

Personal Jurisdiction and the Interwebs

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PERSONAL JURISDICTION AND THE “INTERWEBS”

Alan M. Trammell & Derek E. Bambauer†

For nearly twenty years, lower courts and scholars have struggled to figure out how personal jurisdiction doctrine should apply in the Internet age. When does virtual conduct make someone amenable to jurisdiction in any particular forum? The classic but largely discredited response by courts has been to give primary consideration to a commercial Web site’s interactivity. That approach distorts the current doctrine and is divorced from coherent jurisdictional principles. Moreover, scholars have not yielded satisfying answers. They typically have argued either that the Internet is thoroughly exceptional and requires its own rules, or that it is largely unexceptional and can be subject to current doctrinal tests.

The difficult relationship between the Internet and modern personal jurisdiction doctrine is a symptom of a much larger problem. We argue that the Supreme Court’s current approach has bifurcated physical and intangible harm. Viewed through that lens, the overarching problem comes into focus because rules that sensibly govern the physical world apply awkwardly—sometimes incoherently—to intangible harm. Accordingly, we propose a return to personal jurisdiction’s first principles, particularly a concern for fairness and predictability. We argue that courts should dispense with the fiction that purely virtual conduct creates any meaningful contact with a particular forum. The narrow approach that we advocate likely will restrict the number of places where a plaintiff can sue for intangible harm, but through three test cases we demonstrate why such a rule will enhance fairness and predictability while also ensuring sufficient access to justice.

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INTRODUCTION¹

After more than twenty years of silence, the Supreme Court has recently reentered the fray of personal jurisdiction. It has been remarkably active over the last four years, having decided four cases in that span.² But the Court has remained conspicuously silent about one of the most vexing and urgent questions in this area: when (if ever) virtual conduct, often through the Internet, can justify the exercise of judicial power.

Most courts are still flummoxed by these questions. They remain tethered to anachronistic approaches that reflect a profound confusion about the technology of the medium, deviate from normal civil procedure precedent, bear little relation to the doctrine's underlying principles, and fail to generate consistent results. Current approaches remain stuck in the days of the "Interwebs" and betray the same lack of sophistication that the tongue-in-cheek malapropism captures.

¹ For those unfamiliar with Internet memes, the "Interwebs" is a sarcastic term to parody the inexperience of someone who is unfamiliar with the Internet's customs, technology, or capabilities. See *interweb*, URBAN DICTIONARY (Dec. 12, 2003), <http://www.urbandictionary.com/define.php?term=interweb>.

² See *Walden v. Fiore*, 134 S. Ct. 1115 (2014); *Daimler AG v. Bauman*, 134 S. Ct. 746 (2014); *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 131 S. Ct. 2846 (2011); *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2011).

Personal jurisdiction is an elusive concept. Formally, it is rooted in limits on sovereign power and in protections for defendants against the arbitrary assertion of governmental force. While the basis for the doctrine has evolved over time, the theory worked well enough in a world of physicality—where defendants could be found within a forum state, or where their actions had tangible consequences within those borders. However, once personal jurisdiction had to grapple with intangible interests and harms, the doctrine began to go off the rails, and once it had to contend with the borderless information environment of the Internet, it became almost completely unhinged.³ This Article seeks to return personal jurisdiction to first principles. It identifies the doctrine’s core concerns and applies them to the problems of a ubiquitous networked environment. Its arguments will not please everyone. But it offers a consistent and defensible vision of jurisdiction in the context of costless information sharing, and it realigns offline and online jurisdiction in a manner that is theoretically consistent. Courts must stop allowing themselves to be bedazzled and bewitched by the “Interwebs.” Like Dorothy in *The Wonderful Wizard of Oz*, they have always had the power to do so—they need only realize that they never lost it to begin with.⁴

Since at least the mid-1990s, courts have been aware of the conundrum that the Internet poses to personal jurisdiction analysis. The modern doctrine often turns on the defendant’s “contacts”⁵ with a particular state and the extent to which those contacts reflect “purposeful” action.⁶ In a concurrence in one of the recent Supreme Court cases, Justice Breyer aptly elucidated many of the questions that courts and scholars have confronted over the years. What does it “mean when a company targets the world by selling products from its Web site? And does it matter if, instead of shipping the products directly, a company consigns the products through an intermediary (say, Amazon.com) who then receives and fulfills the orders?”⁷ Moreover, should it matter whether the defendant is a small mom-and-pop operation—in Justice Breyer’s example, an Appalachian potter who

³ See Arthur R. Miller, *Simplified Pleading, Meaningful Days in Court, and Trials on the Merits: Reflections on the Deformation of Federal Procedure*, 88 N.Y.U. L. REV. 286, 350 n.241 (2013) (stating that after *Nicastro*, “[a]lso left in disarray are personal jurisdiction questions relating to claims arising from a defendant’s activities on the Internet”). As we discuss, the Internet is only the latest manifestation of a problem that has long existed in law. See Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 809–12 (1935).

⁴ See L. FRANK BAUM, *THE WONDERFUL WIZARD OF OZ* 131 (1983).

⁵ See, e.g., *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 316, 319 (1945).

⁶ See, e.g., *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297–98 (1980).

⁷ *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2793 (2011) (Breyer, J., concurring).

sells cups and saucers—or a large multinational corporation?⁸ One can easily add to the litany of questions: How should courts deal with alleged defamation on the Internet? If a Web site infringes a protected trademark, where exactly has the harm occurred?

In 1997, one district court proposed a way to mold the traditional tests to the new medium. It suggested that a Web site's commercial nature and degree of interactivity essentially can measure contacts and purposefulness.⁹ A passive Web site would not be enough to justify jurisdiction. Actually concluding sales on the Internet would be. And between those two extremes, as a Web site evinced greater interactivity, and thus a greater exchange of commercial information with consumers, courts should be increasingly likely to find that Internet activity justifies jurisdiction.¹⁰ The *Zippo* sliding scale seemed beautifully simple and has proved singularly influential. Most courts to confront the problem of Internet-based jurisdiction have relied favorably on *Zippo*, even though the test's supposed virtues are chimerical. It distorts the doctrine and its guiding principles. It is predicated on a superficial analogy between physical and virtual worlds. And it has proved conspicuously indeterminate. Yet it endures.

Legal scholars who study Internet law have struggled with these questions of jurisdiction from the earliest days of the field.¹¹ Views of jurisdiction over a defendant by a sovereign state, and of that state's enforcement powers, passed through three eras. In the first, scholars believed (either optimistically or naively) that conventional nation-states had no capability to govern online behavior.¹² So-called Netizens might join together to create new governance structures,¹³ but states, those "weary giants of flesh and steel,"¹⁴ were supposedly impotent in the face of this new communications technology. But Internet censorship in countries such as China and Saudi Arabia quickly demonstrated the fallibility of this view.¹⁵

⁸ See *id.*

⁹ See *Zippo Mfg. Co. v. Zippo Dot Com*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

¹⁰ See *id.*

¹¹ See, e.g., Henry H. Perritt, Jr., *Jurisdiction in Cyberspace*, 41 VILL. L. REV. 1, 13–25 (1996) (discussing applications of traditional personal jurisdiction principles to cyberspace).

¹² See, e.g., Viktor Mayer-Schönberger & Terece E. Foster, *A Regulatory Web: Free Speech and the Global Information Infrastructure*, 3 MICH. TELECOMM. & TECH. L. REV. 45, 55–61 (1997); David G. Post, *Anarchy, State, and the Internet: An Essay on Law-Making in Cyberspace*, 1995 J. ONLINE L. 44, 57–59; Anne Wells Branscomb, *Anonymity, Autonomy, and Accountability: Challenges to the First Amendment in Cyberspace*, 104 YALE L.J. 1639, 1665–70 (1995).

¹³ See Branscomb, *supra* note 12, at 1665–70.

¹⁴ John Perry Barlow, *A Declaration of the Independence of Cyberspace* (Feb. 8, 1996), <https://projects.eff.org/~barlow/Declaration-Final.html>.

¹⁵ See ETHAN GUTMANN, *LOSING THE NEW CHINA: A STORY OF AMERICAN COMMERCE, DESIRE AND BETRAYAL* 127–34 (2004); Jonathan Zittrain & Benjamin Edelman,

In the second era, legal academics conceded the state’s enforcement powers but argued that, as a normative matter, terrestrial governments should withdraw from the field and allow Internet-specific governance to emerge.¹⁶ Those governments rapidly proved unwilling to declare cyberspace a zone of order (or disorder) without law.

Finally, the third era recontextualized the Internet as simply another communications medium, where oversight by law could operate legitimately while taking account of the Net’s idiosyncrasies.¹⁷ Jurisdiction by states, under the right circumstances, was not only possible, but desirable.¹⁸ The progression through these three periods highlights a key issue: whether states should engage in or refrain from adjudication of disputes deriving from online interaction.

Despite intense scholarly interest in this problem at the turn of the century, it remains intractable. Even the best contributions are dated or narrow, or they give insufficient attention to at least one aspect of the problem (that is, either the technology or the procedural nuances). In this Article, we draw on our respective expertise to offer a solution that is both technologically sophisticated and also attentive to the interstices of civil procedure. Our contribution charts a new course independent of the cyber-exceptionalists and also those who have argued that courts can readily apply the current doctrine to the Internet world. The Internet is not *sui generis*, but it does present unique challenges that courts should not gloss over.

Our Article makes three major contributions to this enduringly unsettled area of law. First, our central argument is that courts have tied themselves in knots over Internet-based contacts because they have failed to appreciate a more significant, overarching dichotomy: the difference between physical harm and intangible harm. Most jurisdictional rules evolved to take account of the ways in which physical harm could present itself. Centuries ago, most harm was localized, and the rules reflected that reality. As society became more mobile, such that a person could cause physical harm far from his home, the jurisdictional rules adapted to that new reality. But the various tests that have developed are still squarely oriented around notions of physical harm—car accidents, defective products, and the like.¹⁹

Documentation of Internet Filtering in Saudi Arabia, BERKMAN CENTER FOR INTERNET & SOCIETY (Sept. 12, 2002), <http://cyber.law.harvard.edu/filtering/saudi Arabia/>.

¹⁶ See, e.g., David R. Johnson & David Post, *Law and Borders: The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1387–92 (1996).

¹⁷ See, e.g., JACK GOLDSMITH & TIM WU, WHO CONTROLS THE INTERNET?: ILLUSIONS OF A BORDERLESS WORLD (2006); Joseph H. Sommer, *Against Cyberlaw*, 15 BERKELEY TECH. L.J. 1145, 1205–07 (2000).

¹⁸ See GOLDSMITH & WU, *supra* note 17, at 129–45.

¹⁹ See *infra* subparts I.A–B.

The current tests begin to unravel—both conceptually and pragmatically—when the harm at issue is intangible. For example, in the defamation context, where does one’s reputation exist? As courts tried to apply the rules of a physical world to intangible harms, the results were awkward—at times, even incoherent—and laid the path for online follies to come. Thus, the Internet did not create the problem. It did, however, expose and exacerbate a more profound schism between physical and intangible harm.

Second, we argue for a return to personal jurisdiction’s underlying principles to figure out how best to craft sensible rules for cases presenting purely intangible harm. To do so, we articulate a tripartite view of personal jurisdiction’s deep structure: constitutionally compelled restrictions (imposed by the Due Process Clauses); prudential common law restrictions (crafted by the Supreme Court); and state-specific restrictions (embodied in long-arm statutes). Within each of these layers are limitations on judicial authority that derive from different sources and carry different weights. But they share a fundamental concern for fairness and predictability. While personal jurisdiction precedent often interweaves and even conflates various normative rationales,²⁰ refocusing the analysis on the overarching goals of fairness and predictability has the potential to extricate the doctrine from unnecessary traps. Moreover, identifying the precise sources of personal jurisdiction demonstrates the latitude that both courts and legislatures have to reorient the doctrine in a more normatively satisfying way.

Finally, we set out three test cases for assessing how Internet-based contacts ought to count in the personal jurisdiction analysis. We discuss how the doctrine should effectuate the goals of fairness and predictability, clearly defined, in the context of those test cases. Specifically, our analysis focuses on private fairness concerns (plaintiffs’ and defendants’ ability to plan their conduct and vindicate their rights effectively) and society’s interest in the efficient use of public resources. In so doing, we develop a proposal to realign courts’ approaches to online and offline cases in a way that better effectuates personal jurisdiction’s first principles. Put simply, courts should take a narrow approach when dealing with intangible harm, whether that is a traditional harm (such as defamation in print media) or a modern, virtual harm (such as a Web site that infringes a trademark). Courts should no longer indulge the fiction that virtual activity creates physical contact with any particular forum. Dispensing with that fiction undoubtedly will limit the places where a plaintiff can sue for

²⁰ Other value choices are of course possible. See, e.g., Damon C. Andrews & John M. Newman, *Personal Jurisdiction and Choice of Law in the Cloud*, 73 MD. L. REV. 313, 352 (2013) (prioritizing predictability, transparency, and objectivity).

intangible harm, but it will create a more robust, coherent, and workable doctrine.

In Part I of the Article, we describe how courts have bifurcated notions of physical and intangible harm for purposes of personal jurisdiction. We also demonstrate the confusion and indeterminacy that have resulted as lower courts attempt to apply existing doctrine in the Internet age. In Part II, we return to personal jurisdiction’s first principles and discuss the unique problems that cyberspace poses. In Part III we articulate and defend a narrow approach to Internet-based harm and intangible harm more generally.

I

VIOLENCE AND THE WRIT: CABINING SOVEREIGN AUTHORITY

Personal jurisdiction doctrine has evolved dramatically over the last 150 years. A doctrine long rooted in strictly territorial notions of sovereignty eventually gave way to modern realities. In the early to mid-twentieth century, the doctrine began—first implicitly then quite explicitly—to take account of the increased mobility of people and the proliferation of corporate activities across state and international boundaries. In the process, the Supreme Court crystallized the tests that have characterized the modern doctrine for many decades.

But past is prologue. Just as courts in the early twentieth century struggled to adapt doctrine to new realities, so too courts and scholars have wrestled with how personal jurisdiction can and should function in an era of virtual conduct and intangible harm.

In this Part, we briefly sketch the doctrine’s contours, which largely turn on a defendant’s purposeful contacts with a particular place. Our goal is not to retell in detail how the doctrine has evolved since the late nineteenth century; others have more than admirably undertaken that task.²¹ Instead, we illustrate how personal jurisdiction, despite its modernization in the twentieth century, is still yoked to intensely geographic conceptions of behavior, harm, and judicial power. The shortcomings of that approach started to become apparent when courts pressed geographic notions of jurisdiction into service as they analyzed purely intangible harm. But the advent of the commercial Internet demonstrated how truly blinkered and often unworkable the doctrine has become for a large swath of modern cases.

²¹ See, e.g., Patrick J. Borchers, *The Death of the Constitutional Law of Personal Jurisdiction: From Pennoyer to Burnham and Back Again*, 24 U.C. DAVIS L. REV. 19, 56–78 (1990); William M. Richman, *Understanding Personal Jurisdiction*, 25 ARIZ. ST. L.J. 599, 599–637 (1993); A. Benjamin Spencer, *Jurisdiction to Adjudicate: A Revised Analysis*, 73 U. CHI. L. REV. 617, 620–25 (2006); Mary Twitchell, *The Myth of General Jurisdiction*, 101 HARV. L. REV. 610, 614–30 (1988); Arthur T. von Mehren & Donald T. Trautman, *Jurisdiction to Adjudicate: A Suggested Analysis*, 79 HARV. L. REV. 1121, 1135–63 (1966).

A. Personal Jurisdiction in a Physical World

Since the mid-twentieth century, the Supreme Court has embraced two distinct theories of personal jurisdiction: *general* (or all-purpose) jurisdiction and *specific* jurisdiction.²² The traditional theory, general jurisdiction, identifies a place where a defendant can be sued for *anything*.²³ For example, a New York citizen who travels to California and causes a car accident there can be sued in his home state of New York, even though the lawsuit itself has nothing to do with New York. By contrast, the modern theory, specific jurisdiction, authorizes jurisdiction over a defendant when there is a connection between the lawsuit and the litigation forum.²⁴ Thus, the New Yorker is also subject to personal jurisdiction in California regarding the car accident that he caused there.

Today the contours of general jurisdiction are remarkably clear. After decades in which lower courts applied amorphous and unpredictable standards with widely divergent results,²⁵ the Supreme Court recently clarified how stringent the test for general jurisdiction is. For an individual, it is appropriate only in her state of domicile—her home.²⁶ In *Goodyear* and *Daimler*, the Court articulated a similar test for corporations, restricting general jurisdiction to a place where a corporation is “at home.”²⁷ In almost every situation that will mean two paradigm places: the state where the entity has incorporated and the state in which it maintains its principal place of business.²⁸

²² See, e.g., Borchers, *supra* note 21, at 59–60.

²³ See, e.g., *id.* at 60; Richman, *supra* note 21, at 614.

²⁴ See Alan M. Trammell, *A Tale of Two Jurisdictions*, 68 VAND. L. REV. 501, 507 (2015); von Mehren & Trautman, *supra* note 21, at 1144–45.

²⁵ See James R. Pielemeier, *Goodyear Dunlop: A Welcome Refinement of the Language of General Personal Jurisdiction*, 16 LEWIS & CLARK L. REV. 969, 980–84 (2012); Trammell, *supra* note 24, at 511–12; Twitchell, *supra* note 21, at 630–43.

²⁶ See *Daimler AG v. Bauman*, 134 S. Ct. 746, 760 (2014); *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 131 S. Ct. 2846, 2853–54 (2011); 13E CHARLES ALAN WRIGHT ET AL., FED. PRAC. & PROC. § 3612 (3d ed. 2009). The Supreme Court has continued to recognize that a state may exercise general jurisdiction over a person who is personally served with process in that state. See *Burnham v. Superior Court*, 495 U.S. 604, 610–16 (1990). Although this tradition is deeply rooted in English and American practice, many scholars have argued that it is an anachronism. See, e.g., Terry S. Kogan, *Geography and Due Process: The Social Meaning of Adjudicative Jurisdiction*, 22 RUTGERS L.J. 627, 654–57 (1991); Martin H. Redish, *Tradition, Fairness, and Personal Jurisdiction: Due Process and Constitutional Theory After Burnham v. Superior Court*, 22 RUTGERS L.J. 675, 678–81 (1991); Allan R. Stein, *The Meaning of “Essentially at Home” in Goodyear Dunlop*, 63 S.C. L. REV. 527, 548–49 (2012) (arguing that the Court should “move off of its position that jurisdiction over persons is justified by raw territorial power”).

²⁷ See *Goodyear*, 131 S. Ct. at 2851, 2854, 2857; see also Trammell, *supra* note 24, at 519 (noting that the majority opinion in *Daimler* used the “at home” phrase eighteen times).

²⁸ See *Daimler*, 134 S. Ct. at 753–60; *Goodyear*, 131 S. Ct. at 2853–57; Trammell, *supra* note 25, at 513–21. The Court left open the possibility that a corporate defendant might be subject to jurisdiction elsewhere, but that possibility remains vanishingly small. See, e.g., *Perkins v. Benguet Consolidated Mining Co.*, 342 U.S. 437, 447–49 (1952) (allowing

Before *Goodyear* and *Daimler*, general jurisdiction presented a conundrum in the Internet context, with some courts subjecting companies to general jurisdiction based on shockingly low levels of Internet activity within a state.²⁹ That uncertainty should evaporate in the wake of *Goodyear* and *Daimler*.

The heart of the problem lies with specific jurisdiction. In the iconic case of *International Shoe*, the Supreme Court explicitly introduced the modern theory of personal jurisdiction.³⁰ For decades the Court wrestled with its precise contours, which have ebbed and flowed,³¹ but since the 1980s, the Court has made clear that there are essentially three elements to specific jurisdiction.

First, the defendant must have “minimum contacts” with the forum state.³² Since the Court first announced the test, it has emphasized that this prong turns not simply on the number of contacts but also on their “quality and nature.”³³ But minimum contacts are just that—the plaintiff need not choose a forum with which the defendant has the most or best contacts.³⁴ The touchstone of the analysis is that the defendants’ contacts must be more than merely fortuitous.³⁵ Rather, the defendant must have *purposefully* engaged in activity within, or directed toward, the forum state.³⁶

Second, there has to be a fairly tight nexus between the “minimum contacts” and the lawsuit—in the Court’s usual language, the

general jurisdiction in Ohio, where defendant had temporarily relocated during World War II); see also *Daimler*, 134 S. Ct. at 756 n.8 (describing *Perkins*, the one case in which the Court authorized general jurisdiction somewhere other than one of the paradigm forums, as presenting “exceptional facts”).

²⁹ See, e.g., *Gator.com Corp. v. L.L. Bean, Inc.*, 341 F.3d 1072, 1076–80 (9th Cir. 2003) (finding general jurisdiction over L.L. Bean in California because of marketing and sales in the state, despite L.L. Bean’s having “few of the factors traditionally associated with physical presence”); see also Allan R. Stein, *Personal Jurisdiction and the Internet: Seeing Due Process Through the Lens of Regulatory Precision*, 98 Nw. U. L. Rev. 411, 436–41 (2004).

³⁰ See *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 316, 319 (1945).

³¹ Compare *McGee v. Int’l Life Ins. Co.*, 355 U.S. 220, 223 (1957) (taking expansive approach to jurisdiction in so-called “single contact” cases), with *Hanson v. Denckla*, 357 U.S. 235, 250–53 (1958) (taking more restrictive approach), and *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 295–99 (1980) (same); see also *Goodyear*, 131 S. Ct. at 2854 (noting the ebb and flow).

³² See *World-Wide Volkswagen*, 444 U.S. at 291–92; *Int’l Shoe Co.*, 326 U.S. at 316.

