

CYBERSURVEILLANCE WITHOUT RESTRAINT? THE MEANING AND SOCIAL VALUE OF THE PROBABLE CAUSE AND REASONABLE SUSPICION STANDARDS IN GOVERNMENTAL ACCESS TO THIRD- PARTY ELECTRONIC RECORDS

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The United States Supreme Court has interpreted the Fourth Amendment to provide no privacy protection for records held by third parties. The American Bar Association recently sought to step into this breach by recommending standards to govern government access to third-party electronic records, such as those held by banks, Internet service providers, and medical care providers. Those standards retain requirements of probable cause and reasonable suspicion for government access respectively to highly protected and moderately protected records. Law enforcement has challenged these requirements as unduly burdensome, while some commentators have argued that probable cause and reasonable suspicion are so easy to prove in the third-party records context as to provide no effective privacy protection at all. This Article challenges both those views by defining with greater specificity than has yet been accomplished the meaning of two aspects of probable cause: the quantitative and the qualitative. The Article also addresses their social value by exploring cognitive science, philosophy on the nature of probability, and political incentives facing police and prosecutors. The

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Article also examines the evidentiary concept of “weight” and analyzes the implications of various technological processes for applying these justification requirements in the third-party electronic-records context. The Article ultimately concludes that retaining probable cause and reasonable suspicion protections—when coupled with additional protections provided by the standards—is neither oppressive of law enforcement nor underprotective of persons whose records are searched. Instead, the balance achieved by the standards in this area is just right.

I. INTRODUCTION

The United States Supreme Court has created a general Fourth Amendment principle—the “third-party doctrine”—that leaves information in the hands of third parties unprotected by that Amendment.¹ Yet in an electronic age, increasingly more information concerning personal matters is held by third parties—from banks to insurance companies, Internet service providers, and credit card companies—in readily accessible electronic databases.² The American Bar Association has sought to fill this void in criminal cases by adopting its Standards on Law Enforcement Access to Third Party Records.³ The Standards set out a template for

¹ The United States Supreme Court has explained the doctrine:

[We] ha[ve] held repeatedly that the Fourth Amendment does not prohibit the obtaining of information revealed to a third party and conveyed by [the third party] to Government authorities, even if the information is revealed on the assumption that it will be used only for a limited purpose and the confidence placed in the third party will not be betrayed.

United States v. Miller, 425 U.S. 435, 443 (1976). The doctrine is not monolithic, however. The holding in *Bond v. United States*, 529 U.S. 334, 338–39 (2000) (exposing luggage to third-party exploration did not mean exposing it to the type of exploration there engaged in by the police), for example, is inconsistent with the doctrine. Justice Sotomayor has openly called for reconsidering the doctrine in technological surveillance cases. *See United States v. Jones*, 132 S. Ct. 945, 957 (2012) (Sotomayor, J., concurring) (“[I]t may be necessary to reconsider the premise that an individual has no reasonable expectation of privacy in information voluntarily disclosed to third parties. . . . This approach is ill suited to the digital age . . .”) (citations omitted). The doctrine remains controversial among academic commentators. Compare Stephen E. Henderson, *The Timely Demise of the Fourth Amendment Third Party Doctrine*, 96 IOWA L. REV. BULL. 39, 40 (2011) (seeing signs of the doctrine’s erosion and wishing it a timely death), with Orin S. Kerr, *The Case for the Third-Party Doctrine*, 107 MICH. L. REV. 561, 564 (2009) (defending the doctrine).

² *See Jones*, 132 S. Ct. at 957 (Sotomayor, J., concurring); JON L. MILLS, *PRIVACY: THE LOST RIGHT* 27–37, 45–58 (2008) (summarizing the scope of third-party technological access to personal information).

³ *See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS* (2012), available at http://www.americanbar.org/content/dam/aba/publications/criminal_justice_standards/Black_Letter.authcheckdam.pdf. But these Standards do not apply to “access to records after the initiation and in the course of a criminal prosecution.” *Id.* § 25-2.1(b).

regulating government access to institutional third-party records in criminal investigations.⁴ These standards are novel, marking the first time that a well-respected legal organization has provided a template for drafting statutes at the state and federal level to govern this area.⁵

The Standards provide numerous protections and procedures,⁶ but among them is a sliding scale of levels of justification—probable cause, reasonable suspicion, and mere relevance⁷—as well as variations in who must make these determinations (courts versus law enforcement).⁸ The justification levels vary with the degree of privacy protection a particular record deserves.⁹ These justification provisions would, however, change much of the current law.¹⁰ Indeed, the internal debates in the task force that prepared the initial drafts (the “drafting committee”) were most fierce concerning this single issue.¹¹ Law enforcement members were vehemently opposed to any justification requirement whatsoever, predicting that

⁴ See *id.* § 25-3.4.

⁵ See AM. BAR ASS’N, BACKGROUND REPORT TO CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS (2012), available at http://www.americanbar.org/content/dam/aba/publications/criminal_justice_standards/Memo_House.authcheckdam.pdf (“But because the federal constitutional regulation has been slight, and because other regulation has occurred in an *ad hoc* manner, there is no existing framework via which legislatures, courts acting in their supervisory capacities, and agencies can make the difficult decisions regarding what records should be protected and the scope of such protection.”).

⁶ See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS §§ 25-5.7 (notice), 25-6.1–6.2 (limiting record maintenance, retention, and disclosure), 25-7.1 (providing accountability mechanisms).

⁷ See *id.* § 25-5.2.

⁸ See *id.*

⁹ See *id.* §§ 25-4.2, 25-5.2.

¹⁰ For example, federal Fourth Amendment constitutional protections against government access to third-party records are minimal, if they exist, see *supra* text accompanying note 1, and a patchwork of state and federal legislation addresses specific privacy issues or broad information categories, see MILLS, *supra* note 2, at 130–32, 135–37 (discussing, for example, protection of educational information, trade secrets, and proprietary information), while the Standards protect records based largely upon how private the information they contain is rather than a particular issue or broad subject-matter category. See *infra* text accompanying note 52.

¹¹ The drafting committee did not keep minutes of or record its meetings. I was, however, a member of that committee. My characterizations here are based partly on my recollections of the committee’s meetings and partly on the content of the law enforcement members’ report dissenting from a draft of the Standards. Gary Lacey & Norman W. Frink, Dissent from ABA Standards for Criminal Justice, Government Access to Records: Third Parties and Privacy, Standards DRAFT 6.0 (Apr. 8, 2010) (unpublished manuscript) (on file with the Journal of Criminal Law and Criminology) [hereinafter *Dissenting Report*]. I was also a member of the Criminal Justice Section Council, which reviewed and modified a later version of the Standards. The Council does not keep transcripts of its meetings, so here too I rely on my memory of relevant events.

criminal investigations in serious cases would be rendered virtually impossible. The judge, defense lawyers, and law professors on the drafting committee, however, saw some level of justification as essential to prevent governmental overreaching—to regulate, without prohibiting, legitimate law enforcement work.

So strong were law enforcement's objections that the early drafting committee efforts concerning levels of justification were substantially watered-down. This dilution first occurred within the drafting committee, then in the Standards Committee that reviews the drafting committee's work, and later still in the Criminal Justice Section Council that had the final word before sending the Standards to be ratified by the ABA House of Delegates—which they ultimately were. For example, jurisdictions were left with freedom to have reasonable suspicion, not probable cause, as the maximum level of justification required for certain highly private records.¹² Moreover, the Council insisted on a provision declaring that the standards would not alter traditional grand jury practice, essentially leaving current subpoena practice (requiring barely any level of justification) untouched.¹³

The general scheme of varying levels of required justification used by the drafting committee—though not the details—stemmed from the work of leading Fourth Amendment commentator Christopher Slobogin.¹⁴ Importantly, however, the idea of a sliding scale model of justification levels—though not embracing necessarily the same levels of justification as does Slobogin—is not limited to the Standards. There are a host of federal and state privacy statutes that already provide some limited justification-standard protections for some searches of third-party records in some circumstances.¹⁵ Critics have argued for moving these protections up a

¹² See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS § 25-4.2(b) (“If the limitation imposed by subdivision (a) would render law enforcement unable to solve or prevent an unacceptable amount of otherwise solvable or preventable crime, such that the benefits of respecting privacy are outweighed by this social cost, a legislature may consider reducing, to the limited extent necessary to correct this imbalance, the level of protection for that type of information, so long as doing so does not violate the federal or applicable state constitution.”).

¹³ See *id.* § 25-2.1(c).

¹⁴ See CHRISTOPHER SLOBOGIN, *PRIVACY AT RISK: THE NEW GOVERNMENT SURVEILLANCE AND THE FOURTH AMENDMENT* 186 (2007). Slobogin's scheme treats “event-driven” and “target-driven” searches differently, see *id.* at 9–13, a distinction that I need not define here because it is one that the Standards ultimately rejected.

¹⁵ See *id.* at 139, 179–80 (summarizing the varied statutory protections for “transactional surveillance”—“the accessing of records about activities that have already occurred”—and concluding that most require mere relevance or nothing as a standard of justification). *But see* Stored Communications Act, 18 U.S.C. §§ 2701–11 (2006); *id.* § 2703(a) (requiring probable cause for government access to some e-mail messages stored with Internet service providers for under 180 days); *id.* § 2703(d) (necessitating a grand jury subpoena, requiring

notch, that is, for example, to require probable cause for all government access to stored e-mail content.¹⁶ But these efforts, as with similar intra-drafting-committee efforts, have sparked intense law enforcement opposition.¹⁷ The wisdom of the Standards' sliding scale model thus has wide significance for current law and future legal developments.

One member of the drafting committee, Professor Paul Ohm, has published an article rejecting Slobogin's premise that levels of justification matter and have practical significance in the area of electronic evidence in criminal cases.¹⁸ Ohm argues that it is so easy to establish probable cause in most criminal investigations involving e-mail or the Internet that law enforcement objections have not been justified. Ohm argues, therefore, that there is no need for a sliding scale because probable cause will usually exist and that it alone provides too little protection in an electronic age.¹⁹ Although Ohm's view undercuts much of law enforcement's standard antijustification (whether probable cause or reasonable suspicion) position, Ohm does not clearly argue for increasing (or decreasing) the standard for probable cause, redefining it, or replacing it. Instead, he merely suggests at several points that probable cause in this area is so easy to prove and of so little value in restraining government and protecting privacy that law reform efforts should shift to other areas.²⁰ Probable cause and reasonable suspicion can usually simply be ignored.

But Ohm concedes that there are still instances—though he believes relatively few ones—in which Internet and e-mail investigations will be amenable to regulation by standards of justification like probable cause and

mere relevance, or, for e-mails stored over 180 days, an order alleging “specific and articulable facts showing there are reasonable grounds to believe that the contents of a wire or electronic communication, or the records or other information sought, are relevant and material to an ongoing criminal investigation”); SLOBOGIN, *supra* note 14, at 175–76 (explaining that the “specific and articulable” language in § 2703(d) sounds like “reasonable suspicion” but is in fact a far lower standard).

¹⁶ See, e.g., Patricia L. Bellia, *Surveillance Law Through Cyberlaw's Lens*, 72 GEO. WASH. L. REV. 1375, 1436 (2004) (“Congress should apply a uniform search warrant standard to all stored communications and should require notice of the search in most cases.”); Deirdre K. Mulligan, *Reasonable Expectations in Electronic Communications: A Critical Perspective on the Electronic Communications Privacy Act*, 72 GEO. WASH. L. REV. 1557, 1592 (2004).

¹⁷ See Paul Ohm, *Probably Probable Cause: The Diminishing Importance of Justification Standards*, 94 MINN. L. REV. 1514, 1524 (2010) (noting that the Department of Justice has opposed, and likely in the future will oppose, efforts to raise the standards of justification for governmental technological surveillance).

¹⁸ See *id.* at 1523–24.

¹⁹ See *id.* at 1514–16.

²⁰ See *id.* at 1516.

reasonable suspicion.²¹ Whether these instances will in fact be as rare as Ohm argues is subject to dispute.²² Furthermore, the Standards themselves address some important situations, such as obtaining medical information or acting where First Amendment free speech concerns may be implicated, that merit high levels of protection even if they occur infrequently.²³ Moreover, Ohm focuses on cybercrime investigations rather than investigations of ordinary crimes (e.g., murder, rape, robbery) that may nevertheless leave a digital trail²⁴—but he does not limit his claims to cybercrimes.²⁵ Yet the latter sort of evidence should become increasingly important as technology advances. He simply underemphasizes the different issues ordinary crimes raise. But ordinary crimes leaving digital trails are often far less likely than cybercrimes to leave themselves open to easy proof of probable cause or even reasonable suspicion.²⁶

Perhaps most importantly, however, Ohm does not explore in a more theoretical way the meaning and social value of the two main standards of justification—probable cause and reasonable suspicion. I agree with Ohm that many protections are required other than standards of justification. But standards of justification can still serve important social goals, even in Internet investigations, that should not be slighted. Moreover, the two major justification standard terms (“probable cause” and “reasonable

²¹ See *id.* at 1542–49.

²² See SLOBOGIN, *supra* note 14, at 168–70 (making the case that several of these categories of government surveillance where justification standards can make a difference are far from rare).

²³ See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS §§ 25-3.3, 25-4.1 (2012).

²⁴ See Ohm, *supra* note 17, at 1525–42 (offering cybercrime examples). There is no uniform, agreed-upon definition of “cybercrime.” See Ralph D. Clifford, *Introduction to CYBERCRIME: THE INVESTIGATION, PROSECUTION AND DEFENSE OF A COMPUTER-RELATED CRIME* 3, 3–5 (Ralph D. Clifford ed., 2d ed. 2006) [hereinafter *CYBERCRIME*]. I define “cybercrime” here as any crime in which the criminal act is committed by using a computer, e-mail, or the Internet, rather than an ordinary crime that merely leaves evidentiary traces on computers or the Internet. Cf. Susan W. Brenner, *Defining Cybercrime: A Review of State and Federal Law*, in *CYBERCRIME*, *supra*, at 13, 14–19 (seemingly broadly defining cybercrime to include any use of computer technology to commit crime, but noting that different issues are involved where computers are the target or instrumentality of a crime as compared to crimes where “the computer plays a non-essential role in the commission of the offense”). Examples of cybercrime include hacking, computer fraud, Internet threats, online stalking, and Internet distribution of child pornography. I use the term “cybersurveillance” to refer to government surveillance of any computer-created or stored information, thus including government access to computer records relevant to prove only “ordinary crimes” such as most murders, rapes, face-to-face scams, and simple drug sales.

²⁵ See Ohm, *supra* note 17, at 1515 (suggesting that his argument extends to any non-“traditional” investigations, that is, those involving “modern technology,” and declaring that “the Internet is a hunch-free zone”).

²⁶ See *infra* text accompanying notes 365–371.

suspicion”) are rarely defined with any specificity. Part of the ease of meeting them may be the ambiguity in definition and the signals that these definitions send that they do not place much of a proof burden on law enforcement.

This Article seeks to fill this gap by exploring whether the key justification standards can be more specifically defined, what those definitions should be, and what social value the standards serve. The Article applies the results of this exploration to the ABA Standards, explaining whether they are justified as is or whether another course of action concerning levels of justification would have been more desirable.

A few qualifications are in order. I limit my analysis to targeted investigations, that is, the search for a particular person as the perpetrator of a crime or of a particular place believed connected to a known criminal event.²⁷ I therefore do not address “general search[es],” those occurring where “the government is trying to solve, prevent or deter as-yet undetected or perpetrated crime through surveillance of the general population or a subset of it”²⁸ Many of the comments made here have implications beyond targeted investigations, but space prevents me from addressing them here.

Part II of this Article briefly summarizes the provisions and history of the ABA Standards. Those Standards are the jumping-off point for a fuller exploration of the meanings of probable cause and reasonable suspicion.

In two earlier articles, I identified the several aspects of justification standards like probable cause and reasonable suspicion.²⁹ Those articles did not, however, fully develop two of those aspects that I now address in depth: (1) The quantitative—*how probable* must it be that evidence of crime will be found in possession of the third party? (2) The qualitative—*how trustworthy* must the evidence be upon which law enforcement relies in

²⁷ See Christopher Slobogin, *Making the Most of United States v. Jones in a Surveillance Society: A Statutory Implementation of Mosaic Theory* 12–13 (Vanderbilt Univ. Law Sch., Pub. Law & Legal Theory, Working Paper No. 12-29; Law & Econ., Working Paper No. 12-22, 2012).

²⁸ *Id.* at 13. Slobogin defines “probable cause” to include a belief “based on statistical analysis.” *Id.* at 20. I do not disagree that statistical analysis can often be *part of* the basis for probable cause. To the extent that Slobogin suggests that statistical analysis can alone establish probable cause, however, I disagree for reasons to be explained shortly.

²⁹ See Andrew E. Taslitz, *Police Are People Too: Cognitive Obstacles to, and Opportunities for, Police Getting the Individualized Suspicion Judgment Right*, 8 OHIO ST. J. CRIM. L. 7 (2010) [hereinafter Taslitz, *Cognitive Obstacles*]; Andrew E. Taslitz, *What Is Probable Cause, and Why Should We Care?: The Costs, Benefits, and Meaning of Individualized Suspicion*, 73 LAW & CONTEMP. PROBS. 145 (2010) [hereinafter Taslitz, *Individualized Suspicion*].

finding the relevant standard met?³⁰ Here, in Part III, I will necessarily touch on all aspects of probable cause and reasonable suspicion because they are interrelated. But my primary focus in Part III will be on aspects (1) and (2): the quantitative and the qualitative. Concerning the quantitative, Parts III.A.1 to 2 respond to arguments that it is more socially beneficial entirely to avoid setting a quantitative standard of proof for probable cause and reasonable suspicion. Part III.A.3 explains why, contrary to the claims of critics, cognitive biases are not enhanced by identifying a specific standard of proof, but such specification would appropriately limit law enforcement discretion. Perhaps more importantly, Part III.A.4 explains that the critics have wrongly assumed an objective notion of probability (how often are certain events likely to occur over many repetitions?) rather than a subjective notion (what degree of confidence or certitude does the factfinder justifiably hold in the determination made?). Subjective probability, subjected to standards of rational belief as reflected in social processes involved in the adversarial system, is the soundest way to approach unique legal events like the probable cause and reasonable suspicion determinations under particular sets of facts, and it more accurately describes the judicial reasoning process (Part III.A.4).³¹ Part

³⁰ The other three aspects of probable cause and reasonable suspicion that I earlier identified were: (1) the temporal: *when* the probable cause or reasonable suspicion judgment is to be made and whether its timing affects its meaning; (2) the individualized: whether that evidence points to a *specific* location revealing involvement of a *specific* person in crime; and (3) the accountable: what procedures render the probable cause affiant accountable for his claims such that courts or other reviewing entities oversee the police and avoid being mere rubber stamps for law enforcement judgments. My earlier pieces focused on the last two of these three aspects. See Taslitz, *Cognitive Obstacles*, *supra* note 29; Taslitz, *Individualized Suspicion*, *supra* note 29. I leave a more thorough analysis of the temporal aspect of justification standards for another day.

³¹ Logicians, mathematicians, and their fellow travelers in legal academia might bristle at the way I use the term “subjective probability.” They would understand subjective probability to refer to each individual’s level of certitude that an event will occur or has occurred or that a proposition is true, and would require that certitude comply with certain standards of coherence. See DONALD GILLIES, *PHILOSOPHICAL THEORIES OF PROBABILITY* 1 (2000) (“The *subjective* theory identifies probability with the degree of belief of a particular individual.”); IAN HACKING, *AN INTRODUCTION TO PROBABILITY AND INDUCTIVE LOGIC* 127, 151–53, 163–65 (2001) (explaining how “personal probabilities” can be measured by odds or betting and defining “coherence” in personal probability judgments). Two individuals’ subjective probabilities as so defined can be wildly different, and neither one can objectively be said to be “better” than the other so long as both are coherent—that is, inductively consistent in a way that supports the rules of probability. See GILLIES, *supra*, at 1 (noting that the subjective theory of probability does not assume that “all rational human beings with the same evidence will have the same degree of belief in a hypothesis or prediction”); HACKING, *supra*, at 180 (discussing inductive consistency and coherence). I am using the term in a slightly different fashion. Probability theories can broadly be grouped into the objective, for example, how frequently an event occurs in a broad run of identical activities

III.A.5 next explains why sound policy and the cognitive science of metaphorical reasoning support choosing a preponderance of the evidence—which relies on the metaphor of a tipping scale—as the proper standard of proof. Additionally, Part III.B analyzes the idea of “weight,” which explores the completeness and trustworthiness of the evidence offered to prove probable cause or reasonable suspicion. This Part concludes that courts should give little, if any, weight to incomplete or shoddy supporting evidence. Finally, this Part applies these lessons to the Standards, explaining, contrary to Ohm and other critics, why justification standards still matter in governing government access to digital third-party records.

Part IV, the Conclusion, brings together the preceding discussion and explores some of its implications.

(e.g., how often heads shows up in 1,000 flips of a coin) and the psychological, a state of mind consisting of degrees of certitude. *Id.* at 127 (“The idea of probability leads in two different directions: *belief* and *frequency*. Probability [in the first sense] makes us think of the degree to which we can be confident of something uncertain, given what we know or can find out.”) (emphasis in original). I use the term “subjective probability” to refer to psychological certitude. But I do not use the term to mean psychological certitude that cannot be subjected to standards of critique. Rather, there are standards of rational inference involved in everyday reasoning and in legal reasoning and social processes created by our justice system that permit debate over the rationality of people’s differing senses of certitude. *See generally* RAYMOND S. NICKERSON, ASPECTS OF RATIONALITY: REFLECTIONS ON WHAT IT MEANS TO BE RATIONAL AND WHETHER WE ARE (2008) (discussing at book length the standards of rational inference in everyday life and in special contexts and connecting the two). Critique in light of these rational inference standards and through these social processes results in either agreement among the parties on the appropriate degree of certitude or acceptance by a decisionmaker (such as a judge) of a degree of certitude that the decisionmaker can publicly justify. *See infra* note 211. (I am not adopting the “logical theory” of probability, which does “identif[y] probability with degree of rational belief” but assumes that “given the same evidence, all rational human beings will entertain the same degree of belief in a hypothesis or prediction”—a far stronger claim than I make here. *See* GILLIES, *supra*, at 1 (defining logical theory of probability and discussing the “propensity” theory, which is not relevant here and is thus not discussed further).) This understanding of subjective probability more accurately reflects how the legal system does and should operate in making probability judgments where unique events, like those supposedly governed by the probable cause standard, are involved. I use the term “subjective probability” as a shorthand for this psychological and social process of certitude determination partly because some well-respected legal academics on whom I rely use the term, *see infra* text accompanying notes 211–243 (discussing especially the work of Charles Yablon), and partly because the term offers an effective contrast to the objective probability idea that some commentators wrongly assume must control. Importantly, however, as I will explain, nothing in my approach excludes the use of objective probability data where it is available. Indeed, it may sometimes be essential to making rational inferences of certitude, that is, subjective probability judgments as here defined.

