WHAT MAKES EVIDENCE SUFFICIENT?

Michael S. Pardo*

When is a party's evidence sufficient in a civil case? When is the prosecution's evidence sufficient in a criminal case? The answers to these questions play several important roles—both practical and constitutional—throughout civil and criminal litigation. As a practical matter, a judicial determination that evidence is insufficient may end a case pre-trial (for example, at summary judgment); may end a trial without getting to a jury (resulting in a judgment as a matter of law); or may overturn a jury's verdict in a civil case or a guilty verdict in a criminal case. As a constitutional matter, the right to a jury trial in civil cases depends on whether parties have sufficient evidence to get to trial, and criminal defendants have a due process right to not be convicted based on insufficient evidence. Despite the importance of the sufficiency issue, the legal doctrine separating sufficient from insufficient evidence is imprecise and unclear, and judicial reasoning applying the doctrine in particular cases is often frustratingly opaque.

This Article examines the general question of what, if anything, makes evidence sufficient. In particular, the analysis explores whether there are any basic features or criteria that underlie or ground sufficiency determinations in civil and criminal cases. The Article first diagnoses the primary reason for the lack of clarity surrounding sufficiency doctrine—uncertainty regarding the underlying evidentiary standards on which sufficiency doctrine depends. Then, drawing on recent evidence scholarship on the process of proof at trial, the Article identifies three possible answers to the question of what makes evidence sufficient. The analysis demonstrates that two possible answers based on probabilistic criteria are implausible and inconsistent with sufficiency doctrine. The Article defends a third possibility based on explanatory criteria. The central thesis is that "explanatory facts"—i.e., facts about the relationships between the evidence and the explanations offered by the parties—make evidence sufficient or not. Recognizing the role played by explanatory facts clarifies the doctrine in civil and criminal procedure, illuminates the caselaw, and potentially guides and constrains future applications.

TABLE OF CONTENTS

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* Professor of Law, Georgetown University Law Center. My thanks to the *Arizona Law Review* for excellent editorial work.

INTRODUCTION

This Article explores and answers the following question: what makes evidence sufficient? Before we can begin to answer this question, it is necessary to clarify exactly: (1) what this question is asking; (2) why it is a worthwhile question to ask; and (3) why it is important to answer.

First, what is the question asking? To understand the question, we need to clarify what is meant by "sufficient" in this context. One thing "sufficient" might be taken to mean—*but does not mean*—is that a party in litigation actually persuaded a factfinder (a jury or judge) to find in that party's favor at trial. Consider, for example, a tort case in which the plaintiff (a tenant) sues the defendant (a landlord) for injuries after falling down a staircase.[1] The plaintiff alleges that poor lighting caused the fall, and the defendant disputes this allegation. At trial, the plaintiff will need evidence to persuade the jury that the lighting conditions caused the fall. If the plaintiff were to persuade the jury of this fact, then we might say that, in some sense, the plaintiff's evidence was "sufficient" because it was enough to persuade the jury. To be clear, this is *not* what is meant by "sufficient" throughout this Article. A great deal of useful scholarship has explored what persuades jurors at trial.[2] This Article explores a different issue and answers a different question.

By "sufficient," this Article means a legal determination that is distinct from any actual findings made at trial. In the example above, the plaintiff's evidence might be *insufficient* even though the plaintiff won at trial. And the plaintiff's evidence might be *sufficient* even though the plaintiff lost at trial. Moreover, the

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1. *See* Muckler v. Buchl, 150 N.W.2d 689 (Minn. 1967). This example is used throughout Part II to illustrate different possible answers to the question of what makes evidence sufficient.

2. *See, e.g.*, Nancy Pennington & Reid Hastie, *A Cognitive Theory of Juror Decision Making: The Story Model*, 13 CARDOZO L. REV. 519 (1991); NEIL VIDMAR & VALERIE P. HANS, AMERICAN JURIES: THE VERDICT (2007); Shari Seidman Diamond et al., *The "Kettleful of Law" in Real Jury Deliberations: Successes, Failures, and Next Steps*, 106 NW. U. L. REV. 1537 (2012); MICHAEL J. SAKS & BARBARA A. SPELLMAN, THE PSYCHOLOGICAL FOUNDATIONS OF EVIDENCE LAW (2016).

evidence might be sufficient or insufficient even though the case never goes to trial. Unlike the jury-trial question—which is essentially a *descriptive* question about what a particular factfinder actually decided—whether evidence is sufficient is essentially an *evaluative* question about whether the evidence produced is strong enough to justify or support a legal finding as a matter of law. As in civil cases (such as the tort example above), a similar question arises in criminal cases. For example, imagine an assault prosecution in which the defendant denies involvement and argues that it is a case of mistaken identity.[3] On this issue of identity, the question of whether the prosecution's evidence is *sufficient* is distinct from whether a jury is persuaded of this fact.[4] The question of whether evidence is sufficient may arise even in cases that never go to trial and, indeed, may be the reason why cases terminate pre-trial.[5] In both civil and criminal cases, a complex set of legal-doctrine structures sufficiency-of-the-evidence determinations.[6]

This clarifies what is meant by "sufficient," but the title question asks something further—namely, what *makes* evidence sufficient? The reason for framing the question in this way has to do with the nature of sufficiency determinations. According to legal doctrine, sufficiency determinations purport to be something distinct from the findings of individual factfinders (jurors or judges in bench trials).[7] Thus, in asking whether something *makes* evidence sufficient, the Article is asking whether there are any criteria or features of the evidence that are, in some sense, "outside of the heads" of individual factfinders (or distinct from whether individuals are persuaded or not by the evidence). It might turn out that the answer to this question is negative. In other words, it might be that there is *nothing* outside of the heads of individual judges that makes evidence sufficient, and thus that legal doctrine on "sufficiency of the evidence" is based on a false assumption, is a fiction, or is incoherent.[8] Before accepting such a skeptical conclusion, however,

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3. *See, e.g.*, O'Laughlin v. O'Brien, 568 F.3d 287, 304–08 (1st Cir. 2009).

4. *See id.* at 308 (holding that the prosecution's evidence was insufficient to support the jury's verdict of guilt).

5. *See* FED. R. CIV. P. 56 (motion for summary judgment); FED. R. CRIM. P. 29(a) (motion for a judgment of acquittal based on insufficient evidence).

6. *See infra* Parts I, III, IV. This doctrine is outlined in Part I and discussed in more detail in Parts III and IV. Sufficiency determinations also play a role in the admissibility of evidence. *See infra* Part V.

7. *See infra* Part I. Courts use a "reasonable" or "rational" jury standard to assess sufficiency—evaluating whether a "reasonable" or "rational" jury could make a particular factual finding in light of the evidence. As a matter of legal doctrine, this standard may be met when no actual factfinder makes such a finding, and it may not be met even though an actual factfinder has made such a finding. *See infra* Part I. "Reasonable" and "rational" are used interchangeably in this context. *See infra* note 22.

8. *See* Suja A. Thomas, *Reforming the Summary Judgment Problem: The Consensus Requirement*, 86 FORDHAM L. REV. 2241, 2251 (2018) ("[T]he reasonable jury standard is impossible to implement. Judges decide whether to order summary judgment based on their own opinions of the evidence.") [hereinafter *Reforming*]; Suja A. Thomas, *The Fallacy of Dispositive Procedure*, 50 B.C. L. REV. 759, 784 (2009) ("[T]he determination by a judge of whether a reasonable jury could find for the plaintiff is a legal fiction, incapable of determination.") [hereinafter *Fallacy*].

the Article will search for a plausible alternative on which to ground the legal doctrine. This is the point of asking what, if anything, *makes* evidence sufficient.

Second, why is the question worthwhile to ask? The question is worth asking because, as a practical matter, enormous consequences turn on sufficiency determinations in both civil and criminal cases. These include: (1) whether cases proceed to trial in the first place; (2) whether cases that proceed to trial go to a jury; and (3) whether verdicts will be upheld or overturned on appeal. Moreover, the question is worth asking because the constitutional rights of criminal defendants and civil litigants depend on sufficiency determinations. Criminal defendants have a due process right that criminal convictions be supported by sufficient evidence.[9] Similarly, in civil cases in which parties have a constitutional right to a jury, the scope of that right depends on the sufficiency issue—i.e., a party has a right to a jury only when they have sufficient evidence (there is no such right when the party's evidence is insufficient).[10] In short, the question is worth asking because of the significant role played by sufficiency doctrine throughout civil and criminal litigation.

Third, why is the question important to answer? Despite the significance of the issue, the underlying legal doctrine and the reasoning in particular cases have been frustratingly opaque. The lack of clarity surrounding the doctrine has generated a host of problems. First, it raises the possibility of arbitrary, inconsistent, and biased applications. Second, it potentially deprives criminal defendants and civil litigants of constitutional rights. Third, it fails to provide litigants with adequate notice. And, finally, it invites the types of skeptical answers mentioned above, which claim that the doctrine is incoherent, based on a fiction, and not what it purports to be. Clarifying what exactly makes evidence sufficient thus has the potential to ameliorate this host of problems or, at a minimum, to help ground the doctrine on a more secure foundation.[11]

The general structure of the Article is as follows. Part I spells out the basics of the underlying legal doctrine and the central problem at the doctrine's core: the difficulty in separating sufficient from insufficient evidence. This Part also discusses what a successful answer to the question (what makes evidence sufficient?) would look like, including the doctrinal features that a successful answer should be able to accommodate and explain. Part II explores three possible answers—rejecting two possible probabilistic accounts and then endorsing an explanation-based account as the most plausible. Parts III and IV discuss how the explanation-based account endorsed in Part II fits with sufficiency doctrine in civil and criminal cases, respectively. In particular, Part III demonstrates how the explanation-based account illuminates the standards for summary judgment and judgment as a matter of law in

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9. *See* Jackson v. Virginia, 443 U.S. 307, 324 (1979); *see also* FED. R. CRIM. P. 29(a).

10. *See generally* Galloway v. United States, 319 U.S. 372, 396 (1943); Balt. & Carolina Line, Inc. v. Redman, 295 U.S. 654, 657 (1935).

11. There will also be value if an exhaustive theoretical search fails to uncover any plausible answer to the question of what makes evidence sufficient. Such a skeptical conclusion will help to illuminate the need for reforming sufficiency doctrine.

civil procedure.[12] Part IV then demonstrates how the explanation-based account similarly illuminates due process challenges by criminal defendants to the sufficiency of evidence underlying guilty verdicts.[13] Part V responds to two possible counterarguments to the analysis—a specific objection based on statistical evidence and a general objection to the coherence of sufficiency doctrine. The Conclusion explores the implications of the Article's analysis.

I. THE PROBLEM AND ITS SIGNIFICANCE

In any criminal prosecution or litigated civil case, a critical issue may arise as to whether a party's evidence is legally sufficient. This issue may arise pre-trial, during trial, or after trial, and its resolution may determine the case's outcome. This Part outlines the basic legal doctrine on "sufficiency of the evidence" and illustrates a central problem at its core: the difficulty in separating sufficient from insufficient evidence. Understanding the problem and its significance clarifies why the question of what makes evidence sufficient matters. This Part concludes by discussing the features that a successful answer to the question should possess.

As a doctrinal matter, the *sufficiency* issue must be distinguished from the question of what happened at a trial—that is, whether a party has succeeded at trial with regard to a factual dispute. The law provides a formal system for resolving factual disputes at trial. The trial proof process is comprised of, and structured by, three basic doctrinal features. First, the law assigns one party or the other the burden of proof for each element of a crime, civil cause of action, or affirmative defense.[14] Second, the law assigns a burden of persuasion for each of those elements by assigning a standard of proof such as "beyond a reasonable doubt," by "a preponderance of the evidence," or by "clear and convincing evidence."[15] Third, rules regulate the admissibility of evidence that parties may submit and limit the legitimate uses of such evidence.[16] Within the structure created by these doctrinal features, the law requires factfinders (a jury or a judge) to determine whether the disputed facts are proven or not based on the admissible evidence and the applicable burden of proof.[17] In other words, the trial question is simply whether the actual

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12. *See* FED. R. CIV. P. 56, 50; Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986); Celotex Corp. v. Catrett, 477 U.S. 317 (1986); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986); Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133 (2000).

13. *See Jackson*, 443 U.S. at 307.

14. For the policy considerations with allocating burdens of proof, see DALE A. NANCE, THE BURDENS OF PROOF: DISCRIMINATORY POWER, WEIGHT OF EVIDENCE, AND TENACITY OF BELIEF 3–5 (2016); *see also* Fleming James, Jr., *Burdens of Proof*, 47 VA. L. REV. 51, 58 (1961); Chris William Sanchirico, *A Primary-Activity Approach to Proof Burdens*, 37 J. LEGAL STUD. 273 (2008).

15. For a discussion of the standards of proof and their justifications, see RONALD J. ALLEN ET AL., AN ANALYTICAL APPROACH TO EVIDENCE 742–47 (7th ed. 2022).

16. *See generally* FED. R. EVID. The admissibility rules also place limits on the permissible inferential uses of some items of admissible evidence. *See, e.g.*, FED. R. EVID. 404(b)(2), 407–11.

17. Jurors are typically instructed to use their common sense in determining whether the standards of proof have been satisfied in light of the evidence. *See, e.g.*, SEVENTH

factfinder (the jury or, in a bench trial, the judge) was persuaded or not that the disputed facts were proven. The trial question is essentially a *descriptive* question, asking whether particular factfinders were persuaded in the context of an actual trial.

The *sufficiency* issue, by contrast, is related to, but distinct from, the trial question in two important respects. First, the sufficiency issue focuses on a hypothetical jury finding. As such, the issue may arise regardless of whether there is a trial, an actual jury, or any actual findings. In both criminal and civil cases, the issue may arise pre-trial, during trial, or post-trial. When it arises pre-trial, a sufficiency determination may eliminate the need for a trial.[18] When it arises during trial, a sufficiency determination may prevent the case from going to the jury and proceeding to a verdict.[19] When it arises post-trial, a sufficiency determination may overturn (or uphold) jury findings.[20]

Second, the question of whether evidence is legally sufficient is a *normative*, *evaluative* question. Unlike the trial question—which is a descriptive question of what the factfinder concluded—the sufficiency issue requires courts to evaluate whether the evidence is good enough (sufficient) or not (insufficient). In determining whether evidence is sufficient, courts do not decide the issue themselves as factfinders (as they would in a bench trial).[21] Rather, as a matter of legal doctrine, judges ask whether a "reasonable" or "rational" jury *could* make a particular finding based on the evidence. "Reasonable" and "rational" are used interchangeably in this context.[22] The evaluation of whether a finding is reasonable (rational) or not depends on the available evidence and the proof framework that applies (or would apply) at trial, including the applicable burden and standard of proof.[23] Thus, in a civil case, for example, a court might evaluate whether a

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CIR. FED. CIV. JURY INSTRUCTIONS § 1.11 (2017) ("You should use common sense in weighing the evidence and consider the evidence in light of your own observations in life."). Other instructions may comment on particular items of evidence, and evidentiary presumptions may further structure some of the inferential process. For discussion of these doctrinal features, see ALLEN ET AL., *supra* note 15, at 737–94.

18. *See* FED. R. CIV. P. 56(c)(2) (authorizing motions for summary judgment based on insufficient evidence); FED. R. CRIM. P. 29 (authorizing motions for judgments of acquittal based on insufficient evidence).

19. FED. R. CIV. P. 56(a), 50 (authorizing motion for judgment as a matter of law).

20. *See* Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150 (2000); Jackson v. Virginia, 443 U.S. 307, 318–19 (1979).

21. *See infra* Section V.B. (examining the different roles of judges in evaluating sufficiency versus acting as a factfinder).

22. *See, e.g.*, *Jackson*, 433 U.S. at 319 (using "rational trier of fact" and "evidence could reasonably support"); *Reeves*, 530 U.S. at 149–53 (using both "rational factfinder" and "reasonable jury"); United States v. Beard, 354 F.3d 691, 692 (7th Cir. 2004) ("reasonable jury"); Bammerlin v. Navistar Int'l Transp. Corp., 30 F.3d 898, 902 (7th Cir. 1994) ("rational jury").

23. *See* Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252 (1986) (holding that the sufficiency standard "necessarily implicates the substantive evidentiary standard of proof"); *id.* at 255 ("[W]e conclude that the determination of whether a given factual dispute requires submission to a jury must be guided by the substantive evidentiary standards that apply to the case. This is true at both the directed verdict and summary judgment stages.");

"reasonable jury" could, based on the evidence, find for the plaintiff on a disputed fact "by a preponderance of the evidence."[24] Similarly, in a criminal case, a court might ask whether a "reasonable jury" could, based on the evidence, find for the prosecution on a disputed fact "beyond a reasonable doubt."

Sufficiency doctrine requires courts to evaluate the quality of the evidence in support of that finding. The evaluation is one of *epistemic* appraisal or evaluation, determining whether the finding would be "reasonable" or "rational" in light of the evidence and the standard of proof.[25] In other words, when making such determinations, courts are determining whether the finding is one the law will (or ought to) endorse or rely upon. When factfinders (real or hypothetical) make particular findings, they decide that their factual conclusions follow from the evidence and the standard of proof.[26] When judges ascribe the labels "reasonable" or "rational" to such conclusions, they are determining that, for legal purposes, the law will rely upon the conclusions. By contrast, when judges ascribe the labels "unreasonable" or "irrational" to such conclusions, they are determining that, for legal purposes, the conclusions are unjustified or unwarranted and thus that the law will not rely upon them. In sum, sufficiency determinations sort which factual conclusions the law will (or will not) rely upon and thus treat as "true" (or "proven") for legal purposes.[27]

Further aspects of legal doctrine create a context of *deference* and *permissibility* in sorting reasonable (rational) from unreasonable (irrational) findings. In evaluating the sufficiency of evidence, courts must make deferential assumptions, including not weighing the credibility of witnesses and drawing inferences in favor of the nonmoving party when the evidence plausibly supports

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see also Jackson, 443 U.S. at 318 ("[T]he critical inquiry on review of the sufficiency of the evidence to support a criminal conviction must be . . . to determine whether the record evidence could reasonably support a finding of guilt beyond a reasonable doubt.").

