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RES IPSA LOQUITUR: REDUCING CONFUSION OR CREATING BIAS?

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ABSTRACT

The so-called doctrine of res ipsa loquitur has been a mystery since its birth more than a century ago. This Article helps solve the mystery. In practical effect, res ipsa loquitur, though usually thought of as a tort doctrine, functions as a rule of trial practice that allows jurors to rely upon circumstantial evidence surrounding an accident to find the defendant liable. Standard jury instructions in negligence cases, however, inform jurors that they are permitted to rely upon circumstantial evidence in reaching a verdict. Why, then, is another, more specific circumstantial evidence charge necessary or desirable?

We describe and evaluate the arguments that have been made in support of and in opposition to the res ipsa instruction. One theory is that jurors are confused in performing their task when given only standard instructions; the charge, therefore, clarifies their task, thereby improving the quality of their decisionmaking. A competing theory is that the instruction biases jurors in favor of plaintiffs, thereby degrading the quality of decisionmaking. Our theoretical analysis concludes that the bias explanation is stronger. We reach this conclusion by applying for the first-time modern learning on cognition to the res ipsa instruction.

To support our theoretical conclusion, we report the results of experiments designed to determine the effects of the instruction. All these experiments were intended first to confirm that the res ipsa instruction has an effect and second to confirm or refute our theoretical conclusion that the instruction biases rather than clarifies. While the empirical results did not demonstrate bias, they also failed to show the absence of bias. Moreover, we found no evidence that the instruction reduces confusion. Our conclusion is that the charge has no positive effect, and either may create a bias or, at best, is meaningless.

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I. INTRODUCTION

Something may speak for itself, but it surely is not the doctrine of res ipsa loquitur—the thing speaks for itself.[3] It may be the most convoluted doctrine in tort law. Indeed, it may not even be a doctrine.[4] It may be no more than a "matter of common sense,"[5] a truism. If it is a doctrine, it may not be a tort doctrine. It may instead be an evidentiary doctrine,[6] and if it is an evidentiary doctrine, its significance varies across jurisdictions. Whatever it is, it is widely adopted, and where it is adopted, its form varies.

Despite its uncertain nature and variable contours, its core idea is straightforward: The circumstances surrounding an injury can be evidence that the defendant's negligence caused it.[7] Most courts and commentators have no quarrel with this notion. Surely the circumstances surrounding an injury can say something about an actor's conduct in bringing it about. Indeed, even the few jurisdictions that reject the so-called doctrine embrace the concept behind it.[8] Most of the criticism pertains to the exact formulation of what we will, for convenience, call the "doctrine" of res ipsa loquitur.

Our concern primarily lies neither with the precise formulation of the doctrine nor with its place in the economic analysis of tort law.[9] The doctrine of res ipsa loquitur recognizes that circumstantial evidence of a particular kind can support a finding of liability.[10] The doctrine might deserve to be called a "doctrine" if it has a decisive procedural effect. If satisfying the elements of the doctrine establishes a presumption of liability rather than a permissible inference, as reliance on circumstantial evidence otherwise does, then the doctrine has independent

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[3] *Res Ipsa Loquitur*, BLACK'S LAW DICTIONARY (11th ed. 2019).

[4] For example, Harper and James refer to res ipsa loquitur as a "so-called doctrine." 2 FOWLER V. HARPER & FLEMING JAMES, JR., THE LAW OF TORTS § 19.4, at 1075 (1956); *see also* Potomac Edison Co. v. Johnson, 152 A. 633, 636 (Md. 1930) (Bond, C.J., dissenting) ("[The expression res ipsa loquitur] does not represent a doctrine, is not a legal maxim, and is not a rule. It is merely a common argumentative expression of ancient Latin brought into the language of the law by men who were accustomed to its use in Latin writings.").

[5] William L. Prosser, *Res Ipsa Loquitur in California*, 37 CALIF. L. REV. 183, 184–85 (1949); *see also* Stebel v. Conn. Co., 96 A. 171, 172 (Conn. 1915) (referring to res ipsa loquitur as "a rule of common sense").

[6] *See, e.g.*, Veolia Energy Phila., Inc. v. Flowserve US, Inc., No. 18-2529, 2019 U.S. Dist. LEXIS 73042, at *9 (E.D. Pa. Apr. 30, 2019) ("*[R]es ipsa loquitur* is a rule of evidence . . . ."); Seeman v. Kawamoto, No. B281335, 2019 Cal. App. Unpub. LEXIS 678, at *17–18 (Cal. Ct. App. Jan. 29, 2019) ("The doctrine of res ipsa loquitur is not a rule of substantive law imposing liability, but is a rule of evidence giving rise to an inference of negligence in certain cases."); Rector v. Oliver, 809 N.E.2d 887, 889 (Ind. Ct. App. 2004) ("*Res ipsa loquitur* is a rule of evidence . . . ."); Acharya v. Gomez, No. 05-18-00833-CV, 2019 Tex. App. LEXIS 3467, at *14 n.2 (Tex. App. Apr. 30, 2019) (referring to the doctrine of res ipsa loquitur as "a rule of evidence by which a jury may infer negligence"); RESTATEMENT (SECOND) OF TORTS § 328D cmt. a (AM. LAW. INST. 1965) ("In its inception the principle of res ipsa loquitur was merely a rule of evidence . . . ."). Res ipsa loquitur has also been called "a rule of justice" and "a rule of necessity." St. John's Hosp. & Sch. of Nursing, Inc. v. Chapman, 434 P.2d 160, 167 (Okla. 1967).

[7] *See Res Ipsa Loquitur*, *supra* note 3.

[8] *See infra* text accompanying notes 123–126.

[9] For an economic analysis of res ipsa loquitur, see Mark F. Grady, *Res Ipsa Loquitur and Compliance Error*, 142 U. PA. L. REV. 887, 889–94 (1994).

[10] Prosser, *supra* note 5, at 191 n.47 (stating that the basis of liability for res ipsa loquitur "may be shown by a particular kind of circumstantial evidence" (quoting Harke v. Haase, 75 S.W.2d 1001, 1004 (Mo. 1934)).

significance. But the great majority of states hold that res ipsa only permits an inference to be drawn.[11]

The practical effect of the res ipsa doctrine in most states, therefore, is to permit a jury instruction that corresponds to the jurisdiction's formulation of it when the judge finds the doctrine's conditions satisfied.[12] More precisely, when a judge finds that a reasonable juror could find that the conditions are satisfied, the judge is obliged to give the res ipsa charge. Res ipsa, then, is at heart a doctrine of trial practice. But jurisdictions universally recognize that a jury or judge may resolve a case based on direct or circumstantial evidence, and courts routinely instruct juries that they may rely upon either kind of evidence, neither of which is entitled to more weight than the other, in reaching a verdict whether the court also gives a res ipsa instruction.[13] If res ipsa embodies a certain kind of circumstantial evidence, and juries are always instructed on the meaning of circumstantial evidence and their authority to render a verdict based on it, what is the justification for a separate res ipsa instruction?[14]

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[11] *See infra* notes 98–100 and accompanying text.