II. A BRIEF SUMMARY OF THE ABA'S THIRD-PARTY RECORDS STANDARDS

The rise of the Internet has led to a dramatic increase in the sheer number of records documenting personal information.³² More importantly, however, that information can be easily collected in a single location and analyzed in a fashion presenting previously unparalleled threats to privacy.³³ Indeed, in the private sector, data aggregators are paid to compile “digital dossiers” presenting an entire portrait of a person’s life.³⁴ Other technological developments, such as cell phone cameras, radio-frequency identification devices, public surveillance cameras in stores and on public streets, and electronic voice messaging expand the array of personal information that can be included in a dossier.³⁵ Because privacy is itself best understood as control over information about ourselves, this loss of control risks undermining the many values that privacy is meant to serve.³⁶ In particular, awareness of the risk of observation can promote social conformity, chill dissent, discourage creativity, weaken intimate relationships, and breach the personal boundaries that define personhood.³⁷

Although the private sector poses a danger to privacy interests, the government poses a unique danger. As the Department of Defense Technology and Privacy Advisory Committee (TAPAC) explained in the context of data mining, “only the government exercises the power to compel disclosure of information and to impose civil and criminal penalties for noncompliance. Only the government collects and uses information free from market competition and consumer preferences.”³⁸ Indeed, continued TAPAC, “[w]hen dealing with the government, individuals have no opportunity to express their expectations of privacy by choosing to do

³² See AM. BAR ASS’N, *supra* note 5, at 3–4.

³³ See Richard A. Posner, *Privacy, Surveillance, and Law*, 75 U. CHI. L. REV. 245, 248 (2008) (“But with digitization, not only can recorded information be retained indefinitely at little cost, but also the information held by different merchants, insurers, and government agencies can readily be pooled, opening the way to assembling all the recorded information concerning an individual in a single digital file that can easily be retrieved and searched.”).

³⁴ See MARTIN KUHN, *FEDERAL DATAVEILLANCE: IMPLICATIONS FOR CONSTITUTIONAL PRIVACY PROTECTIONS 1* (2007) (discussing data aggregators); DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE 2*, 9 (2004) (defining “digital dossiers”).

³⁵ See MILLS, *supra* note 2, at 29–34, 72–74, 148–49.

³⁶ See Andrew E. Taslitz, *The Fourth Amendment in the Twenty-First Century: Technology, Privacy, and Human Emotions*, 65 LAW & CONTEMP. PROBS. 125, 131 (2002) (defining privacy).

³⁷ See MILLS, *supra* note 2, at 26–27; Benjamin J. Goold, *Surveillance and the Political Value of Privacy*, 1 AMSTERDAM L. FORUM 3, 4–5 (2009); Taslitz, *supra* note 36, at 152–80.

³⁸ TECH. & PRIVACY ADVISORY COMM., *SAFEGUARDING PRIVACY IN THE FIGHT AGAINST TERRORISM: REPORT OF THE TECHNOLOGY AND PRIVACY ADVISORY COMMITTEE 24* (2004), available at <http://www.defenselink.mil/news/Jan2006/d20060208tapac.pdf>.

business elsewhere or by not engaging in transactions at all.”³⁹ Legal scholar Jed Rubenfeld acknowledges that government can and should have special rights to access private information as necessary to serve its function as law enforcer.⁴⁰ But that does not mean that there should not be significant limitations on when and how the state invades our lives. To the contrary, “precisely because the state’s law enforcement power gives it a license to intrude into our homes and lives in ways that private parties cannot, the state poses dangers to a free citizenry that private parties do not.”⁴¹

Yet constitutional controls on the state are nonexistent when the state seeks private information held in the hands of third parties.⁴² As noted earlier, this is so because of the “third-party doctrine,” holding that the Fourth Amendment’s protection against unreasonable searches and seizures does not apply to information in the control of third parties.⁴³ Although the Court has occasionally suggested limiting this doctrine,⁴⁴ the doctrine is still a vibrant one.⁴⁵ Yet, “[one] would have to be a hermit to be able to function in our society without voluntarily disclosing a vast amount of personal information to a vast array of public and private demanders.”⁴⁶ Disclosure is thus not truly “consensual” in any common understanding of that word.⁴⁷ Third parties consequently hold records of our medical history, psychological condition, physical location, financial transactions, library visits, bookstore purchases, political activities, gifts, and media preferences.⁴⁸ When the state seeks access to this mother lode of personal

³⁹ *Id.*

⁴⁰ See Jed Rubenfeld, *The End of Privacy*, 61 STAN. L. REV. 101, 118 (2008).

⁴¹ *Id.*

⁴² See *supra* text accompanying note 1.

⁴³ See *supra* text accompanying note 1.

⁴⁴ See, e.g., *City of Ontario v. Quon*, 130 S. Ct. 2619, 2629–30 (2010) (noting in dicta, despite finding no Fourth Amendment violation in the government’s surveillance of an employee’s text messages in the specific case, that “[t]he Court must proceed with care” in exploring the Fourth Amendment implications of emerging technologies and noting the importance of new social norms spurred to evolve by these technologies).

⁴⁵ See *supra* text accompanying notes 1–2.

⁴⁶ Posner, *supra* note 33, at 248.

⁴⁷ See *id.* at 247 (observing that, although “[a] far greater amount of personal information is revealed voluntarily than involuntarily,” such disclosure is not truly consensual because it is necessary “[t]o get a good job, to get health and life insurance,” and to get other aspects of personal health and welfare); cf. MARGARET JANE RADIN, *BOILERPLATE: THE FINE PRINT, VANISHING RIGHTS, AND THE RULE OF LAW* 17–18 (2013) (discussing how boilerplate language, especially as used on the Internet, involves neither true knowledge nor true choice, and thus, not true consent when “agreeing” to contract terms).

⁴⁸ See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS § 25-3.1 (2012).

information, the Constitution is largely silent.

Law reformers, many citizens, scholars, and professional activists have thus agitated for change.⁴⁹ Legislation is the only practical legal means available to provide protection where the Constitution does not. Some states and the federal government have occasionally legislated to address similar problems.⁵⁰ But there are many holes in this regulatory network.⁵¹ The ABA sought to assist in filling those holes by adopting its Access to Third Party Records Standards. The Standards thus reject the third-party doctrine and address what level of protection against privacy's invasion by governmental access to third-party (largely electronic) records should be permitted.

The Standards create a sliding scale of protection based upon the privacy level of the information sought. Records are therefore divided into those that are "highly private," "moderately private," "minimally private," and "unprotected" based upon the respective degrees of privacy that a person has in the records held by institutional third parties (the Standards do not apply to records held by individuals).⁵² The degree of privacy protection is determined by weighing four factors, specifically, the degrees to which the transfer of such information is: (1) "reasonably necessary to participate meaningfully in society or commerce" or to achieve socially beneficial goals (such as freedoms of speech and association); (2) personal; (3) accessible to nongovernment persons other than the institutional third party; and (4) capable of access and dissemination to others under existing law.⁵³ An "escape clause" permits legislatures to lower the degree of protection dictated by privacy concerns if that level of protection would unduly interfere with effective enforcement of the criminal law.⁵⁴

The many types of protections range from notice to the relevant persons (those whose privacy is invaded) once items are searched or seized; limitations on who may have access to the records and how, how long, and where they will be maintained; redaction; accountability mechanisms,⁵⁵ and limitations on the uses to be made of the evidence collected.⁵⁶ But the

⁴⁹ See *supra* text accompanying note 16.

⁵⁰ See *supra* text accompanying notes 10, 15.

⁵¹ See SLOBOGIN, *supra* note 14, at 175–76.

⁵² See CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS §§ 25-2.1, 25-4.1, 25-4.2.

⁵³ See *id.* § 25-4.1.

⁵⁴ See *id.* § 25-4.2(b).

⁵⁵ For example, periodic review, public reporting, civil penalties, and evidentiary exclusion are suggested as ways that individual jurisdictions might choose to ensure that law enforcement is accountable for complying with the Standards' mandates. See *id.* § 25-7.1.

⁵⁶ See *id.* § 25-5.5 (redaction), § 25-5.7 (notice), §25-6.1 (retention and maintenance), § 25-7.1 (accountability).

protections at issue in this Article are those limiting government access to the records in the first place. Access is permitted by a search warrant based upon probable cause for highly protected information, a court order based upon reasonable suspicion for moderately protected information, or a subpoena based upon a law enforcement certification of relevance for minimally protected information.⁵⁷ Even unprotected information can be sought, however, only for a “legitimate law enforcement purpose.”⁵⁸ Exigent circumstances and “true” consent can override some of these statutory protections.⁵⁹

By providing protection where the Constitution does not and by potentially expanding limited existing statutory protections, the Standards incurred the ire of the members of law enforcement on the drafting committee.⁶⁰ In a dissenting report, these members put the point this way:

[Under] the Guidelines[,] . . . records that fall into the “highly private” category require the highest justification (e.g., a search warrant) to obtain, while “minimally private” records may be obtained with less justification (e.g., a subpoena). While this [approach] . . . may have some surface appeal, there is no logical or practical necessity for it. The total level of privacy protection that a law accords to a particular category of records is controlled not just by the level of proof required in order to *obtain* a record but also by the whole system of other safeguards on government disclosure or abuse. Indeed, the Guidelines lay out a menu of such options, from customer notification requirements, to restrictions on the use and disclosure of the record by the official, to civil suits against officials who misuse the record. It would be perfectly appropriate for a lawmaker . . . , instead of imposing a high restriction on access with no subsequent safeguards (e.g., a search warrant), . . . [to] require only a low threshold for government access, but require that the official not disclose it to anyone else except under very stringent, court supervised conditions (e.g., a grand jury subpoena).⁶¹

This paragraph of course paints a false dichotomy: restricting access *or* restricting use after the information is obtained. But both are feasible, and the Standards provide both such protections.⁶² Moreover, if no limitations are placed on information access, law enforcement’s incentive is to collect

⁵⁷ *See id.* § 25-4.2.

⁵⁸ *See id.* § 25-5.3(d).

⁵⁹ *See id.* § 25-5.1.

⁶⁰ *See supra* text accompanying notes 11–13.

⁶¹ *Dissenting Report, supra* note 11, at 15–16.

⁶² *Compare* CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS §§ 25-5.1–25-5.2 (requiring, respectively, true consent or some level of justification, such as probable cause, to gain access to records held by third parties), *with id.* §§ 25-6.1–25-6.2 (requiring law enforcement to protect seized records from access by unauthorized persons or entities, limiting access generally only to those involved in or necessary to the investigation, and frequently creating audit logs and routine record-destruction schedules where records are no longer needed).

as much information as possible, then worry about what to do with it later, rather than minimizing privacy invasion. Furthermore, whether post-evidence-collection limitations have been complied with is information generally held in law enforcement's hands, and thus is harder to obtain, creating obstacles to effective accountability.

Nevertheless, these dissenters saw access restrictions as unwarranted by privacy concerns. They also argued that citizens have an obligation to assist law enforcement in criminal investigations and that these higher justification standards would unduly impede or, at the very least, slow or render costly, important criminal investigations.⁶³ Indeed, they would end many investigations, leaving crimes unsolved and wrongdoers unpunished, which would have a broad impact in combating identity theft, organized crime, theft of trade secrets, and child abuse, among other offenses.⁶⁴ Law enforcement needs no such regulation because it "represents the community and is accountable through elected leaders. With rare exceptions, law enforcement officers act in the public interest to protect public safety, fight crime, or for other legitimate purposes."⁶⁵

Nowhere in the dissenters' analysis is there a discussion of just what each justification standard means, how or why it would unduly impede law enforcement, or what legitimate and important societal goals these access requirements would serve.⁶⁶ Law enforcement is to be trusted, political safeguards always work, and privacy is of insufficient concern to ever reject its bowing to law enforcement needs. Thus we have two diametrically opposed critiques of the justification standards: the dissenters' views that they are unnecessary, destructive, and harsh, and Ohm's view that they are useless because they provide no meaningful protections.

III. THE MEANING AND SOCIAL VALUE OF PROBABLE CAUSE AND REASONABLE SUSPICION

Understanding why justification requirements like probable cause and reasonable suspicion are neither unduly burdensome to law enforcement nor worthless—indeed, to the contrary, serve important social goals—in the area of government access to third-party records requires a deeper understanding of just what these standards are. Part III addresses two key aspects of what defines probable cause and reasonable suspicion, as properly understood: the quantitative element, that is, what degree of proof is required (for example, 30%, 50%, or some greater probability) that a

⁶³ See *Dissenting Report*, *supra* note 11, at 15–16.

⁶⁴ See *id.* at 4.

⁶⁵ *Id.* at 5.

⁶⁶ See *id.* at 1–23.

defendant has committed a crime or that evidence of crime will be found in a particular location, and the qualitative element, meaning the requirement that law enforcement and judges rely on complete, trustworthy information. Addressing the first question requires initially, however, understanding why we have standards of proof in the first place. Discussing that point is therefore where Part III begins.

A. THE QUANTITATIVE ELEMENT: STANDARDS OF PROOF

1. *Why Do We Have Standards of Proof?*

Standards of proof, such as preponderance of evidence and beyond a reasonable doubt, serve several social functions. First, neither the government nor private persons acting in its name (jurors) may interfere with individual or group interests absent justification.⁶⁷ The substance of the justification varies with the particular legal claim (for example, contract, torts, murder, rape), but the standard of proof ensures that *some justification* must be offered. In particular, this justification must partly be in the form of proving facts demonstrating that the state's right to impose a cost on an individual or group is triggered.⁶⁸ In a civil contract claim, the facts must show that an agreement supported by consideration existed and was breached, causing damages.⁶⁹ Only then may the state compel the defendant to pay those damages. In a first-degree capital murder case, the facts must show that the defendant, and no one else, killed the victim, and that the defendant did so willfully, deliberately, and with premeditation.⁷⁰ Only then may the state consider imposing the death penalty. These facts, assessed in light of the relevant legal categories, justify the state's cost-

⁶⁷ Cf. BRIAN FORST, *ERRORS OF JUSTICE: NATURE, SOURCES, AND REMEDIES* 57 (2004) ("Establishing guilt involves a *fact-finding process* that aims to determine whether the *evidence is sufficient* to prove beyond a reasonable doubt that the defendant is guilty of the crime charged.") (emphases added). Convicting an alleged criminal thus requires proving, via evidence, and with a high level of confidence, that the defendant engaged in conduct with a specified mental state causing specified social harms stated in statutory elements. The state has no justification for imposing imprisonment or other costs on a person unless the requisite elements are properly proven. Other standards of proof lower the degree of justification required but operate in a similar fashion.

⁶⁸ See LARRY LAUDAN, *TRUTH, ERROR, AND CRIMINAL LAW: AN ESSAY IN LEGAL EPISTEMOLOGY* 68–74 (2006) (describing standards of proof as methods for apportioning the distribution of types of risks of error—e.g., the distribution of the risks of acquitting the guilty and convicting the innocent—and arguing that how to proportion those risks turns on the relative costs imposed on the individual if the standard is met, with higher costs requiring a lower risk of false positives (such as convicting the innocent) relative to false negatives (such as acquitting the guilty)).

⁶⁹ RESTATEMENT (SECOND) OF CONTRACTS § 1 (1981).

⁷⁰ See ELLEN S. PODGOR ET AL., *MASTERING CRIMINAL LAW* 129–30 (2008).

imposing actions.

Second, these justifications must be made *to someone*. That someone may be a judge or a jury.⁷¹ Since the justification must be made to another to a sufficient degree to persuade them to invoke the state's power, the standard of proof ensures accountability. As much empirical evidence demonstrates, a person's mere knowledge that she must be accountable to another reduces the likelihood that her actions embody error.⁷² Accountability can occur only if the person explains her actions to a reviewing individual or body.⁷³ Explanation requires articulation, and articulation encourages self-assessment (e.g., have I done all that I need to do to make a persuasive case before I stand before others to be judged?) and permits error correction by the reviewer.⁷⁴ Standards of proof thus force social actors verbally to explain their choices and the reasoning underlying them. Those explanations must address the evidence that supports the factual claims that trigger the legal categories permitting the state to use or threaten to use force to compel obedience to its dictates.⁷⁵

Third, the level of the standard of proof expresses important societal values.⁷⁶ If the individual or group interest invaded is considered of moderate social importance or the degree of invasion of that interest is likewise seen as moderate, then the lower preponderance standard of proof

⁷¹ See LAUDAN, *supra* note 68, at 16 (noting that judge or jury must be persuaded to convict in a criminal case).

⁷² See Taslitz, *Cognitive Obstacles*, *supra* note 29, at 12, 31–32, 64–66.

⁷³ See *id.* at 64–67.

⁷⁴ See *id.* Even jurors face the task of articulating reasons for their decisions to other jurors. See Jeffrey Abramson, *Jury Deliberation: Fair and Foul*, in JURY ETHICS: JUROR CONDUCT AND JURY DYNAMICS 181, 193 (John Kleinig & James P. Levine eds., 2006) (“[T]he ideal of the cross-sectional jury seeks to mire jury deliberation in the full-bodied life of the community, recruiting jurors from all walks of life precisely so that the jury room will echo with remarks about what a police officer’s word is worth to a black man or what attention a woman does and does not invite by the clothes she wears or the hours she keeps.”); DENNIS J. DEVINE, JURY DECISION MAKING: THE STATE OF THE SCIENCE 154, 156–57 (2012) (describing the constant conversation, disagreement, and even conflict that jurors engage in when trying to persuade one another to reach a common verdict).

⁷⁵ See *Ligon v. City of New York*, Nos. 12 Civ. 2274(SAS), 08 Civ. 1034(SAS), 2013 WL 227654, at *2–3 (S.D.N.Y. Jan. 22, 2013) (presenting findings of fact in a Fourth Amendment civil case, illustrating a court’s explanation of why the evidence supporting the plaintiff’s factual claims triggered the legal categories involved in issuing a preliminary injunction to halt purportedly unreasonable searches and seizures); DEVINE, *supra* note 74, at 163 (“[G]ood studies have been done, and they show that deliberation content can and does influence jury decisions.”); Nancy Pennington & Reid Hastie, *A Cognitive Theory of Juror Decision Making: The Story Model*, 13 CARDOZO L. REV. 519, 520 (1991) (describing how jurors use stories to fit the facts into a legal category).

⁷⁶ See generally Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021 (1996) (discussing the messages that law sends and their social function).

suffices.⁷⁷ But if the interest invaded is seen as highly important or its degree of invasion as extreme, the higher beyond a reasonable doubt standard is required. Tort injuries, such as negligence in maintaining a sidewalk, are generally viewed as being visited upon individuals by individuals and implicating the public only indirectly.⁷⁸ But planned murder is understood as injuring public values as directly as individual security, values fundamental to how we define the social order.⁷⁹ Partly for this reason, tort suits require proof of the relevant facts only by a preponderance; criminal cases require proof beyond a reasonable doubt.⁸⁰ Note that “facts” have a theoretically objective component (e.g., it is either true or false that John shot George) but also often involve value judgments, such as whether a killing reflected a “depraved heart” (second-degree murder) or reasonable provocation into the “heat of passion” (manslaughter).⁸¹ Depravity is not an objective question in the same way as is who hit whom. The extent to which the values defining “depravity” are seen as especially important or not is partly reflected in the level of the standard of proof.⁸² Likewise, the extent to which the values defining probable cause and reasonable suspicion are seen as especially important or not under the Fourth Amendment should also be reflected in the level of the standard of proof required.

Fourth, because we value some things more than others, our tolerance for error in finding the facts and in applying the law varies.⁸³ The

⁷⁷ This communicative grading is akin to that done in assigning a hierarchy of punishments to various criminal offenses: the most serious offenses receive the highest punishments, the less serious ones lesser punishments. See Andrew E. Taslitz, *The Expressive Fourth Amendment: Rethinking the Good Faith Exception to the Exclusionary Rule*, 76 MISS. L.J. 483, 485 (2006); Andrew E. Taslitz, *The Inadequacies of Civil Society: Law's Complementary Role in Regulating Harmful Speech*, 1 MARGINS 305, 309, 334–38 (2001) [hereinafter Taslitz, *Civil Society*].

⁷⁸ See Taslitz, *Civil Society*, *supra* note 77, at 346–47.

⁷⁹ See *id.* at 346–49.

⁸⁰ See LAUDAN, *supra* note 68, at 66–74 (arguing that empirical research should be undertaken to determine the social value that the public places on punishing crime versus imposing tort liability to determine how to set the level of the standard of proof in civil and criminal cases, but favoring a variety of proof standards for different wrongs rather than, for example, the uniform beyond a reasonable doubt standard in criminal cases).

⁸¹ See PODGOR ET AL., *supra* note 70, at 136–38, 147 (defining depraved-heart murder and heat-of-passion voluntary manslaughter); Taslitz, *Cognitive Obstacles*, *supra* note 29, at 9–10, 66–67 (illustrating the role of values in probable cause factfinding); Taslitz, *Individualized Suspicion*, *supra* note 29, at 170 (discussing the difference between “raw” and normative facts).

⁸² See LAUDAN, *supra* note 68, at 66–76 (discussing the link between values and standards of proof).

⁸³ See Christoph Engel, *Preponderance of the Evidence Versus Intime Conviction: A Behavioral Perspective on a Conflict Between American and Continental European Law*, 33

preponderance standard tolerates a fairly significant risk of error; the beyond a reasonable doubt standard permits much less of a risk.⁸⁴

There are, therefore, good reasons to guide important decisions implicating state power by establishing a specific standard of proof.⁸⁵ Probable cause and reasonable suspicion authorize the state to use force against its citizens and thus likewise should require the articulation of an appropriate correlative standard of proof. Yet the United States Supreme Court has never announced one, much less two (in theory, one standard could govern probable cause, another reasonable suspicion). The Court has repeatedly said that probable cause cannot be quantified, and it has implied the same to be true of reasonable suspicion.⁸⁶ In defining these terms—and it always does so vaguely—not once has it recited the relevant respective standard of proof.⁸⁷ Indeed, the outcomes of the Court’s decisions suggest that the standard, if there is one, is elusive and ever-shifting, thus being no standard at all.⁸⁸ In addressing the logic of this no-standard-of-proof

VT. L. REV. 435, 444 (2009) (“Likewise, in criminal law, guilt must be proven ‘beyond a reasonable doubt.’ The law focuses on alpha errors [false positives] and requires them to be very rare. By implication, ‘preponderance of the evidence’ requires much less certainty. The legal order tolerates a substantially higher error rate.”).

⁸⁴ *See id.*

⁸⁵ Another reason articulated by economists is that the standard of proof affects incentives, thus altering social welfare. As a simple example, if a standard of proof is so high that many offenders against the law in civil actions are not held liable, that is in effect legalizing their behavior. Freed of civil liability, the behavior that society seeks to deter increases. The relative costs of lowering the standard of proof must be weighed against the increased deterrent effect to determine the optimal standard. *See generally* Louis Kaplow, *Burden of Proof*, 121 YALE L.J. 738 (2012) (articulating one such theory). This summary greatly oversimplifies the economic argument, but it expresses its essence. I may here touch on the general idea that standards of proof can affect policing behavior, but a thorough theoretical and empirical economic analysis of the social welfare effects of choosing a particular standard of proof for the probable cause and reasonable suspicion determinations is beyond this Article’s scope. The economic theory also apparently assumes an objective theory of probability that I do not think fully describes judicial decisionmaking, *see infra* text accompanying notes 244–255, and the exact nature of police response to varying the standard of proof in suppression hearings or warrant applications is not something that I think can be determined without serious empirical investigation.