³³ *Int’l Shoe Co.*, 326 U.S. at 319.

³⁴ See, e.g., *Keeton v. Hustler Magazine, Inc.*, 465 U.S. 770, 780 (1984) (noting that plaintiff experienced bulk of harm outside of forum but that defendant nonetheless had minimum contacts with forum); see also *Shaffer v. Heitner*, 433 U.S. 186, 228 (1977) (Brennan, J., dissenting) (arguing that “we are concerned solely with ‘minimum’ contacts, not the ‘best’ contacts”).

³⁵ See *Keeton*, 465 U.S. at 774; see also *World-Wide Volkswagen*, 444 U.S. at 298 (noting that plaintiff’s unilateral activity cannot create minimum contacts between defendant and forum); *Hanson*, 357 U.S. at 253 (same).

³⁶ See *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 475–76 (1985); *World-Wide Volkswagen*, 444 U.S. at 297.

plaintiff's claim must "arise out of or relate to" the defendant's forum contacts.³⁷ Despite an occasional kerfuffle over exactly what standard governs this nexus requirement,³⁸ the Supreme Court has never squarely addressed the matter.³⁹

Third, the exercise of personal jurisdiction must be fundamentally fair and reasonable.⁴⁰ The doctrine has developed such that this final prong acts as an independent, albeit very limited, safety valve.⁴¹ When a defendant has sufficient (purposeful) minimum contacts with the forum and the claim has the appropriate nexus with those contacts, jurisdiction might still be problematic. The Supreme Court has cited a bevy of factors that are part of the fairness calculus,⁴² the most obvious of which is inconvenience (both to defendants and plaintiffs).⁴³ Other factors include the forum's interest in the litigation and, more inscrutably, "the interstate judicial system's interest in obtaining the most efficient resolution of controversies" as well as "the shared interest of the several States in furthering fundamental substantive social policies."⁴⁴ The Court has also added "the Federal Government's interest in its foreign relations policies" to the list of fairness factors.⁴⁵

The fairness factors have done very little work in the Supreme Court's actual decisions. In nearly every situation, if the defendant has satisfied the minimum contacts prong, then a court's exercise of personal jurisdiction will be fundamentally fair.⁴⁶ The one exception is the *Asahi* case, in which two foreign manufacturers were litigating an indemnity question in California, even after the original plaintiff, a

³⁷ *Burger King*, 471 U.S. at 472; *Helicopteros Nacionales de Colombia, S.A. v. Hall*, 466 U.S. 408, 414 (1984).

³⁸ *Compare Helicopteros*, 466 U.S. at 425 (Brennan, J., dissenting) (arguing that "there is a substantial difference" between the standards that the Court usually articulates—"arise out of" and "relate to"—and that the choice was dispositive), *with id.* at 415 n.10 (majority opinion) (refusing to consider any potential difference).

³⁹ Lower courts have not settled on a single approach. *See, e.g., O'Connor v. Sandy Lane Hotel Co.*, 496 F.3d 312, 318–20 (3d Cir. 2007) (exploring different levels of connectedness between lawsuit and forum necessary for specific jurisdiction).

⁴⁰ *See World-Wide Volkswagen*, 444 U.S. at 291–92; *see also Int'l Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945) (originally formulating this prong as requiring that "the maintenance of the suit does not offend 'traditional notions of fair play and substantial justice'") (quoting *Milliken v. Meyer*, 311 U.S. 457, 463 (1940)).

⁴¹ *World-Wide Volkswagen* is largely responsible for clearly differentiating the minimum contacts and fairness prongs, such that minimum contacts are necessary even if jurisdiction otherwise would be fundamentally fair to the defendant. *See* 444 U.S. at 293–94.

⁴² *See* Kevin C. McMunigal, *Desert, Utility, and Minimum Contacts: Toward a Mixed Theory of Personal Jurisdiction*, 108 YALE L.J. 189, 195–99 (1998).

⁴³ *See World-Wide Volkswagen*, 444 U.S. at 292.

⁴⁴ *Id.*

⁴⁵ *Asahi Metal Indus. v. Superior Court*, 480 U.S. 102, 115 (1987).

⁴⁶ *See* Richman, *supra* note 21, at 633–35.

Californian, had settled and was no longer a party.⁴⁷ Citing California’s lack of any significant interest in the litigation and the exceedingly heavy burden on the defendant to travel there (with no corresponding convenience to the plaintiff), the Court held that jurisdiction was impermissible based on the fairness prong.⁴⁸

The better view of the fairness inquiry is that most of the considerations that the Supreme Court has identified are prudential restraints on a court’s power to hale defendants into court. There remains, however, a narrow but important constitutional part of the fairness inquiry. In *World-Wide Volkswagen*, Justice Brennan emphasized that any unreasonableness, unfairness, or burden categorically prohibits jurisdiction only when that burden is of a constitutional dimension. Thus, merely having to travel to the plaintiff’s chosen forum is not constitutionally significant.⁴⁹ Instead, a burden becomes problematic only when it prevents a defendant from putting on his case—for example, because the witnesses or other evidence cannot be presented in the forum.⁵⁰ Although Justice Brennan’s opinion was largely a dissent regarding a different matter,⁵¹ his view of the fairness prong is consistent with what the majority says about fairness.⁵² The Brennan dissent, though, gives content to the fairness inquiry more concretely and coherently than any other Supreme Court opinion. Moreover, it demonstrates how little work the notion of (constitutional) unfairness currently does in the personal jurisdiction context.

As the Supreme Court has crafted the contours of personal jurisdiction over the last seventy years, the doctrine has remained tethered to physical interests and harms. For the lion’s share of cases, the assumption that physicality can effectuate personal jurisdiction’s goals was probably well founded. But the occasional case exposed that approach’s latent flaws.

B. Personal Jurisdiction and Intangible Harm

Despite this Article’s focus on the Internet, personal jurisdiction doctrine began to unravel nearly a decade before the first graphical web browser appeared in 1993 in a case treating a far older communications medium: the newspaper. Intangible harms strained personal jurisdiction nearly to the conceptual breaking point.

⁴⁷ See *Asahi*, 480 U.S. at 106; Richman, *supra* note 21, at 635.

⁴⁸ See *Asahi*, 480 U.S. at 115–16.

⁴⁹ See *World-Wide Volkswagen*, 444 U.S. at 301 (Brennan, J., dissenting).

⁵⁰ See *id.*

⁵¹ Namely, whether the first prong’s minimum contacts requirement is an independent inquiry. See *id.* at 299–300.

⁵² See *id.* at 292 (majority view), 300–01 (Brennan’s view).

In 1979, the *National Enquirer*—then a checkout-stand gossip rag—published an article claiming that Shirley Jones, who played wholesome mother Shirley Partridge on the hit television series *The Partridge Family*, was a drunk trapped in an emotionally abusive marriage.⁵³ Jones sued for defamation in California; the *Enquirer* was based in Florida.⁵⁴ The paper itself could undoubtedly be sued in the Golden State—it sold 600,000 copies a year (roughly eleven percent of its total circulation) there.⁵⁵ The question was whether the author and editor of the story, who had no other relevant contacts with California, were subject to jurisdiction.⁵⁶ The Supreme Court held that they were: Jones’s reputation was based in California (since her professional community was there), and so any harm from the allegedly defamatory story would occur in the state.⁵⁷ Moreover, both individual defendants knew Jones was a California resident famous in that state and thus could predict that harm would occur there.⁵⁸ The case launched the famous and much-criticized “effects test” for personal jurisdiction regarding defamation claims.⁵⁹

The key to the case—and the reason for the controversy—is that it required departing from the familiar physical-world framework that courts had so laboriously worked out for personal jurisdiction. Jones resided in California, and a sizeable percentage of the magazines wound up in California. But none of that really mattered: the critical factor was that Jones’s *reputation* resided there.⁶⁰ Reputations are intangible and can have multiple homes. Jones, a Broadway actress as well as a Hollywood one, doubtless had a reputation capable of injury in New York as well.⁶¹ The problem easily multiplies. Imagine Jones spent summers acting in traveling productions in Boston and annually appeared in a widely-loved version of *A Christmas Story* in Chicago. The *Enquirer* would arguably be subject to suit in Massachusetts and Illinois as well. Personal jurisdiction becomes coterminous with the plaintiff’s reputation, which the defendant may or may not easily

⁵³ See Aljean Harmetz, *National Enquirer Agrees to Settle with Shirley Jones in Libel Suit*, N.Y. TIMES (Apr. 27, 1984), <http://www.nytimes.com/1984/04/27/us/national-enquirer-agrees-to-settle-with-shirley-jones-in-libel-suit.html>.

⁵⁴ See *Calder v. Jones*, 465 U.S. 783, 784–86 (1984).

⁵⁵ See *id.* at 785.

⁵⁶ See *id.* at 788–89.

⁵⁷ See *id.*

⁵⁸ See *id.* at 789–90.

⁵⁹ See, e.g., Cassandra Burke Robertson, *The Inextricable Merits Problem in Personal Jurisdiction*, 45 U.C. DAVIS L. REV. 1301, 1310 (2012) (noting that “decisions applying the effects test are often conflicting and contradictory, and efforts to smooth the inconsistent doctrine have been largely ineffective”).

⁶⁰ See *Calder*, 465 U.S. at 789.

⁶¹ See *Shirley Jones*, MASTERWORKS BROADWAY, <http://www.masterworksbroadway.com/artist/shirley-jones> (last visited Apr. 7, 2015) (describing Jones’ successful Broadway career).

discover. And while the printed copies of the *Enquirer* physically landed on newsstands in Los Angeles, the harm came not from their weight or newsprint, but from the information contained therein.⁶² Thus, the *Calder* Court faced a situation with three intangible factors: the scope of the plaintiff’s reputation, the spread of the allegedly defamatory information, and the extent of the defendant’s knowledge about the plaintiff’s reputation.

While the *Calder* opinion portrays the contest as a choice between California and Florida, that bifurcation is a convenient fiction that overlooks important differences between physical and intangible effects. The Court pigeonholed the case into a familiar framework of intentional torts. For example, if someone aims a gun from a high-rise in Manhattan at a person just across the Hudson River in New Jersey, it makes sense that the gunman should be subject to jurisdiction in New Jersey, where he intended to cause physical harm. *Calder* treated the *National Enquirer* and the hypothetical gunman as identical for jurisdictional purposes. The *National Enquirer* story effectively was a defamation bomb, armed in Florida and detonated in California, that damaged Jones’s reputation.⁶³

What the *Calder* Court misses, though, is that bombs are rivalrous whereas information is not.⁶⁴ Even a bomb mailed to a random postal address explodes in only one place. But with the spread of information (even pre-Internet), a more accurate analogy is that the *Enquirer* writer and editor armed defamation bombs and sent them to every state, where they went off.⁶⁵ The only remaining question was whether Jones had a reputation in any particular state and thus could experience injury there. With real bombs, a defendant generally knows where they will detonate and can readily predict harm. With defamation, the defendant has far less control over the final destination (newspapers cross state lines with the aid of travelers), and far less ability to predict harm, since she may be unable to ascertain where the

⁶² See *Calder*, 465 U.S. at 789 (stating that “the brunt of the harm, in terms both of [Jones]’s emotional distress and the injury to her professional reputation, was suffered in California”).

⁶³ See *id.* at 788–90.

⁶⁴ Cf. James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMP. PROBS. 33, 41–42 (2003) (discussing nonrivalrousness of information goods); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL. STUD. 325, 326 (1989) (describing copyright law as one remedy for underproduction because of nonrivalrousness).

⁶⁵ Cf. *Dow Jones & Co. v Gutnick* (2002) 210 CLR 575, para. 14 (Austl.) (Gleeson, C.J.), (adopting such an expansive approach to defamation); *Keeton v. Hustler Magazine, Inc.*, 465 U.S. 770, 773–74, 781 (1984) (permitting suit in New Hampshire, the one state in which the statute of limitations on plaintiff’s libel claim had not run, for damages incurred throughout the United States).

plaintiff's reputation runs.⁶⁶ This is an example of information asymmetry that can affect fairness: the plaintiff likely has better information about the presence of her reputation in a particular forum than does the defendant.

Put simply, the *Calder* Court overlooked the most difficult aspect of the case: all of the relevant factors in the jurisdictional analysis were intangible and presented the usual problems of intangible goods.⁶⁷ Yet the decision applied physical precedent without taking account of those conceptual differences.

Calder has been the subject of pitched criticism,⁶⁸ but its approach has spread beyond intentional torts to areas such as trademark infringement.⁶⁹ As we discuss in subpart III.C, trademark infringement presents the same problems as defamation, but in even sharper form. Tort doctrine devolves from the common law, allowing courts to shape its contours.⁷⁰ By contrast, trademark law at the federal level is a creature of statute and thus is less amenable to prudential tweaking.⁷¹ And while torts nearly always require some level of mens rea, trademark law is a zone of strict liability.⁷² Accordingly, the *Calder* approach for trademark is even more problematic and unmoored from personal jurisdiction principles than it is for intentional torts. *Calder* set the stage for courts to flub their lines when it came time to declaim on personal jurisdiction and the Internet.

C. String of Errors

The emergence of widely-available, packet-switched computer networks carrying commercial traffic—that is, the Internet and particularly the World Wide Web application—caused considerable confusion for courts.⁷³ This technological shift is of recent vintage, though

⁶⁶ *But cf. Dow Jones* para. 39 (holding that “those who make information accessible by a particular method do so knowing of the reach that their information may have”).

⁶⁷ *See Calder*, 465 U.S. at 788–89.

⁶⁸ For an especially good recent treatment, see Robertson, *supra* note 59, at 1309–26.

⁶⁹ *See, e.g., Licciardello v. Lovelady*, 544 F.3d 1280, 1288 (11th Cir. 2008); *see also* Allyson W. Haynes, *The Short Arm of the Law: Simplifying Personal Jurisdiction Over Virtually Present Defendants*, 64 U. MIAMI L. REV. 133, 147 n.88 (2009) (discussing tort cases after *Calder* applying the effects test).

⁷⁰ *See* G. Edward White, *The Intellectual Origins of Torts in America*, 86 YALE L.J. 671, 678–83 (1977).

⁷¹ *See* 15 U.S.C. § 1051 (2013).

⁷² *See, e.g., uBID Inc. v. GoDaddy Group, Inc.*, 623 F.3d 421, 435 (7th Cir. 2010).

⁷³ The Internet is a set of computers communicating via shared protocols, mostly notably TCP/IP. The WWW is one of the applications—or, put differently, one of the types of information—transmitted among those computers. *See generally* BARBARA VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION* 83–90 (2010) (describing core Internet protocols and design).

it seems like distant history to the current generation of lawyers.⁷⁴ The National Science Foundation permitted commercial traffic on the NSFNET backbone beginning in May 1991,⁷⁵ and the first graphical Web browser, Mosaic, debuted in the United States in 1993.⁷⁶ By the time that the federal government privatized the Internet backbone, in 1995, the commercial Net was in full swing.⁷⁷ Courts suddenly faced a host of legal questions driven by a fundamental shift in communications technology. Previous precedent on personal jurisdiction covered information transfer by mail,⁷⁸ long-distance telephone,⁷⁹ and even computer bulletin board service,⁸⁰ but the Net presented a difference in kind rather than degree. The technology dramatically decreased the cost of creating and sharing information, operating over an architecture where physical borders were largely an afterthought.

Cyber-related opinions from the 1990s are replete with introductory paragraphs ponderously describing “the Internet.” Many show judges groping towards some understanding of the technology through analogies to more familiar subjects.⁸¹ A federal district court in Arizona provided a typical example:

The Internet can be described by a number of different metaphors, all fitting for different features and services that it provides. For example, the Internet resembles a highway, consisting of many streets leading to places where a user can find information. The metaphor of the Internet as a shopping mall or supermarket, on the other hand, aptly describes the Internet as a place where the user can shop for goods, information, and services. Finally, the Internet also can be viewed as a telephone system for computers by which

⁷⁴ See JOHN PALFREY & URS GASSER, *BORN DIGITAL: UNDERSTANDING THE FIRST GENERATION OF DIGITAL NATIVES* (2008).

⁷⁵ MILTON L. MUELLER, *RULING THE ROOT: INTERNET GOVERNANCE AND THE TAMING OF CYBERSPACE* 106 (2002).

⁷⁶ Michael Calore, *April 22, 1993: Mosaic Browser Lights Up Web With Color, Creativity*, WIRED (Apr. 22, 2010, 12:00 AM), <http://www.wired.com/2010/04/0422mosaic-web-browser/>.

⁷⁷ See MUELLER, *supra* note 75, at 107; Barry M. Leiner et al., *Brief History of the Internet*, INTERNET SOC'Y, <http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet/>.

⁷⁸ See *McGee v. Int'l Life Ins. Co.*, 355 U.S. 220, 222–23 (1957); *Reuber v. United States*, 750 F.2d 1039, 1050 (D.C. Cir. 1984).

⁷⁹ See *Data Disc, Inc. v. Sys. Tech. Assocs.*, 557 F.2d 1280, 1283–84, 1288 (9th Cir. 1977).

⁸⁰ See *Cal. Software, Inc. v. Reliability Research, Inc.*, 631 F. Supp. 1356, 1361–64 (C.D. Cal. 1986).

⁸¹ For a counter-example, see *Panavision Int'l, L.P. v. Toeppen*, 945 F. Supp. 1296, 1299 (C.D. Cal. 1996), where the court's description of the Internet is accurate, cogent, and readable.

data bases of information can be downloaded to the user, as if all the information existed in the user's computer's disc drive.⁸²

Along with inevitable difficulties in substantive areas, courts struggled to articulate and then apply coherent tests for assessing how on-line activity should influence personal jurisdiction analysis.⁸³ The results were not reassuring: nearly identical facts led to contrary conclusions in different courts. For example, a Connecticut district court held that a technology firm with a Web site and toll-free telephone number "directed its advertising activities via the Internet and its toll-free number toward not only the state of Connecticut, but to all states," and "purposefully availed itself of the privilege of doing business within Connecticut."⁸⁴ Similarly, a California e-mail advertising firm found itself subject to jurisdiction in Missouri because it operated a Web site available to users in the state, which was accessed 311 times from within Missouri.⁸⁵ The court noted that the defendant "automatically and indiscriminately responds to each and every internet user who accesses its website"—that, of course, describing how the basic technology of Web sites and servers functions.⁸⁶

By contrast, a nonresident insurance company escaped jurisdiction in Illinois, despite its Web site, toll-free number, and advertising in national media such as television.⁸⁷ The district court stated: "It cannot plausibly be argued that any defendant who advertises nationally could expect to be haled into court in *any* state, for a cause of action that does not relate to the advertisements."⁸⁸ And the operator of a jazz club in Missouri could not be subject to jurisdiction in New

⁸² *Edias Software Int'l v. Basis Int'l*, 947 F. Supp. 413, 419 (D. Ariz. 1996) (footnotes omitted).

⁸³ See, e.g., *Universal City Studios v. Corley*, 273 F.3d 429, 453–58 (2d Cir. 2001) (struggling with First Amendment protection for hyperlinks); *Voyeur Dorm v. City of Tampa*, 265 F.3d 1232, 1235–37 (11th Cir. 2001) (same with application of zoning laws covering adult entertainment to house streaming such content online); *CompuServe v. Cyber Promotions*, 962 F. Supp. 1015, 1020–28 (S.D. Ohio 1997) (same for trespass and spam e-mail messages); *Stratton Oakmont v. Prodigy Servs. Co.*, 24 Media L. Rep. 1126, 1127–28 (Sup. Ct. N.Y. 1995) (same with intermediary liability for allegedly defamatory content).

⁸⁴ *Inset Sys., Inc. v. Instruction Set, Inc.*, 937 F. Supp. 161, 165 (D. Conn. 1996).

⁸⁵ See *Maritz, Inc. v. Cybergold*, 947 F. Supp. 1328, 1330–33 (E.D. Mo. 1996); see also *Heroes, Inc. v. Heroes Found.*, 958 F. Supp. 1, 5 (D.D.C. 1996) (holding that defendant was subject to jurisdiction in D.C. because it solicited donations on a home page available to D.C. residents and in the D.C. local newspaper); *M&B Beverage Corp. v. N.Y.N.Y. Hotel*, No. 96-2481-CIV-MORENO, 1996 U.S. Dist. LEXIS 22926 at *14–19 (S.D. Fla. Nov. 27, 1996) (same for defendant in Florida because it advertised to Florida residents on a website and through promotional material mailings).

⁸⁶ See *Cybergold*, 947 F. Supp. at 1333. On HTTP, see R. Fielding et al., *Hypertext Transfer Protocol – HTTP/1.1*, RFC 2616 (June 1999), <https://www.ietf.org/rfc/rfc2616.txt>; Cade Metz, *Berners-Lee: World Finally Realizes Web Belongs to No One*, WIREd (June 6, 2012), <http://www.wired.com/2012/06/sir-tim-berners-lee/>.

⁸⁷ See *IDS Life Ins. v. Sunamerica, Inc.*, 958 F. Supp. 1258, 1268 (N.D. Ill. 1997).

⁸⁸ *Id.*

York merely by dint of establishing a Web site, even when the site linked to the plaintiff’s Web page.⁸⁹ Depending upon the court, a defendant’s Web site could create minimum contacts with every state, or with none. At least one of those positions had to be wrong.