[12] For example, in *Fink v. New York Central Railroad Co.*, the court observed:

> We therefore conclude that where the allegations of the petition and the evidence offered in support thereof disclose a state of facts which call for the application of the rule of *res ipsa loquitur*, and where the defendant offers evidence tending to meet and explain the circumstances surrounding the occurrence, it is the duty of the court, when requested so to do, to submit the question to the jury under proper instructions. The weight of the inference of negligence which the jury is permitted to draw in such case as well as the weight of the explanation offered to meet such inference, is for the determination of the jury.

56 N.E.2d 456, 461 (Ohio 1944); *see also* Stockton v. Holyoak, No. 2:17-cv-94 BCW, 2018 U.S. Dist. LEXIS 143252, at *10–11 (D. Utah Aug. 21, 2018) (noting that under Utah law a plaintiff is "entitled to a *res ipsa loquitur* instruction" when he or she "produce[s] sufficient evidence to permit the jury to find the . . . prerequisites to an inference of negligence"); Anderton v. Montgomery, 607 P.2d 828, 833–34 (Utah 1980) ("[W]here the trial court determines that the evidence, viewed in a light most favorable to the plaintiff, could establish the prerequisites to the application of the doctrine, an instruction to that effect is proper. It then becomes the jury's responsibility to apply, or refuse to apply, the doctrine based on its factual findings regarding the circumstantial prerequisites.").

[13] *See infra* text accompanying notes 134–136; *cf.* Shull v. B.F. Goodrich Co., 477 N.E.2d 924, 928 (Ind. Ct. App. 1985) ("Our view of the doctrine of *res ipsa loquitur* may seem strikingly similar to the judicial consideration of the extent of circumstantial evidence which will permit a reasonable trier of fact to infer negligence. In truth and in fact, this is precisely the case."). Indeed, when circumstances justify a res ipsa instruction and the trial court refuses to give it, a verdict relying on circumstantial evidence in favor of the plaintiff must be upheld. *See, e.g.*, Grajales-Romero v. Am. Airlines, Inc., 194 F.3d 288, 296 (1st Cir. 1999) (finding that where "jurors were adequately instructed on inference and circumstantial evidence, ... jurors were entitled to make the res ipsa loquitur inference even in the absence of a specific instruction"); Fedler v. Hygelund, 235 P.2d 247, 251 (Cal. Dist. Ct. App. 1951) (noting that a verdict for plaintiff would stand if "the circumstances justifying the inference of negligence" were proven "with or without instruction defining the doctrine of res ipsa loquitur").

[14] Some scholars have argued that the res ipsa doctrine moves tort law toward a strict liability standard. *See, e.g.*, 2 HARPER & JAMES, *supra* note 4, § 19.5, at 1079–81 (reciting arguments and observing that "juries incline heavily towards plaintiffs"); 1 STUART M. SPEISER, THE NEGLIGENCE CASE: RES IPSA LOQUITUR § 1:9 (1972) (noting that "[s]ome writers regard the doctrine generally as a transitional step in an evolution toward liability without fault"). It is therefore a substantive doctrine disguised as a procedural one. The argument is that res ipsa specifies conditions, or postulates, that allow a judge to send a case to the jury, and juries find in favor of plaintiffs. The effect of recognizing the doctrine, then, is to promote the imposition of liability on defendants when they are not negligent, which is to impose strict liability. The public interest is served if strict liability is superior to a negligence

Stated otherwise, if jurors are told that they may find in favor of the plaintiff based on any kind of circumstantial evidence, why tell them in addition that they may find in favor of the plaintiff based on a particular kind of circumstantial evidence?

One possible explanation is that a res ipsa instruction improves the quality of decision making and thereby promotes the public interest. In this context, quality means accuracy, and we define perfect accuracy as the decision an ideal juror would reach—that is, the decision of one who assimilates all of the evidence presented, understands the relevant law, follows the instructions given, and processes information rationally.[15] In essence, if a res ipsa instruction can be justified as improving decision-making quality, verdicts must be more accurate when they follow a res ipsa instruction than when they do not in cases in which the conditions of a properly formulated doctrine are satisfied. A res ipsa instruction might increase accuracy if it reduces confusion, and indeed the justification often given for use of a res ipsa instruction is that jurors would be confused without it.[16] The argument is that confusion breeds errors, even though the source of the claimed confusion is opaque.

We take as the only legitimate public interest justification for the res ipsa doctrine an increase in the accuracy of decision making and posit an alternative effect of a res ipsa instruction: It biases decisions in favor of plaintiffs. To this extent, an instruction would reduce accuracy. The psychology literature provides several theoretical possibilities that might explain such an effect.[17] Of course, a res ipsa instruction could bias decisions in favor of defendants, an effect that would also imply that the instruction reduces accuracy. But our assumption based on the instruction's actual use is that such a result is unlikely—res ipsa instructions are almost always requested by plaintiffs alone.[18] We assume that regardless of the particular formulation of the doctrine, the giving of a res ipsa instruction increases the percentage of verdicts and judgments in favor of the plaintiff.[19] The issue for us, therefore, is whether the increase in decisions favoring the plaintiff reflects an increase in accuracy, because the instruction reduces confusion, or a decrease in accuracy, because it introduces bias.

Our hypothesis is that a res ipsa instruction biases decisions in favor of plaintiffs and thereby decreases accuracy. We test this hypothesis through a psychological experiment. We believe this is the first experiment of its kind to test the effect of res ipsa instructions. We created three case statements. In the first, the facts strongly support a verdict in favor of the defendant. In the second, the facts strongly support a verdict in favor of the plaintiff. In the third, the facts are sufficiently ambiguous

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standard of liability. The argument is dubious on a number of grounds but, in particular, it does not explain why juries are strongly inclined to find the conditions of res ipsa satisfied.

[15] *See* ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 385 (6th ed. 2012) (describing the "perfect-information judgment" as the ideal decision made by a court that possesses perfect information about the facts and the law relating to a case).

[16] *See infra* note 154 and accompanying text.

[17] *See infra* notes 208–218 and accompanying text.

[18] *See infra* text accompanying note 147.

[19] This assumption is consistent with a premise of the strict-liability justification. *See* 2 HARPER & JAMES, *supra* note 4, § 19.5, at 1081. While that justification assumes that inaccuracy (more plaintiff victories than there should be) is desirable, a premise that we reject, even then it does not explain why juries favor plaintiffs when a res ipsa instruction is given.

that a verdict in favor of the plaintiff or the defendant would be equally reasonable. We then separated test takers into two groups. One group received standard jury instructions on evidence, including instructions on the meaning and effect of circumstantial evidence, but no specific res ipsa instruction. The second group received standard jury instructions on evidence along with a typical res ipsa instruction. Because we hypothesize that a res ipsa instruction benefits plaintiffs, we expect that for each case scenario the percentage of decisions in favor of the plaintiff returned by the group receiving the res ipsa instruction will be higher than it will be for the group receiving only basic evidentiary instructions. We conducted an additional test to determine whether another standard instruction—that the mere happening of an accident does not create a presumption of negligence—creates confusion that the res ipsa instruction abates. As discussed in Part VI, our experiment was not conclusive, though two out of the three statements generated a higher percentage of plaintiff decisions with the res ipsa instructions.

We begin by briefly sketching the history of the res ipsa doctrine, setting out some of the controversies surrounding it. Next, we explain the public interest justification for the doctrine. We then provide an alternative hypothesis based on the psychological literature. Next, we set out our research methodology, report the results of our experiment, and explain the implications of our study.