⁸⁶ *See, e.g.,* Maryland v. Pringle, 540 U.S. 366, 371 (2003) (“The probable-cause standard is incapable of precise definition or quantification into percentages because it deals with probabilities and depends on the totality of the circumstances.”); United States v. Arvizu, 534 U.S. 266, 274 (2002) (“Our cases have recognized that the concept of reasonable suspicion is somewhat abstract.”); Ornelas v. United States, 517 U.S. 690, 696 (1996) (cautioning that probable cause and reasonable suspicion are not “finely-tuned standards”) (internal quotation marks omitted).

⁸⁷ *See* ANDREW E. TASLITZ ET AL., CONSTITUTIONAL CRIMINAL PROCEDURE 188–93, 357–63 (4th ed. 2010) (summarizing case law).

⁸⁸ *See* Orin Kerr, *Why Courts Should Not Quantify Probable Cause*, in THE POLITICAL HEART OF CRIMINAL PROCEDURE: ESSAYS ON THEMES OF WILLIAM J. STUNTZ 131, 131

position below—a position the Court never clearly justifies—I focus primarily on probable cause as my example, then return to reasonable suspicion to see whether the same analysis should govern both concepts.

2. *The Argument Against Having a Standard of Proof for Probable Cause*

To my knowledge, the only academic to have defended at any length the Court's no-standard-of-proof position for probable cause is Orin Kerr. Kerr's argument is that adopting a standard of proof for probable cause will replace judges' intuitive understanding of the importance of missing evidence—evidence not mentioned by the police—in establishing probable cause, leading judges to overvalue weak evidence that such cause exists.⁸⁹ His argument that current procedures do not maximize the amount of evidence showing both the strengths and weaknesses of the case for probable cause is right on the money. But his argument that articulating a standard of proof will make things worse and is otherwise undesirable is wrong.

Probable cause affidavits, Kerr explains, recite “the officer’s affirmative reasons to think probable cause exists.”⁹⁰ But these same affidavits fail to mention what *unsuccessful* investigative efforts by the police were made.⁹¹ Nor do the affidavits mention what investigative steps they chose not to take and why.⁹² Yet these two pieces of information are critical in determining the probabilities of a suspect’s guilt or of the existence and location of damning evidence.⁹³ The first of these evidentiary puzzle pieces matters because failed efforts to find evidence of guilt that should have succeeded were the suspect in fact guilty constitute exculpatory evidence.⁹⁴ If an accused child murderer passes a polygraph test (assuming

(Michael Klarman et al. eds., 2012) (describing the Court’s definition of probable cause, and especially of the associated standard of proof, as “no explanation at all, of course”).

⁸⁹ See *id.* at 131–33.

⁹⁰ See *id.* at 132. For an illustration of the kinds of assertions made in probable cause affidavits, see TASILTZ ET AL., *supra* note 87, at 216–18, 241–43.

⁹¹ See Kerr, *supra* note 88, at 132–33.

⁹² See *id.*

⁹³ See *id.*

⁹⁴ The Court does require the prosecution to produce to the defense all material exculpatory evidence that may lead to an acquittal at trial. See *Brady v. Maryland*, 373 U.S. 83, 87 (1963). But there is no analogous obligation requiring the state to produce exculpatory evidence to the magistrate when filing a warrant application or to defense counsel before or during a suppression hearing. The closest equivalent—and it is not very close—is the rule of *Franks v. Delaware*, 438 U.S. 154 (1978), which permits invalidating a search warrant that intentionally or recklessly misrepresents facts without which probable cause would not have existed. *Id.* at 156. Presumably this rule would extend to exclusions of exculpatory evidence but only where the missing evidence was so important that it alone would have demonstrated probable cause’s absence. See Kerr, *supra* note 88, at 134.

that the polygraph is sufficiently reliable); has an airtight alibi offered by impeccable, disinterested witnesses who successfully stand up to police probing; and left no physical evidence at the crime scene that could be linked to him where such evidence would be expected given the particular facts of the case, the probabilities of the suspect's guilt are significantly reduced.⁹⁵ A judge hearing only evidence of guilt but unaware of this exculpatory evidence will potentially be misled. The second piece of the evidentiary puzzle matters because police not trying investigative techniques normally expected of them, and offering no good reason for their failure, raises suspicion that they lack subjective good faith.⁹⁶ For example, if testable DNA evidence was available and they chose not to test it, this suggests that they had reason to fear it would exculpate the defendant. Consequently, they avoided the test. This bad faith calls into question their motives, objectivity, and competency, thus raising reasons to distrust their conclusion that probable cause of guilt exists.

Kerr offers the following example to make his point.⁹⁷ Assume that an empirical study reveals that there is a 60% chance that any room in a college dormitory contains drugs. Assume further that an excellent drug-sniffing machine, the Potdetector 9000, which is almost 100% accurate, exists. The machine need merely sniff the air outside a dorm room and thus does not require any search to react to the presence of drugs.⁹⁸ The police further conducted an undercover investigation implicating half the dorm rooms in drug possession.⁹⁹ Student A's dorm room was not so implicated. The police submit an affidavit mentioning only the 60% figure and its

Moreover, the burden of proving fraud or recklessness rests with the defendant, *see* TASLITZ ET AL., *supra* note 87, at 228, who rarely will be aware at this early stage of the litigation, if ever, of the police's possession of exculpatory evidence. *See* Kerr, *supra* note 88, at 134.

⁹⁵ The example is mine.

⁹⁶ *See* Kerr, *supra* note 88, at 138.

⁹⁷ *See id.* at 135–37. I have changed Kerr's example here only slightly, such as giving the fictional student the name "Student A," where I felt that it would add clarity to my exposition.

⁹⁸ *Cf.* Illinois v. Caballes, 543 U.S. 405, 409 (2005) (holding that a drug dog's sniff of a lawfully seized car during a routine traffic stop did not constitute a search because the dog reacts solely to contraband); United States v. Place, 462 U.S. 696, 707 (1983) (reaching a similar holding for a canine drug sniff of luggage in a public place). *But see* Florida v. Jardines, No. 11-564, slip op. at 8–10 (U.S. Mar. 26, 2013) (holding that police using a drug-sniffing dog at the entrance to a private home does implicate the Fourth Amendment); Florida v. Harris, 133 S. Ct. 1050, 1058 (2013) (finding reliability of a drug-sniffing dog relatively easy to establish via a flexible, commonsense test).

⁹⁹ Undercover investigations also do not ordinarily implicate the Fourth Amendment. *See generally* United States v. White, 401 U.S. 745 (1971); Hoffa v. United States, 385 U.S. 293 (1966); Lewis v. United States, 385 U.S. 206 (1966); Lopez v. United States, 373 U.S. 427 (1963).

empirical bases to justify searching the room of Student A for drugs. The police never mention that they failed to use the Potdetector 9000. Nor did they mention the undercover investigation. How would a judge react?

Kerr argues that in practice the judge's intuitions will lead her to deny probable cause.¹⁰⁰ The 60% likelihood of drugs is the chance of discovering them by randomly selecting a room. But the judge knows that police do not randomly select rooms.¹⁰¹ Perhaps this is because they have limited resources for repeated trial and error in this fashion; perhaps it is because they know judges will not tolerate such random action. Whatever the explanation, the judge will therefore want the backstory explaining why the police would think that this particular room fits in the 60% where drugs would be found.¹⁰² Without knowing why the police chose to submit only generalized probability evidence, the judge is troubled, even suspicious of the police actions.¹⁰³ The police must be hiding something. That something may include their refusal to use the Potdetector 9000—the use of which could have conclusively ruled Student A's guilt in or out. The other hidden item of evidence, of course, is the undercover investigation that did *not* implicate Student A's room.

But Kerr next makes a startling assertion: the judge's intuitions will fail if she is given a standard of proof, specifically 47%, to guide the probable cause determination.¹⁰⁴ Kerr argues two cognitive biases will thereby be brought into play: the representativeness heuristic and anchoring.¹⁰⁵ The representativeness heuristic, as Kerr defines it, is the idea that individuals “measure probability by reference to data that seem to resemble the probability to be estimated.”¹⁰⁶ Kerr leaves out in his

¹⁰⁰ See Kerr, *supra* note 88, at 137.

¹⁰¹ See *id.*

¹⁰² See *id.* at 138.

¹⁰³ See *id.*; cf. Sherry F. Colb, *Probabilities in Probable Cause and Beyond: Statistical Versus Concrete Harms*, 73 LAW & CONTEMP. PROBS. 69, 69 (2010) (discussing generally the strengths and weaknesses of the human preference for evidence of specific harms done to concrete individuals over statistical likelihood of harms).

¹⁰⁴ See Kerr, *supra* note 88, at 141. Kerr apparently derived his 47% illustrative figure from a 1980s survey of federal judges, which found a broad range of quantitative estimates of probable cause (10%–90%) but averaging 44.52% certainty. See C.M.A. McCauliff, *Burdens of Proof: Degrees of Belief, Quanta of Evidence, or Constitutional Guarantees?*, 35 VAND. L. REV. 1293, 1327–28 (1982). But see Christopher Slobogin, *Let's Not Bury Terry: A Call for Rejuvenation of the Proportionality Principle*, 72 ST. JOHN'S L. REV. 1053, 1082–85 (1998) (quantifying the probable cause standard of proof at 50%).

¹⁰⁵ See Kerr, *supra* note 88, at 139–40.

¹⁰⁶ *Id.* at 139; see also Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 84, 84–85 (Daniel Kahneman et al. eds., 1982) [hereinafter JUDGMENT UNDER UNCERTAINTY] (explaining the representativeness heuristic). Rephrased, we make probability judgments

definition the current understanding that *the reason why* some information is viewed as “representative” is often because it “fit[s] a stereotype or [is seen as] diagnostic of group membership.”¹⁰⁷ The frequency of representative events is likely to be overestimated, indeed viewed as more frequent than other events of which the representative one is a subset—a logical impossibility.¹⁰⁸ For example, subjects given a description of “Linda” as “31 years old, single, outspoken, and very bright”; having majored in philosophy; and, as a student, having been concerned with discrimination and social justice to the point of participating in antinuclear demonstrations, think it more likely that Linda is a feminist activist bank teller than that she is simply a bank teller.¹⁰⁹ But that cannot logically be true because feminist bank tellers are a subset of all bank tellers (unless we assume that every bank teller is by definition a feminist). Because the description of Linda most closely fits that of cultural stereotypes of feminists, the subjects incorrectly assumed that Linda was a feminist bank teller.¹¹⁰

Anchoring is the idea that people will judge probabilities, indeed, that they will make a numerical estimate in a particular case, by adjusting the probabilities up or down based upon a given starting point.¹¹¹ For example, whoever makes the first offer in a negotiation may have an advantage because it anchors the opponent’s estimates of the most likely result.¹¹² Anchoring effects are observed even if uninformative numbers are used, such as estimates of the number of countries in the United Nations being influenced by first being told the number of doctors in a local phone

based on the resemblance of one thing to another *rather than* its likelihood or frequency. More formally stated, the representativeness heuristic means that “probability judgments (the likelihood that *X* is a *Y*) are mediated by assessments of resemblance (the degree to which *X* ‘looks like’ a *Y*).” Daniel Kahneman & Shane Frederick, *Representativeness Revisited: Attribute Substitution in Intuitive Judgment*, in *HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT* 49, 49–50 (Thomas Gilovich et al. eds., 2002).

¹⁰⁷ MARK KELMAN, *THE HEURISTICS DEBATE* 23 (2011).

¹⁰⁸ *See id.* This logical error, called the “conjunction fallacy,” results from the representativeness heuristic but is not the heuristic itself. *See* Amos Tversky & Daniel Kahneman, *Extensional Versus Intuitive Reasoning: The Conjunction Fallacy in Probability Judgment*, 90 *PSYCHOL. REV.* 293, 293 (1983). The term “conjunction fallacy” is used because the joint or conjunctive probability of two events occurring is always less than or equal to the probability of only one of those events occurring. *See* Tversky & Kahneman, *supra* note 106, at 98.

¹⁰⁹ *See* Tversky & Kahneman, *supra* note 106, at 92–93.

¹¹⁰ *See id.* at 96.

¹¹¹ *See* PAUL BREST & LINDA HAMILTON KRIEGER, *PROBLEM SOLVING, DECISION MAKING, AND PROFESSIONAL JUDGMENT: A GUIDE FOR LAWYERS AND POLICYMAKERS* 216, 267–72, 472–73, 519 (2010) (explaining the anchoring heuristic and how it can sometimes interfere with optimal human reasoning).

¹¹² *See id.* at 268–69.

book.¹¹³

Kerr argues without explanation that the 60% likelihood of drugs being found in a dorm room in his example seems representative of the probability (probable cause) being calculated.¹¹⁴ That 60% will act as an anchor in making the probable cause judgment. The judge will thus look to see if there is any reason to lower the probability to below the 47% marker in this case. But, having only the 60% figure, there is no such reason, so the judge will find probable cause.¹¹⁵ Kerr asserts this point as self-evident, never explaining why the judge will lose her skepticism about missing evidence linking the generalized probability to the specific suspect.¹¹⁶

Now Kerr varies the hypothetical.¹¹⁷ Remember that the police

¹¹³ See KELMAN, *supra* note 107, at 23.

¹¹⁴ How does a 60% likelihood of drugs in a dorm room “resemble” probable cause that there are drugs in a dorm room? Perhaps it is that both terms involve probability and, more specifically, the probability of drugs being found in a specific location. That seems plausible. But there are also no overt stereotypes involved, like that of how “feminists” behave in the Linda example above. See *supra* text accompanying notes 108–114. Nor are there particularly vivid facts (being told simply that an empirical study led to the 60% figure is hardly an engaging image) that would make the 60% figure most “available” to memory, leading subjects to focus on the 60% more than on any other information. See BREST & KRIEGER, *supra* note 111, at 51 (describing the “availability heuristic”); *id.* at 271 (arguing that anchoring—the power of the first number presented to “pull” estimates of an event toward that number, a phenomenon discussed *infra*—“may increase the availability of features that the anchor and the target—e.g., the number to be determined—hold in common, selectively *activating* information about the target that is consistent with the anchor (while not activating other information)”). My point is this: even if the representativeness or availability heuristics are triggered, there are reasons to believe that that trigger is less powerful than may be true in other instances. That matters because of the ability to reduce or eliminate the effect of many biases by varying situational and informational factors, as is discussed below. See, e.g., Barbara Mellers et al., *Do Frequency Representations Eliminate Conjunction Effects?: An Exercise in Adversarial Collaboration*, 12 PSYCHOL. SCI. 269 (2001).

¹¹⁵ See Kerr, *supra* note 88, at 140–41.

¹¹⁶ Kerr relies on the infamous “blue bus” example crafted by empirical researchers Amos Tversky and Daniel Kahneman, to make this point. See *id.* at 139–40; Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, 12 OR. RES. INST. BULL. 1. (1972). Without going through the details of that example, it is worth noting that Kerr saw the subjects’ error in estimating probability judgments there as due to their “focusing” on a specific probability number they were given. It is important to note several points here, however: first, although it illustrates error resulting from the representativeness heuristic, simple changes in how data is presented can correct such errors, see *infra* text accompanying note 127; second, the experiment involved *only* generalized probability statements rather than the additional, more concrete, individualized evidence that the probable cause determination requires, see Taslitz, *Individualized Suspicion*, *supra* note 29, at 145; and third, Kahneman and Tversky themselves saw awareness of the representativeness and other heuristics as but cautions and as most useful in making subjective, rather than objective, probability judgments. See *infra* text accompanying notes 213–214.

¹¹⁷ See Kerr, *supra* note 88, at 141–43.

conducted an undercover investigation implicating half the rooms in drugs, Suspect A's room not being in that half. Assume now a 90% likelihood that all rooms implicated in drugs in fact contained drugs. Ignore the Potdetector 9000 possibility for these purposes. Once we know that Suspect A's room was not in the 50% of the rooms linked to drugs, when combined with the empirical study finding a 60% likelihood of all the rooms having drugs, the new probability of drugs in the nonimplicated rooms, like Student A's, is 30%, says Kerr, well below the 47% standard of proof for probable cause. (I am putting aside whether Kerr's probability analysis is correct; he does not explain it, and my goal here is simply to recount his argument.) If the judge knew this information, the judge would unquestionably not find probable cause. But the existence of a 47% standard of proof has robbed this judge of her skepticism about potential missing evidence. She will find probable cause, though she is radically wrong.

Understanding the weaknesses in the latter portion of Kerr's argument (about the elimination of judicial skepticism) and the incompleteness of his argument about missing evidence sheds much light on the value of having a standard of proof in the probable cause determination.¹¹⁸ It is that task to which this Article next turns.

3. *The Flaws in Kerr's Argument Against Having a Probable Cause Standard of Proof*

i. Objective Probability Data Relevant to Probable Cause Rarely Exists

As noted above, Kerr relies for his point on an extended example—the dorm room drug search—in which an empirical study creates a high, objective, generalized probability that drugs will be found in a randomly selected dorm room. Yet it is likely to be the rare case that such generalized, objective probability data is available,¹¹⁹ though, as is

¹¹⁸ One well-known evidence scholar has indeed argued that the essential purpose of having a standard of proof is to encourage parties to produce evidence that would otherwise be missing from the factfinder's awareness. See Dale A. Nance, *Evidential Completeness and the Burden of Proof*, 49 HASTINGS L.J. 621, 621 (1998).

¹¹⁹ Not one United States Supreme Court case addresses generalized probability data in the area of probable cause. See TASLITZ ET AL., *supra* note 87, at 188–93. Nor, except as noted below, is there much academic literature on the point, nor have I ever seen a case raising it in bar and law reform activities or among the many alumni in criminal practice with whom I stay in touch. There has been writing on group-based searches, primarily either in the administrative or special needs search areas—“dragnets” (an umbrella term for group-based searches) or data mining and its cousins—none of which concern me here. See *id.* at 416–66 (concerning administrative and special needs searches); Christopher Slobogin, *Government Dragnets*, 73 LAW & CONTEMP. PROBS. 107, 110–24 (2010) (discussing

addressed shortly, that may change somewhat in the future.¹²⁰ Absent such data, it is hard to see how a specific number can exist to serve as an anchor.

ii. The Standard of Proof, Rather than the Probability Data, Is More Likely to Serve as an Anchor

Nor is it clear why the standard of proof, 47% in his example, would not serve as the anchor rather than the 60% figure.¹²¹ The first figure to

Supreme Court cases involving “dragnet” searches). These search categories do involve implicit or explicit objective probability judgments, but my focus in this piece is entirely on searches targeted at specific individuals or locations. In that area of focus, there is little evidence that numerical, generalized objective probability data, outside of crime mapping and its fellow traveler, discussed below, plays much of a role.

¹²⁰ See *infra* text accompanying notes 309–315. Erica Goldberg, in a recent piece, argues that much greater effort should be made by the police in the future to collect a far wider range of mathematical data relevant to police search and seizure practices than is currently the case. See Erica Rachel Goldberg, *Getting Beyond Intuition in the Probable Cause Inquiry*, 17 LEWIS & CLARK L. REV. (forthcoming 2013) (manuscript at 44–45), available at http://elibrary.law.psu.edu/fac_works/34/.

¹²¹ One reader of a draft of this Article commented that Kerr might argue that the 60% figure is a “factual anchor,” one based on case-specific facts; in Kerr’s hypothetical, the conducting of an empirical study of the likelihood of drugs being found in a randomly selected dorm room at a particular college. The 47% standard of proof, on the other hand, is the same in every case, thus less likely to be chosen as an anchor in a particular case. I am not sure why this should be so. Many studies of the anchoring phenomenon have involved completely abstract, obviously untrustworthy, even irrelevant numbers; indeed anchoring occurs, such as in estimating the length of the Mississippi River, even by being exposed to a drawing of long rather than short lines. See BREST & KRIEGER, *supra* note 111, at 270. Furthermore, “anchors that we encountered along the way and were swayed by remain with us long after the initial decision itself.” DAN ARIELY, *PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS* 36 (2008). Thus, “our first decisions resonate over a long sequence of decisions.” *Id.* Accordingly, “[f]irst impressions are important, whether they involve remembering that our first DVD player cost much more than such players cost today (and realizing that, in comparison, the current prices are a steal) or remembering that gas was once a dollar a gallon, which makes every trip to the gas station a painful experience.” *Id.* If, as I argue here, the 47%, not the 60% figure, creates the first impression, then there is no reason why anchoring alone should be dominated by the latter rather than the former number. Moreover, although the 60% figure is more case-specific than the posited ever-constant 47% standard of proof, both quantities are quite abstract, neither addressing in the number alone individualized or vivid information about a specific dorm room or person. There is additionally some empirical data suggesting that merely presenting abstract or mathematical data to laypersons is less persuasive than case-specific descriptions of persons and events. See ANDREW E. TASLITZ, *RAPE AND THE CULTURE OF THE COURTROOM* 133 (1999) (“[T]he impact of such general [social science expert] background testimony, while significant, is quite limited next to testimony that links general principles to the case before the court.”); David L. Faigman & A.J. Baglioni, *Bayes’ Theorem in the Trial Process: Instructing Jurors on the Value of Statistical Evidence*, 12 LAW & HUM. BEHAV. 1, 16 (1988) (“[O]ur results . . . suggest, contrary to Tribe’s (1971a) assertion, that an expert’s Bayesian formulation will not overwhelm the average trier of fact. Courts, it seems, should be less concerned with jurors being overwhelmed by the complexity of statistical techniques

which judges will be exposed, and the one with which they will be most familiar, is the 47% standard of proof for probable cause, if that standard were widely adopted. If so, a judge should instead be asking what reason is there to believe she should move up *in this case* from that 47% rather than down from the 60% figure—precisely the opposite of Kerr’s analysis.¹²² Yet Kerr argues that, absent persuasive case-specific evidence of this sort, a judge is unlikely to depart sufficiently from her anchor.¹²³

Anchoring, especially in conditions of uncertainty, is a robust phenomenon, resisting efforts to combat it.¹²⁴ But initial anchors have far stronger effects than later ones.¹²⁵ Anchors may simply be the first figure to which a decisionmaker is exposed.¹²⁶ Barring countervailing phenomena, there is thus good reason to believe that the 47%, not the 60%, figure will indeed serve as the anchor. Importantly, anchors do not prevent adjustment in the face of other evidence. But adjustment may not be as large as the evidence suggests.¹²⁷ If this is so, however, judges may undervalue evidence of probable guilt (evidence above the 47% figure), rather than overvaluing it as Kerr claims.

Of course, they may overvalue weak evidence of guilt (under the 47% mark), too, if given a standard of proof. There is, however, little empirical

and more concerned with impressing upon jurors the relevance of those techniques.”); David McCord, *A Primer for the Nonmathematically Inclined on Mathematical Evidence in Criminal Cases: People v. Collins and Beyond*, 47 WASH. & LEE L. REV. 741 (1990) (summarizing much of the research in this area and specifying the conditions under which statistical evidence is unlikely to unduly influence the jury). Given the relative abstractness of the 60% figure, I find it hard to see, therefore, why it should have a stronger grip on the imagination than the 47% figure, especially if the latter is presented earlier and repeatedly. See DEVINE, *supra* note 74, at 131–33.

¹²² See ARIELY, *supra* note 121, at 31–36 (reviewing research showing that, rather than “flip-flopping” among new anchors as they are encountered, the first or initial anchor to which we are exposed lasts for a long time, dominating over other potential anchors).

¹²³ See Kerr, *supra* note 88, at 140–41.