24. Therefore, what might be a reasonable finding under the preponderance standard, may not be a reasonable finding under the "clear and convincing evidence" standard.

25. For an overview of the several epistemological issues involved in this evaluation, see Hock Lai Ho, *The Legal Concept of Evidence*, STAN. ENCYCLOPEDIA OF PHIL. (Oct. 8, 2021), https://plato.stanford.edu/entries/evidence-legal/ [https://perma.cc/ZA8V-EDLA]. In making this evaluation, the law has generally moved away from legal rules specifying that certain evidence is necessarily sufficient or insufficient. There are, however, rare exceptions that apply in particular types of cases. *See, e.g.*, U.S. CONST. art. III, § 3, cl. 1 (requiring two witnesses for a Treason conviction). This Article is focused on the general application of sufficiency doctrine, which typically arises in the absence of such rules. The law tends to eschew not only sufficiency rules but also rules—less strong than sufficiency rules—that ascribe evidentiary weight to types of evidence. For an illuminating discussion of sufficiency rules and other types of rules of weight, see Charles L. Barzun, *Rules of Weight*, 83 NOTRE DAME L. REV. 1957 (2008); *see also* William Twining, *Bentham's Theory of Evidence: Setting a Context*, 18 J. BENTHAM STUD. 20, 28 (2019) ("Today there are almost no priority rules, no rules of weight or probative force, and hardly any rules about capacity of witnesses or corroboration.").

26. *See* ALLEN ET AL., *supra* note 15.

27. For an argument that ascriptions of knowledge serve a similar function, see EDWARD CRAIG, KNOWLEDGE AND THE STATE OF NATURE (1990).

multiple inferences.[28] The first assumption means that courts will not find evidence to be insufficient solely because they believe a witness to be untrustworthy or their testimony unreliable.[29] The second assumption arises because evidence is not self-interpreting—in addition to the admissible evidence, factfinders must also rely on their background knowledge (including "common sense") in determining what inferences follow from the evidence.[30] With these assumptions in place, sufficiency doctrine instructs judges not to determine whether the finding at issue is correct or incorrect but rather whether it is epistemically *permissible*—that is, whether it meets some minimal floor of reasonableness or acceptability.[31] The upshot is that two inconsistent factual findings may both be reasonable (rational), and accordingly, a finding may be reasonable (rational) even though the jury reaches a contrary result.[32] At the same time, some findings will be unreasonable (irrational).[33]

The central problem is that, as a matter of both formal doctrine and legal practice, the line between sufficient and insufficient evidence is obscure and individual decisions are frustratingly opaque. The primary source of the uncertainty surrounding sufficiency review is uncertainty regarding the underlying evidence doctrine on which the sufficiency standard depends—most importantly, the standards of proof.[34] To illustrate this uncertainty, imagine a judge tasked with determining whether a particular finding in a civil case is "reasonable" and, thus, whether the evidence is sufficient. According to the applicable doctrine, the judge must determine whether a "reasonable" jury could, based on the evidence, find for the plaintiff "by a preponderance of the evidence."[35] In order to apply the doctrine, the judge must know what the preponderance standard means and requires and also have some way of determining whether it has been, or could be, satisfied in the

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28. *Anderson*, 477 U.S. at 255 ("Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge, whether he is ruling on a motion for summary judgment or for a directed verdict. The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor.").

29. *See* St. Mary's Honor Ctr. v. Hicks, 509 U.S. 502, 509 (1993).

30. *See* SEVENTH CIR. FED. CIV. JURY INSTRUCTIONS, *supra* note 17.

31. *See Anderson*, 477 U.S. at 255 (explaining that the judicial inquiry is "whether the evidence presented is such that a jury applying that evidentiary standard *could* reasonably find for *either* the plaintiff or the defendant") (emphasis added); Jackson v. Virginia, 443 U.S. 307, 318 (1979) (explaining the judicial inquiry as "whether the record evidence *could* reasonably support a finding of guilt beyond a reasonable doubt") (emphasis added); *id.* at 319 ("[T]he relevant question is whether . . . *any* rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.") (emphasis in original).

32. *See supra* note 31 and accompanying text; *See also* United States v. Beard, 354 F.3d 691, 692 (7th Cir. 2004) ("That is possible, but it was not so lively a possibility as to compel a reasonable jury to acquit . . . .").

33. *See, e.g.*, O'Laughlin v. O'Brien, 568 F.3d 287, 304 (1st Cir. 2009) ("Given the insufficiency of the evidence, circumstantial or otherwise, tying O'Laughlin to the attack, we conclude that a rational jury could not find O'Laughlin's guilt beyond a reasonable doubt."); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 580–82 (1986).

34. Another potential source of uncertainty is that the sufficiency issue falls in a gap between procedural law (civil and criminal) on one hand, and evidence law on the other, and has not received the attention that it deserves from either domain.

35. This assumes that the preponderance standard would apply at trial.

particular case. These are distinct issues on which sufficiency evaluations depend. Without some clarity on these issues, it can be impossible to tell whether a particular finding is "reasonable" or not.

To see this, consider the underlying proof issue from a hypothetical juror's perspective, trying to understand the standard of proof and what it requires. Imagine the following conversation:

JUROR: How do I know whether to find fact *X* in favor of the plaintiff?

THE LAW: When the plaintiff has proven *X* by a preponderance of the evidence.

JUROR: Ok, good. What does that mean?

THE LAW: In this jurisdiction, that means that fact *X* is more likely true than not.[36]

JUROR: Ok, good. How do I know when fact *X* is more likely true than not?

THE LAW: Um . . . when, in your judgment, you believe or you conclude that *X* is more likely true than not.

JUROR: Yes, but when *should* I believe or conclude that this is the case?

THE LAW: . . .

The lack of clarity regarding the standard of proof, what it requires, and whether it has been met in a particular case carries over to evaluations of whether a particular finding is or would be "reasonable" in light of that standard.

The issues raised by the preponderance standard in the above dialogue apply to other standards of proof—"beyond a reasonable doubt" and "clear and convincing evidence"—where there is even more disagreement about the standards and their requirements.[37] As Larry Laudan explains in his trenchant criticism of the BARD standard:

> The most earnest jury, packed with twelve people desirous of doing the right thing and eager to see that justice is done, are left dangling with respect to how powerful a case is required before they are entitled to affirm that they believe the guilt of the defendant beyond a reasonable doubt. In such circumstances, simply muddling on is not an attractive prospect.[38]

The problem is a general one regarding standards of proof. As Kevin Clermont notes: "The amazing result is that, even at this late date, there is no

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36. There is additional uncertainty given that different jurisdictions describe the preponderance standard in differing, inconsistent ways, which implies different outcomes in some cases. For a survey of the differences, see John Leubsdorf, *The Surprising History of the Preponderance Standard of Civil Proof*, 67 FLA. L. REV. 1569 (2015).

37. For a discussion of the disagreements surrounding these standards, see Michael S. Pardo, *Second-Order Proof Rules*, 61 FLA. L. REV. 1083 (2009).

38. LARRY LAUDAN, TRUTH, ERROR, AND CRIMINAL LAW: AN ESSAY IN LEGAL EPISTEMOLOGY 31 (2006).

consensus on what the standards of proof require or should require. It is a theoretical jungle out there."[39]

Because of the underlying uncertainty, the line between reasonable (rational) and unreasonable (irrational) jury findings is not clear. Nor are judicial opinions particularly helpful in articulating the reasoning that separates the two categories. This uncertainty regarding sufficiency doctrine potentially leaves applications to the arbitrary, inconsistent, unprincipled, or biased whims of individual judges. And indeed, scholars have forcefully leveled this charge.[40] Because the sufficiency issue looms large over both civil and criminal litigation, the lack of clarity in its applications is a problem with significant consequences. In a legal world in which most cases do not go to trial, the sufficiency question often takes on more practical importance than the trial question in day-to-day litigation.[41] Much of what happens in litigation outside of the trial context depends on the sufficiency question, including whether cases: (1) are brought in the first place; (2) result in pleas or settlements; or (3) are formally terminated pre-trial.[42] When courts answer the sufficiency question, they may, on one hand, end cases as a matter of law in favor of one party or, on the other hand, allow cases to go forward and jury verdicts to stand. Both types of decisions are enormously consequential, and errors of either type impose costs, potentially terminating cases and depriving parties of constitutional rights.[43] Given the importance of sufficiency determinations throughout civil and criminal litigation, the uncertainty and opacity surrounding the sufficiency issue are unacceptable.

The central problem this Article seeks to address is what separates sufficient from insufficient evidence. The goal is to search for anything in particular that *makes* evidence sufficient. In particular, the analysis will explore whether there are any general criteria or features of evidence that ground sufficiency determinations.[44] What would a successful answer to this question look like? First,

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39. Kevin M. Clermont, *Staying Faithful to the Standards of Proof*, 104 CORNELL L. REV. 1457, 1497 (2019).

40. *See* Elizabeth M. Schneider, *The Dangers of Summary Judgment: Gender and Federal Civil Litigation*, 59 RUTGERS L. REV. 705, 715 (2007) ("[C]urrent summary judgment practice permits subtle bias to go unchecked."); Arthur R. Miller, *The Pretrial Rush to Judgment: Are the "Litigation Explosion," "Liability Crisis," and Efficiency Clichés Eroding Our Day in Court and Jury Trial Commitments?*, 78 N.Y.U. L. REV. 982, 1134 (2003) (criticizing sufficiency doctrine in civil cases); Jon O. Newman, *Beyond "Reasonable Doubt,"* 68 N.Y.U. L. REV. 979, 1002 (1993) (criticizing sufficiency review in criminal cases).

41. *See* Michael S. Pardo, *Some Remarks on the Importance of Evidence Outside of Trials*, 36 REV. LITIG. 443 (2016).

42. *See also* Tyson Foods, Inc. v. Bouaphakeo, 577 U.S. 442, 453 (2016) (class certification depended on the sufficiency of evidence supporting the plaintiff class).

43. *See* Jackson v. Virginia, 443 U.S. 307, 324 (1979); Galloway v. United States, 319 U.S. 372, 396 (1943); Balt. & Carolina Line, Inc. v. Redman, 295 U.S. 654, 657 (1935); FED. R. CRIM. P. 29(a).

44. In terms of methodology, the relationship that the analysis aims to provide resembles "grounding" or "constitutive" explanations in the philosophical literature. For a general discussion of how the philosophical issues relate to legal evidence and proof, see

and most importantly, the answer should clarify and provide some insight or understanding of whether a conclusion is "reasonable" (rational) or "unreasonable" (irrational). Second, the answer should fit with the specific features of the applicable legal doctrine. These features include (1) the applicable standards of proof,[45] (2) the deferential assumptions that apply to witness credibility and the drawing of conflicting inferences,[46] and (3) a degree of *permissibility* (i.e., a minimal threshold of reasonableness that permits contrary findings).[47] Generalizing from these features, sufficiency-of-the-evidence doctrine possesses both a *psychological* aspect and an *epistemic* aspect. The psychological aspect pertains to the beliefs and reasoning of factfinders in assessing evidence and drawing conclusions.[48] The

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Michael S. Pardo, *Grounding Legal Proof*, 31 PHIL. ISSUES 280 (2021). On grounding in philosophy, see Selim Berker, *The Unity of Grounding*, 127 MIND 729 (2018); Shamik Dasgupta, *Constitutive Explanation*, 27 PHIL. ISSUES 74 (2017); Ricki Bliss & Kelly Trogdon, *Metaphysical Grounding*, STAN. ENCYCLOPEDIA OF PHIL. (Nov. 25, 2014), https://plato.stanford.edu/entries/grounding/ [https://perma.cc/L9ZY-2ZD9]. The basic idea is that some target phenomenon is explained in terms of more basic facts or criteria that constitute or ground the target. *See* Dasgupta, *supra* note 44, at 75, 81 ("Why is a faculty meeting occurring? Because the faculty are gathered in a room discussing matters of importance, etc. Why is this water hot? Because its mean kinetic energy is high. Why have I lost this game of chess? Because my king is in check-mate. Here we have not causally explained what brought about the meeting, the heat, or the loss; we have rather explained what underlying facts constitute the phenomena. I use 'ground' just as a label of this mode of explanation . . . [The grounding theorist] just thinks that some things are thus-and-so because of others."). Another way of expressing this relationship is that facts about the target phenomenon are true because of, or in virtue of, or due to, the more basic facts. For other examples of legal scholarship taking a similar theoretical approach, see David Plunkett & Scott Shapiro, *Law, Morality & Everything Else: General Jurisprudence as a Branch of Metanormative Inquiry*, 128 ETHICS 37, 57 (2017) ("[W]e have formulated the positivism/ antipositivism debate in terms of what *grounds* legal facts.") (emphasis added); Samuele Chilovi & George Pavlakos, *Law-Determination as Grounding: A Common Grounding Framework for Jurisprudence*, 25 LEGAL THEORY 53 (2019); Mark Greenberg, *How Facts Make Law*, 10 LEGAL THEORY 157 (2004); Issa Kohler-Hausmann, *Eddie Murphy and the Dangers of Counterfactual Causal Thinking About Detecting Racial Discrimination*, 113 NW. U. L. REV. 1163, 1177 (2019) ("In my view, the only plausible account of what we are doing when we set out to detect discrimination is seeking 'constitutive explanations' . . . ."); Mitchell N. Berman, *Our Principled Constitution*, 166 U. PA. L. REV. 1325, 1363 (2018) (explaining constitutional principles based on a grounding relationship between social facts and norms: "I will say that taking-up practices 'ground' norms, and, correlatively, that norms are 'grounded in' the taking-up practices."); *see also* Michael S. Moore, *"Nothing but a Pack of Neurons": The Moral Responsibility of the Human Machine*, *in* NEUROLAW AND RESPONSIBILITY FOR ACTION 43 (Bebhinn Donnelly-Lazarov ed., 2018) (The philosophers "who defend grounding are, like the componential mechanists, physicalists through and through. For them, the more basic facts about the brain studied by neuroscience will ground the mental facts about the life of the mind."); David Enoch, *How Principles Ground*, 14 OXFORD STUD. IN METAETHICS 1, 5 (2019) ("[U]tilitarianism is best understood as a grounding claim, stating, roughly, that an action is wrong if and only if, *and because*, it fails to maximize utility.").

45. *See supra* note 23 and accompanying text.
46. *See supra* note 28 and accompanying text.
47. *See supra* note 30 and accompanying text.
48. *See supra* note 17 and accompanying text.

epistemic aspect pertains to the justification or warrant of particular conclusions in light of the evidence.[49] A successful answer should account for these general aspects as well as the specific features of sufficiency doctrine.

II. POSSIBLE ANSWERS AND A THESIS

This Part turns to the question of what makes evidence sufficient. Answering this question will provide clarity in resolving the difficult doctrinal issue of whether evidence is sufficient to support a judgment in a civil or criminal case. This doctrinal issue depends on a judge's evaluation of whether a factual finding based on the evidence would be "reasonable" (or "rational").[50] The evaluation, in turn, depends not only on the evidence but also on the underlying evidentiary framework that would apply at trial—most importantly, the applicable burden and standard of proof.[51] In making this determination judges employ deferential assumptions about witness credibility and the weighing of conflicting inferences from evidence.[52]

As discussed in Part I, a source of uncertainty for sufficiency doctrine is uncertainty regarding the underlying evidence doctrine on which the sufficiency standard depends.[53] In response to the uncertainty with evidence doctrine, evidence scholars have devoted considerable attention to the standards of proof and related issues within the process of legal proof. This literature provides a potential resource for better understanding the underlying evidentiary issues on which sufficiency doctrine depends and, accordingly, suggests possible answers to the question of what *makes* evidence sufficient.

The evidence literature suggests three possible answers.[54] They are drawn from theoretical evidence scholarship focused on the proof process at trial—exploring the standards of proof, what they require, and when they are satisfied. Because sufficiency doctrine depends on the underlying evidentiary proof process, these possibilities provide a natural starting place to search for clarity on the

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49. *See supra* note 25 and accompanying text.
50. *See supra* note 22 and accompanying text.
51. *See supra* note 23 and accompanying text.
52. *See supra* note 28 and accompanying text.
53. Clermont, *supra* note 39.
54. The context from which these possibilities are drawn includes discussions about the nature and structure of legal proof at trial. These discussions concern recent debates about the standards of proof, but it is important to note that the standards of proof are just one issue within a broader discussion of how best to understand the process of legal proof and its various components. A host of issues are within the scope of the evidence discussions:

> It is about the entire process of proof, including (1) the form, securing, and presentation of evidence, (2) the forms of argumentation employed at trial, (3) the manner in which humans process and deliberate on evidence, (4) the trial structure created by the rules of evidence and procedure, (5) the structure of litigation before and after trial, (6) the manner in which judges and juries, on the one hand, and trial and appellate judges, on the other hand, interact, and (7) to some extent, the meaning and nature of rationality.