II. BACKGROUND

A. Origin of the Doctrine

A man named Byrne was walking along a public street in Liverpool in 1863 past a shop owned by one Boadle, a flour dealer, when a barrel of flour fell from a second-story window, striking Byrne on the shoulder and knocking him down.[20] Byrne did not know why the barrel fell.[21] The court held that Byrne proved enough to recover for negligence with Chief Baron Pollock observing, "There are certain cases of which it may be said res ipsa loquitur, and this seems one of them. In some cases the Courts have held that the mere fact of the accident having occurred is evidence of negligence . . . ."[22] Byrne v. Boadle is one of the most famous cases in tort law.[23] It is often cited as the case that first recognized the doctrine of res ipsa loquitur in tort,[24]

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[20] Byrne v. Boadle, 159 Eng. Rep. 299, 299 (Exch. 1863).

[21] *Id.*

[22] *Id.* at 300.

[23] A recent search—on January 8, 2020—of the Lexis database of cases for those containing the phrase "Byrne v. Boadle" returned 253 cases, an impressive number of citations to an English case decided more than 150 years ago.

[24] *See, e.g.*, Jenkins v. Big City Remodeling, 515 S.W.3d 843, 848 (Tenn. 2017) (noting that "res ipsa loquitur was first referenced in" *Byrne v. Boadle*); Jerista v. Murray, 883 A.2d 350, 363 (N.J. 2005) ("In some sense, the present case is little different from the first reported decision in which *res ipsa loquitur* was applied *Byrne v. Boadle*..."); Taylor v. Riddell, 896 S.W.2d 891, 893 n. (Ark. 1995) (noting that res ipsa "had its origins" in *Byrne v. Boadle*); Ross v. Am. Red Cross, No. 2:09-cv-905, 2012 U.S. Dist. LEXIS 65454, at *36 (S.D. Ohio May 10, 2012) ("The origin of res ipsa loquitur . . . comes from the English case of *Byrne v. Boadle* . . . .").

though Pollock himself asserts that prior courts had applied it.[25] What can be said is that Byrne v. Boadle is apparently the first case to use the Latin phrase "res ipsa loquitur,"[26] translated as "the thing speaks for itself," in reference to negligence,[27] though it had been used much earlier in another area of law,[28] and it had in substance been used much earlier still outside of law, dating back at least to Cicero.[29]

In tort law, res ipsa loquitur, or "res ipsa" for short, came to be understood as the principle that when certain conditions relating to an accident are satisfied, certain legal conclusions as to an actor's responsibility for it follow.[30] An English court two years after Byrne v. Boadle stated as follows:

> There must be reasonable evidence of negligence. But where the thing is shewn to be under the management of the defendant or his servants, and the accident is such as in the ordinary course of things does not happen if those who have the management use proper care, it affords reasonable evidence, in the absence of explanation by the defendants, that the accident arose from want of care.[31]

Evidence law conventionally distinguishes between direct and circumstantial, or indirect, evidence. Direct evidence is "evidence which, if believed, resolves a matter

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[25] *Cf.* Grady, *supra* note 9, at 918 (*Byrne v. Boadle* was not the first res ipsa case. General negligence was well known to the courts prior to 1863 in common carrier cases. *Byrne* was revolutionary because it was the first noncarrier case in which a plaintiff got to a jury without proving what the defendant's untaken precaution was.).

[26] G. Gregg Webb, *The Law of Falling Objects:* Byrne v. Boadle *and the Birth of Res Ipsa Loquitur*, 59 STAN. L. REV. 1065, 1067 (2007) ("Nearly all commentators agree that the first use of the colloquial Latin tag in the negligence context came in the 1863 case of Byrne v. Boadle . . . ."). Prosser laments that Pollock said the "familiar and homely phrase" in Latin because "he was a classical scholar in the best tradition of English judges." Prosser, *supra* note 5, at 183.

[27] Indicative of the confusion that surrounds the doctrine of res ipsa loquitur is that courts do not even agree on what the "thing" is that must speak for itself. *Compare* Emigh v. Andrews, 191 P.2d 901, 903 (Kan. 1948) ("[Res ipsa loquitur] means the *thing or instrumentality* involved speaks for itself. It clearly does not mean the *accident* speaks for itself."), *with* St. John's Hosp. & Sch. of Nursing, Inc. v. Chapman, 434 P.2d 160, 166 (Okla. 1967) ("[T]his court did not hold . . . that when the doctrine of res ipsa loquitur is applicable, it is the inanimate object that speaks for itself. Such analysis discloses that it is a set of circumstances, a situation, that speaks for itself . . . .").

[28] *See* William L. Prosser, *The Procedural Effect of Res Ipsa Loquitur*, 20 MINN. L. REV. 241, 241 (1936) (noting that the phrase seems to have been first used in 1614 in a case of usury).

[29] THE ORATIONS OF MARCUS TULLIUS CICERO § 53 (C. D. Yonge trans., George Bell & Sons 1891) ("[R]es loquitur ipsa, iudices," translated, "The facts, O judges, speak for themselves . . . ."); *id.* § 66 ("[U]t eo tacente res ipsa loqueretur," translated, "[T]he facts themselves might speak for him while he held his peace.").

[30] Res ipsa is typically used by a plaintiff to establish a defendant's negligence. It can be used, however, by a defendant to prove the plaintiff's negligence when contributory or comparative negligence is at issue. *See, e.g.*, Webb v. Olin Mathieson Chem. Corp., 342 P.2d 1094, 1101 (Utah 1959) (agreeing with defendant that res ipsa "is just as applicable to prove negligence against a plaintiff as it is against a defendant"). Throughout this Article, we, for convenience, usually refer to res ipsa in its standard context, as asserted by the plaintiff against the defendant. But the reader should note that the principles under discussion would apply equally if the parties' roles with respect to res ipsa were reversed.

[31] Scott v. London & St. Katherine Docks Co., 159 Eng. Rep. 665, 667 (Exch. 1865).

in issue."[32] Circumstantial evidence is evidence that requires reasoning beyond a fact or circumstance taken as true to reach a conclusion.[33] Stated otherwise, the conventional definitions hold that direct evidence does not require inference to reach a conclusion, whereas circumstantial evidence does. This distinction exaggerates the difference between the two kinds of evidence, for reaching a conclusion on the meaning of even direct evidence, such as eye witness testimony, requires inference.[34] But under the conventional definitions, res ipsa in tort law concerns circumstantial evidence provided by certain facts surrounding an accident.

By 1905, Professor John Henry Wigmore in the first edition of his treatise on evidence—a location that itself is telling because res ipsa whatever it is has as much to do with evidence as it does with tort law—could report that in the United States the "presumption" embodied in res ipsa "has spread rapidly, although with much looseness of phrase and indefiniteness of scope."[35] Part of the confusion in the cases arose from a failure to distinguish res ipsa from a separate doctrine creating a presumption of liability when common carriers caused injuries to passengers or losses to customers' property.[36] Recognizing that the law was still molten, Wigmore refused to predict what the final shape of res ipsa would be, but he set out three "considerations [that] ought to limit it":

> (1) The apparatus [that caused an injury] must be such that in the ordinary instance no injurious operation is to be expected unless from a careless construction, inspection, or user; (2) Both inspection and user must have been at the time of the injury in the control of the party charged; [and] (3) The injurious occurrence or coudition [sic] must have happened irrespective of any voluntary action at the time by the party injured.[37]

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[32] 1 GEORGE E. DIX ET AL., MCCORMICK ON EVIDENCE § 185, at 1000–01 (Kenneth S. Broun ed., 7th ed. 2013).