¹²⁴ See BREST & KRIEGER, *supra* note 111, at 271–72 (noting that anchoring resists adequate adjustment even when subjects are warned about the phenomenon); RICHARDS J. HEUER, JR., *PSYCHOLOGY OF INTELLIGENCE ANALYSIS* 152 (1999), available at <https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/psychology-of-intelligence-analysis/PsychofIntelNew.pdf> (recommending, while admitting that it has not yet been empirically tested, “ignor[ing] one’s own or others’ earlier judgments and rethink[ing] a problem from scratch” as a way to compensate for the anchoring heuristic); MICHAEL J. MAUBOUSSIN, *THINK TWICE: HARNESSING THE POWER OF COUNTERINTUITION* 22 (2009) (arguing that “[d]eveloping and recognizing a full range of outcomes is the best protection against the anchoring effect if you are sitting on the other side of the negotiating table”).

¹²⁵ See ARIELY, *supra* note 121, at 31–36.

¹²⁶ See *id.*

¹²⁷ See BREST & KRIEGER, *supra* note 111, at 269–71.

evidence on the point, though the little evidence available does suggest that warrant-issuing magistrates overvalue information in probable cause affidavits concerning black suspects relative to white suspects.¹²⁸ But subconscious racial bias seems the more likely culprit here because numerical estimates of suspect guilt were not involved—as they rarely are.¹²⁹ Moreover, the risk of judges overvaluing some weak evidence under rare circumstances is not necessarily preferable to the risks raised by not having a standard of proof at all.¹³⁰

¹²⁸ See Laurence A. Benner, *Racial Disparity in Narcotics Search Warrants*, 6 J. GENDER RACE & JUST. 101, 105 (2002); Laurence A. Benner & Charles T. Samarkos, *Searching for Narcotics in San Diego: Preliminary Findings from the San Diego Search Warrant Project*, 36 CAL. W. L. REV. 221, 230–33 (2000).

¹²⁹ See sources cited *supra* note 124.

¹³⁰ Judges may, of course, overvalue weak evidence even where no numerical estimates of guilt are involved. Specifically, judges may suffer from the “availability heuristic”—overestimating probabilities based on the information most easily available to the judges rather than on a more complete set of information. See BREST & KRIEGER, *supra* note 111, at 252–58. Police and judges often deal with the guilty or those for whom there is at least substantial evidence of guilt. They may, therefore, ignore base rates—the frequency of criminal guilt in the broader population—leading them to view the available evidence as more indicative of probable guilt than it really is. See Jeffrey J. Rachlinski, *Bottom-Up Versus Top-Down Lawmaking*, 73 U. CHI. L. REV. 933, 942–43 (2006) (arguing that because judges face vivid individual cases, they may, given the availability heuristic, come to view the unusual cases before them as common). Laypersons are able to correct for the availability bias when told to sit as jurors but not when simply asked their opinion—at least if the available information seems irrelevant to an unbiased interpretation of evidence. See BREST & KRIEGER, *supra* note 111, at 257. Heightening laypersons’ awareness of the availability bias’s presence and the reasons for its influence in a specific case also might loosen the bias’s hold, but that can lead to overcorrection: discounting probability more than should be the case. See *id.* at 256. Nevertheless, given the similarity between lay and judicial reasoning, these findings might suggest that the grip of the availability heuristic on judges can sometimes be loosened. See Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 778–81 (2001) (finding, in a study of 167 federal magistrates, that their decisionmaking was affected by five common cognitive illusions—anchoring, egocentric bias, hindsight bias, the representativeness heuristic, and framing—though they were less influenced by the last two illusions than were laypersons, while also suggesting that teaching judges to adopt multiple perspectives might help to reduce some of these illusions’ impact). Ultimately, the empirical research suggests that judges—especially busy trial judges—reason intuitively much in the way that laypersons do, rather than deliberately. See Chris Guthrie et al., *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 29–33 (2007). Nevertheless, training and feedback to judges (including frequent peer review), allowing them more decisionmaking time, increased use of scripts and checklists, consistent opinion-writing requirements, and more frequent use of detailed multifactor tests that remind judges of all relevant factors to consider hold promise for moving judges toward more deliberative, less biased reasoning. See *id.* at 33–43; see also Jeffrey J. Rachlinski, *Cognitive Errors, Individual Differences, and Paternalism*, 73 U. CHI. L. REV. 207, 220–21 (2006) (suggesting that proper training, not experience, is more important to reducing judicial cognitive biases). The concept of weight, discussed *infra*, which requires judges to be attentive to the completeness and quality of the evidence before

*Maryland v. Pringle*¹³¹ illustrates the point. There, an officer conducted a consent search of a vehicle. There were three occupants: the driver; the defendant, who was in the front passenger seat; and a third party in the rear seat. The officer found drugs hidden behind an upraised armrest next to the rear passenger. When no one would confess to possessing the drugs, the officer arrested all three men. He later released two of them when the defendant finally confessed. Under Maryland law, all three occupants could be presumed jointly to possess the drugs only if they were visible to all occupants.¹³² These drugs were not. That meant that only one of the three could legally be treated as the possessor, creating a one-third likelihood (absent any other evidence) that any one occupant was guilty.¹³³ The Court upheld the defendant's arrest.¹³⁴ The only possible explanations for finding probable cause here were that: (1) the Court ignored Maryland

them, combined with the requirement of accountability (that is, express reasoned explanation, as with formal opinion writing) implicit in probable cause, *see infra* notes 347–391 and accompanying text, can aid in prompting judges to more deliberate thinking in the probable cause area. Similarly, a specific standard of proof might serve as a reminder that judges must carefully evaluate the evidence of probable cause for its sufficiency rather than simply relying on intuition. Furthermore, a more precise understanding of what probable cause means can provide the checklists, scripts, multifactor considerations, and other reminders that can aid judges in more deliberative thinking processes. In any event, there is no reason to believe that these features argued for here will worsen the availability bias, yet, for the reasons noted, they might help to alleviate it.

¹³¹ 540 U.S. 366 (2003).

¹³² *See Pringle v. State*, 805 A.2d 1016, 1035 (Md. 2002), *rev'd*, 540 U.S. 366 (2003) (stating that “even at the probable cause to arrest stage,” police must show that every person arrested for possession had “‘knowledge’ of the controlled dangerous substance and ‘dominion or control’ over the substance,” such knowledge permissibly being inferred under Maryland law only if the drugs in a car were fully visible to all occupants).

¹³³ One reader of a draft of this piece thought that there was sufficient evidence that all three occupants jointly possessed the drugs because the police also found, pursuant to a “consent search,” \$763 in the glove compartment. *See Pringle*, 540 U.S. at 371–72. I am not convinced. Money in a glove compartment may most logically be linked to the driver or owner of the car. Pringle was neither. Furthermore, the drugs were found behind an upraised armrest next to a backseat passenger *other than Pringle*. There is no reason to believe that Pringle himself, neither owning nor driving the car, nor being near the drugs, was aware of their presence. Equally importantly, Maryland law forbade that inference in judging the existence of the elements of the crime. Pringle thus cannot be charged with knowing that the money in the closed glove compartment was there nor that the drugs were present in the backseat, much less of being aware of both facts jointly. The Court admittedly seems to conclude that mere accessibility of the drugs is sufficient to find knowledge of their presence—again, ignoring Maryland law defining the offense—and that a drug dealer would be unlikely to admit an innocent person into his car, a highly questionable assumption. *See id.* at 373–74. I thus found the state court's majority opinion on these points far more persuasive than the United State Supreme Court's reasoning. *See TASLITZ ET AL.*, *supra* note 87, at 189–95 (articulating a more detailed summary and analysis of *Pringle*).

¹³⁴ *Pringle*, 540 U.S. at 368.

law—which, its precedent says, it may not in determining probable cause (though it may ignore state law for certain other Fourth Amendment purposes);¹³⁵ (2) the Court found probable cause in error given that a one-third likelihood of guilt was lower than their previous precedent ever suggested was plausible;¹³⁶ (3) the Court implicitly relied on a standard of proof but lowered it from previous levels;¹³⁷ (4) the Court varied the level of proof for probable cause with the particular circumstances without ever admitting that it was doing so or explaining what circumstances matter and why;¹³⁸ (5) probable cause is a shifting, ill-defined concept, something creating no effective restraints on government because the Court “knows it when it sees it.”¹³⁹ None of these explanations are flattering to Kerr’s non-standard-of-proof-required vision of probable cause. Taken as a whole, they suggest that absence of a standard of proof gives neither the Court nor lower courts, nor even the police, helpful guidance. Furthermore, the ambiguity of the concept makes it particularly subject to subconscious ideological manipulation, an expression of raw power not justified by any clear or plausible explanation.¹⁴⁰

¹³⁵ Probable cause means probable cause to believe that a specific offense has been committed, *as defined by the law of the relevant jurisdiction*. See, e.g., *Ligon v. City of New York*, No. 12 Civ. 2274, 2013 WL 227654, at *3–4 & n.11 (S.D.N.Y. Jan. 22, 2013) (interpreting United States Supreme Court probable cause case law and focusing on whether, under New York law, police had reasonable suspicion to believe that people stopped outside of a housing project were committing the crime of trespass—a central question to determining whether the Fourth Amendment had been violated). *Virginia v. Moore*, 553 U.S. 164 (2008), is consistent with the analysis in *Ligon*. *Moore* arguably held that a police violation of a state statute prohibiting arrest for a citation-only offense was irrelevant to the reasonableness of the arrest under the Fourth Amendment, given that there was unquestionably probable cause. *Id.* at 171. But *Moore* did not change the meaning of probable cause itself. *Moore* did not create “free-floating” probable cause, that is, probable cause that something “bad” is afoot despite the inability to characterize that something bad as a violation of a specific statute—in *Moore*, the state code’s prohibition on possessing cocaine with intent to sell it. The Court has, even post-*Moore* and post-*Pringle*, been understood by lower courts as still requiring probable cause that a specific crime violating a specific (often state, not federal) statute be shown. See *Ligon*, 2013 WL 227654, at *2–3. That the Maryland court cited as support for its reading of Maryland law cases applying at trial is irrelevant. State statutory law defines the elements of crimes, and those elements must be shown to be involved to some degree of confidence for probable cause to exist. The Maryland court held that trial-level case law involving those elements’ meanings was equally relevant at the probable cause stage. *Pringle*, 540 U.S. at 370–72.

¹³⁶ See TASILTZ ET AL., *supra* note 87, at 188–93 (discussing pre-*Pringle* precedent).

¹³⁷ See *id.* at 193–95 (suggesting this explanation).

¹³⁸ See *id.* (suggesting this explanation).

¹³⁹ See *id.* (describing some alternative interpretations).

¹⁴⁰ See, e.g., LEE EPSTEIN ET AL., *THE BEHAVIOR OF FEDERAL JUDGES: A THEORETICAL AND EMPIRICAL STUDY OF RATIONAL CHOICE* 106–49 (2013) (analyzing empirical data demonstrating that United States Supreme Court Justices frequently vote in an ideological

iii. The Representativeness Heuristic Can Be Overcome

Kerr also relied on the representativeness heuristic as a source of judicial bias.¹⁴¹ But unlike with the anchoring phenomenon, some heuristics, of which the representativeness heuristic is one example, are “not some hardwired bias[es] that necessarily cause[] people to think irrationally about frequency and probability. Instead, [they are] tentative decision-making tool[s] that can be relatively easily elicited or suppressed, depending on how the information is presented and questions are posed.”¹⁴² Indeed, expressing probabilities in concrete numbers showing frequencies rather than in percentages—for example, “60 out of 100”—is a simple device that helps to avoid triggering the representativeness heuristic.¹⁴³ Lawyers in an adversary system should be motivated to present information, such as in a frequency format, to overcome their opponents’ efforts to rely on the representativeness heuristic.¹⁴⁴ The 60% figure in Kerr’s example thus does not necessarily capture the judicial mind via the representativeness heuristic, especially given the primacy of the 47% figure for the standard of proof.¹⁴⁵

Kerr also offers no empirical proof that such heuristics will so dominate all judicial reasoning processes that judicial intuitions about missing evidence will simply shut down. He thinks it self-evident that courts will wonder about missing evidence, particularly when confronted solely with generalized probability data, but magically lose such skepticism if we add in a standard of proof. This position assumes that judges are automatons beyond the reach of conscious, deliberative, or institutional forces.¹⁴⁶ But doctrine, while having far less impact than formalism

manner where there is room in the law for disagreement).

¹⁴¹ See *supra* text accompanying notes 105–107. A “heuristic” is a rule of thumb, but these heuristics evolved, it should be noted, because they are often right; thus, they are not always a source of bias. See GERD GIGERENZER, *GUT FEELINGS: THE INTELLIGENCE OF THE UNCONSCIOUS* 47–49 (2007). See generally KELMAN, *supra* note 107, at 229–41 (comparing the “heuristics and biases” school, which focuses on heuristics as leading to logical flaws with the “fast and frugal heuristics” school, which focuses more on the evolved benefits of heuristics, finding some truth in each position, depending upon the circumstances).

¹⁴² Charles Yablon, *The Meaning of Probability Judgments: An Essay on the Use and Misuse of Behavioral Economics*, 2004 U. ILL. L. REV. 899, 925 (discussing the availability heuristic, but noting that his point also applies to the representativeness heuristic).

¹⁴³ See GERD GIGERENZER, *ADAPTIVE THINKING: RATIONALITY IN THE REAL WORLD* 250 (2000).

¹⁴⁴ See John Leubsdorf, *Evidence Law as a System of Incentives*, 95 IOWA L. REV. 1621, 1624 (2010) (“Adversary incentives provide a familiar and powerful, but ultimately incomplete, justification for entrusting the presentation of evidence to the parties rather than to the courts.”).

¹⁴⁵ See *supra* text accompanying note 104.

¹⁴⁶ Cf. Andrew E. Taslitz, *Forgetting Freud: The Courts’ Fear of the Subconscious in*

suggests, does often have some impact on the courts, especially the trial courts.¹⁴⁷ The Court has repeatedly declared that probable cause is an individualized, not a generalized, decision focusing on evidence of a particular individual's guilt or possession of evidence of crime.¹⁴⁸ Lower court culture may also be imbued with the teachings of this doctrine, though solid empirical evidence is once again lacking. Individualization demands that there be evidence beyond some generalized objective statistical probability linking a defendant to a crime.¹⁴⁹ Furthermore, at least upon appeal, lower courts must articulate and defend their probable cause decisions in writing.¹⁵⁰ The empirical data suggests that the mere knowledge that they may have to do so in any given case, even if they do not in advance know which cases will be appealed, will improve their decisionmaking about the availability of adequate individualizing evidence.¹⁵¹ If they do not articulate their decisions in writing, the fault may be in insufficiently clear or muscular precedent.¹⁵² But to think that any one or two heuristics routinely and entirely control judicial judgments without considering other factors, such as the institutional environment, makes little sense.¹⁵³ Moreover, any good judge should want to know how the police arrived at the 60% and why they think that A's dorm room is one of the 60% containing drugs rather than the 40% that are drug free.

Kerr's explanation of judges' likely intuitive reactions of suspicion about missing evidence is also problematic. Kerr argues that the absence of individualized evidence raises judicial suspicions that police are acting in

Date Rape (and Other) Cases, 17 B.U. PUB. INT. L.J. 145, 155–57, 169–80 (2007) (elaborating on these themes and discussing judicial attitudes toward them); Andrew E. Taslitz, *Willfully Blinded: On Date Rape and Self-Deception*, 28 HARV. J.L. & GENDER 381, 392–94 (2005) [hereinafter Taslitz, *Willfully Blinded*] (explaining that there are degrees to which thoughts are inaccessible to consciousness, that some can be made accessible by effort, and that others, though never accessible to consciousness, can nevertheless be altered by conscious action and behavior; and explaining that there is often constant interaction between conscious and subconscious thought).

¹⁴⁷ See EPSTEIN ET AL., *supra* note 140, at 237–53 (concluding that ideology plays a relatively small role in decisionmaking by federal district court judges and that legalistic decisionmaking based upon precedent plays a far greater role; though ideology's influence is greater where district judges have more discretion, it is still modest; and the likely causes of this result include a “selection effect” (cases least subject to legalistic thinking pass on to the appellate courts), effort aversion, and reversal aversion).

¹⁴⁸ See *Maryland v. Pringle*, 540 U.S. 366, 372–73 (2003).

¹⁴⁹ See Taslitz, *Individualized Suspicion*, *supra* note 29, at 146.

¹⁵⁰ See *id.* at 178.

¹⁵¹ See *id.* at 154–55, 173–79.

¹⁵² See *id.* at 150, 152–53, 165–68 (critiquing the precedent).

¹⁵³ RICHARD A. POSNER, *HOW JUDGES THINK* 84–85 (2008) (discussing the effect of the institutional environment and of precedent on judicial reasoning).

subjectively bad faith.¹⁵⁴ Kerr seems to suggest that this intuition breaks through to conscious reasoning, and thus is potentially susceptible to judicial deliberation about the permissibility of relying on a judgment of bad faith.¹⁵⁵ If the courts follow doctrine, of course, an officer's subjective bad faith is generally irrelevant under the Fourth Amendment.¹⁵⁶ Kerr might be right about the bad-faith intuition being one reason for judicial concern. But many other reasons, including the role of missing evidence in undermining a good story, may play a role as well.¹⁵⁷ Indeed, as we will soon see, Kerr is wrong to view the missing evidence question as one going solely to the question of probability. It is also relevant to the question of weight, an arguably entirely different concept.¹⁵⁸ Weight partly turns on the human tendency to reason in terms of sensible stories, as does probability, if one conceptualizes it differently than does Kerr. Weight refers to a justifiable expression of confidence that sufficient evidence has been presented to establish facts meeting a legal standard (facts found by the crafting of sensible narratives) rather than as a statement of the frequency or likelihood that such facts exist.¹⁵⁹

iv. The Absence of a Standard of Proof Improperly Cedes to Police Excessive Role-Based Authority

Kerr similarly ignores the distinction between rule-based authority and role-based authority.¹⁶⁰ Rule-based authority draws its legitimacy from fairly detailed, precise rules, generally crafted by a legislature.¹⁶¹ Rule-based authority is most needed when aggressive action is required to enforce the law against serious offenders—when the state's need for the right to use force is at its peak.¹⁶² Rules limit police discretion and prod

¹⁵⁴ See Kerr, *supra* note 88, at 137–39.

¹⁵⁵ See *id.* at 137–39. Although Kerr asserts that judicial determinations regarding bad faith proceed “by instinct” and that judges “may not know exactly why something is wrong,” he also claims that judges can learn to identify these instincts as reason to “resist finding probable cause” because “something is amiss.” *Id.* Kerr further argues that such determinations are sufficiently conscious to produce “estimates” that “accurately assess probable cause.” *Id.* at 132.

¹⁵⁶ See *Whren v. United States*, 517 U.S. 806, 813 (1996).

¹⁵⁷ See *infra* text accompanying notes 361–368 (discussing missing evidence and storytelling as central to the concept of evidentiary “weight”).

¹⁵⁸ See *infra* text accompanying notes 348–356.

¹⁵⁹ See *infra* text accompanying notes 354–368.

¹⁶⁰ See Eric J. Miller, *Role-Based Policing: Restraining Police Conduct “Outside the Legitimate Investigative Sphere,”* 94 CALIF. L. REV. 617, 621–23 (2006) (explaining the difference between rule-based and role-based authority).

¹⁶¹ See H.L.A. HART, *THE CONCEPT OF LAW* 94 (2d ed. 1994); Miller, *supra* note 160, at 621–22, 634–35 (providing examples of rule-based jurisprudence).

¹⁶² Rules are most needed under these circumstances because there is the greatest danger

police toward specific types of conduct.¹⁶³ Rules constrain officer behavior by fostering officer internalization of the rules and by threatening sanctions against the officer or his case should he not comply with the rules' mandates.¹⁶⁴ But these limits on police abuses also permit the use of the force and authority that policing of serious crime often requires.¹⁶⁵

Role-based authority, by contrast, derives from an official's status—her role—a status justified by the official's special skills and need for flexibility.¹⁶⁶ Role-based authority allows for tailoring responses to the individual needs of specific cases.¹⁶⁷ In the case of police, modern social norm theorists,¹⁶⁸ in a variation of “broken windows theory,”¹⁶⁹ argue for embracing role-based police authority as a way of reducing signs of disorder in a neighborhood. Reduced disorder encourages community coherence and other factors that discourage crime.¹⁷⁰ Creation of a series of new low-level offenses, such as curfews, give police the “legal hook” to exercise this authority, but the statutes are intentionally broadly crafted to give police enormous flexibility.¹⁷¹ That flexibility is needed if police are to help keep neighborhoods clean and orderly without routine resort to force.¹⁷² Role-based authority implies police partnership with the community to serve community needs for order and respect.¹⁷³

The problem with social norm theories, argues policing scholar Eric Miller, is that they enable the same actors—the police—to exercise both

of police abuse yet the most need for effective police action. *See* Miller, *supra* note 160, at 644–45.

¹⁶³ *See id.*

¹⁶⁴ *See id.* at 635–37. Correspondingly, rule-based authority fails when the rules are poorly enforced or “riddled with exceptions,” or when police resist internalization. *See id.* at 654–55.

¹⁶⁵ They do so by fostering the legitimacy of the police and the legal system under which they operate. *See id.* at 635–37.

¹⁶⁶ *See id.* at 622–23, 635, 638–40.

¹⁶⁷ *See id.* at 632–34, 638–40.

¹⁶⁸ *See* Tracey L. Meares, *Norms, Legitimacy and Law Enforcement*, 79 OR. L. REV. 391, 413–14 (2000); Tracey L. Meares, *Place and Crime*, 73 CHI.-KENT L. REV. 669, 698–700 (1998); Tracey L. Meares & Dan M. Kahan, *Law and (Norms of) Order in the Inner City*, 32 LAW & SOC'Y REV. 805, 820–21 (1998); Miller, *supra* note 160, at 633–34.

¹⁶⁹ *See* GEORGE L. KELLING & CATHERINE COLES, *FIXING BROKEN WINDOWS: RESTORING ORDER AND REDUCING CRIME IN OUR COMMUNITIES* (1998).

¹⁷⁰ *See* Miller, *supra* note 160, at 618–20.

¹⁷¹ *See id.* at 651–52; William J. Stuntz, *Local Policing After the Terror*, 111 YALE L.J. 2137, 2153–54 & n.53 (2002) (“Since crimes can include such things as traffic offenses, . . . this power gives the police the ability to search, without a warrant, almost anyone in a vehicle, plus (depending on the stringency of local curfews and quality-of-life ordinances) a large portion of the pedestrian population to boot.”).

¹⁷² *See* Miller, *supra* note 160, at 622–23.

