JURY VOTING PARADOXES

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The special verdict is plagued by two philosophical paradoxes: the discursive dilemma *and the* lottery paradox. *Although widely discussed in the philosophical literature, these paradoxes have never been applied to jury decision making. In this Essay, I use the paradoxes to show that the special verdict's vote-reporting procedures can lead judges to render verdicts that the jurors themselves would reject. This outcome constitutes a systemic breakdown that should not be tolerated in a legal system that prides itself on the fairness of its jury decision-making process. Ultimately, I argue that, because the general verdict with answers to written questions does not suffer from these paradoxes, it should be adopted in place of the special verdict.*

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INTRODUCTION

Imagine you find yourself in court, unjustly accused of damaging your neighbor's car. Fortunately, you have truth on your side. Using that to your advantage, you mount a stunning defense and convince all of the jurors that you are not liable. Despite this feat, the judge renders a verdict in your neighbor's favor, forcing you to pay the car repair bill. How can this be? After all, not even a single juror believed that you were at fault. The answer is simple: you were the victim of a jury voting paradox.

In this Essay, I introduce two voting paradoxes that plague the jury system. Both paradoxes stem from the use of special verdicts. In particular, the problems occur because the jury's factual findings and the judge's application of the law to those findings do not always match up. This is not due to any malevolence on the part of the judge. Instead, owing to the nature of

special verdicts, judges are prone to draw legal conclusions from the jury's findings that the jurors themselves would have soundly rejected.[1] The problem arises because special-verdict forms simplify jurors' responses and, in doing so, eliminate information that the judge needs to accurately apply the law to the jury's factual findings.

The two paradoxes that I discuss in this Essay are known in the philosophical literature as the *discursive dilemma* and the *lottery paradox*. The discursive dilemma results from the fact that individually consistent sets of judgments, when aggregated, can produce collectively inconsistent sets of judgments.[2] Because special verdicts hide this inconsistency, judges can rule in a way that jurors do not intend.

The lottery paradox results from the fact that information is lost when probabilistic judgments are converted into dichotomous judgments.[3] Humans do not hold beliefs with absolute certainty. Instead, there is a probabilistic element inherent in all of our judgments. Each of the propositions that I accept as true is held with a specific degree of belief—or credence. For instance, I am nearly 100% certain that I live on planet Earth. I am slightly less certain that my car is parked in the driveway. Perhaps it was stolen in the last several hours, or perhaps my memory is failing me and I actually parked it in my garage. Going one step further, I am even less certain that the stock market will go up tomorrow. If I were equally certain about all of these propositions, I would either be set to make a killing off the stock market or disturbed by my inability to remember which planet I live on. Neither is the case, so it seems undeniable that I have different degrees of belief in each of these propositions. In fact, it is so obvious that each of us has different credences for different propositions that it is extremely hard to imagine a functioning world in which that is not the case. Unfortunately, what is obvious to all of us is not obvious to the legal system. Because the special verdict disregards the distinction between probabilistic and dichotomous judgments, it hides information from judges that is necessary to understand the jury's factual findings. Without such information, judges may reach legal conclusions that do not follow from the jurors' factual findings.

The problems posed by the discursive dilemma and the lottery paradox strike at a foundational tenet of our judicial system: that the jury serves as the trier of fact and the judge as the applier of law.[4] It is fine to have different actors who are supreme in their own domains. When the judge's

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1. It is important to emphasize that I am not speaking of jury nullification. The jurors I discuss have no desire to overrule the law. They are interested in finding facts and having the judge apply the law to those facts in the proper manner.

2. *See generally* Christian List & Philip Pettit, Group Agency 42–58 (2011) (discussing the discursive dilemma).

3. *See generally* Richard Foley, *Belief, Degrees of Belief, and the Lockean Thesis*, *in* Degrees of Belief 37–47 (Franz Huber & Christoph Schmidt-Petri eds., 2009) (discussing the lottery paradox).

4. Lord Coke's statement is the classic enunciation of this principle: "The most usual triall of matters of fact is by 12 such men; for *ad quæstionem facti non respondent judices*; and matters in law the judges ought to decide and discuss; for *ad quæstionem juris non respondent*

conclusions rely on the findings of the jury, however, the judge must under-stand what the jury has actually found.

The special-verdict form, as it is implemented today, is defective. It ob-fuscates the jurors' true beliefs, and, in doing so, it leads the judge to reach conclusions that the jurors themselves would not have accepted. Simply put, the jury voting paradoxes that I have identified are endemic to special ver-dicts. The general verdict, the other major verdict type, avoids these issues but suffers from other drawbacks. Specifically, in complex cases that require many factual findings, the general verdict offers little guidance to jurors. Of the verdict types in use, only the general verdict with answers to written questions sidesteps the jury voting paradoxes while still offering sufficient guidance to jurors. Unfortunately, this hybrid verdict is rarely adopted, and when it is, the verdict is often used inappropriately.[5] But this verdict form can be salvaged. In this Essay, I provide a method to do so and argue that properly using the general verdict with answers to written questions repre-sents the best solution to the jury voting paradoxes.

In Part I, I discuss the three types of jury verdicts and outline the advan-tages and disadvantages of each. In Part II, I detail the jury voting paradoxes and explain why they present problems for the legal system. Finally, in Part III, I show how judges can eliminate the jury voting paradoxes by employing general verdicts with answers to written questions.

I.   Jury Verdict Types

There are three basic types of jury verdicts: (1) general verdicts, (2) spe-cial verdicts,[6] and (3) general verdicts with answers to written questions.[7] I will first describe how these verdicts differ from each other and then discuss their respective advantages and disadvantages.

The general verdict—the form most popular in Hollywood courtroom dramas—simply directs the jury to find in favor of one party or the other.[8] Behind closed doors, the jury finds the facts of the case and then applies the law, as instructed by the judge, to those agreed-upon facts. In open court, the jury only renders a final judgment on the issues in dispute; it does not reveal the analysis or factual findings that led each of the jurors to reach the

juratores." 1 Sir Edward Coke, The First Part of the Institutes of the Laws of England; Or, A Commentary Upon Littleton § 155.b (The Lawbook Exchange, Ltd. photo. reprint 1999) (1823); *see also* Edson R. Sunderland, *Verdicts, General and Special*, 29 Yale L.J. 253, 255 (1920) ("No maxim of the law has been more often quoted than that which asserts the jurisdiction of the jury over matters of fact and of the judges over matters of law.").

    5.   *See infra* text accompanying notes 69–70.

    6.   Fed. R. Civ. P. 49(a).

    7.   Fed. R. Civ. P. 49(b).

    8.   *See* Black's Law Dictionary 1696 (9th ed. 2009) (defining a general verdict).

verdict. For this reason, general verdicts are often called "black box" verdicts[9] and have even been described as being "as inscrutable and essentially mysterious as the judgment which issued from the ancient oracle of Delphi."[10] General verdicts are used in the vast majority of criminal trials.[11]

The second type of verdict is the special verdict. This verdict is most commonly used in civil trials.[12] In contrast to a general verdict, a special verdict asks the jury to pronounce on the facts of the case and nothing more.[13] This type of verdict requires the judge to apply the law to the jury's factual findings. In the words of William Blackstone, special verdicts are "[where the jury] state[s] the naked facts, as they find them to be proved, and pray the advice of the court thereon."[14]

The third and final type of verdict is the general verdict with answers to written questions. This is a hybrid verdict in which the jury both issues specific findings of fact and renders a general verdict.[15] The dual nature of this verdict form helps guide the jury's deliberations and allows the jury to provide a rationale for its decision. It achieves these benefits while still permitting the jury to resolve the central question of which party should prevail.