Ronald J. Allen & Michael S. Pardo, *Clarifying Relative Plausibility: A Rejoinder*, 23 INT'L J. EVIDENCE & PROOF 205, 207–08 (2019).

sufficiency question.[55] The three possibilities include two based on explicitly *probabilistic facts* and one based on *explanatory facts*.[56] The two probabilistic possibilities answer the question of what makes evidence sufficient by appealing to different types of *probabilistic facts*—one possibility appeals to "objective" facts about the probabilistic relationship between the evidence and the disputed facts, and the other appeals to "subjective" beliefs about those probabilistic relationships. The first possibility is rejected because (1) it cannot provide answers to the vast majority of sufficiency questions that arise in actual litigated cases, and (2) it is inconsistent with central features of sufficiency doctrine. The second possibility is rejected because (1) it counts virtually every possible juror finding as "reasonable" (and thus provides no clarity in determining which findings are unreasonable); (2) if true, it would impose enormous costs on the legal system; and (3) it is also inconsistent with central features of sufficiency doctrine.

A third possibility based on *explanatory facts* is then defended as the best answer to the question of what makes evidence sufficient. According to this account, the process of legal proof involves the evaluation of competing, contrasting explanations of the evidence and the disputed facts. Accordingly, this account answers the question of what makes evidence sufficient by appealing to *explanatory facts*—facts about the relationship between an explanation and the evidence (e.g., that the explanation is inconsistent with the evidence or that there is no evidence to support part of an explanation). Unlike the probability accounts, the explanatory account fits the central features of sufficiency doctrine and also provides clarity on the issue of whether a particular finding is reasonable.

The discussion will use the tort case *Muckler v. Buchl*[57] to illustrate and contrast the three possibilities.[58] The case involved a 55-year-old woman who fell down a flight of stairs at her apartment building and died a few months later.[59] In a wrongful death lawsuit brought by her husband, the jury found for the plaintiff against the owner of the apartment building. The Supreme Court of Minnesota considered whether the evidence at trial was sufficient to "justify a finding that the fall which caused injuries resulting in the death of the plaintiff's decedent was caused by the negligence of defendant in failing properly to light the stairway in the apartment building where the fall occurred[.]"[60] A witness on the stairs at the time of the fall testified to the poor lighting conditions, but the witness did not see the

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55. It is important to note that the sufficiency issue is conceptually distinct from the underlying proof process. Thus, it is at least possible to hold an account of sufficiency (e.g., explanatory) while holding another account of proof at trial (e.g., probabilistic). Nevertheless, for the reasons discussed, the explanatory account appears to provide the best explanation of both.

56. These possibilities are presented as possible answers to what grounds or constitutes whether evidence is sufficient. *See generally supra* note 44.

57. 150 N.W.2d 689 (Minn. 1967).

58. Several more examples are provided in this Part and in Parts III–V.

59. *Muckler*, 150 N.W.2d at 691 ("She broke her hip in the fall and was taken to the hospital where she died less than 4 months later.").

60. *Id.*

plaintiff fall.[61] The case raised the question of whether the plaintiff's evidence was sufficient—i.e., whether the jury's finding was "reasonable" in light of the evidence and the applicable standard of proof ("preponderance of the evidence").[62]

A. Possibility 1: Objective Probabilities—Epistemic Fantasy

The first possible answer to the question—what makes evidence sufficient—relies on an account of legal proof that is simple to state yet deeply problematic.[63] According to this account, whether evidence is sufficient or not depends on *objective probabilistic facts* concerning the evidence and what it is being offered to prove.

This account relies on two assumptions about the process of legal proof. First, the legal standards of proof can be expressed as probabilistic thresholds between 0 and 1, such as "beyond 0.5" (preponderance of the evidence), "beyond 0.75" (clear and convincing evidence), and "beyond 0.9" (beyond a reasonable doubt).[64] Second, the "probative value" of evidence can be expressed based on the probabilistic relationships between the evidence and what it is being offered to prove.[65] This second assumption is typically modeled based on available "base rates" or other available statistical information.[66] Putting the two assumptions together provides a picture of the proof process: a party with the burden of proof succeeds in "proving" a disputed fact when the objective probability of the fact, given the evidence, exceeds the probabilistic threshold associated with the standard

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61. *Id.* at 692–93; *see also id.* at 693 ("It was dark. I could distinguish the hand rail and I hung onto that because I could not tell where the steps were.").

62. *Id.* at 691.

63. Scholars disagree on the details of probabilistic approaches to legal evidence and proof. The discussion to follow lumps together a number of diverse accounts into two general approaches. Nothing in the discussion turns on the internecine disputes among probabilists—the notes, however, mention some prominent disagreements.

64. *See* NANCE, *supra* note 14, at 31–42; Richard S. Bell, *Decision Theory and Due Process: A Critique of the Supreme Court's Lawmaking for Burdens of Proof*, 78 J. CRIM. L. & CRIMINOLOGY 557, 561–63 (1987); *see also* Dorothy K. Kagehiro & W. Clark Stanton, *Legal vs. Quantified Definitions of Standards of Proof*, 9 L. & HUM. BEHAV. 159 (1985); John Kaplan, *Decision Theory and the Factfinding Process*, 20 STAN. L. REV. 1065, 1072–77 (1968). For a discussion of some of the problems with setting a probabilistic threshold for standards of proof, see Michael L. DeKay, *The Difference Between Blackstone-Like Error Ratios and Probabilistic Standards of Proof*, 21 L. & SOC. INQUIRY 95, 130 (1996).

65. *See, e.g.*, Richard Lempert, *Modeling Relevance*, 75 MICH. L. REV. 1021 (1977); Michael O. Finkelstein & Bruce Levin, *On the Probative Value of Evidence from a Screening Search*, 43 JURIMETRICS J. 265 (2003); Deborah Davis & William C. Follette, *Rethinking the Probative Value of Evidence: Base Rates, Intuitive Profiling, and the "Postdiction" of Behavior*, 26 L. & HUM. BEHAV. 133 (2002); Alvin I. Goldman, *Quasi-Objective Bayesianism and Legal Evidence*, 42 JURIMETRICS J. 237, 239 (2002).

66. *See, e.g.*, Lempert, *supra* note 65, at 1023–25 (quantifying probative value of a blood-type match); Finkelstein & Levin, *supra* note 65, at 266–69 (calculating the probative value of carpet-fiber matches); Davis & Follette, *supra* note 65, at 137–39 (calculating the probative value of infidelity in proving murder based on the base rate of infidelity in the population).

of proof.[67] For example, a civil plaintiff succeeds in proving a disputed fact by a preponderance of the evidence when the objective probability of that fact, given the evidence, is greater than 0.5. This picture also gives a simple answer to sufficiency: evidence is sufficient when the objective probability exceeds the threshold for the standard of proof, and it is insufficient when it does not.

Although the account gives a relatively straightforward answer to when evidence is sufficient, the answer is not plausible. This is so for three related reasons.

First, as a practical matter, the account requires information that is not available for the vast majority of items of evidence. In *Muckler*, for example, no one had any idea, based on the evidence, of the objective probability that poor lighting conditions caused the plaintiff's fall. The evidence consisted of testimony of various sorts, including how dark it was at the time on the stairway, the absence of other possible defects, and the plaintiff's physical condition immediately prior to the fall.[68] The case is typical in that neither of the parties tried to introduce any statistical evidence about the "objective probability" of the disputed facts given the other admitted evidence. Nor is it clear how they could even do so.

Second, even when statistical evidence is admitted, the objective-probability account of sufficiency is still not plausible.[69] When such evidence is presented, it is never the only evidence in the case. Other nonstatistical evidence must also be assessed and combined with the quantified evidence. Moreover, statistical evidence does not simply appear in court—it must be presented through testimony (or a document or other exhibit) and will raise additional questions and assumptions about credibility or other aspects of reliability.[70] These aspects are also

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67. Another aspect of the models includes the use of Bayes's Theorem to combine the probabilities for multiple items of evidence. *See generally* Norman Fenton, Martin Neil, & Daniel Berger, *Bayes and the Law*, 33 ANN. REV. STAT. & APPLICATION 51 (2016). Bayes's Theorem allows one to calculate, consistent with the axioms of probability theory, the conditional probability of a hypothesis given the evidence. The simplest formulation, and the one commonly used in legal applications, is to multiply the prior odds of the hypothesis being true by the "likelihood ratio" (the likelihood of the evidence given the hypothesis being true divided by the likelihood of the evidence given that the hypothesis is false). *See* Lempert, *supra* note 65, at 1022–32; Fenton, Neil & Berger, *supra* note 67, at 53–58. This process would thus allow factfinders to update the probability of a disputed fact in light of each new item of evidence. Even when data are available for each item of evidence, however, an additional difficulty would be establishing the appropriate or permissible prior probabilities for guilt or liability before the evidence is introduced. *See, e.g.*, New Jersey v. Spann, 617 A.2d 247, 254 (N.J. 1993) ("0.5 assumed prior probability clearly is neither neutral nor objective."). Various proposals have been advanced on this issue, but the issue has remained controversial. For discussions, see Clermont, *supra* note 39; Lempert, *supra* note 65. Bayesian models that require constant updating in light of each new item of evidence are also inconsistent with the common jury instruction that factfinders should not draw any inferences until all the evidence has been presented. Ronald J. Allen & Brian Leiter, *Naturalized Epistemology and the Law of Evidence*, 87 VA. L. REV. 1491, 1534 (2001).

68. *See infra* notes 111–12 and accompanying text.

69. *See generally infra* Part V discussing in more detail the use of statistical evidence.

70. *See generally* Ronald J. Allen & Christopher Smiciklas, *The Law's Aversion to Statistical Evidence and Other Mistakes*, 28 LEGAL THEORY 179 (2022).

"evidence" that must be assessed by the factfinder and, like most other evidence, will not be objectively quantifiable.[71] Regardless of whether cases involve statistical evidence, it is a familiar feature of litigated cases that facts are "proven" (or not)—and that the evidence is held to be "sufficient" or "insufficient"—even though no one has any idea of the objective probability of the disputed facts. If facts can be proven, and evidence can be sufficient, in the absence of any known objective probabilistic facts, then objective probabilistic facts cannot be what *makes* evidence sufficient.

Third, the objective-probability account is inconsistent with central features of sufficiency doctrine. As discussed in Part I, the doctrine on sufficiency of the evidence has both a *psychological* aspect and an *epistemic* aspect. The *psychological* aspect pertains to the beliefs and reasoning of factfinders in assessing evidence and drawing conclusions,[72] and it is reflected in the features of sufficiency doctrine that require deference to factfinders (in assessing witness credibility and in choosing between conflicting, reasonable inferences) and reliance on factfinders' "common sense" and background knowledge.[73] The *epistemic* aspect pertains to an evaluation of the reasonableness (or rationality) of possible jury findings. This aspect is one of epistemic permissibility (permitting a possible range of findings).[74] Here is the problem: the objective-probability answer to the sufficiency question eliminates the psychological aspect of the process and, indeed, the role of the factfinder entirely. According to this account, sufficiency is solely a feature of the probabilistic relationship between the evidence and the disputed fact.[75] The account also eliminates the permissibility aspect of sufficiency doctrine. The only reasonable (or rational) conclusion is the objective probability itself—it is either sufficient or not, depending on whether it surpasses the applicable standard-of-proof threshold.[76] As attractive as this account may be in theory,[77] it is a fantasy and not a plausible answer to the question of what makes evidence sufficient.[78]

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71. Even the probative value of statistical evidence depends on several assumptions and factors beyond the statistics themselves, including, crucially, the "reference class" from which the statistics are derived. Ronald J. Allen & Michael S. Pardo, *The Problematic Value of Mathematical Models of Evidence*, 36 J. LEGAL STUD. 107, 111–14 (2007).

72. *See supra* note 17 and accompanying text.

73. *See supra* notes 17, 28 and accompanying text.

74. *See supra* notes 25, 30 and accompanying text.

75. Under such an account, the probative value of the evidence requires no input or assessment by factfinders. For example, under the common "likelihood ratio" approach, the probative value of evidence depends on the ratio of two probabilities. *See supra* note 67 and accompanying text.

76. There is thus no room for the possibility of contrary, inconsistent inferences. *See supra* notes 28–31 and accompanying text.

77. The theoretical virtue of such an account lies in its promise to foster the law's goal of accurate factfinding—namely, basing decisions on what is objectively more probable will, it is assumed, lead to more accurate decisions in the long run.

78. To be clear, the conclusion above is not about the potential value of statistical evidence. Statistical evidence is discussed further in Part V.

B. Possibility 2: Subjective Probabilities—Epistemic Nightmare

The second possible answer to the question of what makes evidence sufficient also relies on a probabilistic account of proof. Recognizing the difficulties with an objective-probabilistic account of proof, evidence scholars have suggested an alternative account that relies on *subjective probabilistic facts*.[79] According to this account, the probabilities that determine whether facts have been proven or not depend on the *beliefs* of factfinders (and not on objective relationships between the evidence and the disputed facts). Among the probabilistic accounts in the evidence literature, this is perhaps the most common one.[80] For the reasons discussed below, however, it is a nonstarter as an answer to the sufficiency question.

The basics of the subjective-probability account of legal proof are simple to spell out. The account rests on two assumptions. First, this account shares the same assumption as the objective account that standards of proof can be expressed as probabilistic thresholds between 0 and 1—e.g., "beyond 0.5" (preponderance of the evidence), "beyond 0.75" (clear and convincing evidence), and "beyond 0.9" (beyond a reasonable doubt).[81] Second, however, this account diverges from the objective account by modeling the "probative value" of evidence based on the subjective beliefs of factfinders.[82] Specifically, according to this account, factfinders form a "degree of belief" (or "credence") between 0 and 1 in the disputed facts, with 1 representing certain truth (or full belief) and 0 representing certain falsity (or full disbelief).[83] Under this account, a party with the burden of proof succeeds in "proving" a disputed fact when the factfinder's degree of belief exceeds the threshold associated with the standard of proof, and the party fails when the degree of belief is at or below the threshold.[84] For example, a civil plaintiff succeeds in proving a disputed fact by a preponderance of the evidence when the factfinder's degree of belief in the fact exceeds 0.5 (after hearing the evidence).

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79. *See* David Kaye, *Two Theories of the Civil Burden of Persuasion*, 2 L. PROBABILITY & RISK 9 (2003) (conceptualizing the preponderance standard as a probability threshold); Richard D. Friedman, *Answering the Bayesioskeptical Challenge*, 1 INT'L J. EVIDENCE & PROOF 276 (1997).

80. *See* Clermont, *supra* note 39, at 1459 n.4 ("[T]he usual particularization of probability for discussing legal proof is subjective probability.").

81. *See* Kaye, *supra* note 79; *see also supra* note 64 and accompanying text.

82. *See* Kaye, *supra* note 79, at 10–11; Friedman, *supra* note 79, at 277; *see also* LEONARD SAVAGE, THE FOUNDATIONS OF STATISTICS (1954); Bruno de Finetti, *Probabilism: A Critical Essay of the Theory of Probability and the Value of Science*, 31 ERKENNTIS 169 (1989); Alan Hajek, *Interpretations of Probability*, STAN. ENCYCLOPEDIA OF PHIL. (2012), https://plato.stanford.edu/entries/probability-interpret/ [https://perma.cc/P6W7-HVR7].

83. *See* D.H. Kaye, *Credal Probability*, 13 CARDOZO L. REV. 647, 647 (1991) ("Generations of statisticians, philosophers, and logicians have discussed probability as a measure of belief in empirical propositions."); *see also* Lara Buchak, *Belief, Credence, and Norms*, 169 PHIL. STUD. 285 (2014) (distinguishing aspects of beliefs and credences); Daniel Greco, *How I Learned to Stop Worrying and Love Probability 1*, 29 PHIL. PERSPS. 179, 179 (2015) ("The simple view . . . is that binary belief is maximal degree of belief—it is the endpoint on the scale of degreed belief.").

84. Under this model, factfinders may either adopt a fixed probability for the disputed facts or, alternatively, simply form a belief as to whether the probability surpasses the threshold associated with the standard of proof.

Consider again the *Muckler* example.[85] The parties are disputing whether poor lighting conditions caused the plaintiff's fall. The plaintiff has the burden of proving this fact by a preponderance of the evidence. According to the subjective-probability account, the plaintiff has succeeded in proving this fact when, after hearing the evidence, the jury believes that the probability of this fact exceeds 0.5. The theoretical advantages and disadvantages of this account as an explanation of the *trial* proof process have been a matter of debate in the evidence literature.[86] Regardless of its possible upsides in that context, however, the subjective-probability account is not plausible and is simply a nonstarter as an answer to whether evidence is sufficient. It fails to account for sufficiency because it fails to provide any plausible criteria or explanation for distinguishing between reasonable and unreasonable findings.[87] The primary function of sufficiency doctrine is to draw this distinction—but the subjective-probability account endorses virtually every finding as reasonable.[88] In *Muckler*, for example, any conclusion at all between 0 and 1 would be permissible, regardless of the strength or weakness of the evidence presented by a given side.[89] And the same is true for any other litigated case, no matter how strong, weak, or lacking the evidence.

The fundamental problem with this possible account is essentially the flipside of the problem with the objective-probability account. As discussed above, the objective account of sufficiency ignores the *psychological* aspect of sufficiency doctrine (i.e., a role for factfinder reasoning, inference, and background knowledge).[90] The subjective account of sufficiency, by contrast, ignores the *epistemic* aspect of sufficiency doctrine. Specifically, the account fails to provide any criteria for determining whether a particular finding is reasonable or unreasonable *based on the quality of the evidence*.[91] If the subjective account were true—and thus all jury findings were reasonable—then this would imply that every litigated case (criminal and civil) should go to a jury, and every jury verdict should

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85. *See supra* notes 57–62 and accompanying text.