In early 1997, a potential silver bullet arrived—or, rather, a silver cigarette lighter. Zippo Manufacturing Company, which produces the famous lighters, sued a California firm, Zippo Dot Com, which registered the domain name *zippo.com* and used it as a portal to USENET groups.⁹⁰ The lighter company sued in its home state of Pennsylvania, asserting both federal and state trademark infringement claims.⁹¹ Its contacts with Pennsylvania included contracts with Internet service providers (ISPs) in the state to enable their users to access Zippo Dot Com content along with access to that content by roughly 3,000 Pennsylvania users.⁹² The California company moved to dismiss the complaint for lack of personal jurisdiction.⁹³

The district court held that Zippo Dot Com could be haled into court in the western district of Pennsylvania.⁹⁴ After rehearsing the familiar standards for analyzing personal jurisdiction, the court turned to the Internet:

[T]he likelihood that personal jurisdiction can be constitutionally exercised is directly proportionate to the nature and quality of commercial activity that an entity conducts over the Internet. This sliding scale is consistent with well developed personal jurisdiction principles. At one end of the spectrum are situations where a defendant clearly does business over the Internet. If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper. At the opposite end are situations where a defendant has simply posted information on an Internet Web site which is accessible to users in foreign jurisdictions. A passive Web site that does little more than make information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction. The middle ground is occupied by interactive Web sites where a user can exchange information with the host computer. In these cases, the exercise of jurisdiction is determined by examining the level of interactivity and commercial

⁸⁹ See *Bensusan Rest. Corp. v. King*, 937 F. Supp. 295, 297–98, 301 (S.D.N.Y. 1996).

⁹⁰ See *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1121 (W.D. Pa. 1997). On USENET, see S. Barber, *Common NNTP Extensions*, RFC 2980 (Oct. 2000), <http://tools.ietf.org/html/rfc2980>; Adam Dachis, *How to Get Started with Usenet in Three Simple Steps*, LIFEHACKER (Aug. 2, 2010, 9:00 AM), <http://lifelhacker.com/5601586/how-to-get-started-with-usenet-in-three-simple-steps>.

⁹¹ *Zippo*, 952 F. Supp. at 1121.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ See *id.* at 1126–27.

Zippo has become singularly influential, but its criteria bear no obvious relationship to the underlying normative principles of personal jurisdiction doctrine and theory. Each supposedly logical step suffers from a fundamental flaw.

First, equating a site’s commercial nature with purposeful availment is both over- and under-inclusive. True, the Supreme Court has held that when a defendant “invok[es] the benefits and protections” of a state’s laws, personal jurisdiction may be proper.¹⁰⁴ But those benefits and protections often have nothing to do with commercial exchanges. For example, if a Pennsylvanian drives to Massachusetts and causes a car accident, the Pennsylvanian is subject to personal jurisdiction there, even though the incident was not commercial in nature.¹⁰⁵ Conversely, even when a defendant derives commercial benefit from a product’s use in a forum, those commercial gains, standing alone, do not justify the exercise of personal jurisdiction if the defendant has not intentionally made contact with the forum.¹⁰⁶ In other words, the commercial nature of an interaction is, at most, a minor factor in the jurisdictional calculus.

Against this background, *Zippo*’s middle zone, in which there is commercial information but no transaction, is significantly flawed. It conditions jurisdiction on the type of information that an entity shares—commercial or noncommercial—rather than on actual activity.¹⁰⁷ Furthermore, this approach runs contrary to well-established precedent that mere advertising cannot support jurisdiction.¹⁰⁸ *Zippo*’s test comes out the other way, at least for sites with any degree of interactivity: jurisdiction is possible, if not likely.

Second, a site’s interactivity is a poor proxy for whether a defendant has purposefully availed itself of the benefits and protections of a state. If a Web site allows a user to transmit certain information (say, to subscribe to an electronic newsletter), that site has done nothing more than receive information and is conceptually indistinguishable from a company that receives letters and packages. Outside of the Internet context, the mere exchange of information rarely, if ever,

¹⁰⁴ *Hanson v. Denckla*, 357 U.S. 235, 253 (1958).

¹⁰⁵ *See id.*; *see also Kulko v. Superior Court*, 436 U.S. 84, 96–97 (1978) (treating *Hess* as a demonstration of purposeful availment).

¹⁰⁶ *See, e.g., World-Wide Volkswagen*, 444 U.S. at 295–99. The Supreme Court has suggested that the commercial nature of an exchange might help identify whether a defendant has derived benefits and protections from a given state, but it has never held that commerciality is either necessary or sufficient for finding purposeful availment. *See Kulko*, 436 U.S. at 97.

¹⁰⁷ *See Zippo*, 952 F. Supp. at 1124.

¹⁰⁸ *See, e.g., Federated Rural Elec. Ins. Corp. v. Kootenai Elec. Coop.*, 17 F.3d 1302, 1305 (10th Cir. 1994); *Singletary v. B.R.X., Inc.*, 828 F.2d 1135, 1136 (5th Cir. 1987); *Transcraft Corp. v. Doonan Trailer Corp.*, No. 97 C 4943, 1997 WL 733905, at *9 (N.D. Ill. Nov. 17, 1997).

suffices to justify personal jurisdiction.¹⁰⁹ Web services such as the DuckDuckGo search engine are highly interactive, but expressly not linked to geography.¹¹⁰ Perhaps *Zippo*'s most notable deviation from the usual jurisdictional rules comes in Internet defamation cases. Under *Zippo*, a passive site displaying defamatory information would not expose a defendant to jurisdiction in the place where a plaintiff experiences the effects of defamation. Such a result runs headlong into the *Calder* test, which assuredly would permit jurisdiction.¹¹¹

If interactivity involves obtaining and using information to tailor a Web site to a user's geographic location, a defendant arguably has done more to target a particular forum. But without any actual activity in that forum, the site has not fulfilled the usual requirements of purposeful availment. In an oblique sense, the defendant might be more likely to predict that it could be amenable to jurisdiction in a given location. For example, if a site uses geolocation to classify a user as residing in Brooklyn and then displays advertisements for Brooklyn restaurants, the entity running the site might more readily predict that a New York court could seek jurisdiction than if the site were ignorant of location.¹¹² The Supreme Court has made abundantly clear, though, that foreseeability is circular and is not the touchstone of personal jurisdiction.¹¹³

Finally, the *Zippo* test itself functions poorly. It is either redundant in cases that long-standing doctrine easily resolves or unworkable in cases that demand a new mode of analysis. At the two extremes of the spectrum, *Zippo* adds nothing to traditional analysis. E-commerce sites, plainly subject to jurisdiction under *Zippo*, are uncontroversially haled into court in the states where they have transacted business and those transactions give rise to the lawsuit in question.¹¹⁴ That result is completely consonant with decades-old specific jurisdiction concepts. At the other end of the spectrum, a purely passive Web site essentially functions as a virtual billboard. Again, traditional analysis already suggests the result that *Zippo* reaches: mere advertisement in a forum,

¹⁰⁹ See, e.g., *Red Wing Shoe Co. v. Hockerson-Halberstadt, Inc.*, 148 F.3d 1355, 1360 (Fed. Cir. 1998) (holding that, in the patent context, "cease-and-desist letters alone do not suffice to justify personal jurisdiction").

¹¹⁰ See *Privacy*, DUCKDUCKGO, <https://duckduckgo.com/privacy> (last visited Apr. 7, 2015).

¹¹¹ See *Calder v. Jones*, 465 U.S. 783, 789–90 (1984).

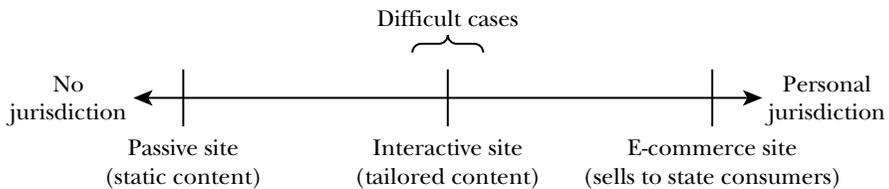
¹¹² Cf. Steven Cook & Miten Sampat, *The Benefits of Geolocation Marketing*, FORBES (Nov. 7, 2011, 12:24 AM), <http://www.forbes.com/sites/ciocentral/2011/11/07/the-benefits-of-geolocation-marketing/> (arguing that to be successful, "online marketing needs to be hyperlocalized—and it isn't").

¹¹³ See *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 295–97 (1980).

¹¹⁴ See, e.g., *Signazon Corp. v. Nickelson*, No. 13-11190-RGS, 2013 U.S. Dist. LEXIS 86793, at *6–7 (D. Mass. June 20, 2013).

without more, is insufficient to subject a defendant to personal jurisdiction.

The hard cases involve the middle range of the scale, in which courts must assess the level of interactivity and the commercial nature of the information transfer. Purely passive Web sites have become a rarity in the world of Web 2.0. Indeed, the dot com boom—where interaction with the user was key—began shortly after *Zippo* was decided.¹¹⁵ In the middle ground, though, the two elements are standards, not rules. Interactivity varies; some sites are highly customized, some minimally.¹¹⁶ Commerciality is similarly ranged.¹¹⁷ And even if the *Zippo* standards were reasonable proxies of the values underlying personal jurisdiction, they offer no guideposts to help courts through the necessary analysis.¹¹⁸ How much interactivity is enough? What counts as commercial information? It is also not clear how the two elements of the middle range interact. Would a highly interactive but noncommercial site—say, one offering information about where to donate used clothing to charities in the user’s local area—face jurisdiction in the forum state? What about a heavily commercial site—perhaps one offering trailers for a soon-to-be-released movie—that was static except for displaying the correct local time in the user’s location? In short, *Zippo* is indeterminate where it is needed most:



Put bluntly, the *Zippo* court’s highly influential test is both wrong and useless. It fails to take account of the normative underpinnings of personal jurisdiction doctrine, and it fails to help courts decide the difficult cases for Internet-based information exchange.

¹¹⁵ See JOHN CASSIDY, DOT.CON: THE GREATEST STORY EVER SOLD 135 (2002) (“By the spring of 1997, e-commerce companies were proliferating like bacteria.”).

¹¹⁶ See, e.g., Marketa Trimble, *Twitter’s Country-Specific Content Blocking Raises Questions about the Efficacy of Geolocation* (Guest Blog Post), TECH. & MKTG. L. BLOG (Oct. 25, 2012), http://blog.ericgoldman.org/archives/2012/10/twitters_preced.htm (discussing Twitter’s customized filtering of content by country); DUCKDUCKGO, *supra* note 110 (minimal customization).

¹¹⁷ Compare *People for the Ethical Treatment of Animals v. Doughney*, 263 F.3d 359, 365–66 (4th Cir. 2001) (finding site commercial based on links to other commercial sites), with *Lamparello v. Falwell*, 420 F.3d 309, 320 (4th Cir. 2005) (finding site noncommercial despite link to online bookseller site).

¹¹⁸ For discussions of standards versus rules, see Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992); Kathleen M. Sullivan, *Foreword: The Justices of Rules and Standards*, 106 HARV. L. REV. 22 (1992); Cass R. Sunstein, *Problems with Rules*, 83 CALIF. L. REV. 953 (1995).

Despite these flaws, *Zippo* remains exceedingly influential, even as some courts have begun to question its utility. Of the thirteen federal circuits, two use the original *Zippo* or a *Zippo*-like test to resolve these issues; two use a “*Zippo* plus” approach, typically the sliding scale plus “something more”; five circuits employ standard purposeful availment methodology (sometimes relying on *Zippo*, although two circuits have rejected the interactivity metric); and four have yet to rule definitively (although two of these have pro-*Zippo* language in either dicta or district court rulings).

FIGURE 1. TREATMENT OF ZIPPO TEST BY CIRCUIT

Circuit	Test for Specific Jurisdiction on Internet
First	No First Circuit ruling, but implicit endorsement of <i>Zippo</i> ¹¹⁹
Second	Purposeful availment—implicitly rejects <i>Zippo</i> ¹²⁰
Third	<i>Zippo</i> plus “something more” ¹²¹
Fourth	<i>Zippo</i> plus ¹²²
Fifth	Purposeful availment— <i>Zippo</i> merely one factor ¹²³
Sixth	<i>Zippo</i> ¹²⁴
Seventh	Purposeful availment—expressly rejects <i>Zippo</i> ¹²⁵
Eighth	<i>Zippo</i> ¹²⁶
Ninth	Purposeful availment—needs “something more” than <i>Zippo</i> ¹²⁷
Tenth	No Tenth Circuit ruling ¹²⁸
Eleventh	Purposeful availment—notes criticism of <i>Zippo</i> ¹²⁹
D.C.	No D.C. Circuit ruling—suggestions in district court opinions of <i>Zippo</i> like test ¹³⁰
Federal	No Federal Circuit ruling ¹³¹

¹¹⁹ See *Signazon Corp. v. Nickelson*, No. 13-11190-RGS, 2013 U.S. Dist. LEXIS 86793, at *6 (D. Mass. June 20, 2013) (stating that the *Zippo* test “has been adopted by this court (and implicitly by the First Circuit)”).

¹²⁰ See *Best Van Lines v. Walker*, 490 F.3d 239, 252 (2d Cir. 2007).

¹²¹ See *Toys “R” Us, Inc. v. Step Two, S.A.*, 318 F.3d 446, 452–54 (3d Cir. 2003).

¹²² See *ALS Scan, Inc. v. Digital Serv. Consultants, Inc.*, 293 F.3d 707, 714 (4th Cir. 2002).

¹²³ See *Pervasive Software, Inc. v. Lexware GmbH & Co. KG*, 688 F.3d 214, 227 n.7 (5th Cir. 2012).

¹²⁴ See *Neogen Corp. v. Neo Gen Screening, Inc.*, 282 F.3d 883, 890 (6th Cir. 2002); see also *See, Inc. v. Imago Eyewear Pty*, 167 Fed. Appx. 518, 522–23 (6th Cir. 2006) (using *Zippo* test to determine personal jurisdiction).

¹²⁵ See *Illinois v. Hemi Group LLC*, 622 F.3d 754, 758 (7th Cir. 2010).

¹²⁶ See *Lakin v. Prudential Sec. Inc.*, 348 F.3d 704, 711 (8th Cir. 2003).

¹²⁷ See *Cybersell, Inc. v. Cybersell, Inc.*, 130 F.3d 414, 418 (9th Cir. 1997).

¹²⁸ See *Shrader v. Biddinger*, 633 F.3d 1235, 1242 n.5 (10th Cir. 2011).

¹²⁹ See *Louis Vuitton Malletier, S.A. v. Mosseri*, 736 F.3d 1339, 1355 n.10 (11th Cir. 2013).

¹³⁰ See *Virgin Records Am. Inc. v. John Does 1-35*, No. 05-1918 (CKK), 2006 U.S. Dist. LEXIS 20652, at *12 (D.D.C. Apr. 18, 2006).

¹³¹ See *Trintec Indus. Inc. v. Pedre Promotional Prods. Inc.*, 395 F.3d 1275, 1281 (Fed. Cir. 2005) (declining to rule on the *Zippo* test).

The “something more” approach exemplifies *Zippo*’s problems. The *Zippo* portion of the test appears to perform a useful function, but in the broad range of cases where it is indeterminate, courts fall back to standard purposeful availment analysis.¹³² As a tiebreaker, these courts employ the approach that they could have used initially, saving the useless intermediate work.

Why did *Zippo*—a test from a single district court case in Pennsylvania—come to dominate analysis of Internet contacts and specific jurisdiction? The likely answers are the appearance of efficiency and technological timidity.

Personal jurisdiction analysis is notoriously complex; it involves a multipronged test, in which each prong employs a standard rather than a rule.¹³³ Courts are composed of human judges who are wont to seek cognitive shortcuts like everyone else.¹³⁴ The *Zippo* sliding-scale seems to reduce the burden of specific jurisdiction analysis by concentrating on a deceptively simple criterion: the interactivity of the defendant’s Web site or Internet presence.¹³⁵ Unlike fairness, for example, interactivity is readily perceptible upon inspection and purports to capture what purposeful availment means for Internet activity. Moreover, the scale appears to be continuous rather than binary—as interactivity of a commercial site increases, the likelihood of personal jurisdiction increases. The metric looks more carefully graduated than it is, giving it the guise of being fine tuned.

Second, *Zippo* offered courts a useful roadmap for technologically timid judges to navigate an unfamiliar and technologically complex landscape: the Internet. Most judges were not well positioned to understand the complexities of Internet protocols, JavaScript, or e-commerce in 1997.¹³⁶ The *Zippo* test seemed to boil the welter of

¹³² See, e.g., *Cybersell, Inc.*, 130 F.3d at 418, 419–20.

¹³³ See, e.g., *Pervasive Software, Inc. v. Lexware GmbH & Co.* KG, 688 F.3d 214, 221–22 (5th Cir. 2012) (analyzing sufficient prelitigation connections to forum state, purposeful establishment of connections by defendant, relatedness to cause of action, and reasonableness for specific jurisdiction); *Illinois v. Hemi Group LLC*, 622 F.3d 754, 757–60 (7th Cir. 2010) (analyzing minimum contacts, relatedness, and fairness for same).

¹³⁴ See, e.g., Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1477–79 (1998); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1128 (1974).

¹³⁵ See *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997); see also *Neogen Corp. v. Neo Gen Screening, Inc.*, 282 F.3d 883, 890–91 (6th Cir. 2002) (finding that the granting of passwords to website members to access test results indicated interactive use and thus purposeful availment).

¹³⁶ Many still are not. Consider the following colloquy between Chief Justice John Roberts and attorney Alexander Ross in *Nicastro*. Roberts: “Do you—are web sites targeted to the United States? Don’t you—you can—let’s say they put it on their web site in England. Can’t you—can’t—can’t I access that from here?” Ross: “Yes, you can.” Roberts: “So they don’t even have to send the web site to the United States?” Transcript of Oral Argument at 55, *J. McIntyre Mach. v. Nicastro*, 131 S. Ct. 2780 (2011) (No. 09-1343), 2011 U.S. Trans. LEXIS 3.

technologies and acronyms down to a manageable calculus. Stepping away from its single metric would require judges to assess how packet-based communication that is indifferent to geographic boundaries affected personal jurisdiction concerns that courts had developed when regular broadcast television was less than a decade old.¹³⁷ It is unsurprising, then, that the first federal circuit court of appeals to reject the *Zippo* approach was the Ninth Circuit—the court with jurisdiction over Silicon Valley.¹³⁸ Technological timidity is a well-documented phenomenon among courts and legislators alike.¹³⁹ *Zippo* seemed to take the new phenomenon of the Internet in passing, and courts were largely happy not to look behind the curtain.

In short, *Zippo* offered false hope. Personal jurisdiction in the Internet context has gone awry but for reasons that transcend the Internet itself.

II

REASSESSING THE PROBLEM

A. Personal Jurisdiction's Principles

For the better part of two decades, courts have lost sight of the principles that underlie personal jurisdiction. They have focused on the notions of minimum contacts and purposeful availment, and they have drawn often inapt and superficial analogies to the pre-Internet world. This approach has wrought theoretical and practical confusion—particularly in Internet cases—and the only way out of the morass is to return to first principles.

Personal jurisdiction essentially consists of limitations on courts' power to command that a defendant appear. Unraveling the tests and analogies that have been glommed on to one another begins with an appreciation of the different sources that produced those limitations. Identifying the precise source of each limitation in turn reveals the values that they protect and the extent to which courts and legislatures can revise and adapt those limitations.¹⁴⁰

¹³⁷ The first regularly scheduled television broadcasts began in 1939, six years before *International Shoe* was decided. See Nick Greene, *Celebrate Broadcast Television's 75th Birthday by Watching Its First Program*, MENTAL FLOSS (Apr. 30, 2014), <http://mentalfloss.com/article/56485/celebrate-broadcast-television-75th-birthday-watching-its-first-program>.

¹³⁸ See *Cybersell, Inc. v. Cybersell, Inc.*, 130 F.3d 414, 418 (9th Cir. 1997); cf. *White v. Samsung Elecs. Am. Inc.*, 989 F.2d 1512, 1521 (9th Cir. 1993) (Kozinski, J., dissenting from denial of rehearing en banc) (noting that “[f]or better or worse, we *are* the Court of Appeals for the Hollywood Circuit”).

¹³⁹ See, e.g., Derek E. Bambauer, *Ghost in the Network*, 162 U. PA. L. REV. 1011, 1038–40 (2014) [hereinafter Bambauer, *Ghost in the Network*]; Derek E. Bambauer, *Rules, Standards, and Geeks*, 5 BROOK. J. CORP. FIN. & COM. L. 49, 52 (2010) (noting that regulators “may not know what technologies are cutting-edge or appropriate”).

¹⁴⁰ See Trammell, *supra* note 24, at 536–46.

We argue that the doctrine has three tiers. Although the Court has not explicitly conceptualized personal jurisdiction in this way, the tripartite formulation demonstrates the different ways that courts and legislatures have attempted to give greater content to the overarching notions of fairness and predictability that animate the doctrine. This formulation also exposes the true breadth of possibility for reassessing and tweaking personal jurisdiction. The first tier comprises truly constitutional elements of personal jurisdiction. The second includes subconstitutional, prudential limitations that the Supreme Court has imposed in common law fashion. In prior work, one of us has argued that most aspects of personal jurisdiction actually belong in this tier, even though the Court rhetorically places them in the first.¹⁴¹ Finally, the third deals with state-based limits on the extent to which state courts exercise power over defendants.

Within the first tier are the limitations that the Constitution directly imposes. The Court has long identified the Due Process Clauses as the font of these restrictions.¹⁴² The hallmark of procedural due process is protecting parties against the arbitrary exercise of governmental power.¹⁴³ In other words, the Constitution mandates that a court may not act arbitrarily by haling a party into court.

The nonarbitrariness concept requires that a forum have some minimal connection to either the lawsuit or the defendant for a defendant to be amenable to personal jurisdiction.¹⁴⁴ This notion protects two closely related values. First, it prevents courts from exercising power in a way that exposes the defendant to unconstitutional surprise and inconvenience.¹⁴⁵ Second, it captures an important notion about state sovereignty. Unless a forum has the requisite connection to the suit or defendant, its courts will exceed their sovereign authority and thus expose the defendant to a different, albeit related, form of arbitrariness.¹⁴⁶ For example, a defendant who lives in Delaware, just outside Philadelphia, might experience no inconvenience if a Philadelphia court attempted to exercise jurisdiction over her. But if

¹⁴¹ See *id.* at 541–46.

