual change is obviously a subset of the larger category of changes in fact that can affect the outcome of pending cases. If a party suggests that a case is moot based on some new fact, the appellate court does not reflexively decide the issue, but first determines whether the suggestion is both credible and relevant enough to warrant further action. That is exactly what I am proposing here with respect to other changes in fact.

There is, however, an additional wrinkle: the movant should also inform the appellate court whether these facts or other relevant facts in the case are likely to change in the near future. As this Article has suggested, this consideration is important in the choice between remand and appellate updating: if the change is a one-time event, then remand does not present the danger of an infinite loop.

The next stage also would be a bit different from the ordinary practice in mootness cases. In mootness cases the appellate court usually either weighs the new facts itself (especially if the facts can be presented on paper) or sends the case to the trial court for an evidentiary hearing. This Article has already argued that remand may be undesirable, because of the problem of the infinite loop. Thus, a different procedure suggests itself: if the appellate court determines that the allegedly new facts can be determined based on written presentations, then it should simply order supplemental briefs in which each side will present its evidence; if the appellate court determines that a hearing would be of some benefit, then the court can either conduct a hearing or, more likely, send the matter to a special master.

Appellate courts deal with written submissions on a daily basis, of course, so the process of receiving and reviewing written presentations of facts should not overly tax them. It is true that appellate courts do not formally make factual findings (except in original jurisdiction cases); but, as was noted above, there are many instances of an appellate court making determinations or oral hearings were otherwise desirable) or to update the facts on its own (if updating the facts based on a paper record seemed appropriate).

\(^{359}\) See supra note 197.
findings without so proclaiming.\textsuperscript{360} The main difference here is that they would be doing so both more honestly and with the benefit of briefing on the issue from both parties—rather than one or none, as is usually the case.

For those disputed factual matters that can be better handled through a process that allows for evidentiary hearings, a choice presents itself: the appellate court could conduct the hearing itself, or it could send the matter to a special master and then review the findings of the special master. Either procedure would be workable; but one conclusion bears emphasizing: in any procedure (including one based solely on the briefs), the appellate process would become much more fluid, the master’s findings might necessitate a new set of briefs, and it is even possible that the finding of new facts would occur after oral argument (for example, in situations where a judge or Justice was particularly slow in writing her opinion, and facts changed as she was working on it).

This system may seem to raise a new concern: gamesmanship on the part of litigants who may want to allege that there are new facts. That danger, however, already exists. Under my proposal as well as the traditional system, there may be an incentive for a party that thinks it will lose in the appellate court to allege that relevant facts have changed. In fact, the incentive may be greater when the appellate court will remand, as that opens the possibility that, by the time the case returns to the appellate court, the identity of some of the judges may have changed, either because of changes in the composition of the court or because—in the case of some courts of appeals—it may be possible to get a new panel.

The important point here is that appellate courts already face this danger and nonetheless seem to muddle through somehow. This is not to suggest that the matter is easily resolved. Changes in facts place the reviewing court in a problematic position, as the court may have difficulty determining the scope of the alleged changes. But the point simply is that they already attend to this issue, and there is no reason to think they will be any worse at it in the future. Similarly, they already find facts; this proposal regularizes that process and provides the parties with notice and an opportunity to be heard.

That said, it bears emphasis that this procedure would depart from the orthodox appellate process, in which the parties simply submit briefs that summarize the record below and make legal arguments confined to that record. Not only would that process be altered in the case of rapidly changing facts, but so, too, would our notion of a case being finally and unalterably submitted to the appellate court. As this Article has argued, however, that version of the appellate process is currently jettisoned on

\textsuperscript{360} See \textit{supra} section V(C)(1).
some occasions, most notably when there is a suggestion of mootness and when the court engages in fact-finding (based on briefs or its own research). Insofar as the process proposed here would further erode those procedures and lead to a more flexible appellate process, that is merely a reflection of the difficulty that rapidly changing facts create: appellate courts either respond to those changes or risk issuing opinions that are (and should be) historical artifacts.