86. *See* Ronald J. Allen & Michael S. Pardo, *Relative Plausibility and Its Critics*, 23 INT'L J. EVIDENCE & PROOF 5, 11 (2019).

87. One possible check of the "rationality" of the subjective beliefs in such models is whether the beliefs conform to Bayes's Theorem and are thus consistent with one another. This consistency constraint, however, is too weak to provide a basis for sufficiency review because it still allows for any factfinder conclusion, no matter how weak or absent the evidence. Allen & Leiter, *supra* note 67, at 1508 ("[T]he irony of the Bayesian approach is that it implicitly exploits the false hope that by running one's subjective beliefs through Bayes' Theorem with the assistance of equally subjective likelihood ratios, something other than a subjective output will result. This is false."); *see also* JOHN EARMAN, BAYES OR BUST? CRITICAL EXAMINATION OF BAYESIAN CONFIRMATION THEORY 57 (1992) ("For the Bayesian apparatus to be relevant to scientific inference, it seems that what it needs to deliver are not mere subjective opinions but reasonable, rational, or objective degrees of belief.").

88. Again, with the possible exception of inconsistent subjective beliefs. *See supra* note 87.

89. *See supra* note 62 and accompanying text.

90. *See supra* note 75 and accompanying text.

91. Goldman, *supra* note 65, at 239 ("Orthodox Bayesianism is subjective, or personalistic, and subjective Bayesianism does not commend itself as a basis for truth acquisition. It is not at all clear how purely subjective Bayesian methods, applied to the legal context, hold any promise of leading a trier of fact to truth."); *see also supra* note 87.

be upheld, regardless of how weak or absent the evidence. This is plainly not how the doctrine operates, in theory or practice.[92] Rather, this presents a *reductio ad absurdum* for this possible account of sufficiency.

C. Possibility 3: Explanatory Facts—Between Fantasy and Nightmare

The evidence literature suggests a third possible answer. The primary theoretical alternative to probabilistic accounts of legal proof relies on the notion of competing *explanations*. According to the explanationist account of legal proof, parties provide possible explanations of the evidence and the disputed facts, and factfinders evaluate the quality of such explanations in light of the evidence and the standard of proof.[93] As explained below, *explanatory facts* provide the best available account of what makes evidence sufficient.

Before turning to the sufficiency issue, it is necessary to first spell out the basics of the explanationist account of proof at trial. Although the account shares some similarities with probabilistic accounts,[94] it diverges from such accounts in

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92. The account would also eliminate the constitutional right of criminal defendants to not be convicted based on insufficient evidence. *See infra* Part IV.

93. *See* Allen & Pardo, *supra* note 86, at 5–7; Michael S. Pardo & Ronald J. Allen, *Juridical Proof and the Best Explanation*, 27 L. & PHIL. 223, 256–57 (2008). The discussion below focuses on the particular version of explanationism that Ron Allen and I have developed (under the label of "relative plausibility"). On other versions of explanationism, see Amalia Amaya, *The Explanationist Revolution in Evidence Law*, 23 INT'L J. EVIDENCE & PROOF 60 (2019); Paul Thagard, *Evaluating Explanations in Law, Science, and Everyday Life*, 15 CURRENT DIRECTIONS PSYCH. SCI. 141 (2006).

The analysis below does not rely on a precise definition of "explanation," as is used in some philosophical and scientific contexts. *See, e.g.*, PETER ACHINSTEIN, THE NATURE OF EXPLANATION 74–103 (1983). Rather, the analysis relies on the generally understood sense in which the term is used in everyday contexts. *See* Eivind Kolflaath, *Relative Plausibility and a Prescriptive Theory of Evidence Assessment*, 23 INT'L J. EVIDENCE & PROOF 121, 124 (2019). The explanations in litigation are typically statements (or a set of statements) that purport to account for the evidence in the case and answer some question of interest with regard to the disputed facts (e.g., what happened, who committed this act, with what state of mind did the defendant act, and so on). For example, the explanation "the defendant committed the crime" may explain why the defendant's DNA was found at the crime scene, but the explanation's ability to account for the *known* evidence is in the service of drawing an inductive inference about an *unknown*, disputed fact ("who committed the crime?—the defendant"). Similarly, the alternative explanation that "the police framed the defendant and planted the sample" is also both a possible account of the known evidence and relevant for answering a question concerning the unknown, disputed fact ("who committed the crime?—someone other than the defendant"). *See generally* PHILIP JOHNSON-LAIRD, HOW WE REASON 177 (2006) ("An explanation accounts for what we do not understand in terms of what we do understand."); Frank C. Keil, *Explanation and Understanding*, 57 ANN. REV. PSYCH. 227 (2006).

94. Most importantly, both explanationist and probabilistic accounts accept similar goals regarding accuracy and allocating the risk of factfinding errors (e.g., to protect criminal defendants) and focus on explaining the same features of the proof process (i.e., its rules, doctrine, structure, and concepts). *See* Timothy Williamson, *Abductive Philosophy*, 47 PHIL. F. 263, 267 (2016) ("Inference to the best explanation does not directly rank potential explanations according to their probability. This does not automatically make it inconsistent

two important respects. First, it rejects the idea that legal standards of proof are probabilistic thresholds, defined as corresponding to a point between 0 and 1.[95] Second, it rejects the idea that the "probative value" of evidence can be quantified or "probabilified" in a rigorous fashion in order to compare it with a probabilistic standard of proof.[96]

Standards of proof, according to the explanationist account, express *explanatory* thresholds that a party with the burden of proof must satisfy.[97] The applicable threshold shifts depending on the standard. For example, under the "preponderance of the evidence" standard, factfinders determine whether the best available explanation supports the party with the burden of proof (typically, the plaintiff) or the opposing party (typically, the defendant).[98] Higher standards require higher explanatory thresholds.[99] Under the "beyond a reasonable doubt" standard, the threshold is met when the prosecution's explanation is the only plausible

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with a probabilistic epistemology, for instance a Bayesian one . . . . [It] may be a good heuristic to use when—as often happens—probabilities are hard to estimate . . . In such cases inference to the best explanation may be the closest we can get to probabilistic epistemology in practice.").

95. *See supra* notes 64, 81 and accompanying text.

96. *See supra* notes 66, 83 and accompanying text. I use the term "probabilify" because some probabilists may argue that evidence does not have to be quantified to compare with a probabilistic threshold. *See supra* note 84.

97. *See* Allen & Pardo, *supra* note 86, at 11–15. The reasoning process resembles "inference to the best explanation," as that term is used in philosophy and science. *See* PETER LIPTON, INFERENCE TO THE BEST EXPLANATION (2004); GILBERT HARMAN, CHANGE IN VIEW: PRINCIPLES OF REASONING 65–75 (1986); *see also* Tania Lombrozo, *Explanation and Abductive Inference*, *in* THE OXFORD HANDBOOK OF THINKING AND REASONING 261 (Keith J. Holyoak & Robert G. Morrison eds., 2012). However, because the explanatory threshold shifts based on differing legal standards of proof, the reasoning process deviates at times from inference to the "best" explanation for reasons discussed below.

98. Determining the "best" available explanation typically involves a comparative choice of which side's explanation (or set of explanations) is "better," with "ties" in terms of explanatory strength going against the party with the burden of proof. But the inference from "better" to "best" (and thus accepted as proven) is not automatic. Factfinders may reject each side's explanation, with or without formulating a third option. *See, e.g.*, St. Mary's Honor Ctr. v. Hicks, 509 U.S. 502, 523–24 (1993). Plaintiffs also need evidence to support their explanations or will otherwise fail to meet their burden of production. *See, e.g.*, State Farm v. Flowers, 854 F.3d 842, 844 (5th Cir. 2017) ("'We resolve factual controversies in favor of the nonmoving party, but only when there is an actual controversy, that is, when both parties have submitted evidence of contradictory facts.'" (quoting Little v. Liquid Air Corp., 37 F.3d 1069, 1075 (5th Cir. 1994))). Within the process of proof, there is enough flexibility for parties to offer alternative (or disjunctive) explanations and for factfinders to consider possibilities not advanced by the parties. *See* Allen & Pardo, *supra* note 86, at 20–22, discussing these issues. For case examples, see Anderson v. Griffin, 397 F.3d 515 (7th Cir. 2005); Zuchowitz v. United States, 140 F.3d 381 (2d Cir. 1998); McCormick v. Kopmann, 161 N.E.2d 720 (Ill. App. Ct. 1959).

99. The higher thresholds express the underlying goal of the higher standards—namely, to allocate the risk of error away from one party. This is why the prosecution must do more than merely have the best explanation in order to prove guilt beyond a reasonable doubt. *See infra* note 100 and accompanying text.

explanation.[100] Similarly, under the "clear and convincing" standard, the threshold requires the party with the burden of proof to have a clearly and convincingly better explanation.[101]

Regarding the second assumption, the probative value of evidence depends on its relationship to the competing explanations being offered by the parties. Evidence has higher probative value to the extent that it supports (or challenges) a party's explanation, and it has lower probative value to the extent that it does not.[102] This admittedly imprecise description is consistent with the nature of "probative value," which is itself imprecise and depends heavily on the details of individual cases, the other evidence, and the competing claims and explanations of the parties.[103]

This outline of the explanationist account of legal proof at trial points toward a possible explanation of sufficiency. The sufficiency of evidence depends on *explanatory facts*—i.e., facts about the relationships between evidence and possible explanations. Moreover, it does so in a manner that incorporates both the *psychological* and *epistemic* aspects of sufficiency doctrine.[104] In incorporating these aspects, the law's reliance on explanatory facts charts a middle way between the epistemic fantasy of objective probabilities and the epistemic nightmare of subjective probabilities. The *Muckler* case provides a starting point from which these points can be explained more generally.

Here again, are the facts of *Muckler*. A 55-year-old woman fell down a flight of stairs at her apartment building and died a few months later.[105] In a wrongful death lawsuit brought by her husband, the jury found for the plaintiff against the owner of the apartment building. The Supreme Court of Minnesota considered whether the evidence at trial was sufficient to "justify a finding that the fall which caused injuries resulting in the death of the plaintiff's decedent was caused by the negligence of defendant in failing properly to light the stairway in the apartment building where the fall occurred?"[106] A witness on the stairs at the time of the fall testified to the poor lighting conditions, but the witness did not see the plaintiff fall.[107]

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100. *See* Allen & Pardo, *supra* note 86, at 16.

101. *Id.*

102. *See* Michael S. Pardo, *The Nature and Purpose of Evidence Theory*, 66 VAND. L. REV. 547, 600–06 (2013).

103. *See generally* Old Chief v. United States, 519 U.S. 172 (1997) (discussing the imprecise factors that affect probative value, including need, evidentiary alternatives, and "narrative" considerations); United States v. Crosby, 75 F.3d 1343, 1348–49 (9th Cir. 1996) ("[P]robative value itself can only be determined in light of the evidence and arguments of a particular case."). Under explanatory accounts, there is no need to quantify or "probabilify" the evidence. *See supra* notes 84, 102 and accompanying text.

104. *See supra* notes 66, 83 and accompanying text.

105. 150 N.W.2d 689, 691 (Minn. 1967) ("She broke her hip in the fall and was taken to the hospital where she died less than 4 months later.").

106. *Id.*

107. *Id.* at 692–93; *see also id.* at 692 ("It was dark. I could distinguish the hand rail and I hung onto that because I could not tell where the steps were.").

In assessing the sufficiency of the evidence, the court noted that it was "working in the field of probability" but that the "degree of probability of a connection between an alleged cause and a given result cannot be defined with mathematical certainty."[108] In assessing the sufficiency of the evidence to support the jury's conclusion, the court explained that the case was "a close one" and examined the possible explanations for what caused the fall, including the poor lighting conditions: "The evidence is consistent with the theory that decedent fell on the stairway because of the darkness. But it is also consistent with the possibility that the fall would have occurred no matter what the lighting conditions might have been."[109] In reaching the conclusion that the jury's conclusion was reasonable, the court examined and rejected other possible explanations, including (1) other defects with the stairs; (2) the decedent's diabetic condition; and (3) intoxication. First, the court rejected other possible defects because "[e]xcept for the inadequacy of the lighting, the evidence shows that there was no defect in the stairway to which the fall could be attributed."[110] Second, the court rejected the decedent's diabetic condition because of "the testimony of competent witnesses that decedent was not suffering observable symptoms before and as she started down the stairs."[111] Third, the court rejected intoxication because of "testimony to the effect that decedent never used intoxicants."[112] Having rejected these possibilities as implausible in light of the evidence, the court concluded: "[I]t seems reasonable that one attempting to descend a stairway so dark that the steps are barely discernible would be likely to fall because of the darkness" and thus "it seems to us more probable that the darkened state of the stairway was the precipitating factor for the accident than otherwise."[113] The court's discussion was ostensibly framed in terms of "probabilities," but the analysis was grounded in details about the relationship between the evidence and the possible explanations of what happened. The jury's inference was reasonable because of, in virtue of, the *explanatory facts* that made the plaintiff's explanation plausible and the alternative explanations implausible.[114] The most important of these explanatory facts are (1) the consistency between the evidence and the plaintiff's explanation and (2) the inconsistencies between the evidence and the alternative explanations.

The role played by explanatory facts in *Muckler* is one that is manifest throughout sufficiency-of-the-evidence determinations. The explanatory facts that matter to sufficiency determinations will depend on details of individual cases, which makes generalizing difficult.[115] There are familiar patterns, however, to be

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108. *Id.* at 693.

109. *Id.* at 693–94.

110. *Id.* at 693.

111. *Id.*

112. *Id.*; *see also id.* ("[T]here was evidence from which the jury could have found that decedent did not consume intoxicating liquors on the day of the accident . . . .").

113. *Id.* at 694.

114. *See supra* notes 109–12 and accompanying text.

115. Philosophers have noted a number of general criteria by which to evaluate the quality of an explanation. *See, e.g.*, LIPTON, *supra* note 97. In litigated cases, however, which explanatory facts matter will vary based on the details of each party's evidence and their competing explanations.

observed in the caselaw regarding important types of explanatory facts. These include the following five patterns:

(1) *Consistency and Inconsistency*. As in *Muckler*, consistency or inconsistency between explanations and evidence is one way in which courts evaluate sufficiency. In *Muckler*, the fact that the plaintiff's explanation was consistent with the evidence (and the alternatives were not) is a reason why the evidence was held to be sufficient.[116] Similar considerations may also provide a reason for holding evidence to be *insufficient*. In *Yeschick v. Mineta*, for example, the fact that the plaintiff's explanation (age discrimination) was inconsistent with the evidence (the defendant hired employees for the same job who were older than the plaintiff) was the reason the court held the plaintiff's evidence to be insufficient (and thus upheld a summary judgment for the defendant).[117] Because of this inconsistency, it would be unreasonable for a jury to accept the plaintiff's explanation.[118]

(2) *The Absence of Evidence*. The fact that a party fails to provide evidence to support an important aspect of an explanation may make the evidence insufficient.[119] This is perhaps the most straightforward way in which evidence may be insufficient. Parties are more than storytellers about the underlying events—they must provide evidence to support their proffered explanations.[120] One clear way in which a particular finding may be unreasonable is because there is no evidence to support it.

(3) *Counterfactual Considerations.* In addition to the simple lack of evidence, courts also evaluate sufficiency by examining whether the evidence that is produced is what one would expect *if the explanation were true*. This can be the case even when there is other evidence to support the explanation.[121] In other words, courts assume an explanation is true and then examine whether the evidence that was produced is what would be expected. The fact that such evidence is missing is then taken as a reason to question the plausibility of the explanation (even if there is other evidence to support it). For example, in *O'Laughlin v. O'Brien*, the court held that the prosecution's evidence was insufficient, in part, because of the lack of forensic evidence connecting the defendant to the crime.[122] According to the court, the issue was not simply the lack of evidence; it was that if the crime had occurred according to the prosecution's explanation of what happened, then such evidence

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116. *See supra* notes 109–12 and accompanying text.

117. 675 F.3d 622, 632 (6th Cir. 2012).

118. *Id.*

119. *See, e.g.*, Alvarez v. Brownsville, 904 F.3d 382, 391–92 (5th Cir. 2018) (concluding that the plaintiff failed to introduce evidence showing "deliberate indifference").

120. On the relationship between the "story model" at trial and explanatory accounts of proof, see Allen & Pardo, *supra* note 86, at 17 n.86.

121. This criterion is thus distinct from the previous one, which concerns the lack of any evidence to support a disputed fact. According to this criterion, there may be evidence to support the disputed fact, but the absence of other, expected evidence may still make the evidence insufficient.

122. *See* 568 F.3d 287, 304 (1st Cir. 2009) ("It bears repeating that the prosecution had to rely on circumstantial evidence because no physical or DNA evidence linked O'Laughlin to the attack despite the copious amount of blood at the crime scene.").

would likely have been available.[123] Accordingly, the lack of such evidence rendered the prosecution's explanation less plausible and the evidence insufficient (i.e., no reasonable jury could convict beyond a reasonable doubt based on the presented evidence).