¹⁷³ *See id.* at 632–33, 666–71.

rule-based and role-based authority.¹⁷⁴ That aggregation of power has numerous ill effects. Notably, rule-based and role-based norms can conflict in a given situation, forcing police to choose.¹⁷⁵ Too often, police are ill-fitted to apply role-based authority effectively.¹⁷⁶ They are trained primarily in a militaristic style and are more comfortable with sanctioning others for apparent violations of rules than with the community-solidifying function that role-based authority is meant to serve.¹⁷⁷ When seeming conflicts arise between the need for ostensibly rule-based and role-based action, police are likely to opt for the seemingly rule-based, sanctioning-of-others option.¹⁷⁸ But because police also have role-based authority, they may act in a discretionary fashion while serving the rule-based role of enforcer.¹⁷⁹ Police may therefore serve neither function effectively.¹⁸⁰

Indeed, police investing energy into attempts to solidify community norms may divert resources from stricter rule-based law enforcement.¹⁸¹ Yet police poorly exercising role-based discretionary authority can undermine community trust, promoting the very community dissolution that role-based authority is designed to counter.¹⁸² The resentment that many poor, minority communities feel toward the police, argues Miller, is partly due to this problem.¹⁸³ Police may also use their discretionary authority as an excuse for developing justifications to go after the higher level offenses embraced by rule-based action.¹⁸⁴ The new lower level offenses thus become just another tool for police serving their more traditional role.¹⁸⁵ The result can be both underpolicing—in the sense of too little effective

¹⁷⁴ See *id.* at 636–37, 657–58.

¹⁷⁵ See *id.* at 658–63 (discussing “role confusion” as a policing tactic).

¹⁷⁶ See *id.* at 646–51, 658–63.

¹⁷⁷ See MARLEEN EASTON ET AL., *BLURRING MILITARY AND POLICE ROLES* (2010); Peter B. Kraska, *The Military–Criminal Justice Blur: An Introduction*, in *MILITARIZING THE AMERICAN CRIMINAL JUSTICE SYSTEM: THE CHANGING ROLES OF THE ARMED FORCES AND THE POLICE* 3, 5–8 (2001).

¹⁷⁸ See Miller, *supra* note 160, at 658–63.

¹⁷⁹ See *id.* at 646–51, 657–63.

¹⁸⁰ See *id.*

¹⁸¹ Cf. *id.* at 627–28 (discussing “under-policing”); *id.* at 665 (discussing the need for attention to law enforcement resources allocated to traditional reactive rather than novel preventative policing); Alexandra Natapoff, *Underenforcement*, 75 *FORDHAM L. REV.* 1715, 1716–19 (2006).

¹⁸² See Miller, *supra* note 160, at 636–37, 650–52.

¹⁸³ See *id.*; Andrew E. Taslitz, *Respect and the Fourth Amendment*, 94 *J. CRIM. L. & CRIMINOLOGY* 15, 15 (2003).

¹⁸⁴ See Miller, *supra* note 160, at 645–51, 657–58, 660–63.

¹⁸⁵ See *id.*; Tom R. Tyler, *Trust and Law Abidingness: A Proactive Model of Social Regulation*, 81 *B.U. L. REV.* 361, 363–65 (2001) (discussing the dangers of police’s “command and control” model dominating).

police presence as community partners—and overpolicing—in the sense of too much police use of rule-based force in situations requiring a subtler approach.¹⁸⁶

This dangerous mixture of rule- and role-based authority in the single institution of the police has, Miller deftly recounts, reached the United States Supreme Court in its articulation of Fourth and Fifth Amendment doctrine.¹⁸⁷ For example, the Court has increasingly defined reasonable suspicion, and even probable cause, as requiring case-by-case judgments made largely by deference to officers' discretionary authority.¹⁸⁸ Yet officers use that authority to exercise force—to stop, arrest, and search—precisely the kind of situation that most requires rule-based constraints on officers' conduct.¹⁸⁹ Deference to police autonomy also corrodes the requirements that officers be able to explain and justify their force-based privacy invasions in detail to promote accountability.¹⁹⁰ The requirement that police act only based upon “articulable suspicion”¹⁹¹ thus degenerates into whatever suspicion the officer's “experience” tells him is justified. Similarly, the Court's refusal to review officer search-and-seizure decisions to determine whether they were motivated by racial bias or stereotyping shields officers from effective review.¹⁹² The Court has even gone so far as to ignore usual or standard police practices in favor of the practices that an officer in fact chooses based upon his own individualized experience and

¹⁸⁶ See Miller, *supra* note 160, at 625–28; Natapoff, *supra* note 181.

¹⁸⁷ See Miller, *supra* note 160, at 638–42, 645–51.

¹⁸⁸ See David A. Harris, *Factors for Reasonable Suspicion: When Black and Poor Means Stopped and Frisked*, 69 IND. L.J. 659, 666–69 (1994); David A. Harris, *Particularized Suspicion, Categorical Judgments: Supreme Court Rhetoric Versus Lower Court Reality Under Terry v. Ohio*, 72 ST. JOHN'S L. REV. 975, 988 (1998); Miller, *supra* note 160, at 638–42, 645–51; Carol S. Steiker, *Counter-Revolution in Constitutional Criminal Procedure? Two Audiences, Two Answers*, 94 MICH. L. REV. 2466, 2492–93 (1996).

¹⁸⁹ See Miller, *supra* note 160, at 645–51 (summarizing illustrative cases).

¹⁹⁰ See *id.* at 646–47 (“Now, almost any evidence that a police officer can proffer will suffice to provide reasonable suspicion. In the reasonable suspicion totality-of-the-circumstances calculus, the officer's training is not just one fact among many, but one that operates as a lens through which to view the other facts. The officer's ability to explain how otherwise-innocent conduct is, under the circumstances and properly understood, suspicious, characterizes the police as well-trained, experienced experts responding to ‘imponderable evidence’ of criminality.”); Taslitz, *Individualized Suspicion*, *supra* note 29, at 166–68, 196–97 (analyzing how judicial deference to officer judgments makes the latter's explanations meaningless and eliminates effective accountability).

¹⁹¹ *Terry v. Ohio*, 392 U.S. 1, 33 (1968) (Harlan, J., concurring); see also *id.* at 21 (“[T]he police officer must be able to point to specific and articulable facts which, taken together with rational inferences from those facts, reasonably warrant [the] intrusion.”).

¹⁹² See Miller, *supra* note 160, at 650–51 (discussing racial bias); Taslitz, *Individualized Suspicion*, *supra* note 29, at 162–64 (discussing stereotyping).

judgment.¹⁹³ These examples illustrate the poor fit between the role-based authority the Court broadly grants to police rather than limiting it to the kinds of situations where discretionary, case-by-case judgment is most wise.¹⁹⁴

The vaguer the standards articulated to guide action, the greater the sphere of role-based authority.¹⁹⁵ The Court's abandonment of the "two-pronged" *Aguilar–Spinelli* test, which prohibited courts from even considering weak informants' tips in the probable cause calculus, in favor of the murkier *Gates* "totality of the circumstances" test that weighs all evidence is one illustration of a move toward role-based authority.¹⁹⁶ The Court's insistence on barring any standard of proof for probable cause decisions likewise enhances officers' discretionary, role-based authority.¹⁹⁷ Kerr thus ignores the fact that standards of proof do not only guide the courts. Just as prosecutors' decisions on whom to charge with what are affected by the beyond a reasonable doubt standard, so should police decisions of whom to arrest and search and where would likely be so influenced.¹⁹⁸ The absence of a standard of proof or the existence of an implied one that is seen as infinitely flexible may tempt ideologically energetic law-and-order courts to defer to police judgments, as many commentators argue the current Court is doing.¹⁹⁹ Likewise, such courts may vary the degree of justification required for police action so as to favor

¹⁹³ See Miller, *supra* note 160, at 646–47; Taslitz, *Individualized Suspicion*, *supra* note 29, at 166–67.

¹⁹⁴ See Miller, *supra* note 160, at 636. Miller thus recommends that other institutions, not the police, have the primary responsibility for role-based crime-preventative action. See *id.* at 663–65.

¹⁹⁵ See *id.* at 645–51.

¹⁹⁶ See TASLITZ ET AL., *supra* note 87, at 201, 211–13 (analyzing the consequences of the Court's abandonment of the old *Aguilar–Spinelli* rule). The *Aguilar–Spinelli* rule, it should be noted, required courts to consider multiple factors but in a more orderly, guided fashion than is true of *Illinois v. Gates*, 462 U.S. 213 (1983). Such multifactor guided tests have the added virtue of helping to reduce the grip of cognitive biases on judicial reasoning. See *supra* note 130 (discussing how scripts, checklists, and multifactor tests serving as reminders of other considerations can help to reduce judicial cognitive biases).

¹⁹⁷ See *supra* text accompanying notes 86–88 (discussing this insistence).

¹⁹⁸ See Kaplow, *supra* note 85, at 751, 815 (arguing that standards of proof create incentives for individual and institutional actors to change their behavior accordingly; for example, high standards may effectively authorize certain conduct that cannot be proven to the level required by the relevant standard).

¹⁹⁹ See EPSTEIN ET AL., *supra* note 140, at 106–49 (arguing that the Court's Justices often vote in an ideological fashion); Thomas Y. Davies, *The Supreme Court Giveth and the Supreme Court Taketh Away: The Century of Fourth Amendment "Search And Seizure" Doctrine*, 100 J. CRIM. L. & CRIMINOLOGY 933, 934 (2010) ("[O]ver roughly the last four decades the continuing conservative majority of the justices of the Supreme Court have reduced Fourth Amendment doctrine to little more than a rhetorical apparition.").

law enforcement interests routinely, if not completely, over individual ones in the interests of promoting law and order.²⁰⁰ The effect is to vest police with great discretion, offering room for police to embrace the role-based model of policing.²⁰¹ That limits the value of probable cause (and reasonable suspicion) in constraining the state's use of force.²⁰² Kerr's failure to address the rule- versus role-based distinction is also but one example of his ignoring the social value of standards of proof outlined earlier in this section.²⁰³ Kerr thus looks solely to the purported costs of standards of proof without acknowledging or weighing them against the benefits.

Kerr's most egregious error, however, is a different one: his assumption that the probable cause inquiry inherently involves an assessment of objective probabilities. It does not. Rather, the assessment is one of subjective probabilities, assessed in light of rational bases for inference, an entirely different concept.

4. *Subjective Probability and Probable Cause*

i. General Principles

There are many different conceptions of probability, but two are most relevant here: objective or frequentist versus subjective probabilities.²⁰⁴ Objective probabilities look to empirical data to determine the frequency with which similar events occur.²⁰⁵ For example, if four out of every ten

²⁰⁰ Cf. Russell D. Covey, *Longitudinal Guilt: Repeat Offenders, Plea Bargaining, and the Variable Standard of Proof*, 63 FLA. L. REV. 431, 444 (2011) (arguing that our system effectively allows prosecutors to lower the standard of proof for repeat offenders).

²⁰¹ See Miller, *supra* note 160, at 645–51 (making similar point but not connecting it to the absence of a standard of proof as one potential contributor). Judicial abdication of significant limits on officer discretion via undue deference to officer judgments and, at best, vaguely stated bases for those supposedly intuitive judgments may also create a move toward role-based policing authority by reducing the required “weight” of evidence and degree of serious police accountability. See *infra* text accompanying notes 379–387.

²⁰² It is important to note that rule-based and role-based policing are less a dichotomy than points on a spectrum. See Miller, *supra* note 160, at 621–23 (implying this point). Similarly, a standard of proof need not be imbued with an unachievable absolute clarity capable of mechanical application to be of value in guiding and limiting both judicial and officer discretion. Cf. LAUDAN, *supra* note 68, at 74–87 (arguing for a less-than-mechanical verbal formulation of the beyond a reasonable doubt standard of proof that he sees as far superior to the current versions of the standard which, in his view, are not standards of proof at all). There is therefore no inconsistency between my defense of subjective probabilities over objective ones in the next subsection and the need for a standard of proof that limits officer discretion.

²⁰³ See *supra* text accompanying notes 67–88.

²⁰⁴ See TERENCE ANDERSON ET AL., *ANALYSIS OF EVIDENCE* 228–29 (2d ed. 2005).

²⁰⁵ See Yablon, *supra* note 142, at 907–08.

randomly selected individuals had pollen allergies in a given location, there would be a 40% likelihood that any randomly selected person will have pollen allergies.

But objectivist approaches to probability can be applied only to groups or to randomly selected individuals when we know nothing more about each individual than that he fits in a particular category, in the above example, living in a particular location.²⁰⁶ Objectivist probability cannot tell us the likelihood that a future unique event will occur or that a past unique event has occurred.²⁰⁷ For example, being told that there is a 10% chance that smoking will cause lung cancer does not tell you the probability that a particular smoker, John, has lung cancer.²⁰⁸ John may be young, hale, from a genetically blessed family of cancer-free smokers, or he may have other individual attributes that make him more or less likely to develop cancer relative to a randomly selected smoker.²⁰⁹ That does not mean that the objective data is irrelevant, but it does mean that we cannot rely on the 10% figure as accurately reflecting *John's* unique risk. Nor would John's developing or not developing lung cancer objectively confirm or refute any judgment of *his* risk.²¹⁰ That is so because John is a unique person. We cannot clone physically, emotionally, intellectually identical Johns, with identical life experiences, in large numbers, have them smoke, and see how many of them would develop lung cancer—the only way of determining empirically verifiable objective probability.

But we can make a subjective judgment. Subjective probability judgments “represent the degree of rational belief that the speaker holds about the likelihood of occurrence of the event in question.”²¹¹ Subjective

²⁰⁶ *See id.* at 909.

²⁰⁷ *See id.* at 901–03.

²⁰⁸ *See id.* at 902.

²⁰⁹ *See id.*

²¹⁰ *See id.* at 901–02.

²¹¹ *See id.* at 910; *see also* L. JONATHAN COHEN, AN INTRODUCTION TO THE PHILOSOPHY OF INDUCTION AND PROBABILITY 59 (1989). This quote from Yablon speaks about the degree of “rational belief.” Logicians and mathematicians, however, would define subjective probability as simply the degree of a person's belief, rational or not, albeit subject to rules of consistency. *See supra* note 31 and accompanying text. Yablon's point and mine, however, is that legal processes can and do subject individual beliefs to scrutiny in the light of reason. It is that scrutiny—pursuant to standards of critique common among laypersons and other standards common in the legal profession—that results in acceptance of some beliefs as rational. Subjective beliefs themselves, of course, arise from ordinary reasoning processes, thus requiring some understanding of human psychology. But whatever beliefs result, they must be justified to others in the courts or among legal combatants outside of the courts. Ultimately, therefore, subjective beliefs processed though legal critique lead to rational inferences arrived at through prevailing norms of sound reasoning. Whether we use the logicians' and mathematicians' terminology of “subjective probability” referring only to

probability judgments are thus psychological, rather than strictly mathematical, judgments.²¹² But that does not mean that they are useless. To the contrary, “[t]hey are subject to change through evidence and argument, and they have objective consequences in the actions you take, such as whether you go out at night in bad neighborhoods or take antidepressants.”²¹³ Moreover, there is an undeniably social component to the formation of subjective probability judgments. The process by which lawyers settle cases is an example:

If I believe that a case has a ten-percent likelihood of success, and you believe it has a seventy-five percent chance, then the subjectivist concept gives us no way of resolving the dispute, or even why it is a dispute and not merely a disparity of beliefs. Yet, surely two lawyers who reached such disparate conclusions about the likelihood of success on a case would (1) view the simultaneous assertion by two trained lawyers that the same case had a ten-percent and a seventy-five percent chance of success as somehow involving inconsistent judgments and (2) seek to resolve the inconsistencies through discussion of objective features of the case. In short, they would act as if the probability were to be determined by an analysis of objective features of the case and that consensus as to a “correct” probability was obtainable through such analysis.²¹⁴

A lawyer would be guilty of malpractice if he settled such a lawsuit based *solely* on knowing that, for example, cases of that general category (say, medical malpractice) settled on average for 10% of the requested dollar amount.²¹⁵ The lawyer would be expected to investigate the law and the facts,²¹⁶ “to evaluate the likelihood of success based on all the individual factors relating to that specific case: the nature of the evidence presented at trial, the strength of the legal issues on appeal, the reputation of

beliefs or Yablon’s terminology describing subjective probability as rational beliefs, the results for the legal system are the same.

²¹² See RICHARD JEFFREY, *SUBJECTIVE PROBABILITY: THE REAL THING* 79 (2004).

²¹³ I thus perhaps disagree with philosopher Larry Laudan when he seemingly argues that a standard of proof relying on subjective judgments, including presumably subjective probability judgments, is no standard of proof at all because it does not give the decisionmaker an objective guidepost against which to measure whether his subjective belief is justified. See LAUDAN, *supra* note 68, at 79–81. Determining whether subjective beliefs held with the necessary degree of certainty are *justified* based on the evidence and rational inferences from it is a necessary part of what properly designed legal proceedings encourage decisionmakers to do. It is why juries deliberate and judges in many instances must verbally defend their conclusions in great detail, often in the form of written opinions. The decisionmaker must then ask herself, “Is my subjective sense of having the required degree of confidence in my judgment justified based upon the evidence and rational inferences from it?” Only if that answer is “yes” is the standard met. Accountability mechanisms further reduce the likelihood of error and increase the likelihood of error correction. Perhaps we can better articulate the meaning of a particular standard of proof for a decisionmaker, but subjective probabilities, as here defined, do not render the standard meaningless.

²¹⁴ Yablon, *supra* note 142, at 911.

²¹⁵ See *id.* at 904.

²¹⁶ See *id.*

the trial judge, and the appellate court's prior rulings on similar issues."²¹⁷

Objectivist probability should primarily control if there are uniform processes sufficiently accounting for relevant factors in the statistics such that we can fairly view an individual case as a largely fungible instance of the same broader phenomenon.²¹⁸ Where objective risks and base rates²¹⁹ are unavailable, subjectivist probability alone controls.²²⁰ Subjective probabilities also govern events with unusual or unique components.²²¹ But there is also a vast middle ground where uncertainty rules the applicability of generalized statistics to the individual case.²²² In such instances, objective data may be consulted but only as part of the subjectivist probability determination.²²³ The quality of any objective data—its trustworthiness—also matters, while subjective judgments can be critiqued based on standards of rational inference and adequacy of evidence.²²⁴ If

²¹⁷ *Id.* at 909.

²¹⁸ *See id.* at 903, 941.

²¹⁹ “Base rates” are also sometimes called “prior probabilities.” *See* ANDERSON ET AL., *supra* note 204, at 251, 399 (explaining prior probabilities). In objectivist terms, a base rate is the prior probability of an event's occurring in the relevant population before using a technique with a known error rate. Concerning probable cause or reasonable suspicion, the base rate is the rate of occurrence of the relevant crime before using an investigative technique, such as a drug-sniffing dog. *See* Goldberg, *supra* note 120, at 32–33. For example, suppose that a dog has a false positive rate (the rate of reacting to cocaine when it is not present) of only .2%. That does not mean that there is a 99.8% likelihood when he reacts to the supposed presence of cocaine that he is correct. If cocaine is present in stopped vehicles only one in every 10,000 times, then the dog's false positive rate means that he will falsely alert to cocaine twenty times in every 10,000 searches (10,000 x .002). But if he has a zero false negative rate (he never fails to alert when he should), he will accurately alert once (since cocaine is present in the one in 10,000 cars). But that means that, of the twenty-one total times that he alerts, he is right only once—an accuracy-in-alerting rate of 5%. *See id.* at 33 (offering this example). Being correct 5% of the time should not establish probable cause or reasonable suspicion under any theory. The example thus illustrates why having no general false positive rates is meaningless without also knowing base rates.

²²⁰ *See* Yablon, *supra* note 142, at 910. For a discussion of the importance of keeping in mind base rates, *see* BREST & KRIEGER, *supra* note 111, at 225–35.

²²¹ *See* Yablon, *supra* note 142, at 910.

²²² *See id.* at 907–08.

²²³ *See* Andrew E. Taslitz, *Myself Alone: Individualizing Justice Through Psychological Character Evidence*, 52 MD. L. REV. 1, 34–38 (2003) (illustrating how this can be done in the context of psychological clinical judgment, particularly in certain forensic settings); Yablon, *supra* note 142, at 911–12. Rephrased, the objective assessment can be used as an anchor, with the subjective assessment adjusting from the anchor upward or downward. This is standard in risk assessment of the likelihood of criminal reoffending, for example, a person may have a high-risk score but is now a paraplegic, has found God, or has successfully completed a drug-treatment program. *See* CHRISTOPHER SLOBOGIN & MARK R. FONDACARO, *JUVENILES AT RISK: A PLEA FOR PREVENTIVE JUSTICE* 71 (2011); Christopher Slobogin, *Risk Assessment and Risk Management in Juvenile Justice*, 27 CRIM. J. 10 (2012).

²²⁴ *See* Yablon, *supra* note 142, at 941.

relevant trustworthy objective data is available and wildly out of line with a subjective judgment, for example, that may provide grounds for rejecting the subjective assessment.²²⁵

Where subjective probability assessments are appropriate, the potential for heuristics to affect judgment does not mean we should seek some other assessment method. Heuristics evolved because they are often right²²⁶ and, absent objective reasons to doubt their accuracy in a particular case, they cannot automatically be assumed to lead a decisionmaker into error.²²⁷ Kahneman and Tversky—the primary figures in the rise of thinking about heuristics²²⁸—saw the value of awareness of heuristics as a reminder not to make snap decisions or to let rules of thumb shortcut data collection and conscious, more deliberative reasoning when making subjective probability assessments.²²⁹ Subjective probability judgments, even if subject to the risk of distortion by heuristics, are often the best option available.²³⁰

Subjective assessments also embody underlying values.²³¹ Lay people

²²⁵ See *id.* at 908–09.

²²⁶ See GIGERENZER, *supra* note 141, at 60–63 (explaining that heuristics evolved because of their frequent cognitive benefits).

²²⁷ BREST & KRIEGER, *supra* note 111, at 368 (“Like other heuristics, the *affect heuristic* can conduce to good decision making, but it also has the potential to distort the process. Whether intuition and affect play a constructive role in decision making depends on the nature and context of the decision at hand.”).

²²⁸ See YABLON, *supra* note 142, at 920–21.

²²⁹ See *id.* at 928–29.

²³⁰ Professor Yablon made the point this way:

When we believe that the causal processes involved in the event we are predicting are uniform or stochastic and repetitive in nature, like those involving purely physical processes such as tire failures or roulette wheels, we are more likely to rely purely or primarily on statistical data. Conversely, when we believe the event being predicted will be the result of a relatively unique and unusual confluence of many nonrecurring factors or involving individual decision makers, such as the 2004 Democratic presidential nomination, we are more likely to put our faith in the subjective assessments of the knowledgeable observers.

Id. at 903; see also *id.* at 905 (noting that subjective probability judgments under the right conditions “may be the best available response to uncertainty”); *id.* at 922 (“As Kahneman and Tversky were well aware, the effect and usefulness of availability are more difficult to assess when dealing with probabilities of individual events.”); *id.* at 926–28 (arguing that Kahneman and Tversky’s writings are best understood as cautioning decisionmakers to consider the proper role of heuristics in making *subjective* probability judgments); Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 106, at 163, 175–76 (explaining that, where objectively correct answers cannot be known, as in “many real-life situations where probabilities are judged,” “[n]evertheless, the availability heuristic may be applied to evaluate the likelihood of such events,” then giving as an example a psychologist involved in making a clearly subjective probability judgment about the diagnosis and proper treatment of a particular patient).