The U.S. Court of Appeals for the Ninth Circuit has neatly summarized the basic differences among the verdict types as follows:

> If the jury announces only its ultimate conclusions, it returns an ordinary general verdict; if it makes factual findings in addition to the ultimate legal conclusions, it returns a general verdict with interrogatories. If it returns only factual findings, leaving the court to determine the ultimate legal result, it returns a special verdict.[16]

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9. *See, e.g.*, Steven S. Gensler, *Bifurcation Unbound*, 75 Wash. L. Rev. 705, 762 n.335 (2000) ("Because the jury does not identify its reasoning in a general verdict, general verdicts commonly are referred to as 'black box' decisions.").

10. Sunderland, *supra* note 4, at 258.

11. *See, e.g.*, United States v. Townsend, 924 F.2d 1385, 1413 (7th Cir. 1991) ("[S]pecial verdicts in the criminal law are disfavored."); United States v. Collamore, 868 F.2d 24, 28 (1st Cir. 1989) (Although the Federal Rules of Civil Procedure set forth a provision for special verdicts, the fact that "no similar provision exists in the Federal Rules of Criminal Procedure" suggests that "the use of special interrogatories is disfavored in criminal trials."); United States v. Desmond, 670 F.2d 414, 416 (3d Cir. 1982) ("As a general proposition, special verdicts are generally disfavored in criminal cases, but there is no per se rule against them."). For a list of exceptions to this general rule, see *United States v. Reed*, 147 F.3d 1178, 1180–81 (9th Cir. 1998) (collecting cases).

12. The preference against special verdicts in criminal trials is further strengthened by the fact that many states "do not allow special verdicts or special interrogatories if the criminal defendant objects to their use." Randolph N. Jonakait, The American Jury System 251 (2003).

13. Fed. R. Civ. P. 49(a).

14. 3 William Blackstone, Commentaries *377.

15. Fed. R. Civ. P. 49(b).

16. Zhang v. Am. Gem Seafoods, Inc., 339 F.3d 1020, 1031 (9th Cir. 2003).

The basic differences among each of the three verdict types lead to distinct advantages and disadvantages. The general verdict's primary advantage is that it keeps the power to decide cases in the hands of the jury. Many prominent legal scholars argue that reserving this power for the jury is necessary to ensure that the jury system functions as it was designed.[17] Proponents of the general verdict fear that, without absolute power over a case's outcome, jurors will lose their ability to rein in harsh laws when justice so demands.[18] In fact, U.S. Supreme Court Justices Black and Douglas believed so strongly in the importance of the general verdict that they opposed incorporating Rule 49—which permits judges to use special verdicts—into the Federal Rules of Civil Procedure. Justices Black and Douglas stated that

> [o]ne of the ancient, fundamental reasons for having general jury verdicts was to preserve the right of trial by jury as an indispensable part of a free government. . . . Rule 49 is but another means utilized by courts to weaken the constitutional power of juries and to vest judges with more power to decide cases according to their own judgments.[19]

Although the general verdict provides jurors with more discretion, it does so at the cost of clarity. By its very nature, the general verdict is less transparent than the special verdict. The general verdict asks the jury to render a verdict on the cause of action without requiring the jury to articulate the factual findings in a step-by-step manner to ensure that it has reached a decision grounded in both law and fact.[20] In other words, because the general-verdict form is concerned only with the jury's ultimate conclusion, it fails to provide a window into the black box of jury deliberations.

Where the general verdict falters, the special verdict thrives. By taking the jury through a cause of action fact by fact, the special verdict ensures that the jurors understand exactly what the plaintiff must prove in order for the defendant to be found liable. For this reason, special verdicts are lauded for "enhanc[ing] the quality of jury decisionmaking by minimizing misinterpretations of law and by providing a framework that helps to identify and organize the issues that the jury may consider."[21] Special verdicts also promote efficiency, an attribute that is particularly noticeable in complex cases.[22] For instance, when a case that uses a general verdict is found to have an error, the whole case must often be relitigated. However, if the jury has

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17.   *See, e.g.*, 9B Charles Alan Wright & Arthur R. Miller, Federal Practice and Procedure § 2503 (3d ed. 2008).

18.   *Id.*

19.   Statement of Justice Black and Justice Douglas on the Rules of Civil Procedure and the Proposed Amendments, 31 F.R.D. 617, 618–19 (1963).

20.   *See supra* note 9 and accompanying text.

21.   Joe S. Cecil et al., *Citizen Comprehension of Difficult Issues: Lessons from Civil Jury Trials*, 40 Am. U. L. Rev. 727, 771 (1991).

22.   *See* Elizabeth Corinne Wiggins, Procedural Innovations to Enhance Juror Comprehension in Complex Litigation 28 (1987) (unpublished Ph.D. dissertation, Johns Hopkins University) (on file with author).

submitted answers to discrete questions, any additional litigation will likely be confined to a narrow issue or set of issues.[23]

Many judges support special verdicts for these reasons. For example, in *Berkey Photo, Inc. v. Eastman Kodak Co.*, Chief Judge Kaufman wrote the following:

> We note *en passant*, however, that in large and complex cases such as this, involving many novel legal issues, the better practice would have been to require special verdicts or the submission of interrogatories to the jury . . . . In that way the right to a jury trial of all factual issues is preserved while the probability of a laborious and expensive retrial is reduced.[24]

In *SCM Corp. v. Xerox Corp.*, Judge Newman used a special verdict for similar reasons. "First, the sheer volume and complexity of the evidence necessitated focusing the jury's attention on specific issues to be sure that orderly decision-making occurred. Second, the use of numerous interrogatories seemed to offer some prospect of minimizing the risk of retrial."[25] More recently, Chief Judge Michel of the Federal Circuit Court of Appeals noted the similar advantages of special verdicts, arguing that they "greatly enhance the rationality, reliability, and predictability of jury verdicts, and their reviewability on post-trial motions and on appeal as well."[26]

Despite the advantages of special verdicts, some prominent civil procedure scholars argue that the verdicts could undermine the jury's ability "to temper strict rules of law by the demands and necessities of substantial justice and changing social conditions," a function that is fundamental to the jury system.[27]

The final verdict type, the general verdict with answers to written questions, retains the advantages of the general and special verdicts while avoiding many of their disadvantages.[28] As in special verdicts, hybrid verdicts "probably minimize the risk of judgments notwithstanding the verdict, retrial, or remittitur in lieu of a new trial."[29] And as in general verdicts, hybrid verdicts require jurors to render a general legal conclusion, thus reserving for them the power of jury nullification.

Some scholars, however, criticize this type of verdict for prolonging jury deliberations and causing hung juries.[30] Still others argue that, because hybrid verdicts necessarily show jurors which legal conclusions follow from

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23.   *See id.*

24.   603 F.2d 263, 279 (2d Cir. 1979) (footnote omitted).

25.   463 F. Supp. 983, 988 (D. Conn. 1978).

26.   Paul R. Michel & Michelle Rhyu, *Improving Patent Jury Trials*, 6 Fed. Cir. B.J. 89, 95 (1976).

27.   Wright & Miller, *supra* note 17, § 2503.

28.   *See* Victor E. Schwartz with Evelyn F. Rowe, Comparative Negligence § 17.04(f) (5th ed. 2010).