(4) *Fit with Background Knowledge*. Courts also examine sufficiency by looking to whether the explanation coheres with, or is inconsistent with, general background knowledge. Explanations that require extraordinary assumptions or that seem to defy "common sense" require more supporting evidence than those that do not. For example, in *United States v. Beard*, a case involving a factual dispute as to whether the defendant possessed a firearm, the court held that the prosecution's evidence was sufficient in part because the defendant's alternative did not fit with general commonsense assumptions.[124] By contrast, in *O'Laughlin*, the court held that the prosecution's evidence was insufficient in part because its explanation was implausible given commonsense assumptions about other evidence in the case. The prosecution alleged that the defendant committed an attack in an apartment in order to steal drug money, but nothing was taken from the apartment, even though the victim's purse (which contained cash, credit cards, and a checkbook) was in plain sight in the room where the attack took place, jewelry and a watch were also in plain sight on the dresser, no drawers or cabinets had been opened, and nothing else appeared to have been disturbed in the apartment.[125]

(5) *The Absence of Plausible Alternatives*. Courts also determine sufficiency by examining whether there is a plausible alternative explanation.[126] The absence of a plausible alternative makes a party's explanation more plausible (and thus more reasonable to accept) than it might seem in the abstract.[127] This might be the case because, as in *Muckler*, the alternatives have been ruled out by the evidence.[128] Or it might be because the opponent has failed to offer one.[129]

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123. *Id.*

124. 354 F.3d 691, 692 (7th Cir. 2004) ("It would mean that someone who borrowed the car from [the defendant] placed a loaded gun in console . . . and then—what? Forgot about it? That is possible, but it was not so lively a possibility as to compel a reasonable jury to acquit . . . ."); *see also* United States v. Morales, 902 F.2d 604, 608 (7th Cir. 1990).

125. 568 F.3d at 302 ("[T]he evidence that O'Laughlin acted upon a financial motive to commit the attack is weak at best.").

126. *See, e.g.*, Muckler v. Buchl, 150 N.W.2d 689, 693 (Minn. 1967); Bammerlin v. Navistar Int'l Transp. Corp., 30 F.3d 898, 902 (7th Cir. 1994) ("Bammerlin produced evidence that could lead a rational jury to eliminate the hypotheses inconsistent with his favored theory, which in turn permits an inference that his hypothesis is true.").

127. *See* United States v. Beard, 354 F.3d 691, 693 (7th Cir. 2004) ("Confidence in a proposition, such as Beard's guilt, is . . . undermined by presenting plausible alternatives.").

128. *See supra* notes 110–12 and accompanying text. *Bammerlin*, 30 F.3d at 902 ("Bammerlin produced evidence that could lead a rational jury to eliminate the hypotheses inconsistent with his favored theory, which in turn permits an inference that his hypothesis is true.").

129. *See* Brackett v. Peters, 11 F.3d 78, 80 (7th Cir. 1993) ("[N]o persuasive evidence of an alternative causal sequence [was] presented."); Spitz v. Comm'r, 954 F.2d 1382, 1385 (7th Cir. 1992) ("The Spitzes' explanation, strained and self-serving as it may be, is the most plausible one on the table. There was not clear and convincing evidence against it."); *Beard*, 354 F.3d at 693.

These five patterns are intended to provide a sense of the explanatory facts that make particular explanations better or worse, and thus the evidence sufficient or insufficient, in the context of particular cases. The explanatory facts that make such explanations better or worse will depend on the details of individual cases, and therefore they cannot be reduced to an algorithm or a simple rule for measuring evidential sufficiency. Rather, courts evaluating sufficiency of the evidence must grapple with the relationships between the competing explanations and the evidence—facts about those relationships make evidence sufficient or not.

When courts grapple with these relationships, two general features are significant. First, and on one hand, the explanatory facts are distinct from the purely *subjective* beliefs of factfinders. In other words, they involve details about the evidence that are in some sense "outside of the heads" of individual decision-makers.[130] This feature corresponds to the *epistemic* aspect of sufficiency doctrine. Because of the explanatory facts, some factual findings are unreasonable and some are not, regardless of what individual factfinders might think.[131] Second, and on the other hand, the evaluation of possible explanations cannot be completely separated from the exercise of judgment by jurors and by judges, who must engage with case-specific details and weigh potentially conflicting details.[132] In other words, the process is also not completely *objective* in the sense that (as with an objective-probability account) a generalized process or procedure could identify correct answers or rank explanations as reasonable or unreasonable in the absence of such judgment or case-specific considerations.[133] This feature corresponds to the *psychological* aspect of sufficiency doctrine. In other words, the evaluation of a possible explanation in light of the evidence takes place in a context that gives deference to factfinders to assess witness credibility and to weigh conflicting evidence, and that seeks to determine what is epistemically *permissible*, not what is necessarily correct. In this context, inconsistent findings may both be permissible and thus reasonable.[134]

Because the explanatory facts that ground sufficiency determinations are neither wholly subjective nor wholly objective (in the senses above), the explanatory-fact account charts a path between the epistemic fantasy of objective probabilism on one hand, and the epistemic nightmare of subjective probabilism on the other.[135] The explanatory facts that make evidence sufficient allow an important

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130. For this reason, the explanatory facts differ from the subjective-probability account. *See supra* notes 87–91 and accompanying text.

131. *See supra* note 25 and accompanying text.

132. *See, e.g.*, *supra* notes 116–29 and accompanying text.

133. In other words, the explanatory-fact account recognizes a role for the factfinder, a role that is eliminated under the objective-probability account. *See supra* note 75 and accompanying text.

134. *See supra* notes 28–30. The explanatory-fact account thus explains this feature of sufficiency review (ignored by the objective-probability account) without collapsing to the subjective-probability account.

135. Scholars have suggested a third type of probabilistic account (between objectivism and subjectivism) that attempts to incorporate explanatory criteria. *See, e.g.*, Brian Hedden & Mark Colyvan, *Legal Probabilism: A Qualified Defense*, 27 J. POL. PHIL.

role for factfinder reasoning, but these facts also, importantly, exist independently of subjective factfinder beliefs and provide a basis for courts to evaluate whether a particular finding is reasonable or not. The next two Parts illustrate how the explanatory-fact account fits with the Supreme Court cases spelling out sufficiency doctrine in civil and criminal cases, respectively.

III. SUFFICIENCY DOCTRINE IN CIVIL PROCEDURE

This Part illustrates how the explanatory-fact account fits with sufficiency review in civil cases. The discussion first focuses on how *explanatory facts* make evidence sufficient (or not) in the context of motions for summary judgment. The discussion then turns to how *explanatory facts* make evidence sufficient (or not) in the context of motions for judgment as a matter of law.

A. Summary Judgment

Summary judgment depends on whether a "reasonable jury" could find for the nonmoving party. The "reasonable jury" inquiry arises from language in Rule 56 of the Federal Rules of Civil Procedure stating that a court shall grant summary judgment when "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law."[136] There is a "genuine" issue of disputed, material fact only when "a reasonable jury could return a verdict for the nonmoving party."[137] Three cases—*Anderson v. Liberty Lobby, Inc.*;[138] *Celotex Corp. v. Catrett*;[139] and *Matsushita Electronic Industrial Co. v. Zenith Radio Corp.*[140]—provide the basic doctrinal framework for summary judgment. The discussion below analyzes this framework (and this trilogy of 1986 cases) through the lens of the explanatory-fact account.

Anderson involved a libel lawsuit brought by a self-described "citizens' lobby" against a magazine and publisher based on articles about the plaintiff organization.[141] The Court's opinion clarified three general issues regarding sufficiency doctrine, the basics of which were spelled out in Part I.[142] First, it explained that summary-judgment determinations depend on the applicable burden

448, 448–49 (2019). Whether such an account can add to explanatory accounts of proof remains to be seen. *See also* Kiel Brennan-Marquez, *The Probabilism Debate that Never Was?*, 23 INT'L J. EVIDENCE & PROOF 141, 142 n.6 (2019) ("The problem with . . . incorporating the epistemic [criteria] that define explanationism—is not that it makes subjective probabilism wrong per se; it's that it turns subjective probabilism into a species of explanationism, thus draining probabilism of descriptive power on its own terms.").

136. FED. R. CIV. P. 56(a).

137. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). The inquiry may be decided based on "materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials." FED. R. CIV. P. 56(c)(1)(A).

138. 477 U.S. 242, 248 (1986).

139. 477 U.S. 317, 323–24 (1986).

140. 475 U.S. 574 (1986).

141. 477 U.S. at 244–45.

142. *See supra* notes 21–33 and accompanying text.

and standard of proof at trial.[143] In this case, the plaintiff would have the burden of proving that the defendant acted with "actual malice" by "clear and convincing evidence."[144] Therefore, when the movant is the defendant, the reasonable-jury inquiry should be whether a reasonable jury could find for the plaintiff by clear and convincing evidence. Second, the Court explained that courts are not to weigh or evaluate the credibility of witnesses.[145] Thus, the inquiry assumes a baseline of witness credibility and then examines the reasonableness of the factual conclusion in light of the evidence and the standard of proof. Third, the Court explained that when performing the reasonable-jury inquiry, courts must give some deference to the nonmoving party's position when interpreting the evidence, drawing "legitimate" and "justifiable" inferences in favor of the nonmoving party (for example, when evidence is ambiguous or otherwise open to multiple, plausible interpretations).[146]

Within this framework, *explanatory facts* ground the sufficiency analysis in the following way. When making the appropriate assumptions about witness credibility and justifiable inferences from the evidence, to survive summary judgment the nonmoving party must show that a "reasonable jury" could find that its explanation meets the explanatory threshold associated with the burden of proof.[147] Whether such a finding could be made will depend on the explanatory relationships between the evidence, the nonmoving party's explanation, and the alternative explanations. On remand following the Supreme Court's opinion, the district court grappled with the explanatory facts and concluded that two of the plaintiff's allegations survived this inquiry and seven did not.[148] The plaintiff's evidence met the standard for the former allegations because of the *explanatory fact* that the defendants had reasons to believe the statements were false (and thus a reasonable jury could find that the defendants acted with actual malice).[149] The

143. *Anderson*, 477 U.S. at 252.

144. *Id.* Thus, it might be the case that a reasonable jury could find for the plaintiff by a preponderance of the evidence but not under the more demanding "clear and convincing" standard.

145. *Id.* at 255.

146. *Id.*

147. Assuming that the plaintiff is the nonmoving party, under the preponderance standard, this would depend on whether a reasonable jury could find the plaintiff's explanation to be better than the available alternatives; under the "clear and convincing" standard, this would depend on whether a reasonable jury could find the plaintiff's explanation clearly and convincingly better. *See* Spitz v. Comm'r, 954 F.2d 1382, 1385 (7th Cir. 1992) ("The Spitzes' explanation, strained and self-serving as it may be, is the most plausible one on the table. There was not clear and convincing evidence against it."). When parties with the burden of proof move for summary judgment, they need to show that a reasonable jury *must* find their explanation meets the explanatory threshold.

148. *See* Liberty Lobby, Inc. v. Anderson, 1991 WL 186998, at *9 (D.D.C. 1991) ("This Court concludes that Allegations 19 and 29 are defamatory and that the evidence in the record could support a reasonable jury finding that the plaintiffs have shown, by clear and convincing evidence, that the statements were published with actual malice; this Court further holds that the record fails to support a finding that Allegations 11, 13, 14, 15, 17, 23, and 27 were published with actual malice and therefore the defendants' Motion for Summary Judgment is granted as to those allegations only.").

149. *Id.*

plaintiff's evidence failed to meet the standard for the latter allegations because of the *explanatory fact* that the defendants had reason to believe the source for the statements (a journalist) was reliable and the *explanatory fact* that the defendants corroborated some of the information in the statements (and thus a reasonable jury could not find actual malice to be a clearly and convincingly better explanation).[150]

Second, *Celotex* involved a wrongful death claim based on exposure to asbestos against fifteen defendants.[151] Celotex, one of the defendants, moved for summary judgment and argued that the plaintiff did not have sufficient evidence that the decedent had been exposed to one of their products.[152] In terms of summary-judgment doctrine, the Supreme Court clarified that because the plaintiff would have the burden of proof at trial—of proving exposure to the defendant's product by a preponderance of the evidence—the defendant had no affirmative obligation at summary judgment to provide evidence *negating* exposure.[153] Rather, the Court explained, the defendant may be able to succeed by "showing" (or "pointing out") the plaintiff's lack of evidence on this issue.[154] Once the defendant purports to make such a showing, the plaintiff must respond with evidence showing that a reasonable jury could find in its favor at trial. On remand in *Celotex*, the appellate court concluded that the plaintiff did, in fact, have sufficient evidence.[155] This evidence consisted of the decedent's deposition and letters from the decedent's former employer and an insurance company.[156]

Both *Celotex* and the outcome on remand make perfect sense in terms of the explanatory-fact account. Parties with the burden of proof must be able to demonstrate that a reasonable jury could find their explanation to be better or more plausible than the alternative(s).[157] Parties without the burden of proof may be able to show that their opponents cannot make such a demonstration by pointing to *explanatory facts* (e.g., the absence of evidence to support an essential part of the plaintiff's explanation). And they may be able to do so without introducing additional evidence that tends to disprove the plaintiff's explanation.[158] Importantly, however, the evidence provided by the plaintiff in the case did, in fact, support the plaintiff's explanation (i.e., that the decedent was exposed to a Celotex product in

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150. *Id.* at *5–*8.

151. *Celotex Corp. v. Catrett*, 477 U.S. 317, 319 (1986).

152. *Id.* at 319–20.

153. *Id.* at 323–25. The need for this clarification arose because *Adickes v. Kress*, 398 U.S. 144, 157 (1970), appeared to have imposed such an evidentiary requirement. *Celotex*, 477 U.S. at 325–26.

154. *Celotex*, 477 U.S. at 325; FED. R. CIV. P. 56(c)(1)(B) ("[S]howing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact."). Commentators have (justifiably) lamented the lack of clarity regarding what is required to "show" the insufficiency of the plaintiff's evidence. *See, e.g.*, Miller, *supra* note 40, at 1063–64.

155. Cartrett v. Johns-Manville Sales Corp., 826 F.2d 33, 39–40 (D.C. Cir. 1987).

156. *Celotex*, 477 U.S. at 320. The evidence was relevant to prove that "the decedent had been exposed to [Celotex's] asbestos products in Chicago during 1970-71." *Id.*

157. *See supra* note 98 and accompanying text.

158. In close cases, a generalized bright line cannot be identified *a priori*, and outcomes will typically depend on case-specific details. *See supra* notes 116–28.

Chicago during 1970–1971).[159] Because of the *explanatory fact* that the plaintiff's evidence, if accepted by the jury,[160] supported the plaintiff's explanation,[161] a reasonable jury could (in the absence of other evidence) find this to be a better explanation than the alternatives (i.e., that the plaintiff was exposed to a different company's product or was not exposed to asbestos).[162] Thus, the plaintiff's evidence was sufficient.

Finally, *Matsushita* clarified the summary-judgment framework in a manner that further illuminates the significance of explanatory facts. The case involved an antitrust lawsuit alleging a "predatory pricing" conspiracy among television manufacturers.[163] The Court explained that the type of pricing conspiracy alleged is "irrational" and therefore "rarely tried, and even more rarely successful."[164] Because the defendants had "no rational economic motive" to engage in such a conspiracy, this explanation for their conduct was "implausible" and made "no practical sense."[165] Therefore, in the absence of any evidence showing that an agreement existed, the pricing conduct identified by the plaintiffs was better explained by independent conduct by the defendants rather than the result of a conspiracy.[166] Thus, without any additional evidence of an agreement—which would render the conspiracy explanation more plausible—no reasonable jury could find for the plaintiffs at trial.[167] Because there was an alternative possible explanation for the defendants' conduct that was at least as good as (and indeed was better than) the plaintiff's explanation, the defendant was entitled to summary judgment.[168] The *explanatory facts*—(1) the absence of evidence to support the

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159. *See supra* notes 155–56.

160. *See supra* note 156.

161. *See supra* note 155.

162. Another option available to the defendant at the summary-judgment stage would have been to introduce its own evidence and argue that, based on this evidence, no reasonable jury could accept the plaintiff's explanation.

163. *Matsushita Electronic Industrial Co. v. Zenith Radio Corp.*, 475 U.S 574, 577–78, 586 (1986).

164. *Id.* at 589. In particular, the Court noted the practical difficulties involved with gaining and maintaining a monopoly long enough to offset the losses involved with the initial pricing scheme. These difficulties made such a scheme "irrational" for one firm to engage in and even riskier when part of a conspiracy (because of the possibility of cheating or defection among one or more participants). *Id.* at 589–91.

165. *Id.* at 596–97.

166. *Id.* at 587–88; *see also id.* at 588 ("Respondents . . . must show that the inference of conspiracy is reasonable in light of the competing inference[] of independent action . . . ."); *id.* at 581 ("The [appellate] court apparently did not consider whether it was as plausible to conclude that petitioners' price-cutting was independent and not conspiratorial.").

167. *See id.* at 588; *see also id.* at 596–97 ("[I]f petitioners had no rational economic motive to conspire, and if their conduct is consistent with other, *equally plausible explanations*, the conduct does not give rise to an inference of conspiracy.") (emphasis added).

168. *See supra* notes 126–29 and accompanying text. Thus, one way that moving parties may succeed at the summary-judgment stage is by offering a more plausible alternative explanation of the nonmoving party's evidence. This may be so even when the moving party has not submitted evidence of its own, and it is consistent with the fact that the moving party

conspiracy explanation; (2) the lack of an apparent rational motive to support the conspiracy explanation; and (3) an alternative, contrary explanation for the defendant's conduct that was at least as good as the conspiracy explanation—made the plaintiff's evidence insufficient.