²³¹ See YablON, *supra* note 142, at 937–39.

thus do not seem to conceptualize risk as merely a question of objective likelihood.²³² They care partly about the number of people who might be injured.²³³ But their risk assessments reflect judgments about the value of the loss being risked versus the value of the social benefit to be gained.²³⁴ Activities seen to have substantial benefits become viewed as less risky, and those with small benefits more risky.²³⁵ People also care about how risks come about and their emotional reactions to the risks.²³⁶ They therefore view activities as “riskier . . . [if they] were involuntary, delayed, uncontrollable, dreaded, or severe (certainly fatal).”²³⁷ Likewise, people view activities they dislike as riskier than those they like even though the objective probabilities of each occurring are the same.²³⁸ Accordingly, “[b]ecause most people disapprove of nuclear weapons, warfare, DDT, handguns, crime, and nuclear power, they see them as greater risks than swimming pools, home appliances, and downhill skiing, even if the latter cause more deaths to Americans in the average year.”²³⁹ Because these judgments fuse values and facts, they are not objectively “wrong” but rather “represent the individualized value judgments of citizens in a democratic society.”²⁴⁰ This explanation also has consequences for how willing people should be to defer to experts. Some judgments, such as the likelihood of a nuclear power plant exploding, have such low base rates that useful frequentist data is not available, making a nuclear specialist’s testimony of the dangers inherent in a particular plant certainly relevant but not controlling.²⁴¹ Moreover, if the “risk” of error is being assessed, which necessarily involves value judgments, there is no a priori reason to assume that the expert’s judgments accurately reflect those of the decisionmaker.²⁴² Concerning the topic of this Article, there is indeed good reason not to defer to expert judgment—here, the judgment of the police—both because the

²³² See *id.*

²³³ See *id.*

²³⁴ See Paul Slovic, *Trust, Emotion, Sex, Politics and Science: Surveying the Risk-Assessment Battlefield*, in *THE PERCEPTION OF RISK* 390, 390 (Paul Slovic ed., 2000); Yablon, *supra* note 142, at 937–39.

²³⁵ See Slovic, *supra* note 234, at 118–19.

²³⁶ See Yablon, *supra* note 142, at 937–39; cf. Paul Slovic et al., *Rational Actors or Rational Fools: Implications of the Affect Heuristic for Behavioral Economics*, 31 *J. SOCIO-ECON.* 329, 332, 339 (2002) (arguing that images, marked by positive and negative affective feelings, guide judgment and decisionmaking; that is, people use an affect heuristic to make judgments).

²³⁷ Yablon, *supra* note 142, at 938.

²³⁸ See Slovic, *supra* note 234, at 415.

²³⁹ Yablon, *supra* note 142, at 938.

²⁴⁰ *Id.*

²⁴¹ *Id.* at 937–38.

²⁴² See *id.* at 941–42.

probable cause determination and its associated subjective probability assessment involve some value judgments better made by courts than police and because police themselves operate in an environment increasing the likelihood that their probable cause (and reasonable suspicion) judgments will be subject to error.²⁴³

ii. Application to Standards of Proof

The process of factfinding in a court case involves just these sorts of subjectivist probability judgments. Standards like beyond a reasonable doubt, preponderance of the evidence, and probable cause are best understood as inviting decisionmakers to decide how probable events are or were in this subjective sense.²⁴⁴ If probability falls short of the applicable

²⁴³ Professor Sunstein bristles at the idea that there is no such thing as an objectively verifiable “risk.” Cass R. Sunstein, *The Laws of Fear*, 115 HARV. L. REV. 1119, 1147 (2002). Professor Yablon sees the debate as partly being about when to defer to experts and what weight to accord their probability judgments. See Yablon, *supra* note 142, at 941. Says Yablon, “when the risk involved appears subject to accurate assessment through frequentist methodologies, deferral to expertise is more appropriate than when the experts merely offer a subjective risk assessment, which may differ from that of lay people.” *Id.* For unique, nonrepeatable events not fully amenable to scientific treatment, deference to experts is less advisable, in part because of the role of value judgments. See *id.* Thus, says Yablon, Sunstein is right that heuristics may sometimes lead lay risk assessors into error as contradicted by sound scientific data, but cognitive psychologist Slovic is right that “subjectivity, uncertainty, and cognitive biases may play a dominant role in expert opinions that are not entitled to be privileged over those of lay persons.” *Id.* Although Yablon, Slovic, and Sunstein are talking primarily about the risk of physical harms from accidents and similar events, Yablon’s logic governs the probable cause decision too. As a subjective probability judgment, whether the standard of proof for probable cause is met—and even what probable cause is—will unavoidably be influenced by value judgments concerning the relative worth of privacy, property, and freedom of movement versus the risks posed by potential crimes. Those value judgments are better made by judges, who at least strive to reflect the values embodied in the law, than by police officers involved in the “competitive enterprise of ferreting out crime.” *Spinelli v. United States*, 393 U.S. 410, 415 (1969) (citation omitted). Furthermore, police are subject to many heuristics that under the circumstances facing police are likely to lead them into error. See Taslitz, *Cognitive Obstacles*, *supra* note 29, at 40–47. There is, therefore, no reason for courts to defer to officer judgments in probable cause determinations.

²⁴⁴ See ANDERSON ET AL., *supra* note 204, at 246. But see Engel, *supra* note 83, at 436 (arguing that the preponderance of evidence standard in the United States reflects objective probability concepts but that the beyond a reasonable doubt standard embraces a more subjective philosophy). I find little support, however, in Engel’s piece for his assertion that a more objectivist quality is embraced by the preponderance standard. I find the argument unconvincing, in any event, for reasons noted earlier and to come, and I do not see it as the only or best way to understand that standard, and finally, I believe that the objectivist concept fails in practice because it is not psychologically realistic. Engel is likewise a critic of objectivist approaches to the standard of proof, so I quibble only with his assertion that the law embraces them in the preponderance burden.

standard, whatever action is being sought will not be approved.²⁴⁵ In the probable cause context, as noted earlier, the law indeed assumes that each event is unique and that an individualized judgment is required.²⁴⁶ Objective, numerical data will rarely be available.²⁴⁷ When it is available, however, it can *usually* still only play a role (the rare exceptions are discussed shortly) as a factor in the judge's decision about the probability of the unique event before her.²⁴⁸ The judge will be concerned about the "risk" of error, but that risk assessment will necessarily reflect value judgments about the conduct of the police, the wisdom of their chosen methods of investigation, the social benefits to be obtained by their activities, and the social costs their actions create.²⁴⁹ The judge will make her decision knowing that she may have to justify her actions and that they can be subject to critique and reversal by an appellate court.²⁵⁰ Her actions can be criticized as involving poor judgments of various sorts based on the evidence before her.²⁵¹ But she must implicitly decide whether she is "convinced enough" or "confident enough" to approve of the officer's actions.²⁵²

Many judges apparently need and thus do craft some sort of implicit benchmark or standard of proof.²⁵³ To make that standard explicit and uniform does not mean that two judges will always agree on the existence

²⁴⁵ See ANDERSON ET AL., *supra* note 204, at 230.

²⁴⁶ See Taslitz, *Individualized Suspicion*, *supra* note 29, at 146; *supra* text accompanying notes 133–135. Part of the appeal of the subjectivist approach to me is precisely that it embraces the idea that a unique, individualized assessment is involved (albeit informed by some generalizations) and that that stance serves important social goals. See ANDERSON ET AL., *supra* note 204, at 266–69 (discussing transcase versus case-specific generalizations and their role in individualized proof); Taslitz, *Individualized Suspicion*, *supra* note 29, at 173–85.

²⁴⁷ See *supra* text accompanying notes 230–242.

²⁴⁸ See *supra* text accompanying notes 217–222 (discussing the role of objective probability data, where available, in making subjective probability assessments).

²⁴⁹ See *supra* notes 230–249 and accompanying text.

²⁵⁰ See EPSTEIN ET AL., *supra* note 140, at 241 ("Courts of appeals apparently exert sufficient control over district judges, even when the appellate judges are adhering scrupulously to a deferential standard of review, to dissuade the district judges from allowing ideology to determine their decisions."); Taslitz, *Cognitive Obstacles*, *supra* note 29, at 65–67 (discussing the positive effects of accountability, albeit illustrating these effects in the context of policing).

²⁵¹ See *supra* notes 71–75.

²⁵² Cf. Luke Meier, Probability, Confidence, and the Constitutionality of Summary Judgment (Dec. 17, 2012) (unpublished manuscript), available at ssrn.com/abstract=2190257 (distinguishing in the civil context between objective probability and "confidence" in a way consistent with much of my argument here).

²⁵³ See McCauliff, *supra* note 104, at 1324–33 (discussing judicial survey on burdens of proof); Slobogin, *supra* note 27, at 20–21.

or absence of probable cause in a specific case. But it does mean that the law would send a message to judges about how confident they must be in the rightness of their decisions based on all the practical considerations that enter into subjective probability assessments. It is generally not possible to critique such subjective judgments on the ground that they have led to error because of heuristic “biases,” but, as noted earlier, procedures can be used to reduce the risks of such mistakes.²⁵⁴ Nor can subjective probability assessments involved in judging whether a standard of proof has been met generally be declared “wrong” simply because they are based in part on objective data, where available, or because of the precise relationship between that data and the individualized, unique decision being made.²⁵⁵ Standards of proof in the area of probable cause can therefore not be rejected on the theory that they will distort objective probability judgments because such judgments are in fact not being made. Rather, it is subjective probability assessments that are at work, and they operate pursuant to their own logic and standards of critique.

5. But What Should the Standard of Proof Be for Probable Cause?

Having argued that a standard of proof is necessary for the probable cause determination still leaves open the question: what should that standard of proof be? This question is ultimately a normative one, subject to great debate. I will argue here, however, for a preponderance of the evidence standard.

Notably, several commentators have argued that the preponderance of the evidence standard is in practice the one that most judges use.²⁵⁶ One of the few empirical studies done (albeit some time ago) found great variability but did find that many judges used that standard.²⁵⁷ The average of all the judges in that study was just short of a preponderance (thus the 47% figure used by Kerr).²⁵⁸ It is important to remember that much evidence inadmissible at trial will be admissible in the probable cause determination and that the initial determination—even if amended to focus more heavily on missing evidence—is still made *ex parte*.²⁵⁹ The process is not an adversarial one. The preponderance standard can therefore be much easier to meet in the warrant context than at a civil trial.

²⁵⁴ See *supra* text accompanying notes 141–153.

²⁵⁵ See *supra* text accompanying notes 218–225.

²⁵⁶ See Slobogin, *supra* note 27, at 20 (explaining that Slobogin’s definition “adopts the preponderance standard, which is likely the way most judges think about probable cause”).

²⁵⁷ See McCauliff, *supra* note 104, at 1303, 1307, 1327.

²⁵⁸ See *id.* The judges’ estimates varied widely, however, with the approximately 47% figure being the arithmetic mean or average of all the individual estimates. See *id.*

²⁵⁹ See TASILTZ ET AL., *supra* note 87, at 238–40.

That most human reasoning implicitly or explicitly involves metaphor also counsels in favor of the preponderance standard.²⁶⁰ Metaphors structure human thought, bringing disparate information together into an understandable whole.²⁶¹ Because of this, language using metaphor is easier to remember, comprehend, and organize.²⁶² Metaphors are a “visual aid to memory,” creating vivid mental images.²⁶³ Metaphors make you *think*, using many mental circuits at once.²⁶⁴ Some metaphors are implicit, others explicit, others both.²⁶⁵ While some metaphors overused in language can lose their punch, others retain their power because they are so fundamental to how we see the world.²⁶⁶ The metaphor of the scales of justice, I argue, is one retaining its power.²⁶⁷ It is easy to visualize a scale tipping. It can be used to good effect in jury instructions and in oral argument.²⁶⁸ Evidence must be of sufficient weight to tip the scales in one direction rather than another. Because standards of proof are imbued with values and are comprehended in terms of stories, they are best not defined in precise mathematical terms.²⁶⁹ But decisionmakers must be given some guidance about their meaning. The image of the scale tipping does just that.²⁷⁰ On the other hand, what equally effective metaphor is available for “47%,” “33 1/3%,” or some other lesser and mathematical definition of the standard of proof? Perhaps some are conceivable (“almost but not quite

²⁶⁰ See Andrew E. Taslitz, *Patriarchal Stories I: Cultural Rape Narratives in the Courtroom*, 5 S. CAL. REV. L. & WOMEN’S STUD. 387, 404, 424–29 (1996).

²⁶¹ See *id.* at 425–26.

²⁶² See JOSEPH J. ROMM, LANGUAGE INTELLIGENCE: LESSONS ON PERSUASION FROM JESUS, SHAKESPEARE, LINCOLN, AND LADY GAGA 101 (2012).

²⁶³ See *id.* at 102.

²⁶⁴ See *id.* at 103.

²⁶⁵ See generally GEORGE LAKOFF, MORAL POLITICS: HOW LIBERALS AND CONSERVATIVES THINK (2d ed. 2002); GEORGE LAKOFF & MARK JOHNSON, METAPHORS WE LIVE BY (2003).

²⁶⁶ See LAKOFF, *supra* note 265, at 65–140 (giving examples of well-worn metaphors that still structure our thoughts, the primary ones discussed being rooted in images of parenting); LAKOFF & JOHNSON, *supra* note 265, at 14–19 (similar); ROMM, *supra* note 262, at 110 (“Some similes and metaphors strike such a strong chord that they become a permanent part of our culture.”); *id.* at 117 (arguing that some overused metaphors become “dying metaphors,” losing their vividness and emotional power).

²⁶⁷ See PENNSYLVANIA SUGGESTED STANDARD CIVIL JURY INSTRUCTIONS § 1.42 (3d ed. 2005) (using the ordinary balance scale as the explanatory metaphor in jury instructions defining the preponderance standard of proof).

²⁶⁸ See *id.*

²⁶⁹ See *supra* text accompanying notes 76–82, 156–158.

²⁷⁰ Cf. LAKOFF, *supra* note 265, at 44–64 (discussing the continuing power of metaphors involving balance, albeit describing the primary one as “moral accounting”—a balancing of books).

hitting the ‘finish line’?),²⁷¹ but I at least find it hard to craft ones with the same clarity and force as the scales. Certainly images of balancing scales are pervasive and powerful in the law, dominating much of constitutional reasoning,²⁷² basic concepts of debt underlying restitution and retribution,²⁷³ the legal conceptualization of reasonable behavior,²⁷⁴ and the public and professional imagery of the law serving grand ideals.²⁷⁵

Empiricists have also studied defining “fuzzy” verbal standards of proof, primarily preponderance of the evidence and beyond a reasonable doubt.²⁷⁶ The fuzziness of these standards is best understood in connection with storytelling theory. Much reasoning about evidence involves the construction of stories.²⁷⁷ Much story construction occurs rapidly and subconsciously.²⁷⁸ If an intuitive result is reached subconsciously, information supporting the result may be inflated, and conflicting evidence

²⁷¹ I discuss other alternatives *infra* in the text accompanying notes 306–308, but to say that there are logically conceivable alternative metaphors is not the same as saying those metaphors have the same power, either in our legal or broader political culture.

²⁷² See AHARON BARAK, PROPORTIONALITY: CONSTITUTIONAL RIGHTS AND THEIR LIMITATIONS 343 (Doron Kalir trans., 2012) (“[B]alancing’ is an analytical process that places the proper purpose of the limiting law on one side of the scales and the limited constitutional right on the other, while balancing the benefit gained by the proper purpose with the harm it causes to the right.”).

²⁷³ See MARGARET ATWOOD, PAYBACK: DEBT AND THE SHADOW SIDE OF WEALTH 9–19 (2008) (discussing the importance of debt as central to all these areas and explaining how the concept is rooted in an idea of balance, albeit of equal balance, in our culture); Andrew E. Taslitz, *Reciprocity and the Criminal Responsibility of Corporations*, 41 STETSON L. REV. 73 (2011) (extending these and related concepts to legal categories, particularly in the criminal law).

²⁷⁴ See John C. Coffee, Jr., *Does “Unlawful” Mean “Criminal”?: Reflections on the Disappearing Tort/Crime Distinction in American Law*, 71 B.U. L. REV. 193, 194–96 (1991) (explaining that tort negligence occurs when the likely social harm of conduct outweighs its benefits, though arguing against a similar test in criminal law); see also, e.g., Leslie Yalof Garfield, *A More Principled Approach to Criminalizing Negligence: A Prescription for the Legislature*, 65 TENN. L. REV. 875 (1998) (arguing for criminalizing ordinary tort negligence under certain circumstances).

²⁷⁵ Dennis E. Curtis & Judith Resnik, *Images of Justice*, 96 YALE L.J. 1727, 1765 (1987) (“The blindfold is not the only indication in justice imagery of the complex relationship between judge and sovereign. The scales have relevance here as well; the scales may suggest that an objective standard, independent of the whim of any ruler (as well as of the judge), governs the outcome. The king’s thumb is poised to tip the scales, but Justice’s firm grip provides some security. Similarly, the sword might be understood as giving Justice an independent base of power; a strength beyond that given to her by her sovereign-employer.”).

²⁷⁶ See ANDERSON ET AL., *supra* note 204, at 260–61, 265.

²⁷⁷ See *id.* at 148, 156–57.

²⁷⁸ See Nancy Pennington & Reid Hastie, *Reasoning in Explanation-Based Decision Making*, 49 COGNITION 123, 136 (1993).

deflated.²⁷⁹ But this does not mean that defining standards of proof serves no function. Instructing decisionmakers on the standard of proof leads them to see it as instructing them on the appropriate degree of confidence.²⁸⁰ With jurors, it may seem that they have little motivation to follow the spirit of these instructions because they face no sanctions. What the empirical evidence shows, however, is that instructions are a “somatic marker,” bringing emotions into play.²⁸¹ Such a marker is especially effective if the institutional setting is designed to promote accountability, for example, via instructions expressly designed to impress on jurors their accountability to society for their decisions—their degree of personal responsibility—and via the solemn formal procedures and environment of the jury trial.²⁸² Somatic markers “reduce options and focus attention.”²⁸³ “They induce the individual to take a risk very seriously.”²⁸⁴ In terms of storytelling, standard-of-proof instructions raise the required plausibility of a story, its completeness of information, coherence, and uniqueness.²⁸⁵ The emotional appeal of the standard raises the level of proof required before activating what might otherwise be jurors’ subconsciously preferred choice

²⁷⁹ See Dan Simon, *A Third View of the Black Box: Cognitive Coherence in Legal Decision Making*, 71 U. CHI. L. REV. 511, 522–23 (2004).

²⁸⁰ See Engel, *supra* note 83, at 458 (“The psychological correlate of the standard of proof is confidence.”). Some experiments arguably suggested that higher burdens of proof merely led subjects to discount even more the influence of evidence contrary to their intuitively derived result. See Simon, *supra* note 279, at 524–25, 528–29, 531–32. But, “[h]appily, this interpretation seems to be wrong.” SAUL M. KASSIN & LAWRENCE S. WRIGHTSMAN, *THE AMERICAN JURY ON TRIAL: PSYCHOLOGICAL PERSPECTIVES* 156 (1988) (discussing differing effects of the differing standards); Engel, *supra* note 83, at 460; Norbert L. Kerr et al., *Guilt Beyond a Reasonable Doubt: Effects of Concept Definition and Assigned Decision Rule on the Judgments of Mock Jurors*, 34 J. PERSONALITY & SOC. PSYCHOL. 282, 293 (1976) (offering empirical evidence that standards of proof do affect reasoning); Andreas Glöckner & Christoph Engel, *Can We Trust the Intuitive Juror? An Experimental Analysis* 18, 22–23 (Max Planck Inst. for Res. on Collective Goods, Preprint No. 2008/36, 2008), available at http://www.coll.mpg.ed/pdf_dat/2008_36online.pdf. I am using the word “confidence” in its commonsense meaning, largely synonymous with degree of certitude of a belief, and not in the technical sense that the term “confidence” has in certain probability judgments. See, e.g., NEIL J. SALKIND, *STATISTICS FOR PEOPLE WHO (THINK THEY) HATE STATISTICS* 134–50 (3d ed. 2008) (explaining statistical “significance” as a frequentist, objectivist measure of the degree of “confidence” in stating that a particular finding is true).

²⁸¹ See ANTONIO DAMASIO, *DESCARTES’ ERROR: EMOTION, REASON, AND THE HUMAN BRAIN* 173 (1994); Antoine Bechara & Antonio Damasio, *The Somatic Marker Hypothesis: A Neural Theory of Economic Decisions*, 52 GAMES & ECON. BEHAV. 336, 339 (2005) (linking somatic markers to decisionmaking processes); Engel, *supra* note 83, at 464.

²⁸² See Engel, *supra* note 83, at 463–65.

²⁸³ Engel, *supra* note 83, at 464; see also DAMASIO, *supra* note 281, at 173.

²⁸⁴ Engel, *supra* note 83, at 464; see also DAMASIO, *supra* note 281, at 173.

²⁸⁵ Engel, *supra* note 83, at 461.

relative to other options.²⁸⁶

The same is as true or more so for judges. Relatively few lawyers are chosen to be a judge, a position of honor.²⁸⁷ “Judges are appointed in a ceremonial way. Throughout judicial procedure, all are reminded repeatedly that the judge holds an office of the people and speaks in the people’s name.”²⁸⁸ Judges likewise must often explain their decisions to others.²⁸⁹ The institutional setting is designed to promote accountability. Judges should, therefore, also be susceptible to the responsibility-enhancing effect of a properly stated verbal standard of proof. Although at least one researcher has criticized the preponderance standard as setting too low a level of accountability for civil trials,²⁹⁰ that is not the same as saying that it establishes no level of responsibility. Surely a formulation below even the preponderance standard would then decrease the sense of responsibility even further. That can be particularly dangerous at the level of the magistrate approving a warrant application because of the *ex parte* nature of that application and the lack of a need to write a judicial opinion²⁹¹—the writing of opinions being a way to increase the actual and the psychological sense of accountability.²⁹² Preponderance thus seems an acceptable floor without creating undue burdens on the state.²⁹³

Ultimately, however, setting the standard of proof is a value judgment. In freestanding due process terms, what procedures should be chosen as fair for a particular context turn on the size of the individual or group interest invaded, the risk of erroneous deprivation if other procedures are chosen, the probable value of additional protections, and the cost to the government, at least in fiscal and administrative terms.²⁹⁴ There is little data available in the probable cause context to inform the question of administrative costs to the state. The state will still have to apply for warrants or face suppression

²⁸⁶ See *id.* at 454–57, 465–66.

²⁸⁷ *Id.* at 463.

²⁸⁸ *Id.*

²⁸⁹ See Christoph Engel, *The Psychological Case for Obliging Judges to Write Reasons*, in *THE IMPACT OF COURT PROCEDURE ON THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* 73, 88–89, 92 (Christoph Engel & Fritz Strack eds., 2007).

²⁹⁰ See Engel, *supra* note 83, at 463–64 (stating that under the preponderance of the evidence standard, “[a]ccountability is reduced to avoiding gross errors”).

²⁹¹ See TASILITZ ET AL., *supra* note 87, at 238–39 (discussing warrant procedures).

²⁹² See Engel, *supra* note 289, at 75–79.

²⁹³ Further support for the proposition that the preponderance standard does not create an undue burden comes from the number of judges who seem to embrace it without complaint. See *supra* text accompanying notes 256–258.