29.   Carrie P. Withey, Note, *Court-Sanctioned Means of Improving Jury Competence in Complex Civil Litigation*, 24 Ariz. L. Rev. 715, 725 (1982).

30.   *See* Wiggins, *supra* note 22, at 30.

their factual findings, this verdict form hinders juror objectivity. Instead of applying the facts to the law, jurors will actually do the reverse. They will determine their preferred legal outcome and then make factual findings that lead to that conclusion.[31] When this happens, the answers to written questions no longer serve as a useful window into the jurors' decision-making process.

Notwithstanding these criticisms of general verdicts with answers to written questions, I argue that they should be adopted in civil cases in place of special verdicts. Prior discussions of verdict choice have failed to account for the existence of jury voting paradoxes. Once their effect on the jury system is understood, however, it becomes clear why special verdicts are flawed and general verdicts with answers to written questions are so appealing. In the next Part, I examine precisely how the discursive dilemma and the lottery paradox can undermine the jury decision-making process.

II.   Jury Voting Paradoxes

A.   *The Discursive Dilemma*

The discursive dilemma is a problem that arises during majoritarian judgment aggregation. The paradox was first identified by the Italian legal theorist Roberto Vacca in 1921[32] and later popularized by Lewis Kornhauser and Lawrence Sager in the legal literature under the term "doctrinal paradox."[33] More recently, Christian List and Philip Pettit reformulated and expanded the problem, calling this more generalized form of the paradox the "discursive dilemma."[34] Because the judgment-aggregation literature has largely adopted the discursive dilemma's presentation of the problem, I do the same here. The prototypical illustration of the discursive dilemma involves three judges who must form judgments on two premises and a conclusion:

- *Premise One*: The defendant had a contractual obligation to undertake a specific action.

- *Premise Two*: The defendant failed to perform that action.

- *Conclusion*: The defendant is liable for breach of contract.

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31.   *See* Stuart F. Schaffer, Comment, *Informing the Jury of the Legal Effect of Special Verdict Answers in Comparative Negligence Actions*, 1981 Duke L.J. 824, 829 (discussing this issue in the context of a comparative-negligence action).

32.   *See* Roberto Vacca, *Opinioni individuali e deliberazioni collettive*, *in* 1 Rivista internazionale di filosofia del diritto 52 (Giorgio del Vecchio et al. eds., 1921).

33.   *See* Lewis A. Kornhauser & Lawrence G. Sager, *The Many as One: Integrity and Group Choice in Paradoxical Cases*, 32 Phil. & Pub. Aff. 249 (2004); Lewis A. Kornhauser & Lawrence G. Sager, *The One and the Many: Adjudication in Collegial Courts*, 81 Calif. L. Rev. 1 (1993); Lewis A. Kornhauser & Lawrence G. Sager, *Unpacking the Court*, 96 Yale L.J. 82 (1986).

34.   *See* List & Pettit, *supra* note 2, at 8, 45–46; Philip Pettit, A Theory of Freedom: From the Psychology to the Politics of Agency 106–11, 114, 123 (2001); Christian List & Philip Pettit, *Aggregating Sets of Judgments: Two Impossibility Results Compared*, 140 Synthese 207 (2004).

Table 1.
The Discursive Dilemma

	Contract?	Breach?	Liability?
Judge 1	Yes	Yes	Yes
Judge 2	Yes	No	No
Judge 3	No	Yes	No
Majority	Yes	Yes	**No**

As shown in Table 1, the first judge believes both premises and accordingly accepts the conclusion. The second judge rejects the conclusion, believing that the first premise is true but that the second is not. Finally, the third judge believes the second premise but not the first, leading him to also reject the conclusion. From this set of beliefs, we see that each premise has majority support, but the conclusion does not. More specifically, the collective belief is as follows: (1) the defendant had a contractual obligation to undertake a specific action; (2) the defendant failed to perform that action; and (3) the defendant is not liable for breach of contract. This inconsistency has the odd effect of making the outcome of the case depend on whether the court holds a vote on the premises or on the conclusion. If the former, the defendant will be found liable; if the latter, the defendant will be found not liable.

Just as the judges on this panel must decide whether to vote on the premises or on the conclusion, individual judges must decide whether to have the jury render a general or special verdict. Whereas employing a general verdict is akin to adopting a conclusion-based approach, employing a special verdict is akin to adopting a premise-based approach.

To get a better sense of the discursive dilemma's implications, it will be helpful to examine the issue in the context of a civil jury trial. For ease of explication, I place all of the examples in this Essay in a hypothetical jurisdiction that permits six-member juries and only requires a majority vote for a finding of liability.[35] This simplification does not limit the applicability of my arguments. All of the examples apply to any jury that meets the following two criteria: (1) the jury has three or more members; and (2) the jury does not require unanimity to reach a verdict. Interestingly, the problems I identify are even more salient when jury size is increased and supermajority voting is introduced.

I base the first example on a hypothetical contract dispute. The plaintiff claims damages from the defendant because the defendant breached a valid

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35.   Although no jurisdiction has this exact combination of features, jury size and voting rules do vary widely across the states. At least eighteen states permit civil juries to have fewer than twelve members, and twenty-seven states permit nonunanimous civil jury verdicts. *See* Ron Malega & Thomas H. Cohen, U.S. Dep't of Justice, NCJ-242850, State Court Organization, 2011, at 10 (2013), *available at* http://www.bjs.gov/content/pub/pdf/sco11.pdf. Two states (Louisiana and Oregon) allow nonunanimous criminal verdicts. *See* Adam Liptak, *Guilty by a 10–2 Vote: Efficient or Unconstitutional?*, N.Y. Times, July 7, 2009, at A10.

contract and injured the plaintiff. To win the claim, the plaintiff must prove five elements: (1) the defendant made a valid offer; (2) the plaintiff accepted the offer; (3) valid consideration was part of the agreement; (4) the defendant breached the terms of the contract; and (5) the plaintiff suffered an injury.

Table 2 shows how the jurors voted on each of the elements in dispute. For each element, five jurors voted "yes" and one juror voted "no." In other words, on each individual element, the vote is 5–1 in favor of finding the condition satisfied. This seems to be a clear victory for the plaintiff. But closer inspection reveals that the plaintiff's victory rests on tenuous ground. In fact, the victory turns entirely on the type of verdict the court elects to use. If the judge requires the jury to render a general verdict, the plaintiff will lose his case. But if the judge requires the jury to render a special verdict, the plaintiff will win.

TABLE 2.
THE DISCURSIVE DILEMMA IN JURY VOTING

	Offer	Acceptance	Consideration	Breach	Damages	Liable
Juror 1	Yes	Yes	Yes	Yes	Yes	Yes
Juror 2	Yes	Yes	Yes	Yes	No	No
Juror 3	Yes	Yes	Yes	No	Yes	No
Juror 4	Yes	Yes	No	Yes	Yes	No
Juror 5	Yes	No	Yes	Yes	Yes	No
Juror 6	No	Yes	Yes	Yes	Yes	No
Majority	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**

The row labeled "Majority" in Table 2 illustrates why the outcome depends on the type of verdict used. Examining that row, we see that a majority of the jurors believes that each individual element is met, but only one juror believes that all the elements are met. More precisely, five jurors voted that a valid offer was made, five jurors voted that an acceptance was tendered, five jurors voted that consideration was part of the agreement, five jurors believed that there was a breach of contract, and five jurors thought the plaintiff suffered an injury. Despite these voting patterns, however, only one juror thought that all of the elements were satisfied.