[33] *See id.* § 185, at 1001.

[34] *See* Sylvester v. SOS Children's Vills. Ill., Inc., 453 F.3d 900, 903 (7th Cir. 2006) ("[A]ctually all evidence, even eyewitness testimony, requires drawing inferences; the eyewitness is drawing an inference from his [] perceptions. 'All evidence is probabilistic, and therefore uncertain . . . .'" (quoting Milam v. State Farm Mut. Auto. Ins., 972 F.2d 166, 170 (7th Cir. 1992))).

[35] 4 JOHN HENRY WIGMORE, A TREATISE ON THE SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 2509, at 3556 (1st ed. 1905).

[36] *See* W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 39, at 243–44 (W. Page Keeton ed., 5th ed. 1984); 4 WIGMORE, *supra* note 35, §§ 2508–09, at 3555–56; *see also* N.Y., Chicago & St. Louis R.R. v. Blumenthal, 43 N.E. 809, 811 (Ill. 1895) ("The happening of an accident to a passenger during the course of his transportation raises a presumption that the carrier has been negligent. The burden of rebutting this presumption rests upon the carrier. Undoubtedly the law requires the plaintiff to show that the defendant has been negligent. But, where the plaintiff is a passenger, a *prima facie* case of negligence is made out by showing the happening of the accident. If the injury to a passenger is caused by apparatus wholly under the control of the carrier and furnished and applied by it, a presumption of negligence on its part is raised."); RESTATEMENT (SECOND) OF TORTS § 328A cmt. b (AM. LAW. INST. 1965) (noting that courts have held that the burden of proof shifts to the common carrier when goods in its hands are damaged or its passengers are injured).

[37] 4 WIGMORE, *supra* note 35, at 3556–57; *see also* KEETON ET AL., *supra* note 36, § 39, at 244; Charles E. Carpenter, *The Doctrine of Res Ipsa Loquitur*, 1 U. CHI. L. REV. 519, 520 (1934); Prosser, *supra* note 28, at 242.

Wigmore's vision of a properly limited doctrine proved to be prophetic.[38] But as courts gained additional experience with res ipsa, several interpretive issues arose. We note here a few of the more important ones for our purposes.

B. Instrumentality

An implication of Wigmore's statement is that the kind of injury to which courts were applying res ipsa was injury caused by an identifiable "apparatus," or instrumentality,[39] such as a telephone wire,[40] chisel,[41] brick arch,[42] locomotive whistle,[43] or window.[44] Byrne v. Boadle itself involved a barrel.[45] Defining res ipsa in reference to an instrumentality became problematic in cases in which application of the doctrine in light of its manifest purpose made sense but the injury could not easily be attributed to any instrumentality, or at least to a particular instrumentality that interacted with one or more other instrumentalities to produce an injury. The point of res ipsa is that the circumstances surrounding an injury may indicate that the defendant was negligent and that the defendant's negligence caused the plaintiff's harm. If a surgeon amputates the wrong leg, determining whether to characterize his hands or the surgical instrument he used as the "instrumentality" is a pointless exercise.[46] If passengers in a raft on an amusement park attraction are injured when their raft collides with the raft in front of it while proceeding down the chute, determining whether the relevant instrumentality is the lead raft, the following raft, the water, or the chute is a distraction.[47] By contrast, when a barrel falls on a pedestrian's shoulder, the barrel is at the heart of the negligence analysis —conceptualizing a instrumentality is easy, identifying the relevant instrumentality is equally easy, and the reason it came to fall determines liability.

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[38] Wigmore repeated verbatim both his unwillingness to predict the final shape of the rule and its three limiting considerations in the second edition of his treatise, published in 1923. *See* 5 JOHN HENRY WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 2509, at 498 (2d ed. 1923). William Prosser restated the three requirements set out by Wigmore in the second edition and observed that they had "been more or less uniformly accepted." Prosser, *supra* note 28, at 242.

[39] A hint about the kind of case Wigmore had in mind in writing about res ipsa is the sub-heading of the section in which he discusses the doctrine: "Defective Machines, Vehicles, and Apparatus." *See* 4 WIGMORE, *supra* note 35, § 2509, at 3556; 5 WIGMORE, *supra* note 38, § 2509, at 492. The "careless[ness]" that Wigmore thought should limit application of the doctrine was closely related to, if not defined by, defectiveness, a concept that applies almost exclusively to instrumentalities.

[40] Ark. Tel. Co. v. Ratteree, 21 S.W. 1059, 1059–60 (Ark. 1893).

[41] Dixon v. Pluns, 33 P. 268, 270 (Cal. 1893).

[42] Chenall v. Palmer Brick Co., 43 S.E. 443, 444–45 (Ga. 1903).

[43] Mitchell v. Nashville, Chattanooga & St. Louis Ry. Co., 45 S.W. 337, 337–38 (Tenn. 1898).

[44] Carroll v. Chicago, Burlington & N. R.R., 75 N.W. 176, 176–77 (Wis. 1898).

[45] Byrne v. Boadle 159 Eng. Rep. 299, 299–300 (Exch. 1863) (noting evidence that "a barrel of flour fell from a window above in defendant's house and shop, and knocked the plaintiff down").

[46] *Cf.* St. John's Hosp. & Sch. of Nursing, Inc. v. Chapman, 434 P.2d 160, 169 (Okla. 1967) (observing, in a case alleging that medical care providers broke an elderly patient's leg while turning her in bed, that "[w]e perceive no good reason why the doctrine of res ipsa loquitur should not be applied to an otherwise proper situation merely because the plaintiff has not shown that some inanimate object was involved in causing the injury or damage complained of by the plaintiff in a negligence action").

[47] *See* Deciutiis v. Six Flags Am., LP, No. 305, 2017 Md. App. LEXIS 392, at *2, *10–12 (Md. Ct. Spec. App. Apr. 17, 2017).

C. Exclusive Control

Wigmore not only assumed that an injury-causing instrumentality could be identified, but he specified, however awkwardly, as a limiting condition of res ipsa that the defendant had control over the inspection or user of it.[48] Courts overwhelmingly adopted the essence of the condition, commonly requiring that the defendant had exclusive control of the instrumentality.[49] Thus, courts generally adopted three requirements for the application of res ipsa loquitur, requirements that have been modified over the years but remain embedded in the law of many jurisdictions: "(1) [T]he accident must be of a kind which ordinarily does not occur in the absence of somebody's negligence; (2) the instrumentality causing the accident must have been within the exclusive control of the defendant; (3) the injury must have happened irrespective of any voluntary action on the part of the plaintiff."[50]

The requirement of "exclusive" control of the accident-causing instrumentality could address the rare situation in which the defendant and one or more third parties had joint control of an instrumentality. It does not explicitly address the accident that might have been caused by any of the multiple instrumentalities controlled by different persons where the instrumentality in the exclusive control of the defendant likely caused the injury. It also maintains Wigmore's focus on an instrumentality.[51] Of course, one could argue that there is nothing wrong with limiting the res ipsa doctrine to cases involving an "instrumentality," excluding from its ambit accidents that cannot be attributed to an instrumentality—despite heroic linguistic contortions—even though they likely were caused by the defendant's negligence. The doctrine then would be deliberately under-inclusive. But a doctrine need not be perfect to be useful, and the significance of the exclusion depends upon the consequence of being excluded, which itself depends upon the legal significance of the doctrine. As explained below, the legal effect of res ipsa is elusive.[52]

Some courts maintain the requirement of exclusive control but interpret it in a way that saps it of independent meaning.[53] For example, one court noted that "exclusive control is not a rigid concept; rather, it is 'subordinated to its general purpose, that of indicating that it probably was the defendant's negligence which

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[48] *See* 4 WIGMORE, *supra* note 35, § 2509, at 3557 ("Both inspection and user must have been at the time of the injury in the control of the party charged . . . .").