²⁹⁴ See *Mathews v. Eldridge*, 424 U.S. 319, 335 (1976); Steven M. Salky & Blair Brown, *The Preponderance of Evidence Standard at Sentencing*, 29 AM. CRIM. L. REV. 907, 911–18 (1992) (using the *Eldridge* test to determine the proper standard of proof in the sentencing phase of criminal cases).

hearings, no matter how the standard of proof is defined—though conceivably a higher standard means more defendants will see the prospect of success on suppression motions, increasing the numbers of such motions filed.²⁹⁵ A fair guess, however, is that defendants have every reason to seek suppression in the first place if they have a plausible claim. There is always the chance of success and, even without success, suppression hearings afford defendants discovery that the stingy discovery rules in criminal cases otherwise do not afford. Tinkering with the standard of proof does not change this calculus.²⁹⁶

The risk of erroneous deprivation is not only the chance of a factual error (e.g., believing that the police took actions they in fact did not) but, if risk is defined as it is above, the chance of error *given the values at stake*.²⁹⁷ The disparate impact of police investigations on minority communities can undermine law enforcement effectiveness and respect for the law in the long run, as courts have sometimes recognized and as much empirical evidence supports.²⁹⁸ Police officers' factual mistakes about probable cause also seem to be higher in minority communities.²⁹⁹ Apart from racial disparities, however, in the context of third-party records, the whole point of a statutory solution is that the Court has woefully misunderstood privacy and its social value, especially in an electronic age.³⁰⁰ The Standards require probable cause only where the individual's privacy interests are at their maximum.³⁰¹ Setting the standard of proof at a preponderance seems consistent with the gravity of these interests. If probable cause so understood causes too much interference with law enforcement

²⁹⁵ Cf. Donald Dripps, *The "New" Exclusionary Rule Debate: From "Still Preoccupied With 1985" to "Virtual Deterrence,"* 37 *FORDHAM URB. L.J.* 743, 768–72 (2010). Dripps found that, despite the exclusionary rule and Dripps's conclusion that in practice the standard of proof for probable cause hovers around 50%, hit rates for searches with warrants are substantially higher than for warrantless searches. For example, warrant-based hit rates range from 74% to 89% but warrantless hit rates hover below 50%. Implicitly applying an objective notion of probability, Dripps seems to suggest that these higher hit rates for warrant-based searches reflect a kind of "probable-cause-plus" standard of proof because they well exceed the 50% expected success rate required by probable cause.

²⁹⁶ See 2 PETER J. HENNING ET AL., *MASTERING CRIMINAL PROCEDURE: THE ADJUDICATORY STAGE* 129–30 (2012) (discussing limited discovery available in most criminal cases).

²⁹⁷ See *supra* text accompanying note 294.

²⁹⁸ See Taslitz, *supra* note 183, at 93.

²⁹⁹ See Andrew E. Taslitz, *Wrongly Accused Redux: How Race Contributes to Convicting the Innocent: The Informants' Example*, 37 *SW. U. L. REV.* 1091, 1124–31 (2008) (reviewing data suggesting that police and magistrates may grant warrants against black suspects on much less reliable evidence than warrants issued against white suspects).

³⁰⁰ See *supra* text accompanying notes 1–5, 42–48.

³⁰¹ See *CRIMINAL JUSTICE STANDARDS ON LAW ENFORCEMENT ACCESS TO THIRD PARTY RECORDS* §§ 25-5.2(a)(i), 25-5.3(a)(i) (2012).

effectiveness, the Standards allow the legislature to lower the level of proof to reasonable suspicion.³⁰² Given the importance of the interests at stake, however, the burden of showing such law enforcement need should be on the state, and the “escape option” should rarely and reluctantly be chosen—though critics of this option fear that it will swallow the rule for highly protected information as a politically feasible alternative.³⁰³

6. *Reasonable Suspicion and the Standard of Proof*

The above analysis applies equally, with slight modifications, to the “reasonable suspicion” concept. The Court has defined reasonable suspicion as lower in quality and quantity than probable cause but has otherwise provided no more guidance than it has with respect to probable cause concerning what quality and quantity are required.³⁰⁴ As with probable cause, the Court seems reluctant to identify a specific and fixed standard of proof for reasonable suspicion.³⁰⁵ Lower court judges seem, however, to assign on average a roughly one-third likelihood of a suspect’s guilt or of evidence’s being found in a specific location.³⁰⁶ If this is meant as an objective probability concept, it suffers all the same flaws as it does in the probable cause context. If this standard of proof often used in practice refers to subjective probability, it suffers from the difficulties of creating a useful metaphor by which decisionmakers can make sense of the concept—as was discussed of below-50% standards of proof for probable cause.³⁰⁷ Still, perhaps the concept can be given some comprehensible meaning *in comparison to* the preponderance standard. Thus, it might be possible to conceive of a scale tipping heavily to one side but moved to tip one-third of the way toward tipping entirely to the other side and treating that as sufficient for reasonable suspicion. This still seems quite a challenging task to me, lacking the benefits of relying on our frequent use of metaphors of balance in our broader culture.³⁰⁸ Nevertheless, if the courts are to take seriously the high Court’s definition of reasonable suspicion, there may be no choice but to try in the area of current constitutional law. Moreover, despite claiming to do otherwise, the Court implicitly acknowledges that some standard is needed by saying that reasonable suspicion is lower *in*

³⁰² See *supra* text accompanying notes 53–54.

³⁰³ At least this was the fear expressed by opponents of the escape option when it was debated in the drafting committee.

³⁰⁴ See *Alabama v. White*, 496 U.S. 325, 330–31 (1990).

³⁰⁵ *Id.*

³⁰⁶ See McCauliff, *supra* note 104, at 1328 tbl.4.

³⁰⁷ See *supra* text accompanying notes 75–82, 151–156, 270–273.

³⁰⁸ See *supra* text accompanying notes 260–275.

quantity than probable cause.³⁰⁹

But Christopher Slobogin has suggested a way around the problem, one that would better govern constitutional law but one that can even now be written into statutory definitions of the relevant terms. Slobogin would redefine “probable cause” to mean an “articulable belief that a search will more likely than not *produce* significant evidence of wrongdoing” and “reasonable suspicion” as an “articulable belief that a search will more likely than not *lead to* evidence of wrongdoing.”³¹⁰ By redefining probable cause as a belief that evidence of wrongdoing *will* be found and reasonable suspicion as a belief that evidence *leading to* evidence of wrongdoing will be found, Slobogin clarifies the distinction between the terms. The justification for a lower standard for reasonable suspicion than probable cause is that the police need to be free to investigate—to develop evidence sufficient for probable cause—if they are to combat crime. Yet some limits on their investigations are required to protect rights to privacy, property, and free movement. The “lead to” evidence language captures well this idea of preliminary investigation. But this clarifying definitional move also allows Slobogin to apply the preponderance standard to both probable cause and reasonable suspicion, avoiding the metaphorical confusion wrought by the Court’s current approach.

Remember, however, that objective probabilities can play some role in subjective probability assessments.³¹¹ Crime data collection and modeling are playing an increasing role in ordinary policing.³¹² Although the science has a long way to go, it increasingly is used for various types of “predictive policing”—policing aimed at preventing future crime or at spotting crime where it is expected to occur but has not yet come to fruition.³¹³ Because predictive policing is about catching crime before it occurs or preventing it—the very concerns underlying the creation of the reasonable suspicion concept³¹⁴—this sort of policing has particular relevance to reasonable suspicion.³¹⁵ Yet as Fourth Amendment scholar Andrew Ferguson points out, reasonable suspicion still must be *individualized* suspicion.³¹⁶ Moreover, the Court has never said that reasonable suspicion should be less

³⁰⁹ See *White*, 496 U.S. at 330.

³¹⁰ See Slobogin, *supra* note 27, at 21–23.

³¹¹ See *supra* text accompanying notes 218–225.

³¹² See Andrew Guthrie Ferguson, *Predictive Policing and Reasonable Suspicion*, 62 EMORY L.J. 259, 265–70 (2012).

³¹³ See *id.*

³¹⁴ See *id.* at 265–269, 287.

³¹⁵ See *id.* at 287.

³¹⁶ See *id.* at 287–292.

individualized than probable cause,³¹⁷ and little in logic or policy would support such a move.³¹⁸ Explains Ferguson, therefore, predictive policing, even if perfected, should generally be only a factor in developing reasonable suspicion but cannot be considered sufficient absent more individualized proof.³¹⁹

It is hard to make sense of the Court's assertion that the quality of evidence of reasonable suspicion can be less than that for probable cause. Perhaps the reference can be understood in terms of the relationship between weight and the standard of proof. The weight of evidence, a concept elaborated below, is a measure of its completeness and its quality (its error rate, if known; the credibility of its sources; and its general trustworthiness).³²⁰ Although, as some philosophers conceive of the concept, increasing or decreasing the weight of evidence does *not necessarily* tip judgment toward or away from the standard of proof, weight usually indeed affects that judgment.³²¹ In other words, using the scale

³¹⁷ See *Alabama v. White*, 496 U.S. 325, 330–31 (1990) (describing reasonable suspicion as less demanding than probable cause in terms of the quality and quantity of information required, but not mentioning any difference in the degree of individualization).

³¹⁸ See Taslitz, *Individualized Suspicion*, *supra* note 29, at 173–85.

³¹⁹ See Ferguson, *supra* note 312, at 38–40 (“[N]o matter the type of predictive information (tip, profile, or high crime area), the information alone is never enough to control the reasonable suspicion analysis.”). Erica Goldberg, on the other hand, argues that certain types of objective probability data can themselves individualize suspicion, even to the point of establishing probable cause. See Goldberg, *supra* note 120, at 25–43. To clarify her position, assume that fingerprinting, DNA analysis, or dog-sniffing of contraband is 100% accurate. If so, then finding a print matching a defendant's fingerprints in a home at a burglary scene (if he had no permission to be in the home), the defendant's DNA in semen in a rape case, or a dog alerting to drugs in a car trunk in a cocaine-possession case would all establish probable cause. That would be true both using objective and subjective ideas of probability. Of course, as Goldberg recognizes, in the real world there are error rates and they may substantially complicate the analysis. See *id.* at 22–31. I view error rates as most relevant to the qualitative inquiry of probable cause determination, as discussed in the next section of this Article. Goldberg rejects, as does Ferguson, the use of “group-based” statistics as alone being insufficient to establish the individualization necessary for reasonable suspicion and probable cause. See *id.* at 20–22. She does, however, accept for situations outside of the ones where individualized objective data is available that objective quantitative analysis cannot control. But she also accepts Kerr's idea that unexplained intuition can be decisive and that there should be no standard of proof in many (Kerr would say all) probable cause analyses, positions I reject in this Article. See *id.* at 45–58. Nor does Goldberg examine, as I do here, subjective probability as the conception that should and does in practice govern probable cause nor the relationship between subjective and objective probabilities.

³²⁰ See *infra* text accompanying notes 347–401.

³²¹ See *infra* text accompanying notes 350–351, 393–395. Other philosophers, such as true Bayesians, view weight as a part of the probability calculus—not separate from it. But I agree with William Twining and his colleagues that these differing conceptions of weight are usefully understood as each having a useful role in the practical tasks of the law. See

metaphor, more complete and trustworthy evidence usually “weighs more,” thus tipping the scales closer toward meeting the standard of proof. But if the standard of proof for reasonable suspicion (say, 33 1/3%) is less than that for probable cause, as the Court seems to conceive of it, then less weighty evidence than that needed for probable cause (that is, evidence adding up to something less than around 50% probability of guilt) might suffice. Intuitively, however, this makes little sense, at least to me. For example, suppose that sound science showed that dogs sniffing for cocaine were wrong 80% of the time while junk science purportedly showed that dogs were instead accurate 80% of the time. Would it make sense for a judge to say, “Well, for reasonable suspicion, I can rely on lower quality evidence, so I will accept the junk science and find that the dog’s sniff here establishes at least reasonable suspicion?”³²² Whether applying an objective or subjective notion of probability, the Court should only be

ANDERSON ET AL., *supra* note 204, at 250–61 (discussing different conceptions of weight). Rephrased, much like the blind man feeling different parts of the elephant, different conceptions of weight convey different aspects of or perspectives on reality, all of which are useful and only all of which together provide a full picture of what the legal “elephant” (here, probable cause or reasonable suspicion) looks like. *See id.* at 261 (“In summary, we have provided four quite different interpretations of what is meant by the probative force, weight, or strength of evidence. Each view tells us something valuable about this important credential of evidence, but no single view says all there is to be said.”). I am thus not concerned if some thinkers see an inconsistency between my referring to weight both as a concept distinct from rationally critiqued subjective probability judgments and simultaneously as part of those judgments. Moreover, even if “weight” is not considered in some technical sense as distinct from subjective probability as here discussed, treating weight *as if* it is separate allows for greater clarity when then returning to discuss how it may in fact affect probability judgments; lawyers certainly speak of weight and probability as different yet connected concepts.

³²² Perhaps the best way to understand this discussion is really as a question of the completeness, quality, and persuasiveness of the evidence. Let us vary the hypothetical above and assume that a nationwide sample of drug-sniffing dogs showed a 75% false positive rate. In an individual case, however, a local officer claims that his impression is that his local police force’s false positive rate is only 50% based upon his experience. That seems to cry out, however, for empirical data supporting such a statement. Although the statement alone suggests a 50% probability, the statement is based on incomplete evidence, thus weak weight. Contrast this example with one in which the prosecution in fact produces a well-designed study involving a statistically significant random sample of local police dog success rates. That study indeed shows a 50% local false positive rate. Now the evidence is complete and thus weightier. It still does not, however, necessarily establish probable cause that a particular defendant committed a crime or possessed contraband because one local police dog alerted to that defendant. That one alert is a unique situation in the realm of probable cause determination, and thus is not subject to frequentist probability judgments alone. The ultimate question is one of what rational inferences support a subjective probability judgment that this individual defendant is guilty or possesses the contraband, though frequentist probability judgments may help to inform that analysis. I thank Professor Charles Yablon for this example in his comments on an earlier draft of this Article.

relying on quality evidence in deciding whether the standard of proof is met. Alternatively, if low-quality evidence is to be considered in the analysis nevertheless, it should be understood as, at least alone, barely to move the scales of justice.

Slobogin's concept of reasonable suspicion simplifies and clarifies the analysis. Evidence must still be fairly complete and of significant probative value but in proving something different from probable cause: the mere likelihood of leading to evidence of wrongdoing. But evidence "leading to" probable cause certainly can be less complete and less probative than that needed to show probable cause—significant evidence of wrongdoing—*itself*.

7. Application to Third-Party Electronic Records

Paul Ohm, in his article arguing that probable cause almost always exists in crimes involving the Internet, relies primarily on one subcategory, what I have here labeled "cybercrimes"—crimes committed via the Internet.³²³ For many such crimes, he is right. For example, if a computer is used to hack another computer or fraud or threats are sent by e-mail, the combination of log files and Internet addresses usually readily traces to an IP address handled by an ISP.³²⁴ That creates probable cause to believe that the provider has information tying the threat or lie to a specific customer's computer.³²⁵ More investigation may be needed to link a specific person to the communication made using that computer at the relevant time. But probable cause to seek records from the ISP is established.³²⁶

But this is far from always true. Thus a heuristic intrusion-detection system may be used to identify things that *look like* malware.³²⁷ Such

³²³ See Ohm, *supra* note 17, at 1525.

³²⁴ See *id.* at 1525–27 (offering other examples).

³²⁵ See *id.* at 1526–35.

³²⁶ Cf. JOHN OLSSON, WORDCRIME: SOLVING CRIME THROUGH FORENSIC LINGUISTICS 123 (2009) (giving examples of multiple users of a single computer in a criminal investigation).

³²⁷ Another term for a "heuristic intrusion detection system" is "anomaly based intrusion detection." See CHARLES P. PFLEEGER & SHARI LAWRENCE PFLEEGER, SECURITY IN COMPUTING 468 (3d ed. 2003) ("An intrusion detection system (IDS) is a device, typically another separate computer, that monitors activity to identify malicious or suspicious events.") (emphasis omitted); *id.* at 469 ("Heuristic intrusion detection systems, also known as anomaly based, build a model of acceptable behavior and flag exceptions to that model . . ."); *id.* at 470 ("Because signatures are limited to specific, known attack patterns, another form of intrusion detection becomes useful. Instead of looking for matches, heuristic intrusion detection looks for behavior that is out of the ordinary."); BAIJU SHAH, SANS INST. INFOSEC READING ROOM, HOW TO CHOOSE INTRUSION DETECTION SOLUTION, (2001), available at http://www.sans.org/reading_room/whitepapers/detection/choose-intrusion-detection-solution_334 (offering further detail on heuristic intrusion detection systems). "Malware" is "software intended to damage a computer system." See *Definitions*

systems are needed because malware is always changing.³²⁸ The system's accuracy depends on the accuracy of the algorithm it uses.³²⁹ To catch more potential malware—to be a safer system—the algorithm should sweep more broadly. But broader algorithms will generate more false positives.³³⁰ The error rate may be sufficiently high that it is consistent with reasonable suspicion but not probable cause that malware was in fact used (that is, that any crime was committed at all), regardless of its source.³³¹

Another example would be using a robust hash algorithm to identify potential copyright infringement.³³² For example, YouTube uses a content identification system to monitor copyright violations.³³³ Thus YouTube might want to determine whether a band's downloaded song is a rip-off of a Van Halen tune, despite the song having been modified slightly to reduce the chances of detection. While traditional hash algorithms might establish probable cause, these more robust algorithms—designed, for example, to detect not simply Van Halen's precise tunes but tunes “close enough” to implicate the copyright laws—might have significant error rates, again creating a question whether a crime has occurred.³³⁴

Now imagine that a user meaning to send an e-mail to Mr. A accidentally sends it to Mr. B. The words used in the e-mail are ordinary words but ones that can sometimes serve as code for ordering child pornography.³³⁵ Is there probable cause to believe that a crime has

of 'Malware,' ASK, <http://www.ask.com/dictionary?q=malware&qsrc=999&o=3966> (last visited May 16, 2013). My thanks to Stephen Henderson for suggesting this malware example and all the examples to follow other than those discussing “ordinary crime.”

³²⁸ See Tim Wilson, *Next-Generation Malware: Changing the Game in Security's Operations Center*, SECURITY DARK READING (Oct. 15, 2012), <http://www.darkreading.com/security-monitoring/167901086/security/security-management/240009058/next-generation-malware-changing-the-game-in-security-s-operations-center.html> (“In a quiet, secluded spot, a malware author is creating a new piece of code that no antivirus tool has ever seen before. It's not a particularly creative exploit—just a slight tweak on an existing Trojan—but it should be enough to bypass the signature-based defenses of the company he's targeting.”)

³²⁹ ALEXIS CORT, SANS INST. INFOSEC READING ROOM, ALGORITHM-BASED APPROACHES TO INTRUSION DETECTION AND RESPONSE 12 (2004), available at http://www.sans.org/reading_room/whitepapers/detection/algorithm-based-approaches-intrusion-detection-response_1413.

³³⁰ See PFLEEGER & PFLEEGER, *supra* note 327.

³³¹ See *supra* text accompanying notes 83–84.

³³² See Jiri Fridrich & Miroslav Goljan, Robust Hash Functions for Digital Watermarking (2000) (unpublished manuscript), available at [http://mathcs.emory.edu/~whalen/Hash/Hash_Articles/IEEE/Robust hash functions for digital watermarking.pdf](http://mathcs.emory.edu/~whalen/Hash/Hash_Articles/IEEE/Robust%20hash%20functions%20for%20digital%20watermarking.pdf).

³³³ See *Content ID*, YOUTUBE, <http://www.youtube.com/t/contentid> (last visited May 16, 2013).

³³⁴ See Fridrich & Goljan, *supra* note 332; E-mail from Stephen Henderson to Andrew E. Taslitz (Jan. 8, 2013) (on file with author).

³³⁵ Cf. *United States v. Cancelmo*, 64 F.3d 804, 808 (2d Cir. 1995) (discussing how the

occurred? The answer might in part depend upon consulting experts³³⁶ but, even then, a sufficiently ambiguous e-mail might establish reasonable suspicion but not probable cause.³³⁷

In each of these three examples, evidence can individualize a purported crime to an ISP, but there is arguably less than probable cause concerning whether the activity was criminal in the first place. Determining whether the available evidence in each case in fact rises to the level of probable cause, reasonable suspicion, or something less is a subjective probability judgment based upon commonsense arguments but does require some sense of how confidently those judgments must be held, that is, a standard of proof.³³⁸

Other times, the link to an ISP involves circumstances where the objective probabilities are sufficiently low to call into question whether there is probable cause that evidence of a specific wrongdoer's crime will be found. A single IP address can sometimes accommodate multiple other websites indicated by subaddresses.³³⁹ If the ISP keeps records of the IP address associated with a fraudulent communication but does not keep the subaddresses—and there are many candidates—and the police are aware of this fact, police knowing the ISP link may not establish probable cause. Alternatively, suppose that someone sends a letter to a news reporter claiming to be the “real” serial killer sought by the police. The letter writer

use of alleged narcotics code words cannot generally be solely sufficient for establishing probable cause, though it is relevant and can sometimes be sufficient when combined with other circumstances); Mehagen Doyle, *Bad Apples in Cyberspace: The Sexual Exploitation and Abuse of Children over the Internet*, 21 WHITTIER L. REV. 119, 129 (1999) (“Many search engines use hidden computer codes to identify sites, relying on keywords and descriptions which are coded by the website operators, but are not visible to people viewing the site. [I]n an effort to increase traffic to their sites (and thus advertising revenue), pornographic web site operators use popular terms.” (internal citation omitted) (alterations in original)).

³³⁶ See OLSSON, *supra* note 326, at 68–73 (providing an example of an expert forensic linguist discussing a case in which he analyzed coded letters sent to a child by a defendant in an effort to sexually harass and seduce her).

³³⁷ Cf. *Cancelmo*, 64 F.3d at 808 (finding that coded drug language alone is insufficient for probable cause).

³³⁸ See *supra* text accompanying notes 254–255.

³³⁹ This process is known as “virtual hosting.” See *Apache Virtual Host Documentation*, APACHE, <http://httpd.apache.org/docs/2.2/vhosts/> (last visited May 16, 2013) (“The term *Virtual Host* refers to the practice of running more than one web site (such as *company1.example.com* and *company2.example.com*) on a single machine. Virtual hosts can be ‘IP-based’, meaning that you have a different IP address for every web site, or ‘name-based’, meaning that you have multiple names running on each IP address. The fact that they are running on the same physical server is not apparent to the end user.”); *Virtual Hosting*, WIKIPEDIA, http://en.wikipedia.org/wiki/Virtual_hosting (last modified Apr. 4, 2013, 1:54 PM).

attaches a map downloaded from Mapquest of a broad area but marks a specific spot as where the body will be found. Assuming that at least ten people mapped that same location via Mapquest in the past thirty days—a very reasonable assumption for a suburban town—the objective probabilities would not establish probable cause.³⁴⁰ More evidence, of less purely mathematical relevance, would be needed.

Perhaps most important, however, is the category of ordinary crimes—those not committed via computer at all—but for which evidence may be found via the Internet and its electronic cousins.³⁴¹ If a murder were committed by a gang beating a bicyclist, a fingerprint might lead to one gang member who refuses to confess or identify his coconspirators.³⁴² The police might speculate that text messages were sent at the time among the offenders. They cannot locate the identified gang member's phone, so they want to “triangulate” among cell phone towers using an ISP's records to locate other phones used in the area at the time of the crime.³⁴³ That speculation is not probable cause and arguably not even reasonable suspicion. If either of those standards applied, more evidence would be needed. Perhaps an arsonist or a rapist keeps an Internet journal or diary stored on the cloud.³⁴⁴ Police would need a quality tip, eyewitness corroboration, or other evidence to have reasonable suspicion or probable cause that the diary or journal was kept and so stored. Indeed, most non-white-collar crime is not committed using records stored with ISPs. Yet in an increasingly technological world, evidence of those ordinary crimes is likely to be available somewhere on the Internet.³⁴⁵

Finally, even if probable cause is easily shown, that does not mean that it should not be required or that it should be relegated to secondary importance. If probable cause involves a significant standard of proof and is accompanied by the requirements of high-quality information, police

³⁴⁰ See *supra* text accompanying notes 207–210.