¹⁴² See James Weinstein, *The Federal Common Law Origins of Judicial Jurisdiction: Implications for Modern Doctrine*, 90 VA. L. REV. 169, 209–13 (2004) (tracing this development to *Pennoyer v. Neff*, 95 U.S. 714, 722 (1878)); cf. Borchers, *supra* note 21, at 49–51 (arguing that the “expansive view of *Pennoyer*”—that the Due Process Clause directly regulates state courts’ adjudicative power—did not take hold until the early twentieth century).

¹⁴³ See Spencer, *supra* note 21, at 634, 636; Trammell, *supra* note 24, at 529–33. But see E. THOMAS SULLIVAN & TONI M. MASSARO, *THE ARC OF DUE PROCESS IN AMERICAN CONSTITUTIONAL LAW* 169–203 (2013) (presenting personal jurisdiction as a hybrid substantive and procedural due process right).

¹⁴⁴ See Spencer, *supra* note 21, at 634–35; Trammell, *supra* note 24, at 530–31.

¹⁴⁵ See Martin H. Redish, *Due Process, Federalism, and Personal Jurisdiction: A Theoretical Evaluation*, 75 Nw. U. L. REV. 1112, 1137–38 (1981).

¹⁴⁶ See Spencer, *supra* note 21, at 641–42; Trammell, *supra* note 24, at 532–33.

Pennsylvania has no actual connection to the lawsuit or the defendant, its courts' attempts to exercise jurisdiction would be an arbitrary assertion of judicial power.

The bar imposed by the Constitution is actually quite low.¹⁴⁷ Imagine that two parties from Oregon and Idaho negotiate a construction contract over the phone in their respective home states and execute it at a meeting in Seattle, Washington. The parties are to perform the contract in several places in the western United States. There is nothing arbitrary about any of those states asserting personal jurisdiction, even if another state has a stronger connection to the underlying lawsuit. It would be arbitrary, however, for Maine courts to assert jurisdiction. Because the standards of procedural due process are so forgiving, the Constitution prohibits only the most bald-faced arbitrariness.¹⁴⁸ Such attempts at truly arbitrary assertions of judicial power are almost nonexistent.¹⁴⁹

The bulk of the limitations that govern personal jurisdiction actually belong in the second tier: prudential, common law restrictions that are inspired—but not required—by the Constitution. Admittedly, the Supreme Court for decades has couched its personal jurisdiction jurisprudence in terms of constitutional imperatives, but strictly speaking, the Court has mischaracterized the source of the restrictions. James Weinstein has traced the common law origins of personal jurisdiction in the United States and concluded that nearly all of personal jurisdiction's strictures are common law in nature.¹⁵⁰

The better understanding of most rules articulated by the Supreme Court—including purposeful availment and the myriad reasonableness factors—is that they are designed to promote fairness, particularly to defendants, and predictability. The Court repeatedly has noted the value of clarity when crafting jurisdictional rules.¹⁵¹ Such rules aspire to resolve threshold questions quickly and thereby avoid satellite litigation about matters that often have little bearing on a case's underlying merits.¹⁵² If we are correct that these rules constitute a form of federal common law—decision rules that assist in effectuating constitutional norms but are not required by any specific

¹⁴⁷ See Spencer, *supra* note 21, at 632 (arguing that inconvenience hardly ever rises to the level of unconstitutionality); see also Borchers, *supra* note 21, at 100 (arguing that states' attempts to exercise jurisdiction are rarely unconstitutional).

¹⁴⁸ See Borchers, *supra* note 21, at 90, 100; Weinstein, *supra* note 142, at 255.

¹⁴⁹ See Patrick J. Borchers, *Jurisdictional Pragmatism: International Shoe's Half-Buried Legacy*, 28 U.C. DAVIS L. REV. 561, 578 (1995).

¹⁵⁰ See Weinstein, *supra* note 142, at 222–50.

¹⁵¹ See, e.g., Daimler AG v. Bauman, 134 S. Ct. 746, 760 (2014); Hertz Corp. v. Friend, 559 U.S. 77, 94 (2010).

¹⁵² See Hertz, 559 U.S. at 94.

constitutional provision—then Congress can amend those rules.¹⁵³ Until the Supreme Court clarifies the precise source and nature of the rules, though, this potentially productive dialogue between the courts and Congress cannot happen.

Finally, the third tier encompasses further restrictions that a sovereign may impose voluntarily. Usually such restrictions come in the form of long-arm statutes. Even if the Court, through its constitutional and prudential rules, permits a state to exercise jurisdiction, a litigant must still find statutory authorization—a long-arm statute that explicitly permits suit in the forum’s courts.¹⁵⁴ Of course, a state may not exercise jurisdiction beyond what the Court has authorized. While many states have conferred jurisdiction on their courts to the full extent permitted by the Supreme Court, others have adopted narrower long-arm statutes.¹⁵⁵

Perhaps the most conspicuous example of a sovereign’s decision not to grant its courts the full measure of permissible jurisdiction is the federal long-arm statute. The federal government is a single sovereign. Thus, if a defendant has minimum contacts with the United States writ large, then *any* federal court could constitutionally exercise personal jurisdiction. Occasionally, Congress has authorized such an expansive approach in the federal courts.¹⁵⁶ But the default rule is that a federal court may exercise personal jurisdiction only to the extent that the law of the state in which it sits has authorized jurisdiction. In other words, federal courts usually borrow state long-arm statutes.¹⁵⁷

To the extent that long-arm statutes impose additional restrictions on personal jurisdiction, those limitations are amenable to change. A legislature always has the latitude to modify its long-arm

¹⁵³ See Henry P. Monaghan, *Foreword: Constitutional Common Law*, 89 HARV. L. REV. 1, 18–20 (1975); Trammell, *supra* note 24, at 544–46; Weinstein, *supra* note 142, at 278. But see Mitchell N. Berman, *Constitutional Decision Rules*, 90 VA. L. REV. 1, 36–38 n.128 (2004) (rejecting notion that constitutional common law necessarily is subject to congressional override).

¹⁵⁴ See Douglas D. McFarland, *Dictum Run Wild: How Long-Arm Statutes Extended to the Limits of Due Process*, 84 B.U. L. REV. 491, 493 (2004).

¹⁵⁵ See *id.* at 525–26 (identifying eighteen states that have narrower, enumerated-acts statutes).

¹⁵⁶ For example, the Securities and Exchange Act permits nationwide service of process. 15 U.S.C. § 78aa(a) (2013). And in rare situations, a federal court may exercise personal jurisdiction over a foreign defendant on a cause of action arising under federal law when the defendant has minimum contacts with the United States as a whole, but not any particular state. See FED. R. CIV. P. 4(k)(2).

¹⁵⁷ See FED. R. CIV. P. 4(k)(1)(A); see also, e.g., Graduate Mgmt. Admissions Council v. Raju, 241 F. Supp. 2d 589, 592–93 (E.D. Va. 2003) (applying Rule 4(k)(1)(A) and thus Virginia’s long-arm statute). This exercise in humility in the federal long-arm statute is actually quite prudent. If Congress authorized federal courts to take a massively expansive approach to personal jurisdiction, the federal courts would become a magnet for plaintiffs. Instead, Congress has sought to foster symmetry between state and federal courts.

statute, and a state's highest court can always construe the statute more broadly or more narrowly, provided that the statute reaches no further than the Supreme Court has permitted.¹⁵⁸

An overview of the three tiers reveals the principles that have animated personal jurisdiction and impelled its evolution. The truly constitutional restrictions protect basic notions of constitutional fairness and state sovereignty. But only the most egregious attempts at asserting personal jurisdiction will run afoul of the Due Process Clauses. A state's exercise of judicial power would have to be completely arbitrary to implicate the Constitution.

Virtually all of the other restrictions are a product of either federal common law (and thus subject to revision by Congress) or a long-arm statute that a legislature may always revise. These additional restrictions promote subconstitutional concerns for fairness, predictability, and clarity.¹⁵⁹ They narrow the places where a defendant is amenable to suit. Moreover, they create mechanisms by which defendants can tailor their conduct and thereby avoid jurisdiction. As courts attempt to craft jurisdictional rules for the Internet context, they should look behind the familiar phrases—"minimum contacts," "purposeful availment," "reasonableness," and the like—to avoid unhelpful analogies to the world of physical trucks and tubes.¹⁶⁰ Only by refocusing attention on the first principles that have guided the development of the doctrine can courts hope to create meaningful limitations for the modern era.

Our tripartite interpretation offers a nuanced vision of how the doctrine seeks to effectuate personal jurisdiction's overarching concerns. It also reveals a tremendous berth for the Supreme Court and Congress to innovate within and around the doctrine's current stric-

¹⁵⁸ See Patrick J. Borchers, *The Problem with General Jurisdiction*, 2001 U. CHI. LEGAL F. 119, 122, 133 (2001) (noting trend among state courts to construe seemingly narrow long-arm statutes to reach the full extent permitted by the Supreme Court).

¹⁵⁹ Occasionally, the Supreme Court treats some of these additional limitations as protectors of interstate federalism. See, e.g., *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 293 (1980) (invoking interstate federalism as part of personal jurisdiction analysis). But even a recent attempt to reinvigorate the sovereignty rationale ultimately sounded in notions of fairness. See *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2787–88 (2011) (plurality opinion); see also Wendy Collins Perdue, *What's "Sovereignty" Got to Do with It? Due Process, Personal Jurisdiction, and the Supreme Court*, 63 S.C. L. REV. 729, 741–43 (2012). In *Nicastro*, a shearing machine made its way through the distribution chain to New Jersey and caused harm there to a New Jersey resident. See 131 S. Ct. at 2786. It is nearly impossible to see how New Jersey did not have a regulatory interest in protecting its citizens from machines that were sold in New Jersey and caused harm there. The only possible explanation for why personal jurisdiction was not permissible was because of a concern for fairness to the defendant.

¹⁶⁰ Senator Ted Stevens's infamous quote is from a speech on network neutrality on June 28, 2006. *Series of Tubes*, YouTube (June 28, 2006), <http://www.youtube.com/watch?v=F99PcP0aFNE> ("And again, the Internet is not something that you just dump something on. It's not a big truck. It's a series of tubes.").

tures. But even if the Court continues to treat its pronouncements as truly constitutional (rather than prudential) in nature, Congress and state legislatures ultimately may adopt the proposal that we develop. Because our proposal narrows the scope of courts’ adjudicative power, legislatures may incorporate it into their respective long-arm statutes. The tripartite approach creates greater space for dialogue between institutions about how best to instantiate certain procedural values, and such a dialogue in itself would be a virtue. But the specific result that we advocate here is achievable even within the current understanding of the doctrine.¹⁶¹

B. Cyberspace’s Problems

Internet communication wreaks havoc on personal jurisdiction.

As courts currently conceive it, personal jurisdiction is physical and territorial. The traditional bases for asserting personal jurisdiction over an individual were purely territorial: a person was subject to jurisdiction in his domicile or wherever he was physically present.¹⁶² Even the more modern basis, specific jurisdiction, relies in part on a certain physicality—minimum contacts between the defendant and the forum.¹⁶³ Physical location is both critically important and easy to determine.

The default rule for the core Internet protocols, by contrast, is that physical location is not relevant—it is a quaint remnant of older modes of communication.¹⁶⁴ The transfer of information between

¹⁶¹ If the Supreme Court reconceptualizes the doctrine along the lines of the tripartite formulation, the Court itself would also be able to engage in the process of crafting the limitations that we suggest. Under current doctrine, though, only legislatures have the power to craft such prudential limitations. Moreover, the current approach, unlike the tripartite understanding, creates something of a one-way ratchet that allows legislatures to narrow, but not expand, courts’ adjudicative jurisdiction. (Apologies to John Harrison, who has long argued that “one-way ratchet” is redundant because the whole point of a ratchet is to go only one way at a time. See John Harrison, *Forms of Originalism and the Study of History*, 26 HARV. J.L. & PUB. POL’Y 83, 90–91 (2003).)

¹⁶² See *Burnham v. Superior Court*, 495 U.S. 604, 610–12 (1990); *Pennoyer v. Neff*, 95 U.S. 714, 722, 727 (1878).

¹⁶³ See *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 316, 319 (1945).

¹⁶⁴ See Paul Wilson, *The Geography of Internet Addressing*, APNIC (Apr. 15, 2005), <http://www.ripe.net/internet-coordination/internet-governance/multi-stakeholder-engagement/itu/internetgeography.pdf>; J.H. Saltzer, D.P. Reed, & D.D. Clark, *End-to-End Arguments in System Design*, 2 ACM TRANSACTIONS ON COMPUTER SYSTEMS 277, 277–79 (1984). There are exceptions. Users physically located in China or Saudi Arabia will experience a different, censored Internet from what users located elsewhere see because China and Saudi Arabia constructed their networks to mirror national borders. See Derek E. Bambauer, *Orwell’s Armchair*, 79 U. CHI. L. REV. 863, 876–77 (2012). And people outside the United States trying to reach George W. Bush’s campaign Web site in 2004, or Hulu today, will be unsuccessful. See *Bulletin 007*, OPENNET INITIATIVE (Oct. 27, 2004), <https://opennet.net/bulletins/007/>; Luke Hopewell, *How To Stream Netflix And Hulu In Australia, And Other Stuff Geoblockers Don’t Want Known*, GIZMODO AUSTR. (Nov. 25, 2013, 10:31 AM), <http://www.gizmodo.com.au/2013/11/how-to-stream-netflix-and-hulu-in-australia-and-other-stuff-geo>

sender and receiver depends upon their locations on the network, not on the planet.¹⁶⁵ Physical and virtual locations may coincide or not.¹⁶⁶ And, determining where an Internet user is located ranges from quite easy (via geolocation services that check Internet protocol addresses)¹⁶⁷ to nearly impossible (via Tor, which encrypts communications and routes them through a series of proxies).¹⁶⁸ For personal jurisdiction, physical location is a fundamental matter; for Internet communication, it is peripheral or even irrelevant.

The Internet's indifference to geography complicates purposeful availment analysis.¹⁶⁹ A blogger has clearly availed herself of the benefits of the forum state where she resides. Perhaps the same is true of the state where the server hosting her site is located, but even here, technology in the form of cloud computing complicates the analysis.¹⁷⁰ Beyond that basic—and still principally geographic—analysis, it is difficult to assess whether and to what extent the blogger has purposefully directed her activity to any other states. Absent other contacts, such as contractual relationships, the only principled answers seem to be *all* states or *none*. *All*—subjecting the blogger to jurisdiction in every state in which her site is accessible—engages in a legal fiction whereby the blogger theoretically benefits from the protections of a state where a user might access the blog.¹⁷¹ Even if that interac-

blockers-dont-want-known/. See generally Marketa Trimble, *The Future of Cybertravel: Legal Implications of the Evasion of Geolocation*, 22 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 567 (2012). As usual, the exceptions highlight the force of the rule.

¹⁶⁵ Wilson, *supra* note 164.

¹⁶⁶ See Trimble, *supra* note 164, at 654–57.

¹⁶⁷ See, e.g., *IP Intelligence & Geolocation*, NEUSTAR, <http://www.neustar.biz/services/ip-intelligence> (last visited May 12, 2015).

¹⁶⁸ *Overview*, TOR, <https://www.torproject.org/about/overview.html.en> (last visited May 12, 2015). To track users trafficking in child pornography via Tor, the FBI had to resort to using malware. See also Kevin Poulsen, *FBI Admits It Controlled Tor Servers Behind Mass Malware Attack*, WIRED (Sept. 13, 2013, 4:17 PM), <http://www.wired.com/2013/09/freedom-hosting-fbi/>.

¹⁶⁹ See, e.g., Stewart E. Sterk, *Personal Jurisdiction and Choice of Law*, 98 IOWA L. REV. 1163, 1181 (2013) (noting that “[i]f ‘minimum contacts’ and ‘purposeful availment’ are to survive as sensible talismans for personal-jurisdiction jurisprudence, the meaning of these phrases will have to evolve to account for the realities of an Internet-based world”).

¹⁷⁰ Cloud computing may distribute copies of data across multiple servers for purposes of redundancy, balancing load, and efficiency. Thus, a user who sets up a WordPress blog on Amazon's EC2 service knows she is transacting with a company whose headquarters are in Washington, but likely does not know whether her data resides on Amazon Web Services computers in Virginia, Oregon, or California. See *Global Infrastructure*, AMAZON WEB SERVICES, <https://aws.amazon.com/about-aws/globalinfrastructure>; see also Derek E. Bambauer, *Conundrum*, 96 MINN. L. REV. 584, 638–42 (2011) (describing how cloud computing technologies can store information in multiple locations that may not be transparent to users).

¹⁷¹ For illustrations of courts taking this approach, see, for example, *Heroes Inc. v. Heroes Found.*, 958 F. Supp. 1, 5 (D.D.C. 1996); *Maritz Inc. v. Cybergold, Inc.*, 947 F. Supp. 1328, 1330–33 (E.D. Mo. 1996); *Inset Sys., Inc. v. Instruction Set, Inc.*, 937 F. Supp. 161, 165 (D. Conn. 1996).

tion actually comes to fruition, it is entirely by the user’s choice, not the blogger’s. *None* cuts the other way: physicality triumphs, and on-line interaction alone cannot suffice for jurisdiction. Purposeful availment on the Internet encounters the same troubles that the doctrine does in stream of commerce cases. Like tiny electronic Volkswagens, or cutting machines, data packets go forth to locations ultimately unknown to the sender.¹⁷²

The Net also disrupts effects-based tests for personal jurisdiction. The default setting for communication is universal accessibility: a new blog is equally accessible in Tacoma, Tashkent, and Tucson. Unless she takes special steps, the blogger has no information about the location or identity of the people who read her posts.¹⁷³ The information she provides could have effects everywhere or nowhere. She can engage in technological self-help and essentially withdraw from certain physical locations (perhaps by screening out IP addresses correlated with particular states), but such measures are imperfect and orthogonal to effects-based analysis.¹⁷⁴ Self-help on the Net—a person’s ability to make certain information unavailable in particular states and, perhaps more cynically, to prevent that state’s courts from haling her before them—seems irrelevant for both practical and theoretical reasons.¹⁷⁵ From a practical perspective, effective self-help avoids the question: a perfect defense means that the defendant has always prevented certain information from being accessible in the forum and means that no plaintiff has a plausible claim there. The moment self-help fails, though (when information slips through the virtual cracks and winds up in the forum), the problem recurs, and courts must decide how to weigh imperfect measures to avoid the particular forum. And, from a theoretical perspective, the question of self-help rarely arises offline. Only in the contractual setting, in which parties mutually agree in advance to avoid jurisdiction in a particular court,

¹⁷² See *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 295 (1980); *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2790 (2011); cf. *United States v. Jones*, 132 S. Ct. 945, 958 n.3 (2012) (Alito, J., concurring in the judgment) (mocking majority opinion’s “tiny constable” approach).

¹⁷³ See Sarah Gooding, *How to Display WordPress Post Content Based on a User’s GeoLocation*, WPMU DEV (July 6, 2011), <http://premium.wpmudev.org/blog/daily-tip-how-to-display-wordpress-posts-based-on-a-users-geolocation/>.

¹⁷⁴ See, e.g., *Calder v. Jones*, 465 U.S. 783, 789–90 (1984) (focusing not on the presence of readers in California, but on the presence of Jones’s professional reputation there).

¹⁷⁵ See, e.g., *Yahoo! Inc. v. La Ligue Contre Le Racisme et L’Antisemitisme*, 433 F.3d 1199, 1203 (9th Cir. 2006) (noting technical report suggesting Yahoo!, in 2000, could identify seventy percent of French users of its Web site and thus block access to Nazi-related content for those users); Trimble, *supra* note 164, at 599–605 (discussing the ease with which users could evade geolocation tools). But see Tracie E. Wandell, *Geolocation and Jurisdiction: From Purposeful Availment to Avoidance and Targeting on the Internet*, 16 J. TECH. L. & POL’Y 275, 295–304 (2011) (arguing for personal jurisdiction standard that incorporates geolocation capabilities).

does self-help have any salience.¹⁷⁶ Otherwise, the notion of self-help in the real, as opposed to the virtual, world seems somewhat confused, because the whole point of an effects-based test is that the plaintiff can sue where she experiences harm.¹⁷⁷

Courts and policymakers struggled to reconcile a technology and a doctrine that were, and are, so fundamentally in tension. The predominant response was Internet exceptionalism: crafting special rules for cyberspace, most notably the *Zippo* test,¹⁷⁸ but also including immunity for intermediaries hosting potentially tortious third-party content¹⁷⁹ and expanded in rem jurisdiction over domain names that infringe trademarks.¹⁸⁰ This felt need to treat Internet problems with bespoke doctrinal solutions was the heart of the cyberexceptionalist approach, which saw the Internet as a fundamental challenge not only to offline rules, but to offline rulers.¹⁸¹ Internet scholars, though, quickly abandoned Internet exceptionalism for cyber-realism, particularly when real-space sovereigns proved perfectly capable of enforcing their writ online.¹⁸² In substantive doctrine, courts too have moved to align offline and online rules, including in areas such as copyright,¹⁸³ trademark,¹⁸⁴ trespass to chattels,¹⁸⁵ and contracts.¹⁸⁶ With personal jurisdiction, though, most federal courts¹⁸⁷ persist in a sort of muddled cyberexceptionalism, hoping that a blend of *Zippo*-style unique rules¹⁸⁸ and “something more”¹⁸⁹ (plus, perhaps, eye of newt and toe of frog)¹⁹⁰ will resolve the fundamental tensions that the Net generates.