VI. Implications

We are left, then, with no ideal approach for appellate courts confronted with facts that have changed since the trial court made its findings. The factors, on balance, seem to favor appellate updating of facts, but this approach has drawbacks, like the others. The fact that none of the available solutions—remand, decide the case based on old facts, or update the facts—is terribly attractive might suggest that we should look a bit further afield for other choices. How else might we solve this problem?

One obvious solution would be a streamlining of the judicial (and particularly the appellate) process. After all, the only reason this problem arises is because of the long delays between the initial fact-finding and the final appellate ruling. And, of course, the main timing difference between remanding and appellate updating flow from, first, the time it takes to get the case before a district court and, second, the time it then takes to put the case back on the appellate docket and go through all the appellate procedures; if those time-consuming procedures did not exist, remand could be as quick as the appellate court updating the facts on its own.

Perhaps such streamlining is on its way, aided in significant part by technology. The placement of all trial materials on universally compatible memory systems (e.g., compact discs) might help to speed up the appellate process. More radically, as Paul Carrington has recently noted, pervasive use of video technology could not only allow for virtual trials contained entirely on videotape, but also for appellate review of trial rulings to which the parties objected before the tape was ever submitted to a judge or jury for their consideration. That is, technology might allow us to retain appellate review but cut out a layer of bureaucratic proceedings. After all, it is by no means clear that we need a separately ensconced post-adjudication appellate review, once we allow witnesses to be cross-examined (and videotaped) separately from the “trial” (that is, the viewing of the tape).

Unless and until we dramatically reduce the time consumed in the appellate process (and unless we take a more radical step, such as

abandoning appellate review altogether), the central problem will remain: the tension between a rule of law norm under which forward-looking opinions lay down not merely advice but the current status of the law as applied to the parties, and the reality that facts are subject to rapid change. To pick one example: those opposed to Internet indecency have managed to enact legislation that seeks to get around the strictures of *Reno v. ACLU.* 362 They and their opponents probably assume that the core holding of *Reno* will remain unless the Justices change their minds. But if relevant facts underlying the Internet have changed (as Justice Scalia noted with concern at oral argument, and Justice O'Connor suggested in her dissent363), then *Reno* may no longer present a valid constitutional analysis irrespective of any new laws that might be challenged.

Some may object that this sounds close to an abandonment of stare decisis, because I am advocating that courts not only can but must be willing to reconsider precedents when facts change, and that parties should not see appellate opinions as fixed stars by which they can set their course for the indefinite future. To this accusation I plead guilty; but this is a necessary corollary to tests that rely on facts, and it appropriately encourages appellate courts to be clear about what they are really relying on. Appellate courts can avoid this problem only by issuing opinions that do not depend on the facts on the ground, a notion of platonic judging that seems at odds with the requirements of Article III. 364

So it may be that the result of rapidly changing facts is that precedents do not control future behavior for very long. In its extreme form, this development could effectively transform the United States into a jurisdiction where precedents have little value. But there is little reason to foresee so radical a development, as dramatic factual changes are still relatively rare, and courts sometimes lay down principles that are sufficiently broad to transcend minor factual developments. For those, however, who would contend that I am not giving sufficient weight to stare decisis, and that a decision should continue to have force even if some of its factual underpinnings have been undermined, the proposal for appellate fact updating is all the more compelling. After all, if an appellate court is making a decision that might affect Americans in other cases in the future, it should make sure that it actually gets to make a decision (i.e., avoid the infinite loop problem of another remand), and that it decides based on facts that are


363. See supra text accompanying notes 3, 98-104.

364. See supra text accompanying notes 163-64.
up to date (i.e., update the facts, and do not simply rule based on old facts).