If a special verdict is rendered, the judge will see that the jury found each element satisfied and enter a judgment in favor of the plaintiff. If, by contrast, a general verdict is rendered, the judge will enter the opposite judgment because he will see that the jurors voted 5–1 in favor of the defendant.

A legal system that prides itself on discovering truth and dispensing justice should not countenance a voting methodology that yields diametrically opposed outcomes that depend solely on how the verdict is rendered. Nonetheless, the discursive dilemma shows that our legal system operates in just this manner.

Surprisingly, a number of state courts have explicitly ruled that the discursive dilemma's asymmetric results are permissible. One example is *Fritz*

v. Wright.[36] In that case, the plaintiff initiated a negligence claim after sustaining a shoulder injury from a fall on the defendant's property. The jury returned a verdict in the plaintiff's favor for the amount of $51,300. After polling the jury, however, the trial court found that the same minimum number of jurors had not agreed with respect to each of the elements.[37] The first three elements were not at issue because the jurors had reached them unanimously. The split occurred on the last two elements. Ten of twelve jurors agreed that the plaintiff's contributory negligence was not a substantial factor in bringing about his harm, but a different set of ten jurors concluded that the plaintiff had suffered an injury warranting $51,300 in damages.

The Pennsylvania Constitution permits verdicts to be rendered by five-sixths of the jury in civil cases.[38] But neither the constitution nor state law provides guidance as to whether, when multiple elements are decided, the five-sixths majority must be composed of the same jurors. On appeal, the Pennsylvania Supreme Court resolved this question, holding that the same ten jurors need not agree with respect to all of the elements.[39] So long as any set of ten jurors agrees to each of the individual elements, the verdict should be sustained.

In *Fritz*, the court was presented with an instance of the discursive dilemma. Instead of resolving the tension between the liable outcome that prevailed under the special verdict and the not-liable outcome that would have prevailed under a general verdict, the court found the asymmetry to be constitutionally permissible. It seems incredibly odd that a defendant's liability should turn solely on the manner of verdict used. Nonetheless, Pennsylvania is not alone in endorsing this outcome: Louisiana,[40] Nebraska,[41] and New Jersey[42] have upheld the same principle. These cases represent only the tip of the iceberg, however. Because the discursive dilemma is generally not observed when it occurs, there is no telling how many verdicts it has affected.

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36.   907 A.2d 1083, 1095–96 (Pa. 2006).

37.   *Fritz*, 907 A.2d at 1086.

38.   Pa. Const. art. 1, § 6.

39.   *Fritz*, 907 A.2d at 1085 ("[W]e hold that any ten jurors who agree on a given interrogatory furnish a sufficient majority as to that question, and a verdict that requires a series of responses to interrogatories should be sustained even where a different grouping of ten jurors comprise the required majority for each individual question posed in a set of special interrogatories.").

40.   Harris v. State *ex rel.* Dep't of Transp. & Dev., 997 So. 2d 849, 871 (La. Ct. App. 2008) ("[C]arefully weighing the policy considerations on the opposite sides of the issue, we conclude that the sounder position is that of the 'any majority' rule.").

41.   Gourley v. Neb. Methodist Health Sys., Inc., 663 N.W.2d 43, 60 (Neb. 2003).

42.   Singer Shop-Rite, Inc. v. Rangel, 416 A.2d 965, 969 (N.J. Super. Ct. App. Div. 1980) ("[T]he fact that a juror who voted against a finding of assault and battery voted for the award of punitive damages did not require a new trial. There is no requirement that the same jurors agree on all issues.").

In Part III, I set forth my recommendations for solving this problem. But first, in the next Section, I discuss legal standards of proof and why such standards, when used in conjunction with special verdicts, allow the lottery paradox to distort jury verdicts.

B.   *The Lottery Paradox*

The lottery paradox occurs when a juror believes that each of the elements of a cause of action has been satisfied but simultaneously believes that not all the elements of that cause of action have been satisfied. As odd as it sounds, this juror is not holding contradictory or logically incompatible views. Rather, he has succumbed to the lottery paradox. Before exploring this paradox in more detail, first we need to examine legal standards of proof.

Let's start by considering what it means to say that something has been proven. In its strictest sense, the meaning is obvious. It means that a proposition has been conclusively shown to be true, that there can be no doubt as to the veracity of the proposition, that the proposition is 100% certain to be accurate. Unfortunately, in the real world, we are rarely, or perhaps never,[43] entitled to believe propositions with such absolute certainty. The level of evidence required to show that most propositions are true with 100% probability is simply too daunting to achieve. Therefore, "proof" in a legal context must mean something other than definitive certainty.

This less exacting conception of proof allows courts to function by permitting jurors to act as if a proposition were true even when that proposition has not been definitively proven. If jurors could only accept propositions that were definitively proven, they would be forced to contemplate ad nauseum the veracity of every element of an action. This would be infeasible; jurors, therefore, need some mechanism to resolve unproven propositions. Somehow, they must accept or reject propositions so that a verdict can actually be rendered. The mechanism that facilitates such resolution is belief.

This naturally leads to the question, "What is belief?" At a basic level, most philosophers maintain that "believing" is the act of accepting a proposition as true.[44] Fortunately, a proposition need not be conclusively proven for one to believe it. In fact, in most circumstances, belief occurs when the probability that the proposition is true is less than 100%. More specifically, according to Bayesian epistemology[45]—the branch of epistemology that legal decision making most closely tracks—the process of believing

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43.   For an argument that we can never prove a proposition, see KARL R. POPPER, CONJECTURES AND REFUTATIONS 43–78 (5th ed. 1989).

44.   Eric Schwitzgebel, *Belief*, *in* STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., Winter 2011 ed. 2010), *available at* http://plato.stanford.edu/archives/win2011/entries/belief.

45.   For an overview of Bayesian Epistemology, see William Talbott, *Bayesian Epistemology*, *in* STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2013), *available at* http://plato.stanford.edu/archives/fall2013/entries/epistemology-bayesian.

adheres to the following steps: First, we create a *threshold for belief*. Second, we examine evidence for the proposition and develop a *degree of belief* in the proposition. Third, we compare whether the *degree of belief* exceeds the *threshold for belief*.[46] If it does, we accept the proposition as true; if it does not, we reject the proposition. By accepting the proposition as true, we are not insisting that the proposition is undeniably true. We are merely saying, "The evidence presented is sufficient. I consider the proposition to be true."

As can be inferred from this believing process, the threshold for belief is the probability of certainty above which a person will take the proposition as true. This probability varies but can be any number above 50%, up to, and including, 100%. The minimum threshold for belief must be greater than 50% because, if it were exactly 50%, one would withhold judgment, and if it were below 50%, one would have reason to disbelieve the proposition. The threshold will be higher or lower depending on how much certainty the situation demands. If the matter is not that important—say I am at the grocery store and want to know whether I have any apples left at home—I might set my threshold for belief at 51%. Nothing major turns on the truth of the proposition, so I have set my threshold low. If, by contrast, certainty is very important—say I am planning a trip to Australia and want to know whether my passport will still be valid at the time of the trip—I will set my threshold much higher, perhaps at 99%. In neither case do I require absolute proof; as long as my degree of belief exceeds my threshold for belief, I will feel comfortable acting as if the propositions are true (i.e., as if there actually are apples in the fridge or as if my passport actually will still be valid).