B. Judgment as a Matter of Law

During trial or following a jury's verdict, a party may move for judgment as a matter of law ("JMOL") on one or more factual issues.[169] The Supreme Court has explained that the JMOL standard "mirrors" the standard for summary judgment in employing a "reasonable jury" analysis.[170] As in the summary-judgment context, the "reasonable jury" inquiry for JMOL depends on the evidence and the applicable burden and standard of proof.[171] Based on the evidence and the standard of proof, courts attempt to discern whether a reasonable jury could find for the nonmoving party (or must find for the moving party). As with summary judgment, explanatory facts ground whether the evidence is sufficient.

The significance of explanatory facts is well illustrated by *Reeves v. Sanderson Plumbing Products, Inc.*, a case spelling out JMOL doctrine in the context of an employment discrimination claim.[172] The case involved a claim for age discrimination after the plaintiff was discharged from his job as a supervisor at the defendant's manufacturing plant.[173] Following a trial, the jury returned a verdict for the plaintiff.[174] The defendant argued that it was entitled to JMOL because the evidence was insufficient to support the verdict.[175] The plaintiff's evidence consisted of proving a prima facie case of discrimination under the *McDonnell-Douglas* framework plus evidence discrediting the defendant's alternative explanation for discharging the plaintiff.[176] The Supreme Court reviewed the appellate court's

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may have no evidentiary obligations. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323–25 (1986).

169. FED. R. CIV. P. 50(a)–(b).

170. Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150 (2000). The "reasonable jury" standard also regulates the parties' constitutional right to a jury under the Seventh Amendment—a JMOL does not interfere with this right when there is insufficient evidence to support a verdict. *See generally* Galloway v. United States, 319 U.S. 372, 396 (1943); Balt. & Carolina Line, Inc. v. Redman, 295 U.S. 654 (1935).

171. *Reeves*, 530 U.S. at 150.

172. *Id.* at 150–51. In employment law, the burden-shifting framework in *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 800–07 (1973), requires the defendant to respond with a non-discriminatory explanation for its actions after the plaintiff proves a prima facie case of discrimination. *See Reeves*, 530 U.S at 142.

173. *Id.* at 137–38.

174. *Id.* at 139.

175. *Id.*

176. *Id.* at 142 (citations omitted) ("[T]he plaintiff must establish a prima facie case of discrimination. It is undisputed that petitioner satisfied this burden here: (i) at the time he was fired, he was a member of the class protected by the ADEA ('individuals who are at least 40 years'), (ii) he was otherwise qualified for the position of Hinge Room supervisor, (iii) he was discharged by respondent, and (iv) respondent successively hired three persons in their thirties to fill petitioner's position."). The defendant alleged that the reasons for discharging the plaintiff were his poor record keeping and failure to discipline employees, but the plaintiff

holding that the plaintiff's combination of evidence (prima facie case plus evidence discrediting the defendant's alternative explanation) is insufficient evidence from which a reasonable jury could find discrimination (by a preponderance of the evidence).[177] The Court eschewed a categorical rule on this issue, rejecting the defendant's argument that such evidence will always be insufficient (or will always be sufficient).[178] Rather, the Court explained, it will depend on the details of each case. These details include the specific explanatory facts in each case—i.e., facts about the relationships between the evidence and the competing explanations.

In this case, the Court concluded, the evidence was sufficient to support the jury's finding for the plaintiff.[179] The *explanatory facts* that grounded this conclusion included "establishing a prima facie case of discrimination"[180] and "additional evidence that Chesnut was motivated by age-based animus and was principally responsible for [the plaintiff's] firing."[181] Based on these explanatory facts, the Court explained, a reasonable jury could have found (and did find) that the plaintiff's explanation for why he was fired was a better explanation than the alternatives.

IV. SUFFICIENCY DOCTRINE IN CRIMINAL PROCEDURE

Criminal defendants have a constitutional right that their convictions must be supported by sufficient evidence.[182] In the criminal context, as in the civil context, sufficiency doctrine requires courts to distinguish "reasonable" from "unreasonable" conclusions in light of the evidence and the standard of proof ("beyond a reasonable doubt").[183] This inquiry is complicated by general uncertainty about the meaning of "beyond a reasonable doubt" and its requirements in particular cases.[184] This Part discusses the sufficiency standard in criminal cases, as spelled out in *Jackson v. Virginia*, and the significant role played by explanatory facts in applying this standard.

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introduced evidence that his record keeping was proper and that disciplining employees was not part of his job responsibilities. *See id.* at 143–46.

177. *Id.* at 148–49.

178. *Id.* at 148. In *St. Mary's Honor Center v. Hicks*, 509 U.S. 502, 503 (1993), the Court also rejected a categorical rule in which disproving the defendant's non-discriminatory explanation would always result in judgment as a matter of law for the plaintiff.

179. *Reeves*, 530 U.S. at 151.

180. *See supra* note 176.

181. *Reeves*, 530 U.S. at 151. *See, e.g.*, *id.* ("Petitioner testified that Chesnut had told him that he 'was so old [he] must have come over on the Mayflower' and, on one occasion when petitioner was having difficulty starting a machine, that he 'was too damn old to do [his] job.'"); *id.* at 152 ("[P]etitioner introduced evidence that Chesnut was the actual decisionmaker behind his firing.").

182. Jackson v. Virginia, 443 U.S. 307, 309, 323–24 (1979).

183. *Id.* at 317 n.10, 318. The discussion to follow focuses on sufficiency doctrine following criminal convictions. Acquittals in criminal cases are a special case in sufficiency doctrine and, to preserve the possibility of jury nullification, are not subject to "reasonable jury" analysis. *See* FED. R. CRIM. P. 29 (motion for a judgment of acquittal based on insufficient evidence).

184. *See* LAUDAN, *supra* note 38, at 31–61.

Jackson involved a state-court conviction for first-degree murder.[185] Before the Supreme Court, in the habeas context, the primary doctrinal issue was the proper relationship between the constitutional requirement of proof "beyond a reasonable doubt," recognized in *Winship*,[186] and the evidentiary requirements necessary to constitutionally support a conviction.[187] The Court considered and rejected a lower "no evidence" standard[188] and instead clarified that the evidence must be strong enough that a "reasonable" or "rational" jury could convict beyond a reasonable doubt.[189]

Applying this standard to the facts of the case, the Court concluded that the evidence was sufficient to support the defendant's conviction.[190] The defendant conceded that he shot the victim but argued that the evidence was insufficient to show the necessary *mens rea* to constitute first-degree murder.[191] The Court recounted some of the relevant facts:

> Testimony by [the victim's] relatives indicated that on the day of the killing the [defendant] had been drinking and had spent a great deal of time shooting at targets with his revolver. Late in the afternoon, according to their testimony, he had unsuccessfully attempted to talk the victim into driving him to North Carolina. She did drive the petitioner to a local diner. There the two were observed by several police officers, who testified that both the petitioner and the victim had been drinking. The two were observed by a deputy sheriff as they were preparing to leave the diner in her car. The petitioner was then in possession of his revolver, and the sheriff also observed a kitchen knife in the automobile. The sheriff testified that he had offered to keep the revolver until the petitioner sobered up, but that the latter had indicated that this would be unnecessary since he and the victim were about to engage in sexual activity.
>
> Her body was found in a secluded church parking lot a day and a half later, naked from the waist down, her slacks beneath her body. Uncontradicted medical and expert evidence established that she had been shot twice at close range with the petitioner's gun. She appeared not to have been sexually molested. Six cartridge cases identified as having been fired from the petitioner's gun were found near the body.[192]

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185. *Jackson*, 443 U.S. at 309.

186. *See In re* Winship, 397 U.S. 358, 362 (1970).

187. *Jackson*, 443 U.S. at 309, 312–13.

188. *Id.* at 316 (rejecting Thompson v. Louisville, 362 U.S. 199 (1960)). For similar doctrinal developments on the civil side, see *supra* note 153 and accompanying text.

189. *Jackson*, 443 U.S. at 324 (holding evidence is constitutionally insufficient if "no rational trier of fact could have found proof of guilt beyond a reasonable doubt"); *see also id.* at 318 ("[T]he critical inquiry on review of the sufficiency of the evidence to support a criminal conviction must be . . . to determine whether the record evidence could reasonably support a finding of guilt beyond a reasonable doubt.").

190. *Id.* at 324–26.

191. *Id.* at 324.

192. *Id.* at 310.

The defendant argued that there was insufficient evidence from which a rational factfinder could find, beyond a reasonable doubt, that he possessed the necessary *mens rea* for first-degree murder. The defendant offered two arguments for why he did not have the requisite intent: (1) that he was incapable of forming such intent because he was too intoxicated, and (2) that he was acting in self-defense.[193]

The Court concluded that, based on the evidence, neither of the defendant's reasons was plausible and that a rational factfinder could find, beyond a reasonable doubt, that the defendant had the specific intent to kill the victim. First, with regard to capacity, the Court noted that, despite evidence that he had been drinking on the day of the crime, several undisputed facts contradicted the claim that he was too intoxicated to form an intent to kill.[194] In particular, the Court explained, the defendant engaged in calculated behavior before and after the shooting: (1) he first fired warning shots and reloaded his gun; (2) he shot the victim more than once; and (3) he drove "without mishap" from Virginia to North Carolina following the shooting.[195] These *explanatory facts*—i.e., the inconsistencies between the evidence and the defendant's explanation—made the defendant's explanation implausible.

Second, with regard to self-defense, the Court noted that this possible explanation was implausible because it was inconsistent (or at least in tension) with undisputed aspects of the evidence.[196] According to the defendant, the victim attacked the defendant after he refused her sexual advances. The Court concluded that the trial judge was warranted in finding this explanation "incredible" in light of the facts that: (1) the defendant had expressed his desire and plan to have sex with the victim earlier that day; (2) the victim was found naked from the waist down; and (3) the victim would have, by the defendant's own narrative, attacked the defendant knowing he was holding a loaded weapon and after he had fired several warning shots.[197] These *explanatory facts* made the defendant's self-defense explanation implausible. In explaining how the evidence contradicted the defendant's two alternative explanations, the Court also clarified that to satisfy the sufficiency standard, the prosecution does not have an affirmative duty to disprove every possible explanation inconsistent with guilt.[198]

The explanatory-fact account clarifies both the sufficiency doctrine established in *Jackson* and the outcome of the particular case. To satisfy the *Jackson* standard, a reasonable jury must be able to find that the prosecution's explanation is

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193. *Id.* at 325.
194. *Id.*
195. *Id.*
196. *Id.*
197. *Id.*
198. *Id.* at 326 ("Only under a theory that the prosecution was under an affirmative duty to rule out every hypothesis except that of guilt . . . could this petitioner's challenge be sustained."); *see also* United States v. Sineneng-Smith, 140 S. Ct. 1575, 1579 (2020) (quoting Greenlaw v. United States, 554 U.S. 237, 243 (2008)) ("In our adversarial system of adjudication, we follow the principle of party presentation . . . . '[W]e rely on the parties to frame the issues for decision . . . .'").

not merely the best explanation but the only plausible explanation.[199] Accordingly, a criminal defendant may succeed under the standard by showing either that the prosecution's explanation is not strong enough, given the evidence, to eliminate reasonable doubt[200] or that there is a plausible defense explanation (even if this explanation is not better than the prosecution's).[201] What makes particular explanations plausible or not—what grounds whether the evidence is sufficient or not—are case-specific explanatory facts. In *Jackson*, the *explanatory facts* included: (1) the several inconsistencies, recited by the Court, between the evidence and the defendant's alternative explanations (rendering them implausible); and (2) the evidence that supported the prosecution's explanation (i.e., that the defendant intended to kill the victim).[202] It is because of these explanatory facts that the evidence was sufficient to support the conviction.

V. COUNTERARGUMENTS

This Part discusses two potential counterarguments to the central thesis of this Article that explanatory facts make evidence sufficient. First, this Part evaluates whether cases that involve statistical evidence present a special case because, so the argument goes, statistical evidence more closely aligns with probabilistic accounts of proof. Next, this Part evaluates a general, skeptical argument—namely, that the sufficiency doctrine that this Article explicates in terms of explanatory facts is, in fact, incoherent because there is nothing to sufficiency analysis beyond the subjective beliefs of judges. In responding to these counterarguments, the analysis further clarifies the ways in which explanatory facts make evidence sufficient.

A. Statistical Evidence

The cases discussed have involved *non-quantified evidence*. Therefore, one might ask, do cases in which parties present explicitly statistical evidence challenge the explanatory-fact account of sufficiency and suggest, instead, that probabilistic facts (based on the statistics) make evidence sufficient (or not)?[203] Although it may be tempting to see an affinity between statistical evidence and probabilistic accounts of legal proof, statistical evidence fits with the explanatory-fact thesis and provides no additional reasons to accept the (previously rejected) probabilistic possibilities.

Rather than challenging the explanatory-fact thesis, relevant statistical evidence may provide explanatory facts to be used in evaluating and comparing

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199. *See supra* note 100 and accompanying text. The higher explanatory threshold follows from the policies underlying the "beyond a reasonable doubt" standard. *See* Allen & Pardo, *supra* note 86, at 10–15 (discussing the relationships between the standards of proof, their underlying policies, and the explanatory thresholds).

200. *See, e.g.*, O'Laughlin v. O'Brien, 568 F.3d 287, 302 (1st Cir. 2009); Langston v. Smith, 630 F.3d 310, 316–20 (2d Cir. 2011).

201. The presence of a plausible defense explanation may be sufficient to raise a reasonable doubt even when it is not the best explanation. *See* United States v. Beard, 354 F.3d 691, 693 (7th Cir. 2004) ("Confidence in a proposition, such as Beard's guilt, is . . . undermined by presenting plausible alternatives.").

202. *See supra* notes 192–98 and accompanying text.

203. This might suggest, therefore, that cases involving statistical evidence more closely align with the objective-probability account rejected in Part II.

explanations.[204] Statistical evidence, in other words, may be one reason why a particular explanation is better or worse.[205] The discussion provides two examples (one civil and one criminal) to illustrate these points, and it then explains why statistical evidence provides no additional independent support for the probabilistic accounts.

Tyson Foods, Inc. v. Bouaphakeo[206] provides a useful example from a civil case. The case involved a class-action lawsuit by workers at a Tyson pork processing plant for overtime pay.[207] The primary legal issue before the Court was class certification, and its resolution depended on the sufficiency of the plaintiff's statistical evidence. The crux of the plaintiffs' complaint was that they were entitled to overtime pay based on a failure to count the time that it took employees to "don and doff" protective gear in the total hours worked by each employee.[208] For example, an employee who worked 39 hours per week and spent an additional 3 hours per week donning and doffing would be entitled to 2 hours of overtime pay (reflecting the 2 hours worked beyond 40 hours). Although records indicated the total hours each of the employees worked at their plant stations, no records were kept of each employee's donning and doffing time.[209] Instead, plaintiffs proffered "representative evidence" in the form of expert testimony on the average time taken for donning and doffing in each of two different plant stations.[210] The studies resulted in averages of 18 minutes per day in one area and 21.25 minutes in another.[211] The applicable number was then added to the recorded time per work for each employee.[212] The process was somewhat complicated by the fact that some employees were compensated for 4–8 minutes per day of donning and doffing, although this practice was not consistently applied throughout the plant.[213] Any such time for which an individual was compensated was then subtracted from that employee's total.[214] In the majority opinion, Justice Kennedy summarized and explained the evidence:

> Tyson had information regarding each employee's gang-time [at the workstation] and K-code time [compensation for donning and doffing]. Using this data, the employees' other expert, Dr. Liesl Fox, was able to estimate the amount of uncompensated work each employee did by adding [expert Dr. Kenneth] Mericle's estimated

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204. *See generally* Jonah B. Gelbach, *Estimation Evidence*, 168 U. PA. L. REV. 549 (2020) (discussing statistical evidence in tort cases); Michelle M. Burtis, Jonah B. Gelbach & Bruce M. Kobayashi, *Error Costs, Legal Standards of Proof, and Statistical Significance*, 25 SUP. CT. ECON. REV. 1 (2017) (discussing statistical evidence in employment-discrimination cases).

205. *See supra* note 102 and accompanying text.

206. 136 S. Ct. 1036 (2016).

207. *Id.* at 1041–42.

208. *Id.* at 1042.

209. *Id.* ("At no point did Tyson record the time each employee spent donning and doffing.").

210. *Id.* at 1043.

211. *Id.*

212. *Id.*

213. *Id.* at 1042.

214. *Id.* at 1043–44.