³⁴¹ See *infra* text accompanying notes 396–399.

³⁴² This example modifies, but is inspired by, a real case worked on by forensic linguist John Olsson. See OLSSON, *supra* note 326, at 11–12.

³⁴³ Jeremy Rothstein, *Track Me Maybe: The Fourth Amendment and the Use of Cell Phone Tracking to Facilitate Arrest*, 81 *FORDHAM L. REV.* 489, 494 (2012) (explaining the process of triangulation).

³⁴⁴ These examples are also inspired by Olsson. See OLSSON, *supra* note 326, at 34, 86.

³⁴⁵ See LARRY DANIEL & LARS DANIEL, *DIGITAL FORENSICS FOR LEGAL PROFESSIONALS: UNDERSTANDING DIGITAL EVIDENCE FROM THE WARRANT TO THE COURTROOM* 1–30 (2012) (recounting the degree to which digital evidence and digital traces are ubiquitous and therefore widely important for forensic purposes); JOHN SAMMONS, *THE BASICS OF DIGITAL FORENSICS: THE PRIMER FOR GETTING STARTED IN DIGITAL FORENSICS* 3 (2012) (“In today’s digital world, electronic evidence can be found in almost any criminal investigation conducted. Homicide, sexual assault, robbery, and burglary are just a few of the many examples of ‘analog’ crimes that can leave digital evidence.”).

accountability, and individualized justice, numerous benefits follow. Important constraints are placed on the risk of police abuses, respect for law via fair procedures is enhanced, and law enforcement itself can be prodded to embrace a culture of respect for constitutional values and of the professionalism requiring careful attention to evidence and hesitation before too readily invading privacy.³⁴⁶

B. THE QUALITATIVE ELEMENT OF PROOF: EVIDENTIARY WEIGHT

Probable cause turns not only on the quantity but also the quality of the evidence. The concept of “weight” illuminates the idea of quality. Evidentiary weight has two components: the completeness of the evidence and its trustworthiness.³⁴⁷ If the probable cause inquiry is based on incomplete evidence, the resulting finding that there is or is not probable cause is suspect because the story of suspected criminality is missing key chapters. On the other hand, even if the story is complete, it will merit little consideration if it does not make sense, that is, if it is based on incredible, tainted, or shoddy evidence.

1. *Weight and Evidentiary Completeness*

The probability that something is so is not the only thing that controls whether a standard of proof has been met. The “weight” of the evidence also matters.³⁴⁸ Just as there are different concepts of probability, however, there are different concepts of weight.³⁴⁹ The most helpful one here defines weight as “the total amount of evidence supporting a probability judgment, even if that evidence is distributed relatively evenly for and against a particular outcome.”³⁵⁰ Weight thus refers to the degree of completeness of the evidence offered to test a hypothesis.³⁵¹ Thus in Kerr’s dorm room example, being told that the police conducted an empirical study finding that 60% of the dorm rooms in a particular university contained drugs merits little weight if we do not know what procedures were used, what the

³⁴⁶ See Taslitz, *Individualized Suspicion*, *supra* note 29, at 175–85.

³⁴⁷ See *infra* text accompanying notes 347–399.

³⁴⁸ See ANDERSON ET AL., *supra* note 204, at 226, 229–30, 247, 250–61. Under some conceptions, “weight” is a truly distinct concept from probability; under other conceptions, it is but one aspect of the probability determination. For my purposes and the practical purposes of the law, which is the correct idea of weight is irrelevant. The gist of my argument would remain the same, and naming weight as a separate concept is a handy, quick way of describing important phenomena in a way that is of practical value. See *id.*

³⁴⁹ See *id.* at 227–29, 260–61.

³⁵⁰ Yablon, *supra* note 142, at 916.

³⁵¹ See ANDERSON ET AL., *supra* note 204, at 259.

sample size was, and over what period of time the study was conducted.³⁵² Even if we know these things, as Kerr points out, we also may want to know why the police suspect this defendant of being in the 60% guilty group rather than the 40% innocent group, what case-specific investigation of the defendant the police conducted and its result or, if they did not do such an investigation, why not.³⁵³

Considering additional evidence *might* change the probability of a proposition's being true but might not. Weight is thus independent of probability.³⁵⁴ The weight of two probability judgments can be given rank order—one judgment is “weightier” than another—but weight cannot usefully be assigned a mathematical value.³⁵⁵ “Yet it is worth noting that much of what both lawyers and scientists purport to do, each in their respective field, is evaluate the weight of the evidence put forward to support various uncertain factual propositions.”³⁵⁶

L. Jonathan Cohen's version of “Baconian” probability theory incorporates this idea of weight.³⁵⁷ The details of his theory and of its formal representation are not important here. What is important is that he and his supporters argue that Baconian probability judgments that take this conception of weight into account most accurately reflect how most people and institutions, including the courts, think about the probability of unique events.³⁵⁸ They thus see efforts to explain the preponderance of the evidence standard in terms of objective probabilities as wanting, the standard instead embracing Baconian weight-informed approaches.³⁵⁹ The sentencing hearing testimony of a clinical psychologist concluding to a reasonable degree of professional certainty, for example, that a defendant committed a crime because he was depressed but without investigating the facts supporting other relevant, plausible diagnoses or the individualized causes of the final chosen diagnosis would deserve little weight.³⁶⁰ Standards of proof commonly used in law should thus be understood as embracing ideas of both subjective probability and weight. This too may be one reason why these standards are not stated in precise mathematical terms

³⁵² See *supra* text accompanying notes 97–99 (summarizing Kerr's example).

³⁵³ See *supra* text accompanying notes 102–103 (summarizing Kerr's analysis of the example).

³⁵⁴ See Yablon, *supra* note 142, at 916.

³⁵⁵ See *id.* at 916–17.

³⁵⁶ *Id.* at 917.

³⁵⁷ See L. Jonathan Cohen, *On the Psychology of Prediction: Whose Is the Fallacy?*, 7 COGNITION 385, 388 (1979).

³⁵⁸ See Yablon, *supra* note 142, at 919.

³⁵⁹ See *id.*

³⁶⁰ See Taslitz, *supra* note 223, at 72–81; Yablon, *supra* note 142, at 929.

(and perhaps should not be so explained) but rather are given verbal formulations believed to do the job.

So understood, Kerr's concerns about the completeness of evidence offered to a judge making a probable cause judgment are better seen as questions of weight than probability.³⁶¹ That recategorization makes the concerns no less valid. But real judges are likely to incorporate judgments of weight and probability not in any formalistic way but rather through storytelling.³⁶² Kahneman and Tversky seemed to recognize the importance of storytelling in how subjective probability judgments are actually made:

Some events are perceived as so unique that past history does not seem relevant to the evaluation of their likelihood. In thinking of such events we often construct *scenarios*, i.e., stories that lead from the present situation to the target event. The plausibility of the scenarios that come to mind, or the difficulty of producing them, then serve as a clue to the likelihood of the event. If no reasonable scenario comes to mind, the event is deemed impossible or highly unlikely. If many scenarios come to mind, or if the one scenario that is constructed is particularly compelling, the event in question appears probable.³⁶³

Kahneman and Tversky stressed the dangers that heuristics might lead a storyteller or interpreter to consider too few relevant factors in crafting a story or to craft simpler rather than more convincing but more complex scenarios. A probability judgment made without considering all relevant data and its implications merits little weight.³⁶⁴ While stories can sometimes leave us subject to the prey of heuristics not appropriate for the situation,³⁶⁵ storytelling is ultimately central to most people's reasoning, including that of judges and juries.³⁶⁶ Stories are judged in part on their coverage (accounting for all the evidence), coherence (plausibility, consistency, and completeness), and uniqueness (superiority to alternative competing stories).³⁶⁷

But storytelling is not simply a way to find raw "facts" or render judgments of probability and weight. Stories too embody values and reaffirm or challenge existing social norms.³⁶⁸ When juries or judges decide witness credibility, evidentiary weight, and guilt probability in rape

³⁶¹ See *supra* text accompanying notes 100–103 (discussing Kerr's views on the point).

³⁶² See ANDERSON ET AL., *supra* note 204, at 148, 152, 155.

³⁶³ Tversky & Kahneman, *supra* note 230, at 177.

³⁶⁴ See Yablon, *supra* note 142, at 929.

³⁶⁵ See BREST & KRIEGER, *supra* note 111, at 219.

³⁶⁶ See LISA CRON, *WIRED FOR STORY: THE WRITER'S GUIDE TO USING BRAIN SCIENCE TO HOOK READERS FROM THE VERY FIRST SENTENCE 1* (2012) ("Story, as it turns out, was crucial to our evolution—more so than opposable thumbs."); Engel, *supra* note 83, at 451–53 ("Jurors attempt to create a narrative story from the pieces of evidence they have heard.")

³⁶⁷ See BREST & KRIEGER, *supra* note 111, at 220.

³⁶⁸ See Taslitz, *supra* note 260, at 434–39.

cases, they either embrace antifeminist or more liberating stories drawing on tales already circulating in society.³⁶⁹ The law may try to prod a factfinder toward favoring certain kinds of stories over others, but some story must be chosen. This is, however, as it should be. In criminal law, many legal standards are phrased precisely to invite partly moral or value-based judgments.³⁷⁰ Words like “reasonable,” “consent,” and “deliberate” are rarely defined in a precise way, leaving ample room for the play of moral judgments.³⁷¹ The beyond a reasonable doubt standard, often defined in terms of “moral certainty,”³⁷² is a similar invitation.³⁷³ Indeed, any verbally (rather than mathematically) articulated standard of proof invites values-infused storytelling.³⁷⁴ The same is likely true in the probable cause determination.³⁷⁵ Judges’ decisions about whether there is probable cause inevitably involve judgments about how convincing the stories told in the detectives’ affidavits are.³⁷⁶ But that judgment will involve some inevitable sense of the acceptability of the police conduct as a question of political morality.³⁷⁷ Kerr seems to recognize this when he assumes that judges will

³⁶⁹ See *id.* at 421–22, 474–75.

³⁷⁰ See Andrew E. Taslitz, *A Feminist Approach to Social Scientific Evidence: Foundations*, 5 MICH. J. GENDER & L. 2–11 (1998).

³⁷¹ See PODGOR ET AL., *supra* note 70, at 131–32 (defining “deliberate” in the test for first-degree murder); Taslitz, *supra* note 260, at 422–24 (discussing “consent”); Taslitz, *Willfully Blinded*, *supra* note 146, at 384–88 (discussing “reasonableness”).

³⁷² *Commonwealth v. Webster*, 59 Mass. (5 Cush.) 295, 320 (1850).

³⁷³ See Engel, *supra* note 83, at 436–38, 441–42.

³⁷⁴ See *id.* at 450–55.

³⁷⁵ See ANDERSON ET AL., *supra* note 204, at 17, 246, 260 (making no distinction on this score between probable cause, preponderance of the evidence, and beyond a reasonable doubt).

³⁷⁶ John H. Blume et al., *Every Juror Wants a Story: Narrative Relevance, Third Party Guilt and the Right to Present a Defense*, 44 AM. CRIM. L. REV. 1069, 1104–06 (2007) (arguing that probable cause as used in the warrant context is inherently narrative in nature and thus serves as a good standard for whether a defendant should be allowed to tell a story of third-party guilt at trial); Myron Orfield, *The Exclusionary Rule and Deterrence: An Empirical Study of Chicago Narcotics Officers*, 54 U. CHI. L. REV. 1016, 1049 (1987) (“Critics of the exclusionary rule maintain that police perjury neutralizes the effectiveness of the exclusionary rule in practice. They argue both that police can deceive judges with convincing probable cause stories and that judges often ‘wink’ at perjury in order to permit the convictions of guilty defendants.”).

³⁷⁷ See Bruce A. Antkowiak, *Saving Probable Cause*, 40 SUFFOLK U. L. REV. 569, 582 (2007) (“So we find that our search for meaning as to the elusive term ‘probable cause’ leads us straight to the center of the political earth.”); *id.* at 587 (“I propose that the judge consult not the ablest and purest of men, but instead seek to understand the process by which the governed functions in its most able and pure state to reach a rational consensus about the core values of justice probable cause exists to serve.”); *id.* at 596 (“Probable cause is a search for a point along a continuum that cannot be calculated in decimals. Instead, it measures the delicate balance of human freedom and government power in the society we

wonder about the bad faith of detectives obviously leaving out important information. Yet standards of proof, while inviting stories, send messages about the kinds of stories that are acceptable.³⁷⁸ More precisely, higher standards of proof tell a factfinder to look for greater weight of the evidence and a higher belief in subjective probability of accuracy than do lower standards.³⁷⁹ Setting a standard of proof in the probable cause determination can focus judges more emphatically on questions of weight (evidentiary completeness) and degree (subjective probability).³⁸⁰ Some stories are better than others.

The Court certainly has recognized the role of weight considerations in the probable cause determination, most clearly in its analysis of informants. In moving from the *Aguilar–Spinelli* standard to the *Gates* standard for addressing informants' tips, the Court moved from a rule of admissibility to one of weight.³⁸¹ Tips failing the old *Aguilar–Spinelli* standard simply could not be considered in the probable cause determination.³⁸² But under *Gates*, tips are considered for whatever they are worth in the totality of the circumstances.³⁸³ But the Court did not leave judges without guidance on the question of weight. To the contrary, *Gates* still requires courts to consider all evidence relevant under *Aguilar–Spinelli* in deciding what weight to give a tip.³⁸⁴ *Gates*, its predecessors, and its progeny provide checklists of many of the inquiries courts should make.³⁸⁵ These checklists can serve as a guide to evidentiary completeness or weight. Restated, they also serve as a guide to what courts must evaluate in crafting convincing probable cause stories. I prefer the admissibility approach to the weight approach because the former gives police more guidance and better channels and limits their discretion.³⁸⁶ They also limit the sorts of stories lower courts may tell.³⁸⁷ Complete elimination of police or factfinder discretion is, however, neither feasible nor desirable. The question is

have created.”); Davies, *supra* note 199, at 974 (noting that some Justices have historically fractured ideologically over the meaning of probable cause).

³⁷⁸ See *supra* text accompanying notes 67–88, 96–99.

³⁷⁹ See *supra* text accompanying notes 243–303, 346–376.

³⁸⁰ See *supra* text accompanying notes 244–256, 346–355.

³⁸¹ See HENNING ET AL., *supra* note 296, at 52.

³⁸² See *id.*

³⁸³ See *id.*

³⁸⁴ See *id.*

³⁸⁵ See TASLITZ ET AL., *supra* note 87, at 186, 197–214.

³⁸⁶ See *id.* at 211–16.

³⁸⁷ Cf. EPSTEIN ET AL., *supra* note 140, at 241, 253 (concluding that appellate precedent in many instances plays a greater role in limiting the influence of ideology on trial courts than on appellate courts).

always one of degree.³⁸⁸ But in expanding the sphere of judicial and officer discretion in *Gates*, the Court could have given no guidance whatsoever. Instead, it crafted a template, if not a set of rules, for evaluating weight.³⁸⁹

Kerr's concern about the incompleteness of evidence could thus be reimagined as a call to the Court to expand its weight template. Perhaps lower courts should be required to inquire of police just what other investigation was done and its results or what investigation could have been done and its potential results.³⁹⁰ Courts are competent to evaluate these questions or will become so over time.³⁹¹ If they fail to make the necessary inquiries in granting warrants, suppression courts might exclude evidence precisely because of the incompleteness of the evidence described in the warrant affidavit. A greater emphasis on weight thus looks not only to the affirmative case made by the police but to what evidence is missing and why.

2. *Weight, Evidentiary Quality, and Trustworthiness*

There is another sense in which the concept of weight might be used in the probable cause determination: as an assessment of the "quality" of individual items of evidence. Return to the scale metaphor. One reason completeness involves "weight" is that, assuming that each item of evidence weighs the same, more items of evidence weigh more, tipping the scale more to one side.³⁹² But some items of evidence might be of better quality than others so that high-quality individual items "weigh" more than low-quality items. That too would tip the scale.

"Quality" of evidence, loosely stated, refers to its trustworthiness and strength.³⁹³ For example, expert evidence could be based on a novel, barely

³⁸⁸ Cf. *supra* text accompanying notes 160–203 (discussing degrees of discretion in rule-based versus role-based authority).

³⁸⁹ Unfortunately, as noted earlier, the Court in *Alabama v. White*, 496 U.S. 325, 330 (1990), declared that evidentiary quality, not merely evidentiary quantity, could be lower in the reasonable suspicion than the probable cause determination. But incomplete and shoddy evidence raises the same concerns about the value of any reasonable suspicion judgment as it does of any probable cause judgment. The Court in *White* was wrong.

³⁹⁰ These are precisely the main categories of "missing evidence" in the probable cause determination of which Kerr complains. See *supra* text accompanying notes 89–103.

³⁹¹ Courts routinely learn to handle much more complex matters than how thorough a police investigation was or should be in a particular case. For example, courts, under *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579 (1993), must learn the science underlying a wide array of forensic evidence. It is a happy consequence of the adversarial system that if courts start demanding certain information to guide their decisions, one or both of the parties will provide it.

³⁹² This analysis assumes either that weight is distinct from subjective probability but can still inform it or that weight is but one aspect of probability. See *supra* notes 347–361.

³⁹³ See Yablon, *supra* note 142, at 903.

tested theory versus a tried-and-true, well-tested theory. The latter expert testimony should be entitled to far more weight than the former. In the language of evidence law, more trustworthy evidence has more “probative value”—it changes the probabilities that an element to be proven exists more than less trustworthy evidence does.³⁹⁴

This discussion takes us back to Ohm’s claim that issues of weight and credibility are unimportant in probable cause and reasonable suspicion judgments involving searches of computers. Ohm’s mistake once again is that he focuses on cybercrimes rather than ordinary crimes leaving traces in the computer world. Thus Ohm argues that there are almost always reliable witnesses as sources of Internet crime evidence because those witnesses are “sophisticated corporate intermediaries.”³⁹⁵ But that just is not true for the vast number of ordinary crimes not committed via computer. In such cases, police must rely on anonymous informants, confidential informants, undercover investigations, and just good old-fashioned police detective work to establish probable cause or reasonable suspicion.³⁹⁶ The quality of the evidence in such cases presents issues little different from investigation in a precomputer world—a point that Ohm apparently concedes.³⁹⁷ There is no reason to suppose that ordinary crimes leaving electronic traces are rare. Even if they are, rapidly changing technology suggests that such cases will become increasingly important in the future.³⁹⁸ Furthermore, even crimes committed via the Internet can turn on ordinary investigation. For example, police may have no reason to suspect an individual of downloading child pornography until receiving an anonymous tip to that effect.³⁹⁹ The quality of the tip—the completeness of the information in it and of corroborating

³⁹⁴ See STEVEN I. FRIEDLAND ET AL., *EVIDENCE LAW AND PRACTICE* 67–69 (5th ed. 2012); see also ANDERSON ET AL., *supra* note 204, at 251–53 (discussing analogous concepts of “likelihood ratios” and “posterior probabilities” in “Bayes” rule as alternative concepts of weight). But see YABLON, *supra* note 142, at 912–15 (explaining the flaws in the work of scholars who think that these concepts can be the bases for objective probability concepts in standards of proof).

³⁹⁵ See Ohm, *supra* note 17, at 1532.

³⁹⁶ See *id.* at 1515.

³⁹⁷ See *id.* at 1528–29, 1545–47 (discussing cases that “straddle the virtual and real worlds”). Ohm mentions other potential exceptions to his “probable-cause-is-mostly-irrelevant” position, including fishing expeditions, preventing future crimes, and data mining. I touch on these exceptions here and accept the idea that they do not involve probable cause as traditionally conceived. I add only that I do not develop analysis of those topics further here because they raise a host of issues beyond the scope of this piece.

³⁹⁸ See *supra* text accompanying notes 24–26.

³⁹⁹ See OLSSON, *supra* note 326, at 123 (speculating that police focused on a particular child pornography downloading suspect in a case the author handled based on an anonymous tip, though he believed the website itself may have been the tipster—an irrelevant point if the tip was truly anonymous).

information and the force or trustworthiness of that information must be assessed. That assessment will either establish probable cause, reasonable suspicion, or nothing, all of which are ultimately subjective probability judgments not resolved by objective mathematical probabilities. The kinds of analysis involved have been addressed in a vast array of scholarship outside the cybercrime world⁴⁰⁰—and even in that world⁴⁰¹—and thus need not be reviewed in depth here. But the bottom line matters: probable cause or reasonable suspicion must not be based on incomplete or shoddy evidence. Any other conclusion countenances unjustified invasions of privacy and property inconsistent with the Fourth Amendment's deepest values.

IV. CONCLUSION

This Article has focused on the meaning and social value of the quantitative (explained as the standard of proof) and qualitative (explained as the weight of the supporting evidence) aspects of probable cause. Along the way, however, this piece has necessarily touched on the individualized suspicion and accountability aspects of probable cause. As I have explained elsewhere, individualized suspicion promotes distributive fairness and procedural justice, while protecting privacy invasions against dragnet-like searches of large groups or fishing expeditions.⁴⁰² Accountability promotes accuracy and ensures democratic safeguards against police overreaching.⁴⁰³ These benefits apply in the world of third-party electronic records searches just as in the nonvirtual world. This Article has developed at greater length, however, the meaning and social benefits of the quantitative and qualitative aspects of probable cause, showing how they matter in third-party records searches in cybercrimes, but even more so in ordinary crimes leaving a cybertrail. This inquiry, though made in the context of cybersurveillance, particularly as illustrated in the new ABA Standards, hopefully has broader implications. The cybersurveillance context has thus offered the opportunity to clarify two occasionally discussed but woefully

⁴⁰⁰ See, e.g., Peter Erlinder, *Florida v. J.L.—Withdrawing Permission to “Lie with Impunity”: The Demise of “Truly Anonymous” Informants and the Resurrection of the Aguilar/Spinelli Test for Probable Cause*, 4 U. PA. J. CONST. L. 1 (2001); Chris La Tronica, *Could You? Should You?* *Florida v. J.L.: Danger Dicta, Drunken Bombs, and the Universe of Anonymity*, 85 TUL. L. REV. 831 (2011).

⁴⁰¹ Cf. Clifford, *supra* note 24, at 104–05 (giving an example in which the harassing nature of certain e-mails turned on the presumed reliability of the recipient—a former girlfriend of the ultimate suspect).

⁴⁰² See generally Taslitz, *Individualized Suspicion*, *supra* note 29 (analyzing the many social benefits of individualized suspicion in the probable cause and reasonable suspicion analyses).

⁴⁰³ See *id.* at 177–78, 210.

undertheorized aspects of probable cause, namely, the quantitative and the qualitative. I hope that this effort sparks further conversation on matters central to protecting privacy against its many modern threats.

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