Jury decision making follows this same process of believing. First, a juror starts with a proposition that must be accepted or rejected (e.g., the defendant's action was the proximate cause of the injury suffered by the plaintiff). Then the juror adopts a threshold for belief (e.g., 51%). Next, he is presented with evidence for and against this proposition. Finally, the juror compares his degree of belief with the threshold for belief. If the degree of belief exceeds the threshold, the juror votes to find the defendant liable. If not, the juror votes to find the defendant not liable. When jurors are asked whether the plaintiff has proven his case, they are really just being asked whether their degrees of belief exceed the appropriate threshold for belief.

The main difference between jury decision making and everyday belief formation is that the jurors are not free to choose their threshold for belief. Instead, the court imposes the threshold on the jurors by informing them of the appropriate legal standard of proof.

There are three main legal standards of proof: (1) preponderance of the evidence; (2) clear and convincing evidence; and (3) evidence beyond a reasonable doubt. The first two are used almost exclusively in civil trials, and the last is the standard of proof employed in criminal trials.[47]

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46. *See id.* (discussing jury deliberations as an example of Bayesian social epistemology).

47. *See, e.g.*, Larry J. Siegel, Introduction to Criminal Justice 392–93 (14th ed. 2014) (discussing the use of standards of proof in criminal and civil trials).

The preponderance-of-the-evidence standard requires the plaintiff to prove that the proposition is more likely true than not. In other words, "the jury is instructed to find for the party that, on the whole, has the stronger evidence, however slight the edge may be."[48] Accordingly, scholars[49] and judges[50] alike place the threshold for belief between 50 and 51%. Preponderance of the evidence is the least demanding standard available and is used in the vast majority of civil trials.[51]

The clear-and-convincing-evidence standard is used in some civil trials and places a higher burden of proof on the plaintiff. Scholars commonly put the threshold for belief at 75%.[52] Judges have been less uniform in the degree of certainty they equate with proof by clear and convincing evidence, setting the threshold somewhere between 60 and 80%.[53]

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48. BLACK'S LAW DICTIONARY 1301 (9th ed. 2009) (defining preponderance of the evidence).

49. *See, e.g.*, SHEILA JASANOFF, SCIENCE AT THE BAR 10 (1995) ("In order to prevail the plaintiff must prove his claim by a 'preponderance of the evidence'—in other words, more than 50 percent of the evidence must be in the plaintiff's favor."); Peter L. Strauss, Essay, *"Deference" is Too Confusing—Let's Call Them "Chevron Space" and "Skidmore Weight"*, 112 COLUM. L. REV. 1143, 1151 n.28 (2012) ("Proof by a preponderance of the evidence" means that the trier of fact has been "50.0001% persuaded."); Richard W. Wright, *Liability for Possible Wrongs: Causation, Statistical Probability, and the Burden of Proof*, 41 LOY. L.A. L. REV. 1295, 1298 (2008).

50. *See, e.g.*, *In re* Winship, 397 U.S. 358, 371–72 (1970) (Harlan, J., concurring) (The preponderance-of-the-evidence standard "simply requires the trier of fact 'to believe that the existence of a fact is more probable than its nonexistence before [he] may find in favor of the party who has the burden to persuade the [judge] of the fact's existence.'" (quoting FLEMING JAMES, CIVIL PROCEDURE 250–51 (1965))); Banks v. Sec'y of Health & Human Servs., No. 02-738V, 2007 WL 2296047, at *2 (Fed. Cl. July 20, 2007) ("It is axiomatic to say that the Petitioners bear the burden of proving, by a preponderance of the evidence—which this Court has likened to fifty percent and a feather—that a particular fact occurred."); United States v. Fatico, 458 F. Supp. 388, 410 (E.D.N.Y. 1978) (noting that every single one of the ten judges polled in the Eastern District of New York placed the preponderance-of-the-evidence standard between 50 and 51%).

51. *See* BLACK'S LAW DICTIONARY 1301 (9th ed. 2009) (noting that preponderance of the evidence "is the burden of proof in most civil trials").

52. *See, e.g.*, Scott Brewer, *Scientific Expert Testimony and Intellectual Due Process*, 107 YALE L.J. 1535, 1652 n.388 (1998) ("Probabilists might suggest that the appropriate level of confidence . . . for the 'clear and convincing' burden [is] something like 75% . . . ."); Christopher Slobogin, *Dangerousness and Expertise Redux*, 56 EMORY L.J. 275, 306 (2006) ("[T]he standard quantification[ ] . . . of 'clear and convincing proof' [is] a 75% degree of confidence . . . .").

53. *See, e.g.*, *Fatico*, 458 F. Supp. at 410 (reporting that all of the judges who gave a numerical estimation of the degree of certainty required for clear-and-convincing proof placed it between 60 and 75%); C.M.A. McCauliff, *Burdens of Proof: Degrees of Belief, Quanta of Evidence, or Constitutional Guarantees?*, 35 VAND. L. REV. 1293, 1328–29 (1982) (reporting that roughly two-thirds of the 172 federal judges who were surveyed stated that the clear-and-convincing-evidence standard required certainty between 70 and 80%).

The beyond-a-reasonable-doubt standard is the most demanding standard and is reserved for criminal trials. Scholars,[54] judges,[55] and the general population[56] all place the threshold for belief fairly close to 90%, well above the degree of certainty necessary to meet the other standards. Importantly, no court ever uses absolute certainty as a burden of proof.[57] One-hundred percent certainty is not even required in cases involving capital punishment.[58]

A simple example will demonstrate how legal standards of proof influence how jurors' beliefs are reported. Suppose there are two people (Juror A and Juror B) who must evaluate the following proposition: "A valid contract exists between the plaintiff and the defendant." The legal standard of proof sets the threshold for belief at just over 50%. Juror A's degree of belief is 51%, and Juror B's degree of belief is 90%. Because their degrees of belief both exceed the given threshold, they both vote that the proposition is true.

On the verdict form, however, the jurors' probabilistic assessments are replaced with simple "Yes" judgments. This means that a judge applying the law to the jurors' factual findings will act as if both Juror A and Juror B had a 100% degree of belief in the proposition.

So long as the degree of belief exceeds the threshold for belief, it is irrelevant in the eyes of the law whether the juror believes with 51 or 99% certainty that the defendant was liable. Because verdict forms require jurors to make dichotomous judgments, any juror with a probabilistic belief that exceeds the relevant threshold is treated as being 100% certain that the belief is correct. This verdict system throws out important information that is necessary for judges to accurately interpret jury decisions. As I will soon show, the absence of this information allows judges to render verdicts with which most

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54.   *See, e.g.*, Louis Kaplow, *Burden of Proof*, 121 Yale L.J. 738, 779 (2012) (suggesting that the standard of proof may require a 95% degree of certainty); Slobogin, *supra* note 52, at 306 (describing "the standard quantifications of 'proof beyond a reasonable doubt' as 90 to 95% degree of certainty"); Jason M. Solomon, *Causing Constitutional Harm: How Tort Law Can Help Determine Harmless Error in Criminal Trials*, 99 Nw. U. L. Rev. 1053, 1087 (2005) (equating the beyond-a-reasonable-doubt standard with 90% certainty).