¹⁷⁶ See *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 590–95 (1991) (creating presumption that forum selection clauses designating a reasonable forum are valid).

¹⁷⁷ See *Keeton v. Hustler Magazine, Inc.*, 465 U.S. 770, 776–77 (1984).

¹⁷⁸ See *Zippo Mfg. Co. v. Zippo Dot Com*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

¹⁷⁹ See 47 U.S.C. § 230(c)(1) (2013). See generally David S. Ardia, *Free Speech Savior or Shield for Scoundrels: An Empirical Study of Intermediary Immunity Under Section 230 of the Communications Decency Act*, 43 *LOY. L. REV.* 373 (2010).

¹⁸⁰ See 15 U.S.C. § 1125(d)(2) (2013).

¹⁸¹ Compare Johnson & Post, *supra* note 16 at 1387–1400 (outlining classic cyberexceptionalist approach), and David G. Post, *Against “Against Cyberanarchy,”* 17 *BERKELEY TECH. L.J.* 1365, 1373–87 (2002) (same), with Jack L. Goldsmith, *Against Cyberanarchy*, 65 *U. CHI. L. REV.* 1199, 1244–50 (1998) (articulating cyberrealist approach).

¹⁸² See Derek E. Bambauer, *Censorship v.3.1*, 17 *IEEE INTERNET COMPUTING* 26, 26–27 (2013); Julie E. Cohen, *Cyberspace As/And Space*, 107 *COLUM. L. REV.* 210, 211 (2007).

¹⁸³ See *Am. Broad. Co. v. Aereo*, 134 S. Ct. 2498, 2506–07 (2014) (equating Aereo’s activities to those of traditional community antenna television companies).

¹⁸⁴ See *Tiffany Inc. v. eBay Inc.*, 600 F.3d 93, 106–08 (2d Cir. 2010).

¹⁸⁵ See *Intel Corp. v. Hamidi*, 71 P.3d 296, 304 (Cal. 2003).

¹⁸⁶ See *Specht v. Netscape Commc’ns Corp.*, 306 F.3d 17, 28–38 (2d Cir. 2002).

¹⁸⁷ The Seventh Circuit is a notable exception. See, e.g., *Illinois v. Hemi Group LLC*, 622 F.3d 754, 758 (7th Cir. 2010) (applying traditional “purposeful availment” analysis).

¹⁸⁸ See *Zippo Mfg. Co. v. Zippo Dot Com*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

¹⁸⁹ *ALS Scan, Inc. v. Digital Serv. Consultants, Inc.*, 293 F.3d 707, 715 (4th Cir. 2002).

¹⁹⁰ WILLIAM SHAKESPEARE, *THE TRAGEDY OF MACBETH* Act IV, sc. 1, l.14 (Folger’s ed. 1992).

We argue that personal jurisdiction doctrine is in need of a cyber-realist moment. Proxies such as the *Zippo* test not only fail to function on their own terms, but also do not align with the underlying rationales for personal jurisdiction’s limits on sovereign power. The Internet presents hard problems for this doctrine. But the point of flexible standards grounded in shared normative commitments is to respond to new challenges. Below, we describe what that response should be.

III

MINIMUM CONTACTS IN A SERIES OF TUBES

A. Going Off the Rails

For personal jurisdiction, the Internet is less different than one might think.

This is counterintuitive. The Net is typically presented as a revolutionary change in communications technology, and we have described the ways in which its architecture has bedeviled courts.¹⁹¹ Yet for personal jurisdiction, the Internet is but one example—the most important example—of a larger problem that the doctrine faces, and has failed to resolve satisfactorily: intangible harms.

While the touchstones and underlying rationales for limits on personal jurisdiction have varied over time, the common theme in the jurisprudence is physicality: the tangible dimension of both the defendant’s presence and the locus of the harm that her conduct has caused. There are solid practical reasons for physicality to matter to jurisdictional analysis. Physical harms implicate concrete interests for the forum state. Most obviously, the forum seeks to protect its citizens or property. Any harm to its citizens or property also generates concomitant, secondary effects, such as consumption of state resources in, for example, the form of fire or police forces.¹⁹² Moreover, if people or property have suffered harm in the forum state, evidence will usually be readily available there as well.

¹⁹¹ See YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM I* (2006) (“It seems passé today to speak of ‘the Internet revolution’ But it should not be. The change brought about by the networked information environment is deep. It is structural. It goes to the very foundations of how liberal markets and liberal democracies have coevolved for almost two centuries.”). *But see* EVGENY MOROZOV, *THE NET DELUSION: THE DARK SIDE OF INTERNET FREEDOM* xiii, xvi (2011) (criticizing “cyber-utopianism: a naïve belief in the emancipatory nature of online communication that rests on a stubborn refusal to acknowledge its downside” and critiquing “Internet-centrists [who] like to answer every question about democratic change by first reframing it in terms of the Internet rather than the context in which that change is to occur”).

¹⁹² See *Burnham v. Superior Court*, 495 U.S. 604, 637 (1990) (Brennan, J., concurring) (“By visiting the forum State, a transient defendant actually ‘avail[s]’ himself of significant benefits provided by the State. His health and safety are guaranteed by the State’s police, fire, and emergency medical services.” (citation omitted)).

The tangible dimension of personal jurisdiction accords well with this Article's focus on fairness and predictability. For fairness, permitting jurisdiction at the defendant's physical location allows that person to receive rapid notice of the pending suit and to immediately bring to bear resources available to her. And physicality of presence or harm offers a concrete signal to the defendant of which state or states may have an interest in regulating her conduct, thus increasing predictability. At times, precedent may seem to minimize physicality, but often this reflects attention to fairness and predictability—the underlying values for the doctrine—rather than a proxy for them. For example, in *World-Wide Volkswagen*, the Court rejected jurisdiction in the state where the physical harm occurred, because it concluded that allowing jurisdiction would disserve those interests.¹⁹³ It would have been difficult for the New York defendants to predict where the Robinsons would take their car; indeed, allowing jurisdiction to travel with the automobile would have had consequences mirroring some of the decisions in early Internet cases, where setting up a Web site produced jurisdiction in any state.¹⁹⁴ Moreover, while the evidence from the crash was located in Oklahoma, neither the Robinsons nor the defendants resided there, minimizing any fairness rationale for jurisdiction.¹⁹⁵ And in the final analysis, the Court still gave expression to physicality in one sense: looking to where the defendants themselves had physically shipped and sold the car.¹⁹⁶

In the information age, however, physical harms and locations are increasingly less of a concern than intangible ones. Internet activity is an obvious example: harms to a trademark's or an individual's reputation can occur anywhere the reputation exists and the damaging information travels. The physical location of the reputation's owner, the author of the information, and the server from which it emanates are orthogonal if not irrelevant.

Superficially, Internet-based contacts can be made physical, but at the price of adopting a formalistic approach to personal jurisdiction analysis that ignores how the network functions. One can make Internet information physical by concentrating hard on how it propagates: via electrical impulse or light pulse or radio wave.¹⁹⁷ On this account, packets are no different than newspapers—the latter spread information via ink and paper, the former via changes in frequency or

¹⁹³ See *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 295 (1980).

¹⁹⁴ There are many examples of such cases. See, e.g., *Maritz Inc. v. Cybergold, Inc.*, 947 F. Supp. 1328, 1330 (E.D. Mo. 1996); *Heroes Inc. v. Heroes Found. Inc.*, 958 F. Supp. 1, 5 (D.D.C. 1996); *M&B Beverage Corp. v. N.Y.N.Y. Hotel*, No. 96-2481-CIV-MORENO, 1996 U.S. Dist. LEXIS 22926, at *19 (S.D. Fla. Nov. 27, 1996).

¹⁹⁵ See *World-Wide Volkswagen*, 444 U.S. at 286.

¹⁹⁶ See *id.* at 298.

¹⁹⁷ See VAN SCHEWICK, *supra* note 73, at 84–85 (describing link layer of TCP/IP).

photon state or current.¹⁹⁸ Voice, too, is merely a series of physical sound waves transmitted through the air. On that view of how the Internet operates, courts can press the old, physicality-based jurisdictional rules into service. But doing so elevates what is, at most, a secondary consideration to a place of prominence.

However, arguments that focus on the Internet’s physical elements are specious.¹⁹⁹ Speakers have very different levels of control over different modalities of communication. Newspaper distribution involves delivery to specified locales.²⁰⁰ Absent a delivery truck accident and spill, the papers end up (initially) only where the publisher intends. So, too, with voice; without enhancement technology (such as recording or broadcast), the speaker knows quite well how far her voice will carry.²⁰¹ By default, though, Internet communication (at least via Web site or BitTorrent or the like) is available to anyone, in any location; the author exercises no election. It takes real effort to limit such distribution by geography, and even an author who tries may fail because of the limits of geolocation technology or a user’s ability to thwart it through circumvention.²⁰² Users, not authors, initiate distribution in the virtual world. And as *Calder* proves, the physical nature of distribution is ultimately secondary to intangible concerns, such as the presence of a defendant’s reputation.²⁰³

Courts have stretched personal jurisdiction principles grounded in physical space problems to meet the challenges of intangible interests and harms. These attempts have gone badly awry from the perspective of personal jurisdiction’s rationales.

B. I Can Haz Jurisdiction: Which (Virtual) Contacts Count?

The challenge for personal jurisdiction is not merely to take account of Internet questions, but to arrive at a coherent approach to intangible harms and interests grounded in the values that animate the doctrine. In this subpart, we outline two approaches to jurisdiction over intangible interests, a broad one and a narrow one, and

¹⁹⁸ Cf. *Dow Jones & Co. v Gutnick* (2002) 210 CLR 575, para. 14 (Austl.) (Gleeson, C.J.) (comparing Internet content to radio and television and finding little difference between them).

¹⁹⁹ See, e.g., *Cybergold*, 947 F. Supp. at 1330 (referring to the physical locations of the defendant’s website’s server and users); *Heroes, Inc.*, 958 F. Supp. at 4–5 (same); *M & B Beverage Corp.*, 1996 U.S. Dist. LEXIS 22926, at *19 (same).

²⁰⁰ See *Young v. New Haven Advocate*, 315 F.3d 256, 260 (4th Cir. 2002).

²⁰¹ Cf. *Ward v. Rock Against Racism*, 491 U.S. 781, 803 (1989) (upholding rules on sound amplification in Central Park against constitutional challenge).

²⁰² See Trimble, *supra* note 164, at 599–605; Nart Villeneuve, *Technical Ways to Get Round Censorship*, in HANDBOOK FOR BLOGGERS AND CYBER-DISSIDENTS 64–65 (2005), available at http://www.rsf.org/IMG/pdf/handbook_bloggers_cyberdissidents-GB.pdf (discussing the various technologies that people can use to circumvent restrictions).

²⁰³ See *Calder v. Jones*, 465 U.S. 783, 789 (1984).

defend the latter method as most aligned with fairness and predictability.

1. *The Broad Approach*

The broad approach extends *Calder's* effects test: it treats intangible claims for IP infringement, along with intentional and quasi-intentional torts (such as public disclosure of private facts), as falling under the test.²⁰⁴ As a practical matter, this means that to establish jurisdiction over the defendant, the plaintiff need only prove that she holds a valid intangible interest in the forum state.

To illustrate the breadth of this approach, consider a New York-based trademark owner who holds an unregistered mark that she uses in advertising in the Tri-state area.²⁰⁵ She discovers that a Connecticut firm has been using the same mark on its website; that firm does no business in New York. Under this broad approach, the owner could successfully bring a claim against the defendant in New York's courts: the mark owner has a valid intangible interest in the state, and the alleged infringement could damage that interest.²⁰⁶ Following the same logic, if the mark's reputation extended into Massachusetts, such as via advertising in newspapers in Worcester and Boston, the New York mark owner would be able to sue the Connecticut defendant in Massachusetts as well. While New York and the New England states are not geographically distant, the indeterminacy of the intangible trademark interest and the lack of scienter necessary for infringement mean that the broad approach is in considerable tension with personal jurisdiction's rationales.

Under this broad approach, jurisdiction flows alongside the intangible interest. This is the logical extension of *Calder*, but it is likely to cause courts to examine more closely the intangible harm element of the calculus. As Cassandra Robertson has noted with respect to defamation claims, the effects test forces courts to take the merits of a claim into account surreptitiously when deciding personal jurisdiction issues.²⁰⁷ Personal jurisdiction is appropriate based purely on the

²⁰⁴ See, e.g., *Keeton v. Hustler Magazine, Inc.*, 465 U.S. 770, 780 (1984) (defamation); *Mavrix Photo, Inc. v. Brand Techs., Inc.*, 647 F.3d 1218, 1227–32 (9th Cir. 2011) (copyright); *Licciardello v. Lovelady*, 544 F.3d 1280, 1288 (11th Cir. 2008) (trademark).

²⁰⁵ Unregistered marks are protected from infringement under section 43(a) of the Lanham Act. 15 U.S.C. § 1125(a) (2013).

²⁰⁶ See, e.g., *Lovelady*, 544 F.3d at 1283–84 (stating that “although the website was created in Tennessee, the Florida long-arm statute is satisfied if the alleged trademark infringement on the website caused injury in Florida”); *Nestle Prepared Foods v. Pocket Foods Corp.*, No. 04-cv-02533-MSK-MEH, 2007 U.S. Dist. LEXIS 26181, at *12 (D. Colo. Apr. 5, 2007) (holding that “trademark infringement occurred in Colorado when the Defendants marketed their products . . . for sale in Colorado . . . [T]he tort arises from the marketing of the product.”).

²⁰⁷ See Robertson, *supra* note 59, at 1311–20.

supposed intangible harm that the plaintiff has experienced in the forum, and whether such harm has occurred is the entire question on the merits.

Although this bootstrapping principle has vexed courts and scholars in the libel context, the phenomenon is not confined to one idiosyncratic corner of the law but, instead, bedevils nearly every case in which the harm is intangible. For example, with unregistered trademarks, this phenomenon is inevitable if personal jurisdiction is appropriate wherever the plaintiff alleges that his mark has been harmed. Because the mark is unregistered, part of the plaintiff's prima facie case is to establish that it has a valid mark.²⁰⁸ Rights in an unregistered mark extend geographically only so far as actual or constructive use, such as via advertising or other consumer recognition of the mark.²⁰⁹ (The need to peek at the merits is reduced with a mark registered on the Principal Register of the Trademark Office, since registration provides a presumption of nationwide priority of use.)²¹⁰ A court considering whether to force an out-of-state defendant to appear in a suit will likely want to consider the rough merits of the mark owner's claim, in order to avoid nuisance suits and to accord with the fairness rationale.²¹¹

This approach raises costs for defendants and decreases them for plaintiffs. It makes jurisdiction less readily predictable for defendants, who face suit in a greater number of fora. To obtain greater certainty about where they may be sued (and thus help them navigate substantive differences in doctrine among states), defendants may invest more resources to investigate the geographic reach of potential plaintiffs' interests.²¹² In the example above, if the Connecticut firm is aware of the New York-based mark, it may decide to check whether the mark's reputation extends beyond the Empire State. This may be a desirable effect if potential trademark infringers currently invest too little in investigative precautions.²¹³ An equally (or perhaps more) likely scenario is that such behavior is socially undesirable if firms

²⁰⁸ See, e.g., *Checkpoint Sys., Inc. v. Check Point Software Techs., Inc.*, 269 F.3d 270, 279 (3d Cir. 2001) (explaining the requirements to prove trademark infringement).

²⁰⁹ See *United Drug Co. v. Theodore Rectanus Co.*, 248 U.S. 90, 98 (1918); see also *Emergency One, Inc. v. Am. Fire Eagle Engine Co.*, 332 F.3d 264, 267–68 (4th Cir. 2003).

²¹⁰ See 15 U.S.C. § 1057(b) (2013).

²¹¹ See Robertson, *supra* note 59, at 1323–26 (discussing intellectual property cases taking this approach).

²¹² For example, in trademark cases alleging infringement under the Lanham Act §§ 32, 43(a), 15 U.S.C. §§ 1114(1), 1125(a), courts employ a multifactor test, using anywhere from six to thirteen elements. Compare *Australian Gold, Inc. v. Hatfield*, 436 F.3d 1228, 1239–40 (10th Cir. 2006) (six factors), with *Palm Bay Imports, Inc. v. Veuve Clicquot Ponsardin Fondee En 1772*, 396 F.3d 1369, 1371 (Fed. Cir. 2005) (thirteen factors).

²¹³ Cf. Steven Shavell, *Individual Precautions to Prevent Theft: Private Versus Socially Optimal Behavior*, 11 INT'L REV. L. & ECON. 123, 123–26 (1991) (discussing the precautions that people take to prevent theft of property). See generally GUIDO CALABRESI, *THE COSTS OF*

invest too much in litigation-avoidance activities.²¹⁴ This empirical difficulty is compounded by information asymmetry: plaintiffs can generally determine easily the range of their marks' reputations, because they know about the reach of their advertising and sales, while such data may be challenging for defendants to unearth. Thus, the broad approach decreases the predictability of jurisdiction, and the unpredictability of threshold litigation matters rarely leads to a socially desirable outcome.²¹⁵ The broad approach increases plaintiffs' choice of forum. But favoring the plaintiff's convenience over the defendant's does not create a one-for-one trade. The modest increase in fairness toward the plaintiff, by expanding her forum choices, likely comes at the expense of not just inconvenience to the defendant during litigation but also tremendous uncertainty as the defendant attempts to plan his prelitigation activity. Information asymmetry is likely to produce higher informational costs for defendants, possibly leading to excessive precautions under the broad approach. Moreover, the social cost increases with the likelihood that the parties will litigate over the appropriateness of the plaintiff's forum choice.

In sum, the broad approach favors plaintiffs and disfavors defendants, though its outcomes are in tension with both personal jurisdiction's rationales and the Constitution.

ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS 26–31 (1970) (arguing that one goal of tort law is the reduction of accident costs).

²¹⁴ Cf. WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* 90 (1987) (discussing risk of excessive precautions by potential tort victims); Edward L. Rubin, *Punitive Damages: Reconceptualizing the Runcible Remedies of Common Law*, 1998 *Wis. L. REV.* 131, 150 (1998) (discussing efficient breaches and arguing that requiring strict compliance in contract cases may induce excessive precautions).

²¹⁵ As an empirical matter, even if such unpredictability ultimately leads to socially useful behavior by encouraging firms to conduct more research about other marks, it is strange to think that intentional jurisdictional ambiguity is the best way to address this problem. The Supreme Court has repeatedly emphasized the importance of clear jurisdictional rules to avoid satellite litigation on threshold issues. See, e.g., *Daimler AG v. Bauman*, 134 S. Ct. 746, 760 (2014); *Hertz Corp. v. Friend*, 559 U.S. 77, 93–94 (2010); *Navarro Sav. Ass'n v. Lee*, 446 U.S. 458, 464 n.13 (1980). To the extent that firms pay too little attention to competing marks, substantive legal norms, which legislatures can calibrate as necessary, should address that problem directly. If courts crafting jurisdictional rules happen to create the right amount of social deterrence through a jurisdictional shot in the dark, it is pure happenstance—the proverbial broken clock that is right twice each day. And Congress does not hesitate to second-guess the Court's approach to deterrence. For example, when the Court found that plaintiffs in trademark dilution claims must prove actual dilution, rather than the less-demanding likelihood of dilution, Congress rapidly revised the relevant provisions of the Lanham Act to the contrary. See *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418, 433 (2003); Trademark Dilution Revision Act of 2006, Pub. L. No. 109-312, § 2, 120 Stat. 1730 (Oct. 6, 2006).

2. *The Narrow Approach*

The second approach is a narrow one: Internet-based contacts should rarely, if ever, suffice for personal jurisdiction.²¹⁶ This approach rejects the fiction that virtual activity and harm create physical contact with a particular territory. Unlike a car accident that occurs in exactly one place, intangible interests and harms, while real, are too indeterminate to provide sufficient fairness and predictability. Under current doctrine, this would require resisting an expansive interpretation of *Calder*, as the Supreme Court has done recently. Last year in *Walden v. Fiore*, the Court made clear that *Calder* does not automatically permit jurisdiction wherever a defendant feels the effects of an intentional tort.²¹⁷ And building on *Walden*, the California Court of Appeal has held that not even every defamation case properly invokes the effects test. Instead, it has taken a narrow approach to Internet defamation, requiring a plaintiff to show that “the defendant expressly aim[ed] or specifically direct[ed] his or her intentional conduct at the forum, rather than at a plaintiff who lives there.”²¹⁸ In other words, courts have sensibly shown an inclination to confine *Calder* to its facts. Forthrightly overruling it, particularly because of its insidious influence in the realm of virtual contacts, would be better yet. At a practical level, either outcome would mean that, for example, a defendant infringing a trademark via a Web site would have to be sued in her state of domicile.

This approach enhances predictability, as would most minimalist or rule-based methods. Defendants know that they are subject to general, all-purpose jurisdiction in but one state (or likely just two states for corporate defendants), and they can plan accordingly. There may be predictability benefits for plaintiffs, too, whose risk of expending resources upon a suit only to have it dismissed for lack of jurisdiction decreases. And while some plaintiffs’ costs will increase, as they must prepare to litigate farther from home, they are likely to wait for harm to materialize to incur such costs, whereas defendants would be more likely to hedge against the risk of being sued. Moreover, society more broadly benefits from enhanced predictability as the narrow approach likely will consume fewer public resources to resolve a threshold question.

Fairness likely increases as well with the narrow approach. Perhaps the most obvious aspect of private fairness or unfairness in the

²¹⁶ *But see* Dustin E. Buehler, *Jurisdictional Incentives*, 20 GEO. MASON L. REV. 105, 137–45 (2012) (arguing for expansive notion of personal jurisdiction to permit legislative tailoring of litigation incentives).