> average donning and doffing time to the gang-time each employee worked and then subtracting any K-code time. For example, if an employee in the kill department had worked 39.125 hours of gang-time in a 6-day workweek and had been paid an hour of K-code time, the estimated number of compensable hours the employee worked would be: 39.125 (individual number of gang-time hours worked) + 2.125 (the average donning and doffing hours for a 6-day week, based on Mericle's estimated average of 21.25 minutes a day) – 1 (K-code hours) = 40.25. That would mean the employee was being undercompensated by a quarter of an hour of overtime a week, in violation of the FLSA. On the other hand, if the employee's records showed only 38 hours of gang-time and an hour of K-code time, the calculation would be: 38 + 2.125 – 1 = 39.125. Having worked less than 40 hours, that employee would not be entitled to overtime pay and would not have proved an FLSA violation.[215]

In upholding class certification, the Court discussed the sufficiency of the evidence as applied to each individual plaintiff: "The study here could have been sufficient to sustain a jury finding as to hours worked if it were introduced in each individual employee's individual action."[216]

The case presents a clear example of how statistical evidence can help to ground an explanation in the context of sufficiency analysis. The unknown, disputed facts for each individual employee were: did that employee work more than 40 hours in a given week? And if so, how much more? In attempting to provide answers to these questions and thus explain these unknowns, the statistical evidence, when combined with the other evidence in the case, supports a reasonable conclusion that the plaintiff's explanation of what happened is more plausible than the defendant's alternative explanation (the employee worked fewer than 40 hours). Notice that the Court did not say that the statistic is the correct amount—i.e., that a reasonable jury *must* find for the plaintiff.[217] Rather, consistent with the Court's language, the defendant would be free to challenge the calculated amount for any individual with contrary evidence or to introduce other evidence of an individual employee's time.[218] The Court's analysis confirms that, given the facts of this case, statistical evidence may form part of the evidentiary base that is sufficient to support a reasonable jury finding. Assuming the evidence is otherwise admissible, statistical

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215. *Id.*

216. *Id.* at 1048. The Court also rejected a categorical rule regarding statistical evidence and its proper uses. *Id.* at 1049. ("The fairness and utility of statistical methods in contexts other than those presented here will depend on facts and circumstances particular to those cases.").

217. In other words, *pace* the objective-probability account, probative value is not merely the statistic by itself (without input from the factfinder), and the statistic does not provide the only reasonable answer.

218. Another common approach to challenging such evidence is to challenge the admissibility of the expert testimony through which the statistical evidence is presented. The defendant did not raise such a challenge or respond with its own expert testimony on the issue. *Id.* at 1044 ("Petitioner did not move for a hearing regarding the statistical validity of respondents' studies under *Daubert* v. *Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993), nor did it attempt to discredit the evidence with testimony from a rebuttal expert.").

evidence may play a similar role in other types of cases: for example, proving causation in tort cases or disparate impact in discrimination cases.[219] Thus, rather than challenging the role of explanatory facts in sufficiency analysis, statistical evidence may provide the basis for an important *explanatory fact* within that analysis.

Ohio v. Hunter provides a useful example from a criminal case.[220] The prosecution's evidence included a "cold hit" DNA match. In such cases, a positive "hit" between a sample associated with a crime and a profile in an existing DNA database provides the basis for investigative focus on the defendant; it may also constitute the primary prosecution evidence at trial.[221] The evidence in such cases is typically presented as a "random match probability" that is exceedingly low.[222] The evidence may therefore possess high probative value and be highly persuasive evidence of guilt. As in *Tyson Foods*, the evidence coheres with the explanatory-fact thesis.[223]

In *Hunter*, the crime at issue was a rape and burglary that occurred in 1995.[224] The victim was unable to identify or describe her attacker in much detail.[225] No arrests were made following the local investigation. In 2003, an official administering the state's Combined DNA Index System informed the local police that the defendant's profile matched the profile from the 1995 rape kit.[226] Based on this information, the police obtained a warrant for a DNA sample for the defendant, which was tested and again matched.[227] At trial, the random match probability—i.e., the probability that a randomly selected person would match the crime sample—presented was "one in 756 trillion."[228] The defendant was convicted. The defendant

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219. *See, e.g.*, Ricci v. DeStefano, 557 U.S. 557, 587 (2009) (statistical disparity may be sufficient to prove prima facie case of discrimination); Teamsters v. United States, 431 U.S. 324, 339 (1977) (discussing the importance of statistical evidence for proving discrimination); *see also* Halliburton Co. v. Erica P. John Fund, Inc., 134 S. Ct. 2398, 2415 (2014) (effect of information on stock price).

220. 861 N.E.2d 898 (Ohio Ct. App. 2006).

221. *See* David H. Kaye, *Rounding Up the Usual Suspects: A Legal and Logical Analysis of DNA Trawling Cases*, 87 N.C. L. REV. 425 (2009); Andrea Roth, *Safety in Numbers? Deciding When DNA Alone Is Enough to Convict*, 85 N.Y.U. L. REV. 1130 (2010).

222. *See id.*

223. More generally, statistical evidence fits within the explanatory framework in other types of criminal cases as well—for example, in rebutting or responding to alternative explanations suggested by the defense. *See, e.g.*, United States v. Veysey, 334 F.3d 600, 603–04 (7th Cir. 2003) (actuarial testimony on the probability of four residential fires occurring by chance); Wisconsin v. Pankow, 422 N.W.2d 913, 917–919 (Wis. Ct. App. 1988) (expert testimony on the probability of three infants dying of SIDS in the same household during a five-year period).

224. *State v. Hunter*, 861 N.E.2d 898, 899 (2006).

225. *Id.*

226. *Id.*

227. *Id.*

228. *Id.* at 901. The appellate court mistakenly characterized this evidence as "the probability of the sample . . . belonging to anyone other than the appellant." *Id. See* Roth, *supra* note 221, at 1152 ("1 in 756 trillion is not the probability that the DNA belonged to

did not testify, and the defense did not raise any issues with regard to the reliability or presentation of the DNA evidence testing. Rather, the primary defense was to the authenticity of the 1995 rape-kit evidence.[229] The Ohio courts, however, found the evidence was properly authenticated with documentary evidence.[230] Absent any specific reasons to think there was any mishandling or other problems with the chain of custody, the mere possibility that something could have gone wrong was not enough to render the prosecution's evidence insufficient.[231] Thus, in the absence of a plausible alternative explanation, the DNA evidence supported a prosecution explanation that a reasonable jury could find beyond a reasonable doubt.[232] The facts about the DNA evidence, and the absence of any plausible defense explanation, were *explanatory facts* that made the prosecution's evidence sufficient.

Although "random match probability" evidence may possess high probative value in cases such as *Hunter*, it is important to note that the exceedingly low probability associated with the evidence does not correspond to the defendant's likelihood of innocence (or to the probability that the defendant is not the source of the DNA).[233] Nor does the random match probability necessarily even correspond to the probative value of such evidence.[234] The probability, in other words, is one piece of potentially incriminating (yet defeasible) evidence that must be integrated with all other known evidence in the case and compared against the competing possible explanations. On the one hand, the evidence may support the prosecution's explanation for what happened (the defendant committed the crime), as was the case in *Hunter*. In the absence of any other plausible alternatives, such evidence may,

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someone other than the appellant; it is the probability that any randomly selected person from the population would match the profile. Of course, such a small RMP would yield an impressive source probability regardless of the size of the suspect population, given that the Earth's population is only six billion people. But the court's reasoning would presumably be equally flawed in a subsequent case with a higher RMP.").

229. *Hunter*, 861 N.E.2d at 901; Roth, *supra* note 221, at 1152.

230. *Hunter*, 861 N.E.2d at 901 ("[A]bsent some reason to suspect mishandling, records maintained in the ordinary course of business establishing custody of evidence are sufficient to admit the DNA results. Moreover, the DNA profile from the rape kit existed years prior to its association with appellant's DNA. When that association did occur, appellant's DNA was retested with a new sample to confirm the match."). *See* FED. R. EVID. 901.

231. *Cf.* United States v. Beard, 543 F.3d 691, 692 (7th Cir. 2004) ("That is possible, but it was not so lively a possibility as to compel a reasonable jury to acquit . . . .").

232. Courts have generally rejected a categorical rule that probabilistic DNA evidence is *necessarily* insufficient as a matter of law to support a conviction. *See* Roth, *supra* note 221, at 1150 (collecting cases and discussing this issue). As with all other evidence (statistical and otherwise), the probative value of such evidence will depend on the case-specific details, the other evidence, and the possible alternative explanations.

233. The "source probability" (i.e., the probability that the defendant is the source of the sample) can be calculated, via Bayes's Theorem, from the random match probability and the size of the suspect population. *See* Roth, *supra* note 221, at 1147–49; Kaye, *supra* note 221, at 491–92.

234. *See* Allen & Pardo, *supra* note 71.

depending on the circumstances, be sufficient to support a conviction.[235] On the other hand, even seemingly strong DNA evidence will not be sufficient when there is a plausible alternative explanation that is consistent with innocence.[236] Some of these alternative explanations are discovered as part of the investigative process, and the best explanation for the "match" turns out to be interpretive errors, contamination within the testing process, innocent reasons for the suspect's DNA at the crime scene, or law-enforcement misconduct.[237]

These examples illustrate why statistical evidence provides no additional support for either the *objective* or *subjective* probabilistic accounts in Part II. What was true in *Tyson* and *Hunter* is true in every case involving statistical evidence—namely, the evidence must be interpreted in light of the other evidence and the competing explanations. In other words, statistical evidence does not provide an objective probabilistic fact that eliminates the need for judgment by factfinders. As we saw in Part II, such objective probabilistic facts, if known, would eliminate the need for factfinders, and the objective probabilistic facts would provide the only "reasonable" answer. But that view is a fantasy, and it fails to account for sufficiency doctrine.[238] This is no less true when a case involves statistical evidence. First, such evidence must itself be interpreted by the factfinder. Second, and more importantly, that evidence must be integrated with all the other known evidence in the case (including, e.g., witness credibility). Nothing about the fact that some evidence may be in statistical form eliminates the need for reasoning and judgment by factfinders in evaluating competing explanations in light of the evidence.

Nor does statistical evidence provide any additional support for subjective probabilism. As discussed in Part II, this account eliminates the epistemic, evaluative aspect of sufficiency doctrine, counting virtually all possible findings as "reasonable" no matter how weak or absent the evidence to support it.[239] As in *Tyson* and *Hunter*, however, statistical evidence provides the basis for *explanatory facts* that are, in an important sense, distinct from the *subjective* beliefs of factfinders.[240] The evidence was sufficient in those cases, but because of other explanatory facts, statistical evidence is not sufficient in other cases.[241] As in any other case, whether such evidence is sufficient or not will depend on the explanatory facts, which must

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235. In prosecutions based on "cold hit" DNA evidence, the difficult cases involve otherwise relatively weak evidence that would be insufficient by itself to support a conviction (e.g., a general physical description or the defendant's presence in a geographical location) that is combined with the (highly probative seeming) DNA evidence. *See* Roth, *supra* note 221, at 1140–44.

236. *See supra* notes 126–29 and accompanying text. To be clear, the line between "possible" and "plausible" alternatives is imprecise and will create hard cases.

237. *See generally* ERIN E. MURPHY, INSIDE THE CELL: THE DARK SIDE OF FORENSIC DNA (2015) (discussing examples).

238. *See supra* notes 72–78 and accompanying text.

239. *See supra* notes 90–92 and accompanying text.

240. *See supra* notes 216, 231 and accompanying text.

241. *See, e.g.*, NOCO Co. v. OJ Com., LLC, 35 F.4th 475 (6th Cir. 2022); Howard v. Wal-Mart Stores, Inc., 160 F.3d 358 (7th Cir. 1998); *see also* Allen & Smiciklas, *supra* note 70 (collecting cases).

be evaluated by courts in the real world that exists between epistemic fantasy (objective probabilism) and epistemic nightmare (subjective probabilism).

B. A Skeptical Critique: Is Sufficiency Doctrine What It Purports to Be?

But is something beyond subjective probabilism even possible? Maybe there is nothing that makes evidence sufficient, other than the subjective beliefs of judges. Is sufficiency doctrine a sham? The discussion now considers these questions and the possible counterargument they suggest.

To assess this counterargument, it will be helpful to briefly summarize where the critique arises within this Article's analysis. Explanatory facts, this Article argues, play a role in sufficiency doctrine somewhere between objective and subjective probabilism. On one hand, if courts had access to the objective probabilities of the disputed facts, then these probabilities would be the only "reasonable" answer. The task for a court assessing sufficiency of the evidence in such circumstances would thus be to compare the objective probabilities with the standard of proof.[242] On the other hand, if sufficiency review only consisted of subjective degrees of belief, then either all determinations would be "reasonable," or the "reasonable" answer would be a judge's own subjective degree of belief.[243] If the former were true, then there would be nothing for reviewing courts to do with regard to sufficiency review other than to rubberstamp every conclusion as reasonable. If the latter were true, then judges would merely be implementing their own subjective degrees of belief in place of jurors'. Explanatory facts ground sufficiency doctrine in a manner that falls between these extremes. The doctrine creates a context of epistemic *permissibility* in which some but not all inferences are allowed based on the evidence.[244]

At this point, the counterargument interjects: (1) all that sufficiency review entails is subjective degrees of belief; and (2) rather than rubberstamping all conclusions as reasonable, judges are implementing their own subjective degrees of belief as a substitute for those of jurors. If the counterargument is true, it holds devastating consequences for sufficiency doctrine, which must therefore be incoherent and unconstitutional.[245] Given this significance, it is important to consider this critique carefully and in detail.

Professor Suja Thomas has articulated a clear and forceful version of this critique. Thomas's analysis focuses on the "reasonable jury" standard, which she argues is the root of the problem.[246] The reasonable jury standard is a "fiction" that is "incapable of determination," and therefore, sufficiency doctrine is "impossible

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242. This assumes, for the sake of argument, that the standard of proof is a fixed probabilistic threshold. *See supra* note 64 and accompanying text.

243. Alternatively, sufficiency review could consist merely of reviewing consistency among the subject beliefs of factfinders. *See supra* note 87.

244. *See supra* notes 28–33 and accompanying text.

245. *See supra* notes 9–10 and accompanying text.

246. *See* Thomas, *Reforming*, *supra* note 8; Thomas, *Fallacy*, *supra* note 8; *see also* Suja A. Thomas, *Summary Judgment and the Reasonable Jury Standard: A Proxy for the Judge's Own View of the Sufficiency of the Evidence?*, 97 JUDICATURE 222 (2014).

to implement."[247] This critique goes to the foundational premise on which sufficiency doctrine depends: "The false factual premise underlying the reasonable jury standard is that a court can actually apply the standard. A court cannot do this."[248] Instead, she argues, judges implementing the doctrine are merely substituting their own subjective views of the evidence and disputed facts, which may, in fact, differ from those of the actual jury, a hypothetical jury, or other judges.[249] Thomas's focus is on the doctrinal use of the reasonable jury standard in the context of summary judgment and JMOL.[250] The critique, however, cuts deep and would apply to any other use of the reasonable jury standard as well, including sufficiency review of the prosecution's evidence in criminal cases.[251]

The crux of the critique is that sufficiency review depends merely on the subjective beliefs of decision-makers.[252] According to the argument, the doctrine's coherence, and indeed its very possibility, is undermined by the following: (1) the inability of judges to predict what actual or hypothetical jurors will do;[253] and (2) the fact that judges sometimes disagree about whether summary judgment is appropriate.[254] The explanatory-fact account, however, helps to further clarify sufficiency doctrine and, in the process, provides a response to this counterargument.

Explanations and their relationships with the evidence (i.e., the explanatory facts) are distinct from the subjective beliefs of factfinders (judges and juries). This distinction provides a foundation for a "reasonable jury" standard and also for a

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247. *See* Thomas, *Reforming*, *supra* note 8, at 2251; Thomas, *Fallacy*, *supra* note 8, at 784.

248. Thomas, *Fallacy*, *supra* note 8 at 777–78. *But see* Michael S. Pardo, *Pleadings, Proof, and Judgment: A Unified Theory of Civil Litigation*, 51 B.C. L. REV. 1451, 1504 (2010) (explaining how outcomes under the "reasonable jury" standard may diverge from outcomes of the judge as factfinder).

249. Thomas, *Fallacy*, *supra* note 8, at 784 ("[T]he determination by a judge of whether a reasonable jury could find for the plaintiff is a legal fiction, incapable of determination. Accordingly, the only analysis that judges perform in their decisions to dismiss cases—under the mantra of the reasonable jury standard—is an improper one based on the judge's own views of the facts."); Thomas, *Reforming*, *supra* note 8, at 2251 ("[T]he reasonable jury standard is impossible to implement. Judges decide whether to order summary judgment based on their own opinions of the evidence.").

250. *See generally* Thomas, *Reforming*, *supra* note 8, at 2251; Thomas, *Fallacy*, *supra* note 8.

251. *See supra* Part IV. The "reasonable jury" standard is also used in admissibility determinations. *See* Huddleston v. United States, 485 U.S. 681 (1988) (discussing the standard under FED. R. EVID. 104(b)).

252. *See supra* note 249.

253. Thomas, *Reforming*, *supra* note 8, at 2249 ("For a judge to determine what a reasonable jury could find, it appears that a judge would be required to imagine who would sit on the jury, how the jurors would deliberate, and the conclusion that they would reach. I have described this task as impossible for several reasons.").

254. Thomas, *Reforming*, *supra* note 8, at 2250 ("Another indication that a judge decides only what he thinks, not what a reasonable jury could find, is the disagreement among judges about whether summary judgment should be ordered.").

range of *permissible* inferences within that standard.[255] To meet a standard of proof, the party with the burden of proof must satisfy an explanatory threshold, for example, by having the best of the available explanations in a civil case (under the "preponderance of the evidence" standard) or by having the only plausible explanation in a criminal case (under the "beyond a reasonable doubt" standard).[256] Sometimes the explanatory facts will be such that no reasonable jury could find that this threshold is met, given the particular details of the case ("Situation 1").[257] The plaintiff's explanation in *Matsushita* and the prosecution's explanation in *O'Laughlin* could not meet the applicable thresholds.[258] Other times, the explanatory facts will be such that whether the threshold is met depends on the credibility of witnesses, other aspects of the evidence on which factfinders could reasonably disagree, or other explanatory considerations about which reasonable jurors could disagree ("Situation 2").[259] The plaintiff's explanations in *Reeves*, *Celotex*, and *Tyson Foods* and the prosecution's explanations in *Jackson* and *Hunter* fall into this category.[260] Sufficiency doctrine tracks this distinction. When a court declares that no reasonable jury could reach a particular conclusion, there ought to be identifiable *explanatory facts* as to why the explanatory threshold cannot be met (and indeed, judicial reasoning often reflects this).[261] If not, then, according to sufficiency

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255. *But see* Thomas, *Reforming*, *supra* note 8, at 2550 ("The idea of what a reasonable jury could find suggests that only one reasonable result from a jury exists."). Because sufficiency review concerns epistemic permissibility, factfinders may be entitled to a range of inconsistent inferences and conclusions. Thus, the "reasonable jury" standard does not imply that there is one reasonable answer in each case.