55.   *See, e.g.*, Hal R. Arkes & Barbara A. Mellers, *Do Juries Meet Our Expectations?*, 26 Law & Hum. Behav. 625, 631 (2002) (discussing several surveys in which the mean and median responses of federal judges questioned about the beyond-a-reasonable-doubt standard were around 90% certainty); McCauliff, *supra* note 53, at 1325 tbl.2, 1332 tbl.8 (showing results of a survey in which federal judges' mean estimate of the probability of certainty required for beyond-a-reasonable-doubt proof was 90.28%).

56.   *See, e.g.*, Richard O. Lempert et al., A Modern Approach to Evidence 1378 n.19 (5th ed. 2014) (observing that the general population equates the beyond-a-reasonable-doubt standard with 85 to 90% certainty).

57.   *See* Haislah v. Walton, 676 F.2d 208, 218 (6th Cir. 1982) (Kennedy, J., dissenting) (noting that "in human affairs absolute certainty is seldom possible"); *In re* Extradition of Demjanjuk, 612 F. Supp. 544, 553–54 (N.D. Ohio 1985) ("Absolute certainty is not required in the law . . . in meeting burdens of proof.").

58.   *See* Franklin v. Lynaugh, 487 U.S. 164, 188 (1988) (O'Connor, J., concurring) ("Petitioner's 'residual doubt' claim is that the States must permit capital sentencing bodies to demand proof of guilt to 'an absolute certainty' before imposing the death sentence. Nothing in our cases mandates the imposition of this heightened burden of proof at capital sentencing.").

jurors would disagree. When this happens, it is the result of a lottery paradox.

Contrary to our intuitions, there is a difference between believing the truth of individual propositions and believing the truth of the conjunction of those propositions. The lottery paradox highlights this distinction and, in doing so, shows that it is perfectly rational for a person simultaneously to believe (1) that P is true; (2) that Q is true; and (3) that the conjunction of P and Q is false.

The prototypical example of the lottery paradox runs as follows.[59] Imagine a lottery whose winning number will be an integer from 1 to 100. Suppose also that there is 1 ticket issued for each possible winning number. Given these conditions, it is certain that 1 ticket is guaranteed to win and 99 tickets are guaranteed to lose. From here, it follows that the propositions "Ticket 1 will lose," "Ticket 2 will lose" . . . "Ticket 100 will lose" are all rationally believable, and, indeed, a reasonable person would hold each of these individual propositions. But that same person would not hold the conjunction of these propositions to be true. In other words, it is irrational to believe that "Ticket 1 *and* Ticket 2 . . . *and* Ticket 100 will lose." Because 1 ticket is guaranteed to win, the conjunction of all 100 propositions cannot possibly be true.

The lottery paradox exists because our judgments regarding the individual propositions are based on probabilistic reasoning. A rational person's degree of belief in the proposition "Ticket 1 will lose" is 99%.[60] Therefore, since the degree of belief exceeds the threshold for belief (51%), a rational individual would state that he believes that the proposition is true. At the same time, that rational individual would state that the conjunction of those 100 propositions is false—his credence in the conjunction (0%) fails to exceed the threshold for belief (51%).

The surprising lesson of the lottery paradox is that beliefs need not be deductively closed. In other words, the relationship between believing propositions and believing a conclusion that follows from those propositions is much looser than most people realize.

Let us tweak the lottery example to illustrate just how absurd conclusions can be when one assumes that beliefs are deductively closed (an assumption that the special-verdict form makes). Suppose I hand you 5 tickets and stipulate that 1 of the tickets will win. Next, I tell you that I am going to list a series of propositions and ask you to indicate whether you accept or reject them individually. I further stipulate that your threshold for belief should be the clear-and-convincing-evidence standard (75% confidence). The first proposition is as follows: I am a pink elephant or Ticket 1 will lose. Because there are 5 tickets in this lottery and 4 of them will lose, your belief in the second half of the proposition (i.e., "Ticket 1 will lose") should be

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59. For the original formulation of the lottery paradox, see Henry E. Kyburg, Jr., Probability and the Logic of Rational Belief 197 (1961). For more recent discussions, see John Hawthorne, Knowledge and Lotteries (2004), and Foley, *supra* note 3.

60. This figure comes from the fact that 99 of the 100 tickets will lose.

80%. Therefore, regardless of your thoughts on my status as a pink elephant, your credence in the entire proposition can be no less than 80%. Then I list the 4 other propositions in turn, replacing Ticket 1 with Ticket 2, then Ticket 3, and so on. Each time, you respond that your credence (80%) is above the threshold for belief (75%) and, accordingly, you accept the proposition as true. For reference, Table 3 provides each of the propositions and whether one should accept them as true based on the conditions specified. This table resembles a special-verdict form in that it contains only the proposition and whether the respondent's credence has exceeded the threshold for belief. Importantly, like the information on a special-verdict form, the following responses lack any indication of one's precise degrees of belief.

TABLE 3.
AM I A PINK ELEPHANT?

Proposition	Accept as True?
I am a pink elephant or Ticket 1 will lose.	Yes
I am a pink elephant or Ticket 2 will lose.	Yes
I am a pink elephant or Ticket 3 will lose.	Yes
I am a pink elephant or Ticket 4 will lose.	Yes
I am a pink elephant or Ticket 5 will lose.	Yes

From Table 3, we can see that you believe either that I am a pink elephant or that all of the tickets will lose. Since I have already stipulated that one of the tickets will win, you know with complete certainty that it is not possible for all of the tickets to lose. Therefore, your conjunctive belief must be that the author of this Essay is a pink elephant. That belief is obviously false, and any system of reasoning that leads to that conclusion must be flawed. The fact that belief in premises does not entail belief in conclusions that necessarily follow from those premises is especially pertinent to the jury decision-making context. Indeed, the reasoning in the pink-elephant example is flawed in exactly the same way that the special-verdict form is flawed.

There can be no doubt that jurors make probabilistic judgments. They do not know with certainty whether any of the individual elements of a cause of action has been fulfilled or whether any posited fact is true. Instead, they make reasoned judgments based on the evidence presented in the case. The construction of the special-verdict form, however, presumes that jurors do make findings with 100% certainty—that is, that they make dichotomous as opposed to probabilistic judgments. This nonsensical approach allows defendants to be found liable even though a majority of jurors would have voted the opposite way—i.e., not liable—if given the opportunity.

Special-verdict forms require jurors to adopt one of two positions: the proposition is true or it is false.[61] Because this type of verdict forces jurors to make an all-or-nothing determination regarding the truth of a given premise, the vote of a juror whose credence in a proposition is 51% carries as much weight as the vote of a juror whose credence in the same proposition

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61.   For sample special-verdict forms, see SCHWARTZ, *supra* note 28, § 17.04(b)–(c).

is 99%. In the eyes of the law, the certainty of both jurors is rounded up to 100%.[62]

The next three tables show how the lottery paradox applies to jury decision making in a trial involving two elements and a conclusion. Table 4 sets up the problem by indicating the degrees of belief each juror has for the individual elements and for the overall conclusion. Specifically, each juror's credence is 60% for Element 1 and 60% for Element 2. Despite having a 60% degree of belief in each individual element, each juror's degree of belief that the defendant is liable is only 36%.[63]

In Table 4, the jurors' credences have cleared the preponderance-of-the-evidence threshold for belief (51%) for each individual element but not for the conjunction of both elements. If only given the opportunity to vote on the elements, the jurors would unanimously find the defendant liable. However, if the jurors voted on the liability issue itself, they would unanimously find the defendant not liable.