This discussion also might counsel in favor of the approach put forward by Justice Souter in *Denver Area Educational Telecommunications Consortium, Inc. v. FCC*, that "we should be shy about saying the final word today about what will be accepted as reasonable tomorrow." One seeming problem with this restraint is that consequently litigants and ordinary citizens can never really rely on the Court's pronouncements; the Court, in taking small steps that it promises a willingness to later reconsider, deprives parties of any assurance about what the future legal regime will be. Perhaps, though, this is the great advantage of the Souter approach when facts are changing: people won't rely, and thus will have no basis to complain when future changes come down the pike. That is, the problem with more definitive opinions is that citizens may assume that, like opinions of old, they will remain for a while; and so later changes based on new facts may frustrate those expectations.

The bottom line is that in light of the centrality of facts to adjudication, rapidly changing facts require that courts be willing to reconsider earlier opinions the factual basis of which has shifted. And, if that happens, the role of stare decisis is diminished. Litigants, judges, and ordinary citizens will not be able to rely on precedents, because the changes at work undermine the cases on which they would seek to rely. Even if an appellate court does update the facts, in light of the possibility of continual change it may only be postponing the inevitable staleness of its opinion. This Article suggests that such updating is nonetheless appropriate, as an updated opinion still will have a longer shelf life than will one that is not updated—and, more importantly, will actually apply to the controversy as it currently exists. No matter what, though, judicial opinions can only be as permanent as the facts on which they rest. No appellate court will ever catch up with changing facts. So the court must find the facts as of some point and issue its ruling, knowing all the while that the resulting opinion may be irrelevant in a matter of a few years (or perhaps months).

VII. Conclusion

Bruce Ackerman introduced a useful metaphor for judging: judges as passengers in the caboose of a train, looking backward at the view behind them. One can imagine policymakers looking boldly ahead, setting the

366. Id. at 777 (Souter, J., concurring).
train (the American Republic) on a particular path. But the role of judges is to try to make sense of the landscape that the policymakers have carved out and the path they have chosen.

This Article highlights an elaboration of the metaphor: appellate judges are not in the caboose looking at the landscape (at least insofar as the landscape represents the development of facts, as opposed to law). Trial judges are in the back of the caboose, absorbing the view and writing descriptions of it; appellate judges are somewhere inside, blinds closed, relying exclusively (in theory, anyway) on the descriptions that the trial judges give them. The problem on which this Article focuses is that sometimes the landscape changes between the time the descriptions are written and the appellate judges get to review them. What should happen in those cases?

The question lacks easy answers. The structure of the appellate system seems to presuppose that facts will remain sufficiently stable to allow the appellate court to focus on questions of law, secure in the knowledge that the findings from the district court have not been overtaken by new developments. This view also presumes that, in those rare cases when facts found below have changed, such change is a one-time development, so that a simple remand can solve the problem—the case will then come back up the appellate chain with a stable set of findings.

What, then, should an appellate court do when confronted by a credible assertion that facts have changed in the time since the district court made its findings, and may change again in the near future? A tempting answer would be for the appellate court to send the case away without weighing the significance of any alleged factual changes—either by remanding to the district court for more fact-finding or by deciding the case based on the facts as originally found. In light of the delays involved in remand, and the strange posture of a grant or denial of forward-looking relief that may be inapposite on the day it is granted or denied, both of these possibilities are unattractive. This Article suggests another option: the appellate court updating the facts on its own. To return to the metaphor of the train, the appellate judges would open the blinds to get a view for themselves. That proposal may consume more appellate resources, but it has the virtue of providing for appellate review of the controversy as it actually exists.

The larger issue, though, is that neither the appellate process nor our vision of precedent is terribly well equipped for rapidly changing facts. These situations confound not only our understanding of the role of appellate courts but also the seeming permanence of appellate decisions. This Article argues that fact updating will often be the most attractive response to changed and changing facts. But even if the updating of facts is necessary to ensure that appellate courts issue opinions that pertain to the
world when those rulings are handed down, it is of course not sufficient to
insulate appellate opinions from future factual changes. Where such trans-
formations occur, formerly "current" appellate rulings will be out of date.
Ultimately, whether we like it or not, judicial opinions are written in sand.