256. *See supra* notes 97–101 and accompanying text.

257. In this situation, the grounds for the "reasonable jury" standard concern the relationships between the evidence and the available explanations, not predictions about what actual or hypothetical jurors will do. *See supra* note 253. For this reason, the fact that judges and jurors disagree does not necessarily mean that a particular conclusion is reasonable or not. *See* Michael W. Pfautz, *What Would a Reasonable Jury Do? Jury Verdicts Following Summary Judgment Reversals*, 115 COLUM. L. REV. 1255 (2015).

258. *See supra* notes 122–25 and 165–68 and accompanying text.

259. Differences in jurors' background knowledge and experiences will be among the reasons why they draw different inferences from the same evidence. This background knowledge and experience is also, in a fundamental sense, part of the "evidence" on which legal factfinding depends. *See supra* note 17. Thomas is thus correct that this is an important source of reasonable disagreement, one that judges ought to be sensitive to during sufficiency review. *See* Thomas, *Reforming*, *supra* note 8, at 2249–50; *see also* Schneider, *supra* note 40.

260. *See supra* notes 179, 155, 216, 202, 231 and accompanying text.

261. *See supra* notes 116–29 and accompanying text. This is not to deny that courts may sometimes apply the "reasonable jury" standard too aggressively, declaring inferences unreasonable when that conclusion is unwarranted by the explanatory facts or failing to point to any explanatory facts that make the inference unreasonable. Similarly, courts may be too lenient on the criminal side in applying the "reasonable jury" standard, failing to declare inferences unreasonable when that conclusion is warranted by the explanatory facts. *See* Newman, *supra* note 40. Greater doctrinal attention to *explanatory facts* may better guide and constrain sufficiency determinations.

doctrine, the evidence is sufficient, and courts ought not to interfere with the factfinding process.[262]

The general distinction between the two types of situations described above is not a legal fiction. Indeed, it is employed frequently and coherently within evidence law when courts assess the *admissibility* of evidence. Examining its successful implementation in the admissibility context demonstrates how it may also be employed coherently in the sufficiency context. As in the sufficiency context, admissibility decisions make use of standards of proof and the "reasonable jury" standard.[263] Within the admissibility context, factual determinations necessary to apply the rules of evidence are decided under the "preponderance of the evidence" standard.[264] Rule 104 of the Federal Rules of Evidence, however, divides decision-making authority by employing two different standards for such preliminary factual determinations.[265] For some preliminary questions, the judge decides under Rule 104(a) whether the preliminary fact is proven by a preponderance of the evidence.[266] For example, in deciding whether a statement falls within a hearsay exception, the court will have to determine whether the statement meets the factual conditions for the exception.[267] If there is a dispute about one or more factual conditions, the judge will decide whether the fact is proven by a preponderance of the evidence.[268] By contrast, for other preliminary questions, the judge will decide under Rule 104(b) whether a "reasonable jury" could find that fact proven by a preponderance of the evidence.[269] For example, in determining whether a non-self-authenticating document is authentic, the judge will *not* determine whether the document is proven by a "preponderance of the evidence" to be "what it is claimed to be"—rather, the

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262. The fact that some courts employ the doctrine incorrectly or poorly is evidence of the doctrine's effectiveness; it is not evidence of its incoherence or impossibility. At the post-trial stage, courts with significant second-order doubts about whether they are in "Situation 1" or "Situation 2" described in text may also grant motions for new trials. *See* FED. R. CIV. P. 59; FED. R. CRIM. P. 33; Cassandra Burke Robertson, *Invisible Error*, 50 CONN. L. REV. 161 (2018) (discussing the standards for new-trial motions based on weight-of-the-evidence considerations); United States v. Morales, 902 F.2d 604, 608 (7th Cir. 1990).

263. *See* Huddleston v. United States, 485 U.S. 681 (1988).

264. *See* Bourjaily v. United States, 483 U.S. 171, 175 (1987).

265. For analysis of the distinction between Rules 104(a) and 104(b), see John Kaplan, *Of Mabrus and Zorgs—An Essay in Honor of David Louisell*, 66 CALIF. L. REV. 987 (1978).

266. *See id.* at 995.

267. For example, in deciding whether the "present sense impression" exception to the hearsay rule applies, the court will have to determine whether the statement was made "while or immediately after" the declarant perceived the event being described. *See* FED. R. EVID. 803(1).

268. *Bourjaily*, 483 U.S. at 175; *see also* Eleanor Swift, *A Foundation Fact Approach to Hearsay*, 75 CALIF. L. REV. 1339 (1987).

269. *See* FED. R. EVID. 104(b) ("When the relevance of evidence depends on whether a fact exists, proof must be introduced sufficient to support a finding that the fact does exist.").

judge will determine whether a reasonable jury could find, by a preponderance of the evidence, that the document is what it is claimed to be.[270]

The explanatory framework applies to the preponderance standard at the admissibility stage just as it does at the proof stage.[271] The distinction between Rules 104(a) and 104(b) further reveals how the "reasonable jury" standard operates within an explanatory-fact framework. In Rule 104(a) determinations, the judge determines whether the best explanation concerning the disputed fact favors the party with the burden of proof.[272] By contrast, in Rule 104(b) determinations, the judge asks whether a "reasonable jury" could find that the best explanation favors the party with the burden of proof.[273] In order to decide that no reasonable jury could find the preliminary fact (e.g., a document's authenticity), the court ought to be able to identify the *explanatory facts* that support this ruling.[274] If, instead, the choice of possible explanations turns on witness credibility or ambiguities in the evidence, then courts should allow the evidence to proceed to the jury—even when judges would not themselves find the preliminary facts proven by a preponderance of the evidence.

Huddleston v. United States provides an illustrative example.[275] The issue before the Supreme Court was the standard that district courts ought to employ in order to admit a criminal defendant's prior act for a non-character purpose.[276] The defendant was charged with selling stolen videotapes.[277] The defendant argued that he did not know the videotapes were stolen.[278] To prove knowledge, the government sought to introduce evidence that the defendant had previously sold stolen televisions.[279] The defendant argued that the trial court erred in admitting evidence about the television sales because the government failed to prove as a condition of admissibility that the televisions were, in fact, stolen.[280] The Court explained that

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270. *See* FED. R. EVID. 901; *see, e.g.*, United States v. Estrada-Eliverio, 583 F.3d 669, 672–73 (9th Cir. 2009) (discussing the Rule 901 "reasonable jury" standard).

271. *See supra* note 98 and accompanying text. For a discussion of how standards of proof operate in the context of admissibility, and of how explanatory facts ground sufficiency determinations in this context, see Michael S. Pardo, *On Proving Mabrus and Zorgs*, VAND. L. REV. (forthcoming 2023).

272. *See Bourjaily*, 483 U.S. at 175; United States v. Mitchell, 365 F.3d 215, 240 (3d Cir. 2004).

273. *See* Huddleston v. United States, 485 U.S. 681 (1988).

274. For example, a gap in a chain of custody may be so great that no reasonable jury could find the evidence to be what it purports to be. *See, e.g.*, United States v. Bonds, No. CR 07–00732, 2009 WL 416445, at *6 (N.D. Cal. Feb. 19, 2009) (excluding lab results when no admissible evidence linked defendant to the samples); *see also* United States v. Ladd, 885 F.2d 954, 957 (1st Cir. 1989) (discussing "chain of custody" analysis: "Where, as in this case, a trier chooses among plausible (albeit competing) inferences, appellate courts should not intrude").

275. 485 U.S. 681 (1988).

276. *Id.* at 685.

277. *Id.* at 682.

278. *Id.* at 684.

279. *Id.* at 683. The theory of relevance for this evidence was for the non-character purpose of proving the defendant's knowledge. *Id.* at 684; FED. R. EVID. 404(b)(2).

280. *Huddleston*, 485 U.S. at 687–88.

the proper standard proof for such issues is the preponderance standard (in both civil and criminal cases), but also that the district court did *not* need to make a finding (under Rule 104(a)) that the televisions were stolen.[281] Rather, the proper inquiry is whether a "reasonable jury" could find by a preponderance of the evidence that the televisions were stolen.[282] Thus, a judge may conclude that a reasonable jury could find that the televisions were stolen *even when the judge would not have found that the televisions were stolen*. When would this be the case? This would be the case when the court concludes that a reasonable jury could find that the government's explanation on whether the televisions were stolen is better than any explanations offered by the defendant, but the judge is not herself persuaded that this is the better explanation. For example, the findings might diverge because of different views about the credibility of a witness who testifies in support of one side's explanation.[283]

In concluding that the evidence was sufficient, the Court pointed to several *explanatory facts* that supported the prosecution's explanation that the televisions were stolen. These included the low price of the televisions, the large quantity the defendant offered for sale, the defendant's inability to produce a bill of sale for the televisions, and the defendant's involvement in the sale of other stolen goods.[284] The defendant, by contrast, claimed that he was selling the televisions on commission from a third party (who had told the defendant that the televisions were obtained legitimately).[285] Given these explanatory details, the Court concluded that a reasonable jury *could* find by a preponderance of the evidence that the televisions were stolen. The explanatory facts grounded this determination even though the actual jury may *not* make such a finding.[286] Similarly, a judge deciding the issue may also *not* make such a finding.[287]

The distinction between determining that an explanation is better, on one hand, and determining that a "reasonable jury" could so find, on the other hand, generalizes to all other sufficiency-of-the-evidence contexts. Explanatory facts make evidence sufficient (or not). Moreover, they may make the evidence sufficient to support a finding (e.g., the televisions were stolen), even though the factfinder

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281. *Id.* at 686–89.

282. *Id.* at 690 ("In determining whether the Government has introduced sufficient evidence to meet Rule 104(b), the trial court neither weighs credibility nor makes a finding that the Government has proved the conditional fact by a preponderance of the evidence. The court simply examines all the evidence in the case and decides whether the jury could reasonably find the conditional fact—here, that the televisions were stolen—by a preponderance of the evidence.").

283. *See supra* note 31. The judge could find the witness is not credible and thus reject that explanation, but a reasonable jury might accept that explanation if they find the witness to be credible. This is one clear way in which a result under the reasonable-jury standard could diverge from a judge's own view of the evidence.

284. *Huddleston*, 485 U.S. at 691.

285. *Id.* at 684.

286. The jury is free to reject the evidence and the prosecution's explanation on the disputed fact.

287. *See supra* note 263 and accompanying text.

does not make this finding.[288] Importantly, the *explanatory facts* are distinct from the subjective beliefs of judges (and jurors), and thus they provide a foundation for sufficiency review.[289]

The aim of the above discussion has been to address a skeptical challenge to sufficiency doctrine. Recognizing how explanatory facts make evidence sufficient answers this challenge. To be clear, nothing in the analysis is meant to endorse every application of sufficiency doctrine by courts—indeed, courts may be too aggressive in concluding that evidence is insufficient in some types of civil cases.[290] At the same time, courts may not be aggressive enough in concluding that evidence is insufficient in some types of criminal cases.[291] Criticism and possible reform of current practices must begin with an accurate understanding of the underlying phenomena. Making explicit the ways in which explanatory facts ground sufficiency doctrine is a step in that direction.[292]

CONCLUSION

Explanatory facts make evidence sufficient. The explanatory facts are case-specific details about the relationships between the evidence and the competing explanations offered by the parties. In drawing attention to this overlooked feature of sufficiency-of-the-evidence analysis, this Article presents an account of sufficiency that presents a realistic alternative to possible probabilistic accounts. The explanatory-fact account clarifies the sufficiency issue by identifying the types of facts that matter, and it fits legal doctrine and caselaw in criminal and civil cases

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288. The explanatory facts, in other words, may fix the range of permissible inferences and permit inconsistent inferences within that range. For example, juries in *Reeves* and *Tyson* could have rejected the plaintiffs' explanations, even though the evidence was sufficient to support them. *See supra* notes 176, 210 and accompanying text. Similarly, juries in *Beard* and *Hunter* could have acquitted the defendants, even though the evidence was sufficient to support the convictions. *See supra* notes 121, 229 and accompanying text.

289. *See supra* notes 116–29 and accompanying text.

290. *See* Miller, *supra* note 40; Schneider, *supra* note 40; *see also* ROBERT P. BURNS, THE DEATH OF THE AMERICAN TRIAL (2009).

291. Newman, *supra* note 40. The split between civil and criminal cases in how courts apply the "reasonable jury" standard mirrors a similar split in how courts apply the *Daubert* admissibility standard for expert testimony in civil and criminal cases (i.e., more aggressive use in excluding civil plaintiff evidence as compared with prosecution evidence in criminal cases). *See* NAT'L RSCH. COUNCIL, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD (2009) (discussing the different treatment of *Daubert* in civil and criminal cases).

292. In addition to the counterarguments considered in this Part, other possible counterarguments might focus on particular details of the explanatory account of legal proof. For example, one might object that the explanatory thresholds for the standards of proof are either too *low* or too *high*, respectively. Such counterarguments, it is important to note, do not aim at the central thesis of this Article that explanatory facts make evidence sufficient (or not). Rather, they aim at particular interpretations of the standards of proof. Thus, even if the objections were correct, they would not undermine this Article's central claim—one could still accept, in other words, that explanatory facts make evidence sufficient (or not), only based on different thresholds. For responses to these possible counterarguments in the context of legal proof, and defenses of the thresholds employed, see Allen & Pardo, *supra* note 86, at 17–27.

better than the alternatives. These upsides, however, do not mean that the account provides a simple recipe for identifying correct answers to the sufficiency question in every case; nor does it mean that explanatory reasoning is not without potential dangers (including potential reasoning errors and bias by judges).[293] For these reasons, if explanatory facts play the role that this Article contends they do, one significant implication is that the legal profession needs a greater understanding of explanatory reasoning, including its virtues and vices.[294] In explicating the importance of explanatory facts in sufficiency analysis, the Article intends to start a conversation, not be the last word.

A second, related implication is that the legal profession would benefit from a more explicit focus on explanatory facts in sufficiency reasoning by parties and judges. Because case-specific judgment is necessary when evaluating sufficiency, courts should more explicitly acknowledge the need to identify the reasons that make particular explanations reasonable or not in light of the evidence. For example, reviewing courts could require more reasoned articulations from parties and lower courts as to the *explanatory facts* that make conclusions reasonable or unreasonable, as some courts already do.[295] Such a requirement would not revolutionize sufficiency doctrine; rather, it would make explicit what was implicit, rendering the opaque process more transparent and providing more guidance for parties' and courts' reasoning.

A final potential implication extends beyond factfinding. Explanatory reasoning is ubiquitous throughout the law, as it is elsewhere.[296] Thus, paying greater attention to the roles played by explanatory facts may reveal important insights on other legal issues. Consider, for example, the Supreme Court's recent discussion involving a citizenship question on the 2020 census questionnaire.[297] In discussing administrative law's "reasoned explanation requirement," Chief Justice Roberts's majority opinion reasoned:

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

294. *See* Lombrozo, *supra* note 97, at 260.

295. *See supra* notes 116–29 and accompanying text.

296. *See* W. Bradley Wendel, *Explanation in Legal Scholarship: The Inferential Structure of Doctrinal Legal Analysis*, 96 CORNELL L. REV. 1035 (2011). On the ubiquity of explanatory reasoning, Kevin McCain and Ted Poston explain:

> Explanatory reasoning is quite common. Not only are rigorous inferences to the best explanation (IBE) used pervasively in the sciences, explanatory reasoning is virtually ubiquitous in everyday life . . . . IBE is used to help increase crop yields by producing accurate agricultural models. It is widely used widely by health professionals . . . . Many philosophers argue explanatory reasoning plays a key role in the epistemology of testimony . . . . Some maintain that explanatory reasoning is at the heart of all epistemic justification. It may even be that we cannot even comprehend language without employing IBE.

Kevin McCain & Ted Poston, *Best Explanations: An Introduction*, *in* BEST EXPLANATIONS: NEW ESSAYS ON INFERENCE TO THE BEST EXPLANATION 1 (Kevin McCain & Ted Poston eds., 2017) (citations omitted).

297. Dep't of Com. v. New York, 139 S. Ct. 2551 (2019).

> Altogether, the evidence tells a story that does not match the explanation the Secretary [of Commerce] gave for his decision. In the Secretary's telling, Commerce was simply acting on a routine data request from another agency. Yet the materials before us indicate that Commerce went to great lengths to elicit the request from DOJ (or any other willing agency). And unlike a typical case in which an agency may have both stated and unstated reasons for a decision, here the VRA enforcement rationale—the sole stated reason—seems to have been contrived.
>
> We are presented, in other words, with an explanation for agency action that is incongruent with what the record reveals about the agency's priorities and decisionmaking process.[298]

Indeed. But a discussion of explanatory facts in administrative law specifically, and legal reasoning generally, are topics for another day.

298. *Id.* at 2575.