[49] *See* 1 SPEISER, *supra* note 14, § 2:10 ("It is essential, therefore, to the application of the doctrine of res ipsa loquitur that it must be established that the instrumentality or agency which produced the injury complained of was at the time of the injury under the sole and exclusive management or control of the defendant or of his agents or servants . . . .") (collecting cases).

[50] Graham L. Fricke, *The Use of Expert Evidence in Res Ipsa Loquitur Cases*, 5 VILL. L. REV. 59, 59 (1959).

[51] *See supra* note 38 and accompanying text.

[52] *See infra* Section II.F.

[53] *See, e.g.*, Bickham v. Coca Cola Refreshments USA, Inc., No. 14 CV 3341 (VB), 2015 U.S. Dist. LEXIS 156066, at *13–14 (S.D.N.Y. Nov. 18, 2015) (observing that the "meaning given to exclusive control in the cases . . . is anything but consistent with what the requirement, on its face, would seem to demand" (quoting Potthast v. Metro-North R.R., 400 F.3d 143, 149 n.7 (2d Cir. 2005))).

caused the accident.'"[54] However sensible this observation is, a flexible concept of exclusive control makes the requirement useless. Both the Restatement Second and Third eliminate any reference to instrumentality. The Restatement Second explains in comments that attributing an injury to a specific instrumentality under the defendant's exclusive control is only one way of demonstrating the defendant's responsibility for the accident.[55] The Restatement Third attempts to define the doctrine as applicable to all accidents that were probably caused by the defendant's negligence.[56]

A second issue pertained to the time at which the defendant had control of the instrumentality. Wigmore contemplated that carelessness might inure in construction, inspection, or use, where the user is under the control of the defendant.[57] Construction and inspection imply conduct that occurs prior to an injury, but Wigmore states as a condition that inspection and use were "at the time of the injury" in the defendant's control.[58] The doctrine indeed was applied where the instrumentality was in control of the defendant when the plaintiff's injury occurred.[59] That interpretation made sense when an instrumentality was negligently used to cause a contemporaneous injury. It made no sense when the defendant's negligence preceded the plaintiff's injury, such as when a product was defectively manufactured or a car was negligently repaired. True, when a lag occurs between the defendant's actions and the plaintiff's injury, the probability increases that the cause of the injury was something other than the defendant's actions. But often the probability that defendant's actions caused the injury remains high, as high as it is in cases in which the defendant's actions and the plaintiff's injury are contemporaneous and the doctrine is deemed applicable. Recognizing this fact, many courts interpret the doctrine as applying when the defendant had control of the instrumentality at the

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[54] Stone v. Courtyard Mgmt. Corp., 353 F.3d 155, 159 (2d Cir. 2003) (quoting Corcoran v. Banner Super Mkt., Inc., 227 N.E.2d 304, 306 (N.Y. 1967)).

[55] RESTATEMENT (SECOND) OF TORTS § 328D cmt. g (AM. LAW INST. 1965).

[56] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 (AM. LAW INST. 2010) ("The factfinder may infer that the defendant has been negligent when the accident causing the plaintiff's harm is a type of accident that ordinarily happens as a result of the negligence of a class of actors of which the defendant is the relevant member.").

[57] 4 WIGMORE, *supra* note 35, § 2509, at 3557 (opining that the "apparatus [that caused an injury] must be such that in the ordinary instance no injurious operation is to be expected unless from a careless construction, inspection, or user" and that "[b]oth inspection and user must have been at the time of the injury in the control of the party charged").

[58] *Id.*

[59] *See, e.g.*, McKeever v. Phoenix Jewish Cmty., 374 P.2d 875, 877 (Ariz. 1962) (finding exclusive control condition satisfied where swimming pool and accessories were in defendant's exclusive control when plaintiff's daughter drowned); Pacheco v. Ames, 69 P.3d 324, 437 (Wash. 2003) (finding exclusive control satisfied where oral surgeon caused nerve damage while using dental drill on plaintiff's jaw); Gilbert v. Korvette's, Inc., 299 A.2d 356, 369-70 (Pa. Super. Ct. 1972) (finding exclusive control satisfied where plaintiff was injured on malfunctioning escalator in defendant's store). *See generally* 1 SPEISER, *supra* note 14, § 2:10 ("It is essential, therefore, to the application of the doctrine of res ipsa loquitur that it must be established that the instrumentality or agency which produced the injury complained of was *at the time of the injury* under the sole and exclusive management or control of the defendant or of his agents or servants . . . ." (emphasis added) (footnote omitted)).

time the negligence or equivalent tortious conduct occurred, which might or might not be the time the injury was sustained.[60]

D. Ordinarily Does Not Occur Absent Negligence

The res ipsa condition that has proved most troublesome is that "the event [be] of a kind which ordinarily does not occur in the absence of negligence."[61] Actually, even the focus of the inquiry is controversial. Some cases state that the relevant occurrence is the "accident"; others state that it is the "injury."[62] The Restatement Second refers to the "event," specifying that the doctrine may apply when "the event is of a kind which ordinarily does not occur in the absence of negligence."[63] The reference to an event seems to be an implicit reference to the accident.[64] In fact, the proper focus depends on context. Focusing on the accident is appropriate in some contexts, and focusing on the injury in others. When the event at issue is an occurrence giving rise to an injury, such as an airplane falling from the sky, and the question is whether negligence of the pilot caused it, the inquiry is directed at the accident. But when the "event" of interest is the injury, such as a patient suffering a paralyzed leg during abdominal surgery, and the question is whether the injury was caused by the surgeon's negligence, the inquiry is directed at the injury.

The more pressing problem concerns the probability calculation required by the doctrine. Courts typically state that res ipsa applies when the accident or injury, which for convenience we refer to as the "event," ordinarily does not occur in the absence of negligence.[65] This formulation effectively contains a double negative: The event ordinarily does not happen if the party is not negligent.

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[60] *See, e.g.*, Smoot v. Mazda Motors of Am., Inc., 469 F.3d 675, 679 (7th Cir. 2006) (observing that the "exclusive control" requirement, if taken literally, would bar application of res ipsa to products liability cases and noting that state law permits application "as long as the product defect existed before the defendant shipped the product"); Jenkins v. Whittaker Corp., 785 F.2d 720, 730 (9th Cir. 1986) ("Under Hawaii law, however, *res ipsa loquitur* requires a finding of exclusive control and management of the injury-producing instrumentality only at the time of the negligence, not at the time of the resultant injury." (citations omitted)); Jackson v. H. H. Robertson Co., 574 P.2d 822, 825 (Ariz. 1978) (noting that "the significant time of exclusive control is the time at which the alleged negligence resulting in the injury occurred, not the time of the accident" (citation omitted)); McGuire v. Stein's Gift & Garden Ctr., Inc., 504 N.W.2d 385, 390 (Wis. Ct. App. 1993) ("The significant moment of exclusive control is the time at which the alleged negligence causing the injury occurs, not the time of the accident." (citation omitted)).