Table 4.
Probabilistic Judgments for Cases with Few Elements

	Element 1	Element 2	Liable
Juror 1	Yes (60%)	Yes (60%)	No (36%)
Juror 2	Yes (60%)	Yes (60%)	No (36%)
Juror 3	Yes (60%)	Yes (60%)	No (36%)
Juror 4	Yes (60%)	Yes (60%)	No (36%)
Juror 5	Yes (60%)	Yes (60%)	No (36%)
Juror 6	Yes (60%)	Yes (60%)	No (36%)
Majority	**Yes (60%)**	**Yes (60%)**	**No (36%)**

By comparing Table 4 with Table 5, we can see why this divergence arises. Because Table 5 converts the probabilistic judgments in Table 4 into dichotomous judgments, each juror's degree of belief is lost. In Table 5, a simple "Yes" vote makes it seem as if each juror has a 100% degree of belief in each of the elements. A judge who sees only these dichotomous judgments will incorrectly believe that the jury intended to find the defendant liable. By contrast, if the jurors had been able to express their actual degrees of belief, the judge would have seen that the jury did not believe the defendant was liable.

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62. Tables 5 and 6 illustrate why this method of vote aggregation is extremely problematic and works to undermine the special verdict.

63. In order to obtain the degree of belief in the conclusion, one must multiply the degree of belief in each of the premises. Accordingly, I obtain the above figure (36%) by multiplying the degree of belief in the first element (60%) by the degree of belief in the second element (60%). This calculation assumes that the jurors believe that the truth of Element 1 and the truth of Element 2 are entirely independent. In other words, if jurors were suddenly to learn the truth or falsity of one of the elements, such information would not change their degrees of belief in the other element. This simplifying assumption is not problematic; so long as the premises are not linked completely (i.e., they have at least a minimal degree of independence), the paradox still holds.

Table 5.
Dichotomous Judgments for Cases with Few Elements

	Element 1	Element 2	Liable
Juror 1	Yes (100%)	Yes (100%)	Yes (100%)
Juror 2	Yes (100%)	Yes (100%)	Yes (100%)
Juror 3	Yes (100%)	Yes (100%)	Yes (100%)
Juror 4	Yes (100%)	Yes (100%)	Yes (100%)
Juror 5	Yes (100%)	Yes (100%)	Yes (100%)
Juror 6	Yes (100%)	Yes (100%)	Yes (100%)
Majority	**Yes (100%)**	**Yes (100%)**	**Yes (100%)**

The problem raised by the lottery paradox becomes even more pernicious in cases involving additional elements. Because most causes of action require proving multiple elements or establishing multiple factual findings, it is quite common for special-verdict forms to have a substantial number of propositions that lead up to a single conclusion.[64] Table 6 provides an example of a case with five elements, each of which is jointly necessary for a finding of liability.

Table 6.
Probabilistic Judgments for Cases with Many Elements

	Element 1	Element 2	Element 3	Element 4	Element 5	Liable
Juror 1	Yes (85%)	Yes (85%)	Yes (85%)	Yes (85%)	Yes (85%)	No (44%)
Juror 2	Yes (95%)	Yes (95%)	Yes (95%)	Yes (95%)	Yes (60%)	No (49%)
Juror 3	Yes (55%)	Yes (55%)	Yes (55%)	Yes (55%)	Yes (55%)	No (05%)
Juror 4	Yes (65%)	Yes (85%)	Yes (70%)	Yes (75%)	Yes (85%)	No (25%)
Juror 5	Yes (75%)	Yes (75%)	Yes (75%)	Yes (75%)	Yes (75%)	No (24%)
Juror 6	Yes (80%)	Yes (80%)	Yes (80%)	Yes (80%)	Yes (80%)	No (44%)
Majority	Yes	Yes	Yes	Yes	Yes	No

As in the preceding example, every single juror believes that each of the elements has been satisfied according to the preponderance-of-the-evidence standard. In other words, the jurors believe that each element is individually more likely than not to have occurred; their degrees of belief exceed 50% for each of the elements. Despite this, not a single juror believes that the conjunction of the elements is more likely than not to have occurred. As a result, the plaintiff has not met the burden of proof for the conclusion.

A close look at the jurors shows that even people with very high degrees of belief in the individual elements can rationally disbelieve the conjunction of those elements. For instance, Juror 1's degree of belief for each element is 85%, but his degree of belief that the defendant is liable is only 44%. Juror 2's degree of belief in all but one of the elements is 95%. Nonetheless, his

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64.   In fact, some cases employ special verdicts that require jurors to make dozens of factual findings. *See, e.g.*, Smith v. Danyo, 585 F.2d 83, 87–88 (3d Cir. 1978) (medical-malpractice action requiring juror responses to forty-nine questions); Fox v. Kane-Miller Corp., 542 F.2d 915, 916 (4th Cir. 1976) (securities-fraud action requiring juror responses to fifty-two questions).

degree of belief in the conjunction of the elements fails to meet the threshold for belief required by the preponderance-of-the-evidence standard. Juror 3 presents perhaps the most interesting case. His credence in each of the propositions is 55%, and, accordingly, he believes that the burden of proof has been met with respect to each of the individual elements. And yet Juror 3's credence that the defendant is liable is only 5%. This means that he believes with 95% certainty that the defendant is not liable. Under any standard of proof, it seems odd to find liability based on the vote of a juror who believes that there is a 19-out-of-20 chance that the defendant is not liable. Nonetheless, as Table 7 shows, if a special-verdict form is used, Juror 3 will be counted as voting to find the defendant liable.

Table 7.
Dichotomous Judgments for Cases with Many Elements

	Element 1	Element 2	Element 3	Element 4	Element 5	Liable
Juror 1	Yes	Yes	Yes	Yes	Yes	Yes
Juror 2	Yes	Yes	Yes	Yes	Yes	Yes
Juror 3	Yes	Yes	Yes	Yes	Yes	Yes
Juror 4	Yes	Yes	Yes	Yes	Yes	Yes
Juror 5	Yes	Yes	Yes	Yes	Yes	Yes
Juror 6	Yes	Yes	Yes	Yes	Yes	Yes
Majority	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

III.   Eliminating the Jury Voting Paradoxes

Now that we have seen the distorting effects that the discursive dilemma and the lottery paradox can have on jury verdicts, the next step is to create a system that prevents these paradoxes from occurring. This Part presents a solution. First, in Section III.A, I offer a way to structure special verdicts to avoid the discursive dilemma. This solution ultimately proves unsatisfying, however, because it fails to prevent the lottery paradox from occurring. Lacking a way to save the special verdict, in Section III.B, I call for judges to use the general verdict with answers to written questions in place of the special verdict.

A.   *Preventing the Discursive Dilemma*

Can we eliminate the inconsistency that the discursive dilemma exposes without throwing out the special verdict entirely? We certainly can, and the solution is fairly straightforward. Instead of presenting premises as individual, discrete propositions, judges should present them as conditional propositions.[65] In other words, a judge should condition a juror's ability to affirm the truth of a subsequent proposition on the juror's having affirmed the truth of all earlier propositions. To see how this would work, let us return to the example of the breach-of-contract dispute presented in Table 2.

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65.   List and Pettit note that this type of "sequential priority procedure" can be used to solve the discursive dilemma. List & Pettit, *supra* note 2, at 56.

In that table, Jurors 3 through 6 rejected an element early in the verdict form but continued to vote that the burden of proof had been satisfied with respect to subsequent elements. The conditional approach would prevent this from happening.