²¹⁷ 134 S. Ct. 1115, 1123, 1125 (2014). The Supreme Court explicitly left for another day “questions about virtual contacts.” *Id.* at 1125 n.9.

²¹⁸ *Burdick v. Superior Court*, 233 Cal. App. 4th 8, 13 (Cal. Ct. App. 2015).

jurisdictional calculus is whether one party has to travel. But usually the burden of having to travel to the forum for trial is relatively insignificant.²¹⁹ Moreover, the total burden is likely to remain constant, regardless of how courts allocate that burden between the plaintiff and the defendant. Whether the defendant has to travel to the plaintiff's preferred forum or vice versa, the total inconvenience is the same. More to the point, it is quite minimal in the grand scheme of litigation.²²⁰

The crux of private fairness, then, turns on factors quite different than a party's burden of traveling to the forum. Most significantly, fairness turns on a case's portability—whether a party has access to necessary evidence, including compulsory process for bringing in critical witnesses. Here, the Internet should increase portability and reduce costs more generally, since documents can be filed electronically, witnesses can be deposed by Skype, and so forth. For precisely this reason, even though the narrow approach will restrict the potential forums available to a plaintiff, it will not substantially impede access to justice. If a case is fully portable, it does not really matter where the plaintiff must litigate.

Fairness also includes larger societal interests, which have crystallized in the Internet context to favor the unfettered exchange of information.²²¹ The narrow approach to personal jurisdiction for intangible activity and harm accords with how the United States has approached Internet liability questions more generally. It promotes the free flow of information and effectively favors defendants. First, in the realm of substantive law, both Congress and the courts have adapted doctrine to limit the scope of liability and to make it more predictable.²²² For example, section 230 of the Communications Decency Act immunizes intermediaries and their users from tort and

²¹⁹ See *McGee v. Int'l Life Ins. Co.*, 355 U.S. 220, 223 (1957) (“[M]odern transportation and communication have made it much less burdensome for a party sued to defend himself in a State where he engages in economic activity.”); Borchers, *supra* note 21, at 95 (arguing that the overwhelming majority of litigation cost comes in the form of pretrial proceedings, most of which are not tied to the actual forum).

²²⁰ See *supra* notes 40–51 and accompanying text. Notwithstanding the low costs of actual travel, some scholars have documented that the effect of transferring a case can be significant. Following transfer, plaintiffs generally achieve less favorable outcomes, winning fewer cases and abandoning some altogether. See Kevin M. Clermont & Theodore Eisenberg, *Exorcising the Evil of Forum-Shopping*, 80 CORNELL L. REV. 1507, 1518–25 (1995); see also David W. Robertson, *Forum Non Conveniens in America and England: “A Rather Fantastic Fiction,”* 103 LAW Q. REV. 398, 418–20 (1987) (observing a similar negative effect for plaintiffs when defendants successfully bring forum non conveniens motions).

²²¹ See Derek E. Bambauer, *Against Jawboning*, 100 MINN. L. REV. (forthcoming 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2581705, at *10–14.; H. Brian Holland, *Section 230 of the CDA: Internet Exceptionalism as a Statutory Construct*, in *THE NEXT DIGITAL DECADE: ESSAYS ON THE FUTURE OF THE INTERNET* 189, 204–06 (Berin Szoka & Adam Marcus, eds., 2010).

²²² See Holland, *supra* note 221, at 190–93.

state criminal liability that would result from treating them as the speaker or publisher of content provided by a third party.²²³ Additionally, Title II of the Digital Millennium Copyright Act provides a safe harbor from infringement liability for intermediaries who follow a notice-and-takedown system for accused content.²²⁴ Courts have shaped common law doctrines of secondary liability for trademark infringement to largely mirror the DMCA.²²⁵ And the Supreme Court has interpreted the Patent Act to require that a single entity infringe a patent in order to find a second party liable for inducement, effectively making secondary liability for Internet-based method patents more difficult to prove.²²⁶

These doctrinal modifications serve distinctly utilitarian ends: to achieve the Internet’s promise as a medium, speakers and intermediaries must not be chilled by the threat of liability.²²⁷ We have deliberately tilted the table towards potential defendants and away from potential plaintiffs as a mechanism for protecting open communication online, in the belief that society as a whole benefits.²²⁸ While many of these changes benefit intermediaries—third parties in communications transactions that occur online—there is no clear reason to distinguish between first and third parties.²²⁹ Procedural limits on the places where an Internet user can be sued for intangible harms thus fit a larger trend in substantive cyberlaw doctrine.

²²³ 47 U.S.C. § 230(c) (2013); see *Batzel v. Smith*, 333 F.3d 1018, 1026 (9th Cir. 2003); *Zeran v. Am. Online, Inc.*, 129 F.3d 327, 330 (4th Cir. 1997).

²²⁴ 17 U.S.C. § 512(c) (2013).

²²⁵ See, e.g., *Tiffany, Inc. v. eBay, Inc.*, 600 F.3d 93, 103–05 (2d Cir. 2010) (discussing contributory trademark infringement).

²²⁶ See *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111, 2117 (2014).

²²⁷ See 47 U.S.C. § 230(b) (2013) (noting that it is U.S. policy “to promote the continued development of the Internet and other interactive computer services and other interactive media”); Mark Lemley, David S. Levine, & David G. Post, *Don’t Break the Internet*, 64 STAN. L. REV. ONLINE 34, 34–38 (2011) (discussing the potential chilling effects of the Protect IP Act of 2011 and the Stop Online Piracy Act).

²²⁸ See, e.g., Derek E. Bambauer, *Exposed*, 98 MINN. L. REV. 2025, 2055 (2014) (“Section 230 has been critical to the development of a thriving Internet ecosystem based largely on content supplied by users.”); Eric Goldman, *The Regulation of Reputational Information*, in THE NEXT DIGITAL DECADE: ESSAYS ON THE FUTURE OF THE INTERNET 293–99 (Berin Szoka & Adam Marcus, eds., 2010); Eric Goldman, *Unregulating Online Harassment*, 87 DENV. U. L. REV. ONLINE 59, 60 (2010) (arguing that section 230 facilitates innovation in the creation of user-generated content).

²²⁹ Indeed, from a utilitarian perspective, holding intermediaries accountable for unlawful conduct is likely to be far more efficient and effective in curtailing that illegal activity than targeting first parties. See Doug Lichtman & Eric Posner, *Holding Internet Service Providers Accountable*, 14 SUP. CT. ECON. REV. 221, 222–40 (2006); Ronald J. Mann & Seth R. Belzley, *The Promise of Internet Intermediary Liability*, 47 WM. & MARY L. REV. 239, 243–75 (2005); see also Rebecca Tushnet, *Power Without Responsibility: Intermediaries and the First Amendment*, 76 GEO. WASH. L. REV. 986, 1002–15 (2008); Felix T. Wu, *Collateral Censorship and the Limits of Intermediary Immunity*, 87 NOTRE DAME L. REV. 293, 298–304 (2011).

Moreover, the practical justifications for expanded jurisdiction in cases of physical interests and harms fit poorly, if it all, in the Internet context of intangible considerations. Unlike physical damage, harms to intangible interests rarely call nonjudicial government resources into action. Exploding automobiles implicate fire and police departments; faulty cutting machines draw in EMS and hospital personnel. There is no government entity to call for relief from patent infringement or defamation. And, when physical harm has occurred, relevant evidence is likely to be located in the place where the plaintiff experienced that harm. Online, though, evidence of the harm or violation is also digital. Its location can be arbitrary, often having little or no connection to where the plaintiff is physically located, and the cost advantages of siting lawsuits near the plaintiff are, consequently, minimal.

Finally, Internet users may benefit from the reduced costs that flow from a narrow jurisdictional approach because they may be as likely to be sued as to sue. Firms, in particular, can expect that they will both prosecute and defend IP claims over time. From an *ex ante* perspective, there is no cost-based reason to favor rules preferring plaintiffs rather than defendants.²³⁰ For example, the sandwich chain Subway sued competitor Quiznos on trademark and false advertising grounds after Quiznos ran a Web-based contest for user videos poking fun at Subway's food.²³¹ Later, though, Subway found itself on the wrong end of a false advertising suit, after consumers challenged the veracity of its claims to sell a "footlong" sandwich.²³² (The consumers' sandwiches came up short.)²³³ Similarly, rapper Jay-Z is both a victim of copyright infringement online²³⁴ and, allegedly, an infringer himself.²³⁵ While this possibility of trading places will not apply to every Internet user, if it is generally the case that a user faces the possibility

²³⁰ In many situations, the Due Process Clauses, of course, provide the tie-breaking rule that favors defendants.

²³¹ See *Doctor's Assocs. v. QIP Holder LLC*, No. 3:06-cv-1710(VLB), 2010 WL 669870, at *15-25 (D. Conn. Feb. 19, 2010) (setting out causes of action under Lanham Act and Connecticut law); Louise Story, *Subway Sues Quiznos Over User-Made Ads*, N.Y. TIMES (Jan. 28, 2008), <http://www.nytimes.com/2008/01/28/technology/28iht-adco.4.9555321.html>.

²³² See Kristene Quan, *Size Matters: Customers Sue Subway After "Footlong" Sandwich Fails to Measure Up*, TIME (Jan. 25, 2013), <http://newsfeed.time.com/2013/01/25/size-matters-customers-sue-subway-after-footlong-sandwich-fails-to-measure-up/>.

²³³ See *In re Subway Footlong Sandwich Mktg. & Sales Practices Litig.*, 949 F. Supp. 2d 1369, 1370 (J.P.M.L. 2013).

²³⁴ See Jess Collen, *Getting Jay Z's New Album, Copyrights Be Damned*, FORBES (July 22, 2013, 1:58 PM), <http://www.forbes.com/sites/jesscollen/2013/07/22/getting-jay-zs-new-album-copyrights-be-damned/> (describing illegal downloading of Jay-Z's album "Magna Carta Holy Grail").

²³⁵ See Eriq Gardner, *Jay Z Faces Sound Engineer's Bold Claim Over Song Rights*, HOLLYWOOD REP. (July 9, 2014, 8:18 AM), <http://www.hollywoodreporter.com/thr-esq/jay-z-faces-sound-engineers-717385>.

of being either a plaintiff or a defendant, then society may prefer, from behind the veil of ignorance, a system that reduces overall costs rather than one that favors a particular side.²³⁶

There are several ways that courts could implement this narrow approach. Most obviously, if the Supreme Court embraces the notion that most restrictions on personal jurisdiction are unconstitutional, it could simply announce a new prudential rule—a sort of *Nicastro* for the Net. The Court could go further and overrule *Calder*, which long has been the subject of intense scholarly criticism.²³⁷ This route would have the advantage of being the most candid and workable way to achieve the narrow approach to intangible harm. It would concede that the current tests for physical contacts are simply decision rules, giving concrete guidance to courts that confront traditional harms. Without overturning any of those precedents, the Court could admit that a different decision rule is desirable in guiding an analysis of intangible activity and harm.

Even if the Court rejects the tripartite formulation of personal jurisdiction’s deep structure, it could still fit the rule that we propose into the current doctrinal framework. One possibility is that the Supreme Court could declare that virtual activity does not create a meaningful “contact” with any particular forum. Lower courts can largely do the same thing by rationalizing the rules that currently govern Internet cases. For some circuits, this would necessitate discarding existing approaches—for example, it would mean retiring *Zippo*. Other circuits could readily fit this scheme under their extant tests, which often require “something more” than Internet activity.

Another possibility is that courts could incorporate the narrow approach to intangible harm into the analysis of whether jurisdiction is reasonable. At present, the reasonableness calculus is a pragmatic backstop to personal jurisdiction: even if jurisdiction over the defendant is proper, the court may decline to exercise that jurisdiction if it sees exercising authority as inefficient or undesirable.²³⁸ The burden of demonstrating unreasonableness falls on the defendant. Courts could treat the issues that we raise about personal jurisdiction via Internet contacts as meeting that burden, making jurisdiction unreasonable.

²³⁶ See generally JOHN RAWLS, A THEORY OF JUSTICE (rev. ed. 1999).

²³⁷ See, e.g., Andrea M. Matwyshyn, *Of Nodes and Power Laws: A Network Theory Approach to Internet Jurisdiction Through Data Privacy*, 98 NW. U. L. REV. 493, 517 (2004); Robertson, *supra* note 59, at 1309–26; see also Howard B. Stravitz, *Sayonara to Minimum Contacts: Asahi Metal Industry Co. v. Superior Court*, 39 S.C. L. REV. 729, 771 (1988) (“The Court appeared to reach hard to justify jurisdiction in . . . *Calder*.”).

²³⁸ See, e.g., *Asahi Metal Indus. Co. v. Superior Court*, 480 U.S. 102, 113–16 (1987); see also Allan R. Stein, *Styles of Argument and Interstate Federalism in the Law of Personal Jurisdiction*, 65 TEX. L. REV. 689, 764–65 (1987).

Couching these doctrinal tweaks in the Court's current constitutional language of "contacts," "purposefulness," and "reasonableness" may appeal to courts and scholars who view personal jurisdiction primarily in constitutional terms. From our perspective, this is only a second-best solution that would still lead to certain awkwardness. Courts would continue to indulge the fiction that intangible activity necessarily has tangible results, or they would risk creating a different standard of reasonableness for tangible and intangible harms. But any uneasiness in logic would be forgivable. The end result would be more predictable and efficient and thus would be superior to current approaches.

Finally, Congress could act legislatively to alter the jurisdictional balance. It has been attentive to jurisdictional concerns of late, particularly in intellectual property. For example, in the Anticybersquatting Consumer Protection Act of 1999, Congress authorized expanded in rem jurisdiction over domain names if plaintiffs could not obtain in personam jurisdiction over defendants.²³⁹ Thus, even if the court could lack jurisdiction over a defendant who owned a trademark-infringing domain name, the plaintiff could more easily litigate against the domain name itself.²⁴⁰ Similarly, when Congress passed patent reform legislation via the America Invents Act, it altered appellate jurisdiction when patent issues arise via the defendant's counterclaims in its answer, rather than via the plaintiff's claims in its complaint.²⁴¹ Previously, the Supreme Court had followed the venerable well-pleaded complaint rule, holding that the Federal Circuit had appellate jurisdiction for claims of patent infringement, but that the circuit courts of appeal had appellate jurisdiction for counterclaims.²⁴² Congress created the Federal Circuit in 1982 to unify the increasingly divergent patent precedent generated by the regional circuit courts of appeals;²⁴³ the Court's ruling placed that goal at risk. So, the America Invents Act changed the rule.

Thus, Congress is well positioned to reassess the jurisdictional rules for Internet-based cases. Under the tripartite formulation of personal jurisdiction's deep structure, Congress has almost unfettered latitude to revise the doctrine, which in nearly every instance is

²³⁹ 15 U.S.C. § 1125(d)(2)(A) (2013).

²⁴⁰ See, e.g., *Porsche Cars N. Am., Inc. v. Porsche.net*, 302 F.3d 248, 254 (4th Cir. 2002) ("The anticybersquatting statute authorizes in rem jurisdiction over a domain name if personal jurisdiction over the registrant of the domain name is unavailable.").

²⁴¹ See Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 19(b), 125 Stat. 284, 331 (codified as amended at 28 U.S.C. § 1295(a)(1) (2011)).

²⁴² See *Holmes Grp., Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 832-33 (2002).

²⁴³ See Federal Courts Improvement Act of 1982, Pub. L. 97-164, § 127, 96 Stat. 25, 37 (1982).

procedural common law subject to legislative tweaking.²⁴⁴ But even if courts continue to view the doctrinal architecture as constitutionally compelled, Congress still has latitude to place further limitations on courts’ adjudicative authority. What it may not do, under the traditional view of personal jurisdiction, is expand jurisdiction beyond the limits articulated by the Supreme Court. Consequently, under either view, Congress may impose the narrow approach to intangible harm that we propose here.

C. Test Cases

We can measure this Article’s proposal for the problems of the Internet and personal jurisdiction against three hard test cases involving contracts, trademarks, and computer network attacks (hacking). A brief word, though, is in order about what our proposal does *not* change.

Although the narrow approach that we advocate calls for courts to abandon the fiction that virtual activity is akin to physical contact with one or more states, many cases feature a combination of virtual and physical contact. Many lower courts already recognize that Internet activity, by itself, is ambiguous for purposes of determining the propriety of personal jurisdiction. Thus, they already take account of non-Internet, physical contacts.²⁴⁵ Our approach, while discounting the Internet activity entirely, leaves undisturbed the rest of the jurisdictional analysis that many courts already undertake in these “mixed” cases.

Accordingly, our proposal should not change how courts approach cases involving direct and indirect sales. In the case of direct sales from a defendant to a plaintiff, the relevant contact is the defendant’s physical delivery of a good to a particular forum. Thus, when a transaction occurs between an online site and a user, and the claim is founded on that transaction, the situation is no different than in physical space; specific jurisdiction is undoubtedly appropriate where the defendant sent the product. To the extent that Justice Breyer worried about the Appalachian potter who might be exposed to jurisdiction throughout the country,²⁴⁶ the concern is easily allayed. A seller has ample opportunity to engage in self-help through forum selection clauses, which federal courts presumptively enforce.²⁴⁷ Thus, the Appalachian potter can include a clause in the sales contracts—with

²⁴⁴ See Weinstein, *supra* note 142, at 187.

²⁴⁵ See, e.g., *Toys “R” Us, Inc. v. Step Two, S.A.*, 318 F.3d 446, 453 (3d Cir. 2003) (identifying non-Internet contacts, including attendance at trade shows and use of vendors in forum, as relevant to jurisdictional calculus).

²⁴⁶ See *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2793 (2011) (Breyer, J., concurring).

²⁴⁷ See *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 590–95 (1991).

purchasers in Alaska, California, and Vermont—that direct all litigation to Kentucky.

A slightly more complicated case involves indirect sales through the Internet—say, via an independent distributor or via a consignment operation like Amazon. Here, too, the goods are tangible, even if the communication medium is virtual. And here again there is no call to rewrite offline rules for the online world. Courts and scholars have challenged whether the Supreme Court’s jurisprudence in this area—the so-called “stream of commerce” cases—functions well.²⁴⁸ This is a classic situation, though, in which any doctrinal deficiencies are common to both the online and offline worlds. If anything, the Internet cases simply expose a broader problem with the Court’s stream of commerce jurisprudence.

Hard cases, however, remain. In three test cases, the narrow approach best promotes fairness and predictability.

1. *Contracts*

The first hard test case involves online contracts. Consider a user in Phoenix who signs up for a new social networking service with headquarters in Brooklyn. The site’s terms of service, which all users must accept as a condition of access, do not specify venue or choice of law. The terms do, however, promise that the site will not share the user’s data with any other company. And the site collects basic demographic information sufficient to enable it to know where the user resides in real space. Eager to raise capital, the site—in contravention of the terms of service—sells user data to a third party. When the user learns of this breach, may she sue the site in Arizona? Does that answer change if the site does not collect information enabling it to determine users’ residency? The narrow approach would allow jurisdiction in New York but not Arizona, and such a result appears to yield the greatest efficiency.

Internet-based contracts are largely contracts of adhesion: terms of service, e-commerce agreements, and the like contain standardized terms, and bespoke provisions are difficult if not impossible to negotiate.²⁴⁹ However, the Net also offers choice—consumers have many options, and sites compete for traffic.²⁵⁰ Generally, online contracts

²⁴⁸ See, e.g., *Nicastro*, 131 S. Ct. at 2794–2804 (Ginsburg, J., dissenting); Robin J. Effron, *Letting the Perfect Become the Enemy of the Good: The Relatedness Problem in Personal Jurisdiction*, 16 LEWIS & CLARK L. REV. 867, 893–94 (2012).

²⁴⁹ See Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429, 467–69 (2002). But see Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173, 1230–45 (1983) (contending that form terms contained in contracts of adhesion should be presumptively unenforceable).

²⁵⁰ See Derek E. Bambauer, *Middlemen*, 65 FLA. L. REV. F. 1, 2 (2013).

mirror offline ones in what buyers prioritize.²⁵¹ While some users join or leave sites and services based on nonpecuniary factors such as privacy policies, most focus solely on price.²⁵² This means that buyers and sellers are capable of bargaining to an efficient outcome, but it also means that nonprice terms likely reflect sellers’ preferences.²⁵³

If these conclusions are correct, then sellers can easily protect themselves from unfavorable jurisdictional rules through choice of forum provisions in contracts. Thus, the goal of a strong default rule—to approximate what the parties would bargain for, thereby saving them the transaction costs of negotiation—is best met with the narrow jurisdictional approach.²⁵⁴ Sellers will want to minimize the number of forum states where they can be sued and will craft terms that limit jurisdiction for claims arising out of the contract.

The narrow approach arrives at the same end without the cost. The broader jurisdictional scheme, which buyers might prefer (since it could allow them to sue in their home states), faces contractual override by sophisticated sellers, who simply can draft appropriate provisions at (relatively) minor cost. Buyers, then, only obtain the benefit of more fora in which to sue if they are litigating against unsophisticated sellers or if courts disregard forum selection clauses.²⁵⁵ Sellers able to predict the risk of being haled into multiple forum states, and who believe they could not offset this risk contractually, would likely set aside resources or obtain insurance against those added costs, increasing prices. Again, buyers generally prefer low price over other favorable contractual terms.²⁵⁶

²⁵¹ See Hillman & Rachlinski, *supra* note 249, at 485–86.

²⁵² See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 4.8, at 116 (6th ed. 2003).

²⁵³ To expand upon the logic: if sellers prefer Term A and buyers prefer Term B, presumably sellers will have to be compensated to offer Term B. But, since buyers care principally about price, they favor a lower price with Term A to a higher one with Term B. In effect, sellers compensate buyers to accept Term A.