[61] *See* RESTATEMENT (SECOND) OF TORTS § 328D (AM. LAW INST. 1965).

[62] *See* Haugen v. BioLife Plasma Servs., 714 N.W.2d 841, 843–44 (N.D. 2006) (citing cases in support of both positions and concluding that "the use of accident better describes the doctrine").

[63] RESTATEMENT (SECOND) OF TORTS § 328D (AM. LAW INST. 1965).

[64] *Id.* at cmt. c (addressing the "[t]ype of event" that will satisfy the condition and treating "events" and "accidents" synonymously).

[65] *See, e.g.*, Barwick v. United States, 923 F.2d 885, 887 (D.C. Cir. 1991) (discussing as a requirement for a res ipsa jury instruction that "the plaintiff must establish that: [] the event was of a kind that ordinarily does not occur in the absence of someone's negligence"); Fertik v. Stevenson, 186 F. Supp. 3d 98, 102 (D. Mass. 2016) ("Under Massachusetts law, the doctrine of *res ipsa loquitur* '[is permitted] . . . when an accident is of the kind that does not ordinarily happen unless the defendant was negligent . . . .'" (quoting Enrich v. Windmere Corp., 616 N.E.2d 1081, 1085 (Mass. 1993))); Wright v. United States, 280 F.2d 472, 484 (M.D.N.C. 2003) (holding that a requirement for a res ipsa instruction is an "injury [that] would rarely occur in the absence of negligence").

Negligence itself is a negative concept, the failure to exercise due care,[66] and therefore the formulation embodies a triple negative and is equivalent to providing that the event ordinarily does not happen if the party exercises due care.[67] But under either formulation, this requirement permits application of res ipsa to an adverse occurrence when an adverse result is expected to occur infrequently in the exercise of due care. Suppose that when a certain surgical procedure is performed carefully, paralysis occurs ten percent of the time. Paralysis ordinarily does not happen if the surgeon is not negligent; equivalently, paralysis ordinarily does not happen if the surgeon exercises due care. Res ipsa would apply even though the careful surgeon was unlucky.

The proper calculation compares the prior probability of the adverse event when the actor is negligent to the prior probability of the adverse event when the actor is careful.[68] Stated otherwise, the question is this: For the adverse event at issue, is the probability that the actor was negligent greater than the probability that the actor was careful? As one court stated, "The test is not whether a particular injury rarely occurs, but rather, when it occurs, is it ordinarily the result of negligence."[69] Res ipsa applies only if, in the universe of adverse outcomes, the actor was negligent more often than when he or she exercised due care. In other words, given the injury, the probability of negligence is greater than half.[70] Of course, despite the literal formulation of the test, courts might reserve res ipsa for cases in which they correctly assume that prior probabilities indicate negligence. Further, a proper interpretation of the test does not necessarily save an unlucky actor from application of res ipsa. If when the adverse event occurs the actor was negligent 90% of the time and careful 10% of the time, a careful actor may still be subject to res ipsa. But the appropriate refinement in the test precludes application of res ipsa in those cases in which the adverse outcome is equally unlikely given due care and given negligence. Just how important the refinement is, however, is questionable. Courts routinely continue to use the double-negative formulation of the test despite criticism of it.[71] The reason may be

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[66] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 3 (AM. LAW INST. 2010) ("A person acts negligently if the person does not exercise reasonable care under all the circumstances.").

[67] Fricke opines that "[t]he expression 'does not ordinarily happen in the absence of negligence' may be less objectionable than 'does not ordinarily happen if due care is used,'" though he does not explain why. Fricke, *supra* note 50, at 60.

[68] *See, e.g.*, *id.* at 60–61 ("[T]he inquiry should be turned toward the extraordinary or abnormal occasions *when accidents occur*, and the question whether their occurrence is more often attributable to negligent conduct than not."); David Kaye, *Probability Theory Meets Res Ipsa Loquitur*, 77 MICH. L. REV. 1456, 1473 (1979) (arguing that the most appropriate standard, in most cases, for permitting the application of res ipsa is that injuries be far less frequent when reasonable care is taken than when it is not).

[69] Brannon v. Wood, 444 P.2d 558, 562 (Or. 1968); *see also* 1 SPEISER, *supra* note 14, § 2:4 (providing nearly identical language); Cavero v. Franklin Gen. Benevolent Soc'y, 223 P.2d 471, 479 (Cal. 1950) (Traynor, J., dissenting) ("[T]he court in effect holds that solely because an accident is rare it was more probably than not caused by negligence. There is a fatal hiatus in such reasoning. The fact that an accident is rare establishes only that the possible causes seldom occur. It sheds no light on the question of which of the possible causes is the more probable when an accident does happen.").

[70] NEAL FEIGENSON, LEGAL BLAME: HOW JURORS THINK AND TALK ABOUT ACCIDENTS 60–61 n.21 (2000).

[71] *See infra* notes 220–221 and accompanying text.

that cases in which the court determines res ipsa applicable in fact satisfy the more rigorous requirement that the probability of the event given negligence is greater than the probability given due care.

The Restatement Third adopts a double positive rather than a double negative test, though it continues to use the negative term negligence.[72] It expresses the relevant condition in terms of the probability of the accident resulting from the actor's negligence: "The factfinder may infer that the defendant has been negligent when the accident causing the plaintiff's harm is a type of accident that ordinarily happens as a result of the negligence of a class of actors of which the defendant is the relevant member."[73] Stated otherwise, the doctrine applies only when the adverse event probably resulted from the defendant's negligence. The intent is to avoid the implication that res ipsa may apply when an accident is an equally unlikely result of both careful and careless behavior.[74] Apart from being linguistically awkward, the test has been criticized as allowing the application of res ipsa based on generalized, or statistical, probabilities as opposed to probabilities specific to the circumstances of the case.[75]

Determining that the relevant probability condition is satisfied usually depends upon the common experience of the fact finder. For example, anyone can decide based on common experience whether a barrel comes to fall from a second-story window ordinarily because the one in control of the barrel was negligent. But in some cases, the probability calculation is outside the scope of common experience. The issue then is whether res ipsa is applicable when expert testimony is required to inform the fact finder of the relevant probabilities. For instance, a fact finder may not know whether paralysis results from a surgical procedure more often when the surgeon is negligent than when he or she is not, but an expert witness may.[76] One could argue that when expert testimony is required to establish the necessary probability condition, rather than to rebut the defendant's evidence that the probability condition is not satisfied, the need for res ipsa disappears, because the fact finder can now reach a decision apart from the mere circumstantial evidence

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[72] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 (AM. LAW INST. 2010).

[73] *Id.*

[74] *See id.* at reporter's note to cmt. e (rejecting "the idea that res ipsa can be justified by evidence indicating that harm ordinarily does not occur when due care is exercised").