Because judges are tasked with writing special verdicts and have relatively wide discretion regarding the questions they can require the jurors to answer, they would be responsible for implementing this solution. Indeed, some judges already do take this approach when they draft their special-verdict forms.[66] For instance, in the example of the contract dispute, a judge writing a conditional special-verdict form might include the following questions to ascertain the truth of the first two elements (offer and acceptance):

1. Did the plaintiff make a valid offer?

2. Did the defendant accept the plaintiff's valid offer?

It is clear that someone who accepts the truth of proposition two cannot logically reject the truth of proposition one. Nonetheless, jurors frequently do just that because they fail to understand the conditional nature of the second question.[67] It would not be uncommon for jurors to vote 4–2 in favor of the first proposition and 6–0 in favor of the second proposition. Such a vote would indicate that two jurors either misunderstood the questions or believe logically incompatible propositions. To avoid this scenario, judges must make their special-verdict forms more explicitly conditional. Instead of relying on jurors to give logically consistent answers, judges should simply modify the instructions to prohibit jurors from responding affirmatively to an element if they responded in the negative to an earlier element. Thus, the contract example could be modified to read as follows:

1. Did the plaintiff make a valid offer?

2. Any juror who responded "No" to an earlier question must vote "No" on this question: Did the defendant accept the plaintiff's valid offer?

Table 8 presents the same elements as Table 2. This time, however, the judge uses the conditional special verdict. Now the premises and conclusion match. As Table 8 shows, this simple change resolves the discursive dilemma.

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66. For an example of a conditional verdict, see Boeken v. Philip Morris Special Verdict Form, *available at* http://www.tobacco.neu.edu/box/boekenbox/BoekenLegal/8SpecialVerdicts.pdf.

67. *See, e.g.*, Duk v. MGM Grand Hotel, Inc., 320 F.3d 1052, 1055 (9th Cir. 2003) (returning an inconsistent verdict in a comparative-negligence case); McCollum v. Stahl, 579 F.2d 869 (4th Cir. 1978) (providing an inconsistent verdict in a wrongful-discharge case); Equal Emp't Opportunity Comm'n v. Foot Locker Retail, Inc., No. C07-5472BHS, 2009 WL 1174640, at *1–3 (W.D. Wash. Apr. 28, 2009) (despite reaching a finding of not liable on all claims of unlawful employment practices, the jury awarded $100,000 in punitive damages to the plaintiff).

TABLE 8.
AVOIDING THE DISCURSIVE DILEMMA

	Offer	Acceptance	Consideration	Breach	Damages	Liable
Juror 1	Yes	Yes	Yes	Yes	Yes	Yes
Juror 2	Yes	Yes	Yes	Yes	No	No
Juror 3	Yes	Yes	Yes	No	No	No
Juror 4	Yes	Yes	No	No	No	No
Juror 5	Yes	No	No	No	No	No
Juror 6	No	No	No	No	No	No
Majority	**Yes**	**Yes**	**Tie**	**No**	**No**	**No**

B.   *Preventing the Lottery Paradox*

There are two ways to eliminate the lottery paradox. The first method is to ask jurors to specify their precise credences for each element. The judge could then make the appropriate calculation to determine whether a majority of jurors believes the conjunction of all the required elements. If there is a majority, the judge can confidently enter a judgment against the defendant. If there is not a majority, the judge can confidently enter a judgment in favor of the defendant.

Unfortunately, this solution is simply not viable because people are quite bad at reporting their exact degrees of belief in propositions.[68] When pressed, people provide a figure, but they do so without much confidence. This presents an intractable problem for the first solution. If a juror is unable to report precise degrees of belief in the factual findings, the judge will be unable to determine the correct legal conclusion.

This deficiency leaves only the second option: judges must refrain from using the special verdict. To eliminate the lottery paradox, judges should ask jurors to deliver an ultimate conclusion as to the defendant's liability. That is, judges should use the general verdict with answers to written questions in place of the special verdict.

Unfortunately, however, the general verdict with answers to written questions fails to prevent the lottery paradox. This failure stems from the way judges are directed to handle verdicts when the jury's answers to the premises (i.e., the answers to written questions) conflict with its answer to the conclusion (i.e., the general verdict). The Federal Rules of Civil Procedure provide the following instructions to judges when such situations arise:

> (3) *Answers Inconsistent with the Verdict.* When the answers are consistent with each other but one or more is inconsistent with the general verdict, the court may:
>
> > (A) approve, for entry under Rule 58, an appropriate judgment according to the answers, notwithstanding the general verdict;
> >
> > (B) direct the jury to further consider its answers and verdict; or

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68.   *See, e.g.*, DANIEL KAHNEMAN, THINKING, FAST AND SLOW 98 (2011) ("[W]hen called upon to judge probability, people actually judge something else and believe they have judged probability.").

(C) order a new trial.[69]

Under this rule, judges have three options. They can (1) enter a judgment that is consistent with the jury's answers to the written questions; (2) return the form to the jury and ask it to reconsider its responses; or (3) order a new trial. From these choices, it is clear that the Federal Rules treat a verdict with inconsistent premises and conclusions as an incoherent verdict. This does not have to be the case. As shown earlier, one's beliefs need not be deductively closed. Accordingly, it is not irrational for a jury both to believe the premises and to disbelieve the conclusion.[70] Therefore, when this scenario occurs, judges should never take the Federal Rules's first option: entering a judgment that accords with the jury's findings on the interrogatories. Opting for this solution could mean falling prey to the lottery paradox. An alternative is simply to accept the jury's conclusion (i.e., the general verdict) as its final judgment. But I do not advocate that position either. Although it is possible that the jurors have collectively chosen to believe the premises and reject the conclusion—and although this belief could be rational—judges should not simply assume that to be the case. Instead, they should exercise the Federal Rules's second option and direct the jury to revisit its answers. Judges should specifically explain to the jurors that the verdict indicates that they have found the burden of proof satisfied with respect to all of the elements but not with respect to the conclusion. The jurors will then be given the option of either resubmitting the same responses or amending the verdict form in the event that they made a reporting error the first time.

Conclusion

The special verdict is broken. When it is used in its current form, a judge cannot reliably know whether a majority of the jurors intended to find for the plaintiff or for the defendant. Supporters of the special verdict fail to acknowledge this concern when they insist that the judge is simply applying the law to the jury's findings of fact and that the judge is not reaching any conclusions that the jurors would not reach themselves. The supporters' argument proceeds as follows: (1) the jurors have found the premises to be true; (2) the verdict entered by the judge necessarily follows from those premises; and (3) the jurors would therefore find the verdict entered by the judge to be true. And yet the discursive dilemma and the lottery paradox show that this line of reasoning is flawed.

In this Essay, I have advocated for two steps that would prevent both paradoxes from occurring. First, judges should draft interrogatories in such a way that jurors can only logically accept subsequent premises as true if

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69. Fed. R. Civ. P. 49(b).

70. It is important to note that this inconsistency only goes one way. It would be quite irrational for the jury to believe the conclusion but not the premises that are necessarily true if the conclusion is true.

they have accepted prior premises as true. This step would prevent the discursive dilemma. Second, judges should adopt the general verdict with answers to written questions in place of the special verdict. This measure would prevent the lottery paradox. Once they implement these two changes, judges will be able to enter verdicts confidently, with full knowledge that the jury voting paradoxes have not distorted the jurors' intended judgments.