²⁵⁴ See, e.g., Charles J. Goetz & Robert E. Scott, *The Mitigation Principle: Toward a General Theory of Contractual Obligation*, 69 VA. L. REV. 967, 971 (1983) (“Ideally, the preformulated rules supplied by the state should mimic the agreements contracting parties would reach were they costlessly to bargain out each detail of the transaction.”); Alan Schwartz & Robert E. Scott, *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541, 596 (2003) (“[I]t does for parties what they would have done for themselves had their contracting costs been lower.”).

²⁵⁵ See *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 590–95 (1991) (creating presumption that forum selection clauses designating a reasonable forum are valid); cf. *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2793 (2011) (Breyer, J. concurring) (expressing concern about effects of the jurisdictional rule on small manufacturers such as an Appalachian potter).

²⁵⁶ It is possible that this buyer-seller account is incomplete—that there are externalities or broader societal considerations that it fails to consider. See Ian Ayres, *Regulating Opt-Out: An Economic Theory of Altering Rules*, 121 YALE L.J. 2032, 2090 (2012). However, those issues generally arise in other contexts, such as tort, antitrust, or unfair competition, rather than within contract doctrine itself, and reviewing courts can disregard jurisdictional terms when those other considerations are at stake. See, e.g., *Dix v. ICT Grp., Inc.*,

Accordingly, we conclude that the narrow approach is optimal for the contracts test case. The disgruntled dating service user described above could not sue in her home state of Arizona, regardless of whether the site collected information about her state of residence. Even without a choice of forum provision, the courts, under our approach, would evaluate personal jurisdiction narrowly. Put differently, personal jurisdiction has the effect of operating like an implied contractual term—in this case, an implied choice of forum term that channels all litigation to New York.

2. *Trademarks*

Second, imagine an entrepreneur who opens a donut shop, called Cactus Donuts, in Kingman, Arizona. Since the new business is near the Nevada border, the shop owner advertises in local newspapers in Las Vegas, gaining minor recognition. Sometime later, a second donut aficionado opens a shop, also called Cactus Donuts, in Nipton, California—also near the Nevada border. The California owner launches a Web site heavily promoted via Google Ads and social media. Many Nevada residents visit the Cactus Donuts (California) site. Finally, the Arizona owner opens a second Cactus Donuts shop in Las Vegas, but is consternated to learn that most customers think it is an offshoot of the California one. The Arizona owner determines to sue her counterpart for trademark infringement.²⁵⁷ Can she obtain personal jurisdiction in Arizona? What about Nevada?

Trademarks present a difficult puzzle for personal jurisdiction because the harms involved are doubly intangible. First, trademarks protect particular bits of information because of their cognitive effects on consumers.²⁵⁸ The dominant theoretical rationale for trademark law is that it reduces search costs.²⁵⁹ For example, rather than examining each pair of shoes carefully to determine their quality, consumers can simply look for the word “Nike” on the box or the famous swoosh on the side of the sneaker. Trademark doctrine thus protects an

161 P.3d 1016, 1024–25 (Wash. 2007) (“If a forum selection clause precludes class actions and thereby significantly impairs Washington citizens’ ability to seek relief . . . the clause violates the public policy underlying [Washington’s Consumer Protection Act] . . .”).

²⁵⁷ In trademark law, for unregistered marks, senior users (those first in time) enjoy superior rights to junior users (those later in time) everywhere that they use their marks in commerce, including in geographic locations where their reputation has spread. *See, e.g.,* Planetary Motion, Inc. v. Techplosion, Inc., 261 F.3d 1188, 1193–1203 (11th Cir. 2001) (discussing priority under 15 U.S.C. § 1125(a), which covers unregistered marks); *United Drug Co. v. Theodore Rectanus Co.*, 248 U.S. 90, 97–102 (1918) (discussing geographic limits on rights in unregistered marks).

²⁵⁸ *See* Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1844 (2007).

²⁵⁹ *See, e.g.,* Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777, 786–88 (2004).

intangible good—a brand or logo—because of an intangible effect. Over time, trademark doctrine has become even more intangible and borderless. Courts have expanded trademark protection to cover situations other than purchases, further attenuating the psychological role of marks.²⁶⁰ Marks are protected even in jurisdictions where the particular goods or services are not available, on the theory that their reputation is present in those states and subject to damage.²⁶¹ And theories of liability such as dilution unmoor trademark from classic harms such as passing off, relying instead on the concept that dilutive marks reduce the unique conjuring power of famous marks in consumers’ minds—even if consumers are not confused in the slightest about the source of the product or service.²⁶²

Second, any harm to the mark because of Internet activity, such as advertising, is intangible. If courts treat the mark as having a physical location (and the harm as occurring there), it means that jurisdiction travels with the trademark. The moment that there is a reputation to be harmed in a given state, jurisdiction is proper. This has curious resonance with pre-*Zippo* Internet decisions finding jurisdiction in every state due to online presence.²⁶³ Trademark, in short, runs the greatest risk of sliding down the slippery slope of online jurisdiction to de facto unlimited jurisdiction throughout the United States.

Our solution bifurcates tangible harms, such as the sale of goods bearing an infringing mark, and intangible ones, such as use of an infringing mark on an Internet site. For tangible harms, the physicality rule applies: the mark owner can sue in the states where the sales occurred, as well as in the defendant’s domicile state. For intangible harms, though, the mark owner must sue the defendant in the defendant’s home state.

²⁶⁰ See, e.g., *Gibson Guitar Corp. v. Paul Reed Smith Guitars*, 423 F.3d 539, 549–52 (6th Cir. 2005) (initial interest confusion); *Ferrari S.P.A. v. Roberts*, 944 F.2d 1235, 1244–45 (6th Cir. 1991) (post-sale confusion).

²⁶¹ See, e.g., *Nestle Prepared Foods Co. v. Pocket Foods Corp.*, No. 04-cv-02533-MSK-MEH, 2006 U.S. Dist. LEXIS 76213, at *29–32 (D. Colo. Apr. 5, 2007) (holding that Pocket Foods infringed Nestle’s trademark even though Pocket Foods had not made any sales in Colorado).

²⁶² See 15 U.S.C. § 1125(c) (2013); *Nabisco, Inc. v. PF Brands, Inc.*, 191 F.3d 208, 228–29 (2d Cir. 1999); Frank I. Schechter, *The Rational Basis of Trademark Protection*, 40 HARV. L. REV. 813, 831–32 (1927).

²⁶³ It also corresponds with how trademark doctrine treats infringement of registered marks, which enjoy presumptive nationwide priority and which can obtain injunctive relief upon entry into a relevant geographic market. Compare *Nestle Prepared Foods Co.*, 2007 U.S. Dist. LEXIS 26181, at *14–16 (holding personal jurisdiction over Pocket Foods reasonable in granting injunction because Pocket Foods had entered into distribution agreement with Colorado firm), with *Dawn Donut Co. v. Hart’s Food Stores, Inc.*, 267 F.2d 358, 365 (2d Cir. 1959) (denying injunctive relief where there was no likelihood that a distributor of baked goods “will expand its use of [its registered] mark at the retail level into defendant’s trading area”).

For the trademark case above, the Arizona Cactus Donuts owner would have to sue its California doppelganger in California's courts. The alternative broad approach to trademark presence and harm runs too greatly counter to fairness and predictability—a defendant would be exposed to jurisdiction everywhere in the country and would have no self-help mechanisms to avoid jurisdiction in any given place.

3. *Hacking*

Finally, assume that a Brooklyn user of an online dating service, angry with his lack of relationship success, launches a computer network attack against the site. The attack overwhelms the site's servers with traffic, driving it offline, and the downtime costs the dating service tens of thousands of dollars. The servers are located in Virginia and California, while the service itself operates out of Atlanta, Georgia. The jilted user does not know where any of the physical plants are located, nor does he care. Once the service discovers his identity, can it sue him in Virginia, California, or Georgia?²⁶⁴

Of the three hard test cases, hacking presents the greatest conundrum for personal jurisdiction analysis. Computer network attacks can generate physical effects, intangible effects, or both. For physical effects, consider a hack that causes a generator to overheat, or that shuts down an air traffic control system, potentially causing inbound aircraft to crash.²⁶⁵ For intangible effects, there have been attacks that copied trade secrets or classified information, or that defaced Web sites.²⁶⁶ For both physical and intangible, the cyberweapon Stuxnet serves as a telling example: it both caused Iran's uranium enrichment centrifuges to spin too fast and wear out, and it also

²⁶⁴ The suit would presumably be under the civil provisions of the federal Computer Fraud and Abuse Act or similar state law provisions. See 18 U.S.C. § 1030(g) (2013); CAL. PENAL CODE § 502(e)(1) (West 2014); GA. CODE ANN. § 16-9-93(g) (2010); VA. CODE ANN. § 18.2-152.12(A) (2010).

²⁶⁵ See, e.g., Bambauer, *supra* note 139, at 1015–19 (describing how Stuxnet worm damaged Iran's uranium enrichment plant); David Kushner, *The Real Story of Stuxnet*, IEEE SPECTRUM (Feb. 26, 2013, 2:00 PM), <http://spectrum.ieee.org/telecom/security/the-real-story-of-stuxnet> (same); David E. Sanger, *Obama Order Sped Up Wave of Cyberattacks Against Iran*, N.Y. TIMES, June 1, 2012, at A1 (discussing how President Obama "secretly ordered increasingly sophisticated attacks on the computer systems that run Iran's main nuclear enrichment facilities"); see also Paul Festa, *DOJ Charges Youth in Hack Attacks*, CNET (Mar. 18, 1998, 4:50 PM), <http://news.cnet.com/2100-1023-209260.html>. (describing how a juvenile's computer hack disabled an airport control tower); Jeanne Meserve, *Sources: Staged Cyber Attack Reveals Vulnerability in Power Grid*, CNN (Sept. 26, 2007, 11:06 PM), <http://www.cnn.com/2007/US/09/26/power.at.risk/> (detailing an experimental controlled hack that "changed the operating cycle of [a] generator, sending it out of control").

²⁶⁶ See Siobhan Gorman et al., *Computer Spies Breach Fighter-Jet Project*, WALL ST. J., Apr. 21, 2009, at A1; Violet Blue, *MIT Website Hacked by Anonymous on Anniversary of Aaron Swartz Suicide*, ZDNET (Jan. 11, 2014, 1:09 AM), <http://www.zdnet.com/mit-website-hacked-by-anonymous-on-anniversary-of-aaron-swartz-suicide/>.

transmitted false information to the engineers at the Natanz enrichment complex.²⁶⁷

For hacks with physical effects, standard physicality analysis for personal jurisdiction should apply. Such attacks are real, but they are the exception rather than the rule.²⁶⁸ Conceptually, this type of network attack is similar to mailing a bomb to a given location: it causes tangible harm, likely calls forum-state resources into action, and is geographically predictable by the perpetrator.²⁶⁹ An attacker stealing data does not care, and probably does not know, where the computer storing the information resides.²⁷⁰ An attacker seeking to overload a generator likely has a solid idea of where it is located. So, for hacking that causes physical damage, our approach is rooted in physicality jurisprudence. Courts, though, must resist formalistic thinking. If a hacker defaces a website hosted on a computer in Los Angeles, she has changed the magnetic state of bits on the server’s hard drive.²⁷¹ That should not count as physical effects, though, in the same way that a gunshot across state lines should count. Information is transmitted via physical change—but that differs from physical harm.

For hacks with both physical and intangible effects, our approach disambiguates: the defendant can be haled into court wherever physical harm occurs but can be sued for intangible effects only in her domicile.²⁷² In cases of intangible harms, from a predictability perspective, the defendant is indifferent to the location of the targeted computer. Moreover, much depends on the plaintiff’s choice of technology. If the plaintiff hosts information on his own server, in his state of residence, it may be possible (albeit unlikely) for the defendant to ascertain where she might be subject to jurisdiction by using geolocation or other technological self-help. But if the plaintiff uses cloud computing (such as Amazon’s EC2), or mirrors the site via services such as Akamai, the defendant has little, if any, ability to

²⁶⁷ See Bambauer, *supra* note 170, at 585–86.

²⁶⁸ See *id.* at 616–18 (“[A]vailable data suggest that [physical-attack] risks have been considerably overstated.”).

²⁶⁹ See Rose Pastore, *How An Elite Nerd Squad Dismantled the Unabomber’s Last Deadly Device*, POPULAR SCI. (Jan. 22, 2013), <http://www.popsoci.com/technology/article/2013-01/how-elite-bomb-squad-dismantled-unabombers-last-deadly-device> (describing disarming of Unabomber Theodore Kaczynski’s last mail bomb).

²⁷⁰ See Bambauer, *Ghost in the Network*, *supra* note 139, at 1014 (discussing how GhostNet spy software captured secret documents for their political value, regardless of the computers’ various physical locations).

²⁷¹ Cf. *United States v. Drew*, 259 F.R.D. 449, 452–55 (C.D. Cal. 2009) (prosecution for hoax involving falsified MySpace profile created on servers in Los Angeles by Missouri defendants).

²⁷² This Article deals only with personal jurisdiction in civil suits; venue for criminal trials is a distinct issue. See 2 CHARLES ALAN WRIGHT ET AL., *FED. PRAC. & PROC. CRIM.* § 301 (4th ed. 2010); 14D CHARLES ALAN WRIGHT ET AL., *FED. PRAC. & PROC.* § 3801 (3d ed. 2010).

predict where the plaintiff will bring suit.²⁷³ Cloud computing may distribute different parts of content across different servers—a process Google calls “sharding”—or may vary how it responds to requests for information, from whichever server it thinks is most available or closest in networking terms.²⁷⁴ It is counterintuitive, if not completely arbitrary, to allow personal jurisdiction analysis to turn on the plaintiff’s choice of computer storage.

Moreover, hacking may not even involve physical changes to a computer system. Consider trade secret theft. The attacker may use purloined credentials to access the system and files, and then copy the data.²⁷⁵ This does not flip the bits on the target system—no data was harmed in the making of this copy—but of course causes real harm to the trade secret owner: the information is in the wild.²⁷⁶ The copying does cause the target computer to react physically, as its hard drive spins and information is copied into and out of memory, but these physical effects are not the harm at issue.²⁷⁷

In the hacking hypothetical above, the defendant would be amenable to suit in New York. She is suable in New York because she lives there. Jurisdiction in California, Georgia, or Virginia is not proper, though, because the defendant has little ability to predict the effects of the denial of service attack on systems there, and there is no reason to think it fair to allow the plaintiff to dictate jurisdiction based on the siting of its information technology systems. Hackers are playing with real fire, though—if a malware attack (instead of a DoS one) caused physical damage to the computers in California or Georgia, they would be subject to jurisdiction there. In our view, that is the appropriate allocation of risk for personal jurisdiction purposes.²⁷⁸

²⁷³ See generally John Dille et al., *Globally Distributed Content Delivery*, IEEE INTERNET COMPUTING 51 (Sept./Oct. 2002), available at http://www.akamai.com/dl/technical_publications/GloballyDistributedContentDelivery.pdf (describing how mirroring “deploy[s] clusters in a few locations”); *Global Infrastructure*, AMAZON WEB SERVICES, <http://aws.amazon.com/ec2/> (last visited May 12, 2015) (explaining the EC2 web service).

²⁷⁴ See Derek E. Bambauer, *Schrödinger’s Cybersecurity*, 48 U.C. DAVIS L. REV. 791, 814 (2015).

²⁷⁵ See, e.g., *Inquiry Mgmt. Sys., Ltd. v. Berkshire Info. Sys., Inc.*, 307 F. Supp. 2d 521, 523 (S.D.N.Y. 2004) (advertising-tracking service provider allegedly obtained user identification and password to gain access to rival company’s data).

²⁷⁶ See, e.g., *Diamond Power Int’l, Inc. v. Davidson*, 540 F. Supp. 2d 1322, 1326–27 (N.D. Ga. 2007) (former manager of plaintiff’s service operations allegedly misappropriated trade secrets for the benefit of a competitor).

²⁷⁷ Small-scale physical effects, such as use of a target computer’s RAM or network bandwidth, have generally not been found to generate liability. See, e.g., *Intel Corp. v. Hamidi*, 71 P.3d 296, 303–04 (Cal. 2003). But see *Cyber Promotions Inc. v. Am. Online, Inc.*, 948 F. Supp. 436, 456 (E.D. Pa. 1996) (“Cyber simply does not have the unfettered right . . . to invade AOL’s private property with mass e-mail advertisements.”).

²⁷⁸ It is particularly important that courts not conflate statutory regimes treating intangible effects, such as the Computer Fraud and Abuse Act, with physical tort schemes

D. Potential Objections

1. *Will Restricting the Places Where Plaintiffs Can Bring Lawsuits Make Litigation Less Efficient?*

From a practical perspective, the restriction that we propose—limiting the places where personal jurisdiction is available for purely intangible harms—could lead to litigation inefficiencies. Return for a moment to the final test case involving hacking. If someone located in New York hacks into, say, a Virginia defense contractor’s computer system, the hacker can cause both physical harm (say, shutting down the air conditioning and thereby destroying expensive equipment) and intangible harm (for example, data intrusion and theft). Under the broad approach to personal jurisdiction, the Virginia plaintiff could bring all of the claims in Virginia.²⁷⁹ Under our narrow approach, the plaintiff faces an initial choice that might seem unpalatable and inefficient: (1) divide the claims (by bringing the claims for physical harm in Virginia and those for intangible harms in New York); or (2) bring all claims in New York where the defendant is amenable to general jurisdiction. The first option fails to capture the efficiency of deciding related claims together.²⁸⁰ The second option locates the case in New York, potentially far away from the evidence that pertains to the physical harm suffered by the Virginia plaintiff. Neither seems satisfactory on first read.

Despite the initial appearance of inefficiency and rigidity in this context, for several reasons, our proposal in fact offers the exact opposite qualities.

First, it creates a clear rule about where a lawsuit should begin. When the harm is intangible, the plaintiff knows he must start on the defendant’s home turf. Second, as discussed more fully below, courts have safety valves at their disposal—transfer of venue and consolidation under multidistrict litigation—that can ameliorate major inefficiencies. Third, while those safety valves might relocate certain lawsuits away from the initial forum, they operate much more efficiently than current personal jurisdiction jurisprudence. Right now, a plaintiff can seek out any number of potential forums. As long as she can show that the defendant has *minimum* contacts with a given place,

regulating tangible effects, such as trespass. Mistaken analogies between the two risk sending courts down the virtual rabbit hole for personal jurisdiction purposes.

²⁷⁹ Although a plaintiff “must secure personal jurisdiction over a defendant with respect to each claim she asserts,” courts typically allow a plaintiff to invoke “pendent personal jurisdiction” over the defendant with respect to all transactionally related claims. 4A CHARLES ALAN WRIGHT ET AL., *FED. PRAC. & PROC.* § 1069.7 (3d ed. 2010).

²⁸⁰ See Alan M. Trammell, *Transactionalism Costs*, 100 VA. L. REV. 1211, 1217–19, 1223–24 (2014) (noting the longstanding presumption that courts should resolve logically related claims together).

that forum becomes available.²⁸¹ Satellite litigation often develops around personal jurisdiction questions, complete with full hearings and rights of appeal. By contrast, transferring a case is relatively limited and straightforward. The burden is on the party seeking transfer to demonstrate that the alternative forum is not just viable, but notably superior to the initial forum.²⁸² Moreover, the judge, not the party seeking transfer, ultimately assesses society's interests in efficiency when making that determination.²⁸³ And once the judge decides to transfer the case (or not), that is the end. No satellite litigation develops because venue is a matter of convenience and legislative grace; unlike personal jurisdiction, it is not imbued with constitutional significance.²⁸⁴

From an *ex ante* perspective, when the harm is physical, the place of harm likely offers the most efficient place to sue.²⁸⁵ For example, the evidence and relevant witnesses will often be there. But when the harm is intangible, there is no *ex ante* reason to believe that any forum presumptively offers a more desirable or socially efficient location. In any particular case, one forum might be clearly superior. (The example above demonstrates such a situation—when related claims most logically will be tried in a different forum.) Without a way to predict where the best forum will be, there are good reasons, from an efficiency perspective, to create a clear starting point for the litigation and then empower judges to adapt to a case's vagaries in some circumstances.

The narrow approach to personal jurisdiction for intangible harms creates that clear starting point. A plaintiff can obtain personal jurisdiction in only a limited number of places—where a defendant is

²⁸¹ See McMunigal, *supra* note 42, at 193–99.

²⁸² See, e.g., *Delta Air Lines, Inc. v. Chimet, S.P.A.*, 619 F.3d 288, 295 (3d Cir. 2010); *Filmline (Cross-Country) Prods., Inc. v. United Artists Corp.*, 865 F.2d 513, 521 (2d Cir. 1989); *Momenta Pharmaceuticals, Inc. v. Amphastar Pharm., Inc.*, 841 F. Supp. 2d 514, 522 (D. Mass. 2012).

²⁸³ See, e.g., *Jarvis Christian Coll. v. Exxon Corp.*, 845 F.2d 523, 529 (5th Cir. 1988); *Jones v. Smith*, 784 F.2d 149, 151 (2d Cir. 1986).

²⁸⁴ See, e.g., *Leroy v. Great W. United Corp.*, 443 U.S. 173, 180 (1979) ([V]enue . . . is primarily a matter of choosing a convenient forum.); *Johnson Creative Arts, Inc. v. Wool Masters, Inc.*, 743 F.2d 947, 951 (1st Cir. 1984) (“Venue . . . is based on Congress’ decision concerning where a case *should* be heard. It is a privilege given to the defendant primarily as a matter of convenience and is not based on an inherent power of a particular court over the parties.”).