[75] Daniel J. Pylman, Res Ipsa Loquitur *in the Restatement (Third) of Torts: Liability Based Upon Naked Statistics Rather Than Real Evidence*, 84 CHI.-KENT L. REV. 907, 913 (2010).

[76] *See* Brannon v. Wood, 444 P.2d 558, 563 (Or. 1968).

surrounding the event.[77] Some courts have indeed held that res ipsa is not available in such a case,[78] but most courts now permit its use.[79]

E. Disparate Access to Information

An original justification for res ipsa was that the defendant, but not the plaintiff, had direct evidence bearing upon the defendant's negligence.[80] The plaintiff always has the burden of persuasion on the issue of the defendant's negligence,[81] and in most jurisdictions res ipsa permits a finding of the defendant's negligence based on circumstantial evidence, the particular circumstantial evidence provided by satisfying the conditions of the doctrine. By permitting the plaintiff to prevail on the basis of circumstantial evidence, res ipsa creates an incentive for the defendant to divulge information uniquely in his or her possession. Failure to come forward with that information implies that it favors the plaintiff, meaning that a verdict for the plaintiff based on circumstantial evidence is unassailable.

The assumption of asymmetric access to information raised a number of questions and led to several principles. One issue was whether asymmetric access was a condition for application of the doctrine or merely one reason for it.[82] In some cases, direct evidence of the cause of an event is equally unavailable to the plaintiff and the defendant. For example, a vehicle may crash on a deserted road killing the

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[77] *See, e.g.*, Smoot v. Mazda Motors of Am., Inc., 469 F.3d 675, 680 (7th Cir. 2006) (noting the apparent anomaly of applying res ipsa when expert testimony is required to establish probability, recognizing a split in authority, and concluding that Wisconsin would apply the doctrine); RESTATEMENT (SECOND) OF TORTS § 328D cmt. d (AM. LAW INST. 1965) (recognizing that "expert testimony that such an event usually does not occur without negligence may afford a sufficient basis" for satisfying the probability condition of res ipsa).

[78] *See, e.g.*, Holzhauer v. Saks & Co., 697 A.2d 89, 94–95 (Md. 1997) (recognizing that under Maryland law if because of the complexity of the subject matter expert testimony is required to establish negligence, "a plaintiff must necessarily be precluded from relying on *res ipsa loquitur*"); Deciutiis v. Six Flags Am., LP, No. 305, 2017 Md. App. LEXIS 392, at *8 (Md. Ct. Spec. App. Apr. 17, 2017) (following *Holzhauer*).

[79] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 reporter's note to cmt. c (AM. LAW INST. 2010) ("Outside the area of medical malpractice, essentially all courts agree that plaintiffs can introduce expert testimony in support of their res ipsa loquitur claims . . . . The more modern view, accepted in an increasing number of jurisdictions, is that in a medical-malpractice res ipsa case the plaintiff can supplement any common-knowledge assessments with expert testimony . . . ." (citations omitted) (providing case examples)).

[80] *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 328D cmt. k (AM. LAW INST. 1965) ("It frequently is said by courts that one basis for the application of the principle of res ipsa loquitur is the defendant's superior knowledge, or his superior opportunity to obtain it, as to how the event occurred."); 1 SPEISER, *supra* note 14, § 26:23 ("The res ipsa loquitur doctrine is based in part upon the theory that the defendant in charge of the instrumentality which causes the injury either knows the cause of the accident or has the best opportunity of ascertaining it, and that the plaintiff has no such knowledge . . . .").

[81] *See, e.g.*, KEETON ET AL., *supra* note 36, § 38, at 239 ("The burden of proof of the defendant's negligence is quite uniformly upon the plaintiff . . . ." (footnote omitted)).

[82] Wigmore stated that the justification for res ipsa "consists in the circumstance that the chief evidence of the true cause, whether culpable or innocent, is practically accessible to [the defendant] but inaccessible to the injured person." 4 WIGMORE, *supra* note 35, § 2509, at 3557. In *Snider v. Wal-Mart Stores, Inc.*, the court observed that, under Kentucky common law, "evidentiary necessity remains a prerequisite for applying the [res ipsa] doctrine," implying that the doctrine is unavailable to the plaintiff if both parties have access to direct evidence. Snider v. Wal-Mart Stores, Inc., 664 F. App'x 463, 464 (6th Cir. 2016).

driver and the passenger. The accident might ordinarily occur as a result of the driver's negligence, but the driver's estate has no better access to direct evidence than does the passenger's estate. The better reasoned opinions hold that res ipsa is available in such a case, even though the doctrine cannot induce the defendant to divulge evidence that he or she alone has. These courts recognize that asymmetric access to information is a justification for res ipsa in some cases, but not a requirement in all.[83] Indeed, res ipsa emerged when rules of civil procedure permitted parties to retain certain privately held information, but as discovery rules changed to require disclosure, the disclosure justification for res ipsa all but disappeared.[84] Courts that do not require unequal access presumably believe that the true justification of res ipsa is that the doctrine produces more accurate results. If the circumstances of an accident indicate that the defendant is probably responsible for it, requiring the plaintiff to prove negligence by direct evidence would lead to false negatives. Res ipsa allows the defendant to be held liable. Of course, a plaintiff ought to be able to prevail on the basis of circumstantial evidence alone without resort to the doctrine of res ipsa, but this point seems to elude some courts.

The assumption that res ipsa is justified only when the plaintiff lacks direct evidence led some courts to adopt the rule that if a plaintiff pleads and tenders proof of specific negligence, he or she is not entitled to invoke res ipsa.[85] Specific negligence is generally understood as the particular actions that an actor should have taken or not taken in the exercise of due care. Thus, in economic terms, negligence is the failure to take a precaution the marginal cost of which is less than the marginal reduction in expected accident costs the precaution would bring about.[86] Expected accident cost is the probability of the accident multiplied by the monetary value of the loss. [87]As articulated in the famous Hand Formula, an actor is negligent if

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[83] *See* RESTATEMENT (SECOND) OF TORTS § 328D cmt. k (AM. LAW INST. 1965) (recognizing that the defendant's superior knowledge or opportunity to obtain it is frequently said to be a basis for applying res ipsa but is not a requirement for its application); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. i (AM. LAW INST. 2010) (noting that courts in early cases "often attached weight to the point that the facts of the defendant's conduct were known or readily knowable by the defendant, while the plaintiff was ignorant of these facts," but that "the defendant's superior access to information is not a prerequisite for res ipsa loquitur").

[84] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. i (noting that "development of modern discovery has diminished the strength" of the rationale that res ipsa encouraged the defendant to disclose evidence when the facts of defendant's negligence were known or knowable by the defendant but not the plaintiff).

[85] 1 SPEISER, *supra* note 14, § 5:9 ("In a number of cases the position has been taken that where plaintiff, instead of relying on a general allegation of negligence, alleges only specific acts of negligence, the right to rely on the doctrine of res ipsa loquitur has thereby been lost or waived, at least with respect to the cause of the accident specifically alleged." (footnotes omitted)); *see also* Anderson v. Union Pac. R.R., 890 N.W.2d 791, 796 (Neb. 2017) ("We have held that if specific acts of negligence are alleged or there is direct evidence of the precise cause of the accident, the doctrine of res ipsa loquitur does not apply.. . . The doctrine is applicable only where the plaintiff is unable to allege or prove the particular act of negligence which caused the injury."); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. g (AM. LAW INST. 2010) ("A number of courts still follow the traditional rule that the plaintiff, by professing to explain to the jury how the accident actually happened, cannot concurrently invite the jury to speculate about the causes of accidents in a res ipsa loquitur manner.").