²⁸⁵ This approach is deeply ingrained in European approaches to personal jurisdiction. In the United States, however, it is sometimes difficult to effectuate. See Borchers, *supra* note 158, at 130–32. If a plaintiff suffers harm in the forum but cannot prove that the defendant *purposefully* affiliated with the forum, personal jurisdiction is lacking. See, e.g., *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2787–90 (2011) (plurality opinion); *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297 (1980).

subject to general jurisdiction.²⁸⁶ This presumption promotes clarity and predictability for both plaintiffs and defendants, and it avoids satellite litigation about where else a defendant is subject to jurisdiction. Accordingly, it focuses the parties’ and the courts’ resources on the case’s merits rather than threshold issues.

What, then, are the mechanics of dealing with inevitable inefficiency? If the presumptive starting point is problematic, courts and litigants already have tools to ameliorate the problem. Our proposal likely creates an incentive for plaintiffs to bring their cases in federal courts, which often have more flexibility than state courts to relocate cases. Channeling cases to federal courts creates several advantages.

First, federal courts, unlike state courts, can transfer cases across state lines.²⁸⁷ In the example above, if the Virginia defense contractor brings its claim for intangible harm in New York state court, there is no direct mechanism by which the state court can address the problem.²⁸⁸ Under our approach, if the plaintiff believes that Virginia is the appropriate forum, it should bring the claim for intangible harm in New York federal court, where personal jurisdiction undoubtedly is appropriate. Because the defendant resides there, venue is also appropriate.²⁸⁹ The plaintiff then can move to transfer venue to a federal court in Virginia. In fact, such a scenario is precisely what the venue statute envisions when it liberally authorizes federal courts to transfer cases.²⁹⁰ Moreover, the venue statute already permits *plaintiffs* to seek a transfer from the venue that they initially select.²⁹¹

²⁸⁶ For an individual, this means the person’s domicile. For a corporation, it means, in all likelihood, the states where the defendant has incorporated or maintains its principal place of business. See *supra* notes 26–28 and accompanying text.

²⁸⁷ See 28 U.S.C. § 1404(a) (2013).

²⁸⁸ The indirect mechanisms for moving a case in this fashion are convoluted. First, the initial state court could grant a *forum non conveniens* dismissal, and the plaintiff could refile the case in the alternative forum. This approach is less than ideal because the bar for granting a *forum non conveniens* dismissal is high. See *Sinochem Int’l Co. v. Malaysia Int’l Shipping Corp.*, 549 U.S. 422, 430 (2007) (“A defendant invoking *forum non conveniens* ordinarily bears a heavy burden in opposing the plaintiff’s chosen forum.”). Moreover, a dismissal is just that, meaning that a plaintiff could face a host of problems when trying to refile, including potential statute of limitations problems. See *Norwood v. Kirkpatrick*, 349 U.S. 29, 32 (1955) (noting that *forum non conveniens* results in dismissal). Second, the defendant could remove the case to federal court, and then either party could seek a transfer. See 28 U.S.C. § 1441(a) (2013). This effectively leads to the same result that we suggest, but it adds the additional, unnecessary step of beginning in state court.

²⁸⁹ See 28 U.S.C. § 1391(b)(1) (2013) (venue lies in “a judicial district in which any defendant resides, if all defendants are residents of the State in which the district is located”).

²⁹⁰ See 28 U.S.C. § 1404(a) (2013); see also 15 CHARLES ALAN WRIGHT ET AL., *FED. PRAC. & PROC.* § 3847 (3d ed. 2010) (discussing the standards governing transfer).

²⁹¹ See 28 U.S.C. § 1404(b) (2013); see also, e.g., *Ferens v. John Deere Co.*, 494 U.S. 516, 529 (1990) (“Section 1404(a) also exists for the benefit of the witnesses and the interest of justice, which must include the convenience of the court. Litigation in an inconvenient forum does not harm the plaintiff alone.”).

A potential wrinkle concerns the requirement that, absent the parties' consent, a court may transfer a case only to courts where venue would have been appropriate initially.²⁹² In our example, would venue be appropriate in Virginia? Under current jurisprudence, the answer is almost assuredly "yes." Venue lies in "a judicial district in which a substantial part of the events or omissions giving rise to the claim occurred."²⁹³ Traditionally, this requirement has been more demanding than the usual "minimum contacts" test for personal jurisdiction.²⁹⁴ Our proposal to tighten the personal jurisdiction standard could introduce a procedural oddity, making venue relatively easy to establish in the place of harm (here, Virginia) even though personal jurisdiction would not necessarily be appropriate. If our personal jurisdiction proposal were truly required by the Due Processes Clauses of the Constitution, that would be problematic. But the narrow approach that we suggest is prophylactic in nature, a prudential limitation that is subject to tweaking by Congress.²⁹⁵ Accordingly, Congress could authorize transfer of venue to a court that, under the narrow approach that we suggest, would not have personal jurisdiction in the first instance. Admittedly, this option—Congress's authorizing venue in a court that does not have personal jurisdiction—is possible only if Congress adopts our proposal as part of the federal long-arm statute or if the Supreme Court explicitly embraces it as a prudential, common law limitation that is not constitutionally compelled.²⁹⁶ Either way, the current transfer of venue provisions could largely ameliorate the problem of cases winding up in manifestly inefficient locales.²⁹⁷

²⁹² See 28 U.S.C. § 1404(a) ("[A] district court may transfer any civil action to any other district or division where it might have been brought or to any district or division to which all parties have consented.").

²⁹³ 28 U.S.C. § 1391(b)(2).

²⁹⁴ See 4A WRIGHT ET AL., *supra* note 279, § 3806 (noting that "[p]ersonal jurisdiction and venue simply are not the same thing" and that whereas personal jurisdiction requires only "minimum" contacts, venue under section 1391(b)(2) requires that a "substantial" part of the claim arise in the district).

²⁹⁵ See *supra* note 153 and accompanying text.

²⁹⁶ Cf. *supra* note 150 and accompanying text. This scenario would not work if the Supreme Court were to adopt our proposal as part of the constitutional test for personal jurisdiction.

²⁹⁷ One might wonder whether this indulgence would give plaintiffs a way to circumvent our proposal. It would not. Imagine, for instance, that the Virginia plaintiff tries to bring a lawsuit in the Eastern District of Virginia for intangible harms, arguing that venue is appropriate under 28 U.S.C. § 1391(b)(2) (that is, where a substantial part of the events or omissions occurred). The New York defendant, under our proposal, could move for a dismissal based on a lack of personal jurisdiction. See FED. R. CIV. P. 12(b)(2). By contrast, if the plaintiff brings suit in New York, there can be no objection to personal jurisdiction. But the New York federal court would still have discretion to *transfer* the case to Virginia, where venue would lie.

A second, more direct palliative is already available: multidistrict litigation. When cases that present common factual questions are pending in different federal judicial districts, judges may consolidate those cases for pretrial proceedings.²⁹⁸ This avenue is most appropriate when many plaintiffs—say, numerous victims of a hacking attack—file similar claims throughout the United States. The multidistrict litigation panel can group them together to avoid duplication of pretrial proceedings, including pretrial conferences²⁹⁹ and discovery.³⁰⁰ Consolidation also would be appropriate if there are multiple defendants whom the plaintiff must sue in multiple states. If consolidation would lead to efficiency gains—principally by coordinating discovery in related cases—the multidistrict litigation panel would transfer the cases to one judge who would manage the pretrial phase of all of those cases.³⁰¹ If the cases proceed to trial, the managing judge remands the cases to the courts where they originated.³⁰² But hardly any cases proceed to trial.³⁰³ The overwhelming majority are resolved through dispositive motions or settlement before trial.³⁰⁴ If the concern is that the narrow approach would lead to inefficient lawsuit structures, multidistrict litigation can avoid that problem in the lion’s share of cases that do not ultimately proceed to trial.

Courts thus have two tools to mitigate inefficiency. Both admittedly involve an extra step—forcing plaintiffs to initiate lawsuits in one place and then allowing courts to make necessary adjustments. The beauty of both solutions, though, is that they promote clarity at litigation’s inception and then empower *courts* to decide if a different lawsuit structure or location would be more efficient. The latter point is critical. Whereas the broad approach to personal jurisdiction gives

²⁹⁸ See 28 U.S.C. § 1407(a) (2013) (“When civil actions involving one or more common questions of fact are pending in different districts, such actions may be transferred to any district for coordinated or consolidated pretrial proceedings. Such transfers shall be made by the judicial panel on multidistrict litigation authorized by this section . . .”).

²⁹⁹ See, e.g., FED. R. CIV. P. 16(a)–(e) (scheduling conference), 26(f) (pretrial conference).

³⁰⁰ See, e.g., FED. R. CIV. P. 16 (scheduling conferences), 26–36 (various discovery provisions).

³⁰¹ See 28 U.S.C. § 1407(b).

³⁰² See 28 U.S.C. § 1407(a).

³⁰³ See ADMIN. OFFICE OF THE U.S. COURTS, 2012 ANNUAL REPORT OF THE DIRECTOR ON JUDICIAL BUSINESS OF THE UNITED STATES tbl. C-4 (2012) (showing that 1.2% of civil cases filed in federal court went to trial); Marc Galanter, *The Hundred-Year Decline of Trials and the Thirty Years War*, 57 STAN. L. REV. 1255, 1255–59 (2005) (noting a steady decline in the percentage of trials in federal and state courts); see also Kevin M. Clermont, *Litigation Realities Redux*, 84 NOTRE DAME L. REV. 1919, 1956 n.184 (2009) (noting that approximately 1% of federal civil cases terminate with trial); J. Maria Glover, *The Federal Rules of Civil Settlement*, 87 N.Y.U. L. REV. 1713, 1720 (2012) (noting that “federal civil trials . . . are now a rarity”).

³⁰⁴ See, e.g., FED. R. CIV. P. 12(b)(6) (motion to dismiss for failure to state a claim); FED. R. CIV. P. 56 (motion for summary judgment).

plaintiffs almost unfettered discretion to choose where to litigate a claim—even in a demonstrably inefficient forum—our approach gives a neutral magistrate the ability to realize litigation efficiencies. Our proposal provides clarity, takes away the plaintiff’s unilateral power to impose inefficiency on the defendant and the system as a whole, and retains flexibility.

2. *Will the Narrow Approach Improperly Restrict Legitimate State Regulatory Interests?*

Our proposed approach might seem to risk artificially limiting a state’s legitimate regulatory sphere. In the defense contractor hypothetical, if a hacker in New York purloins the data of a Virginia company, doesn’t the Commonwealth of Virginia have an interest in regulating and punishing that conduct? In a sense, this regulatory interest implicates a societal fairness concern that our analysis thus far has elided.

The first response to this concern is a narrow doctrinal one: the scope of Virginia’s substantive regulatory power concerns choice-of-law principles, not personal jurisdiction doctrine. The Supreme Court has repeatedly emphasized that, although the two doctrines share much in common, they are conceptually distinct and protect different interests.³⁰⁵ Accordingly, a New York court, which has personal jurisdiction over one of its domiciliaries, might well apply Virginia substantive law to a dispute that concerns conduct in Virginia.

In theory, this is unproblematic and commonplace. In practice, though, courts tend to find that the substantive law of the state in which they sit should govern.³⁰⁶ And the Supreme Court has placed only the loosest restrictions on a court’s ability to choose a particular

³⁰⁵ See, e.g., *Kulko v. Superior Court*, 436 U.S. 84, 98 (1978) (“[W]hile the presence of the children and one parent in California arguably might favor application of California law in a lawsuit in New York, the fact that California may be the ‘center of gravity’ for choice-of-law purposes does not mean that California has personal jurisdiction over the defendant.”) (some internal quotation marks omitted); *Shaffer v. Heitner*, 433 U.S. 186, 215 (1977) (“[W]e have rejected the argument that if a State’s law can properly be applied to a dispute, its courts necessarily have jurisdiction over the parties to that dispute.”); *Hanson v. Denckla*, 357 U.S. 235, 254 (1958) (“The issue is personal jurisdiction, not choice of law.”).

³⁰⁶ See Patrick J. Borchers, *The Real Risk of Forum Shopping: A Dissent from Shady Grove*, 44 CREIGHTON L. REV. 29, 32 (2010) (noting the tendency of courts to apply forum law); Michael Steven Green, *Horizontal Erie and the Presumption of Forum Law*, 109 MICH. L. REV. 1237, 1266–74 (2011) (noting various presumptions counseling application of forum law); Thomas O. Main, *The Procedural Foundation of Substantive Law*, 87 WASH. U. L. REV. 801, 830–31 (2010) (noting the historical pedigree of the lex fori approach—calling for application of forum law—to conflict of laws); Courtland H. Peterson, *Proposals of Marriage Between Jurisdiction and Choice of Law*, 14 U.C. DAVIS L. REV. 869, 871 (1981) (arguing that modern choice-of-law theory encourages courts to apply forum law).

body of substantive law.³⁰⁷ In this convoluted way, the restriction of personal jurisdiction doctrine could also limit a state’s ability to ensure that its substantive law governs a dispute.

Our second response recognizes the way in which personal jurisdiction and choice-of-law doctrines interact, even though they are technically distinct. The Internet context (and the problem of intangible harm generally) might exacerbate certain doctrinal difficulties, but they do not *cause* that difficulty. Thus, if our proposal brings the uneasy relationship between personal jurisdiction and choice-of-law into starker relief, it usefully exposes a deeper problem.

Scholars long have noted the anomaly in the Court’s current approaches to personal jurisdiction and choice-of-law. For the former, the standards are relatively rigorous, requiring that defendants have purposefully directed activity at the forum state. But a state’s substantive law may govern a dispute as long as that state has even a tenuous connection to the lawsuit.³⁰⁸ This leads to the odd result that even when a state has sufficient regulatory interest in a dispute to supply the substantive rules of decision, it might nonetheless lack power to compel a defendant to appear in its courts. If anything, this is backwards.³⁰⁹ Many scholars have argued that the two standards should mirror each other more closely.³¹⁰ Our proposal casts new light on an old, festering problem.

There is a newer problem, though, that our proposal (and any choice-of-law oddities to which it might lead) also exposes. It is not always intuitive which state should have the power to regulate conduct on the Internet. In the case involving the New York hacker, many would probably assume that Virginia has a regulatory interest in protecting its citizens. The strength of that intuition recedes when the intangible harm seems less direct. For instance, in the trademark test case, should Arizona have the right to subject a California donut

³⁰⁷ See *Allstate Ins. Co. v. Hague*, 449 U.S. 302, 312–13 (1981) (plurality opinion); *id.* at 320–32 (Stevens, J., concurring in the judgment); see also Alan M. Trammell, *Toil and Trouble: How the Erie Doctrine Became Structurally Incoherent (and How Congress Can Fix It)*, 82 *FORDHAM L. REV.* 3249, 3275 (2014) (“[T]he Supreme Court has held that the Full Faith and Credit Clause and the Due Process Clause impose only nominal constraints on a state’s ability to apply its own substantive law to a dispute.”).

³⁰⁸ See Linda Silberman, *Reflections on Burnham v. Superior Court: Toward Presumptive Rules of Jurisdiction and Implications for Choice of Law*, 22 *RUTGERS L.J.* 569, 585–87 (1991) (noting that jurisdictional rules “function as the disguised regulator of choice-of-law power”); Spencer, *supra* note 21, at 658–60.

³⁰⁹ “To believe that a defendant’s contacts with the forum state should be stronger under the due process clause for jurisdictional purposes than for choice of law is to believe that an accused is more concerned with where he will be hanged than whether.” Linda J. Silberman, Shaffer v. Heitner: *The End of an Era*, 53 *N.Y.U. L. REV.* 33, 88 (1978).

³¹⁰ See, e.g., *id.* at 87–89; Spencer, *supra* note 21, at 659–60; see also Silberman, *supra* note 308, at 587 (noting that divergent choice-of-law and personal jurisdiction principles can lead to forum shopping).

shop—which has never done business in Arizona—to Arizona substantive law? Should Nevada or Vermont be able to do the same? These choice-of-law questions are difficult precisely because a similar problem underlies the current doctrine—courts resolve claims for intangible harm with rules tailored to the physical world. Determining how to navigate states' competing regulatory interests is even more difficult than the questions with which we grapple in this Article. Our proposal simply makes more salient a bevy of hard questions plaguing current doctrine.

3. *Will the Narrow Approach Impede Plaintiffs' Ability to Pursue Defendants in Foreign Countries?*

Our belief that the narrow approach offers a practical and efficient solution is predicated on the idea that, in most instances, a plaintiff who experiences intangible harm can easily bring a lawsuit outside of her home state. It might be marginally inconvenient for a Nevadan to bring a claim in Vermont or North Carolina, but in most situations the Nevadan will not encounter serious obstacles in finding a lawyer, bringing her claim, conducting discovery, and obtaining and enforcing a judgment. There assuredly are procedural differences between the states but none that presumptively are an affront to American conceptions of due process.

But what if the defendant who has caused intangible harm is not in another state but rather in a foreign country? Surely, one might argue, the challenges that a Nevadan faces in those circumstances should merit greater consideration. We agree. For two reasons, though, the difficulties presented by foreign defendants do not undermine the desirability of the narrow approach in the purely domestic context.

First, from a realist perspective, there is the problem of enforcement. Imagine that an Iranian hacker causes intangible harm to the Nevada plaintiff. A broader approach to jurisdiction than the one that we advocate would allow the Nevadan to gain jurisdiction over the Iranian defendant in Nevada and bring the claim. Suppose that the plaintiff wins a judgment, what then? She would have to enforce the judgment somewhere, and unless the defendant has assets in the United States, the plaintiff might be left exactly where she began: facing no reasonable prospect of recovery in the United States and being dependent on the courts of a rogue state. In other words, there is a deeper problem on which our proposal has little, if any, effect.

The more difficult case is one involving, say, a German hacker. An American plaintiff theoretically could bring a claim in Germany, a country with an independent judiciary that would afford the plaintiff a full and fair opportunity to pursue her claim against the defendant.

The problem is not the unenforceability of the claim but, rather, the extreme inconvenience of navigating a foreign judicial system. In fact, we do not suggest that the narrow approach to jurisdiction necessarily should govern transnational cases.

The German example underscores the second, and probably far more significant, response: our proposal is an attempt to treat jurisdictional dilemmas at a subconstitutional level and thus need not be universally applicable. Until now, courts that have perceived unfairness and unpredictability within the broadest approaches to jurisdiction have had to cabin courts' exercise of judicial power in purely constitutional terms.³¹¹ They have endeavored to argue that a Web site created by someone in Vermont or Germany does not necessarily establish relevant "contacts" with Nevada (absent certain other purposeful affiliation with Nevada), such that Nevada courts have no constitutional authority over those defendants. Because those limitations sound in constitutional theory, they necessarily have to apply to all defendants.

The beauty of our approach is that because it is *not* cast in constitutional terms, but rather operates on a prudential level, it can be limited to a certain subset of cases. A prudential limitation of this nature can apply to purely domestic cases where the rule makes the most sense. We concede that a different prudential rule might be desirable in transnational cases and might balance the competing concerns in a different way. This offers all the more reason to believe that the Supreme Court should clarify which limits on personal jurisdiction truly derive from a constitutional imperative and which ones are prudential. Only then can courts and legislatures disentangle the web of incoherent rules and move toward a sensible, pragmatic jurisdictional regime.

CONCLUSION

This Article opened with one puzzle: why the advent of the "Interwebs" so badly confounded courts' personal jurisdiction analysis. Our analysis of the problem uncovered a deeper, more profound conundrum: why consideration of intangible interests and harms has created such confusion in the doctrine. The intellectual challenge was not one of a technology or even the dramatic decrease in information costs that it wrought. Rather, it was with the shift from physical interests to virtual ones. This Article offered several responses. First, it advanced a more nuanced theory of personal jurisdiction precedent, conceiving of it as a tripartite assemblage of constitutional requirements, prudential limitations, and statutory commands. Second,

³¹¹ See *supra* notes 151–53 and accompanying text.

it elucidated a concrete vision of the normative interests at stake in personal jurisdiction debates, defining and focusing on fairness and predictability. Finally, it offered a coherent, minimalist answer to the problem of intangible interests and harms, concluding that personal jurisdiction values are usually best served by discounting Internet activity when assessing a defendant's connection to a particular forum. While not everyone will welcome our proposal, we believe it usefully advances the debate in civil procedure circles.

Perhaps more profoundly, we believe that the Article offers a concrete example of what cyberlaw offers legal scholarship more broadly. At the founding moment of the cyberlaw field, skeptics (most notably Judge Frank Easterbrook) criticized the project as folly—merely “law of the horse,” contributing nothing to wider legal debates by focusing on an irrelevant organizing principle.³¹² He challenged expositors of the nascent subject to show how cyberlaw could illuminate more general subjects.³¹³ Larry Lessig, Jonathan Zittrain, Dan Hunter, and others took up that challenge.³¹⁴ We believe this Article demonstrates anew why they were correct and Easterbrook was wrong. By concentrating on the puzzle of personal jurisdiction and the Internet, this Article has uncovered deeper unresolved questions in civil procedure, from the difficulties of defining personal jurisdiction's deepest values to the challenge of identifying a limiting principle to the Supreme Court's expansive approach to reputational injuries. Internet cases illuminated the larger problem of intangible interests and injuries in personal jurisdiction. The Internet is not exceptional for personal jurisdiction—it is a vital exemplar of deeper fissures in the doctrine that courts and scholars should address holistically. Moreover, it offers a pathway to solutions not merely about the “Interwebs,” but about fundamental questions of state power, fairness, and efficiency.

³¹² See Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 207–08 (1996).

³¹³ See *id.* at 208.

³¹⁴ See, e.g., Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 501 (1999); Jonathan Zittrain, *Internet Points of Control*, 44 B.C. L. REV. 653 (2003); Dan Hunter, *Cyberspace as Place and the Tragedy of the Digital Anticommons*, 91 CALIF. L. REV. 439 (2003).