[86] *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 214, 214 n.2 (8th ed. 2011).

[87] *See id.* at 213.

B < PL, where B is the cost of precaution, P is the probability of the accident, and L is the value of the loss.[88]

Normally, a plaintiff has the burden of proving by a preponderance of the evidence that a particular untaken precaution satisfies the negligence condition.[89] Suppose the plaintiff can prove by a preponderance of the evidence that only the defendant could have taken a cost-justified precaution and that the defendant could only have taken one specific precaution, but the plaintiff can produce no direct evidence that the defendant failed to take it. The plaintiff could satisfy his or her burden of persuasion through circumstantial evidence. That evidence, though circumstantial, could be understood as proof of specific negligence. But suppose plaintiff can establish that defendant might or might not have taken precautions A, B, and C. Each was cost-justified, and each was a sufficient condition for the accident, meaning that failure to take any one of them would have resulted in the accident even if the other two were taken.[90] Further, the evidence supports the conclusion that the probability the accident was caused by the failure to take each precaution is 30%. The probability that defendant caused the accident by failing to take some precaution is 90%, but the plaintiff cannot prove which precaution the defendant failed to take. In such a case, requiring the plaintiff to identify the specific untaken precaution will result in the exoneration of the defendant even though some negligence on the part of the defendant almost certainly (90% likelihood) caused the plaintiff's injury. Relaxation of the rule requiring proof of the specific negligent act is necessary to avoid an inefficient result.

Courts reasoned that if a plaintiff can identify the specific way in which the defendant was negligent, then he or she must have direct evidence supporting the claim, and reliance on res ipsa is consequently unjustified.[91] Later courts came to hold that producing whatever direct evidence the plaintiff has should not preclude him or her from relying on res ipsa to the extent that the factfinder determines the direct evidence inadequate to justify a favorable verdict.[92] The alternative rule forces the plaintiff to choose either to rely exclusively on limited direct evidence or on the operation of res ipsa. Allowing a plaintiff to introduce evidence of specific negligence and invoke res ipsa is sensible if the purpose of the doctrine is to increase

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[88] *Id.* at 213–14, 214 n.2; *see also* United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (Hand, J.).

[89] *See* KEETON ET AL., *supra* note 36, § 38, at 239.

[90] We could modify this analysis by assuming that combinations of precautions had various probabilities of reducing expected accident costs, but that would complicate the exposition without changing the point of the analysis.

[91] *See supra* note 84 and accompanying text.

[92] *See, e.g.*, Crawford v. Rogers, 406 P.2d 189, 193 (Alaska 1965) ("The proof by a plaintiff of specific acts of negligence on the defendant's part does not necessarily mean that the doctrine of res ipsa loquitur will not be available to the plaintiff. If such proof does not furnish a complete explanation of the accident, there may still be room for an inference of negligence arising from the happening of the accident."); Abbott v. Page Airways, Inc., 245 N.E.2d 388, 394–95 (N.Y. 1969) (holding that introduction of evidence on the specific cause of the injury did not preclude the plaintiff from invoking res ipsa); *see also* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. g (AM. LAW INST. 2010) ("[M]ost modern courts find it inappropriate to penalize the plaintiff who seeks to prove specific negligence by preventing the plaintiff from developing and submitting to the jury a res ipsa loquitur argument in the alternative.").

the accuracy of decision-making. It encourages the introduction of direct evidence while recognizing the logical force of circumstantial evidence. Some courts hold that pleading specific acts of negligence does not preclude use of res ipsa but proffering evidence of specific negligence at trial does.[93] Some courts hold that a plaintiff may not rely upon res ipsa if he or she fails to produce reasonably available direct evidence or is in a position to show the particular circumstances surrounding the injury.[94]

F. Legal Effect of Res Ipsa

Courts have disagreed as to the legal consequences of res ipsa, in particular whether satisfaction of the conditions of the doctrine creates a presumption or raises an inference that the defendant was negligent and responsible for the plaintiff's injury.[95] If res ipsa creates a presumption, then a plaintiff establishing its predicate conditions would be entitled to judgment as a matter of law in the event the defendant does not produce exculpatory evidence. In effect, the doctrine would shift the burden of production, though not the burden of persuasion, to the defendant on the issue of the defendant's liability.[96] When the defendant does not offer evidence, the presumption is not rebutted, and the defendant cannot prevail.[97] If instead the doctrine raises an inference, the plaintiff would not automatically be entitled to judgment as a matter of law where the defendant fails to produce exculpatory evidence.[98] By nature, an inference is permissive, and in this context the inference

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[93] *See, e.g.*, Cunningham v. Lence Lanes, Inc., 25 A.D.2d 238, 239 (N.Y. App. Div. 1966) (holding that where plaintiff alleged specific acts of negligence, introduction of evidence at trial to prove such acts "effectively deprived the plaintiff of the benefit of the presumption under the rule of *res ipsa loquitur*); Holzhauer v. Saks & Co., 697 A.2d 89, 92 (Md. 1997) (citing Joffre v. Canada Dry Ginger Ale, Inc. 158 A.2d 631 (Md. 1960)).

[94] *See, e.g.*, District of Columbia v. Singleton, 41 A.3d 717, 725–27 (Md. 2012); *cf.* Capps v. Am. Airlines, Inc., 303 P.2d 717, 718 (Ariz. 1956) (stating as a condition for res ipsa that the plaintiff "*not be in a position to show the particular circumstances which caused the offending agency or instrumentality to operate to his injury*").

[95] Prosser, *supra* note 28, at 245–52, 260 (explaining differences in approaches, collecting cases, and suggesting that some courts adopting the presumption approach did so originally in actions against common carriers, which implicated a separate doctrine shifting the burden of persuasion to the defendant for personal injuries to passengers and property damage); *see also* RESTATEMENT (SECOND) OF TORTS § 328D cmt. m (AM. LAW INST. 1965) (noting that most courts treat res ipsa as creating an inference whereas some give it the effect of a presumption).

[96] In the context of res ipsa, "presumption" is rarely used in its strong sense in which both the burden of production and the burden of persuasion shift to the defendant. *See, e.g.*, Rodi Yachts, Inc. v. Nat'l Marine, Inc., 984 F.2d 880, 886 (7th Cir. 1993) (distinguishing strong and weak meanings of presumption and defining a strong presumption as "one that shifts the burden of persuasion as well as of production"); RESTATEMENT (SECOND) OF TORTS § 328D cmt. m (AM. LAW INST. 1965) (noting that an exceedingly small number of courts "treat res ipsa loquitur as imposing the burden of proof," as opposed to merely the burden of production, on the defendant); Prosser, *supra* note 28, at 250 (noting that courts in only four states consistently take the position that res ipsa shifts "the ultimate burden of proof" to the defendant).

[97] Prosser, *supra* note 28, at 244 ("A greater advantage is given to the plaintiff if his res ipsa loquitur case is treated as creating a presumption. This means that the jury will not merely be permitted to infer the defendant's negligence, but, in the absence of evidence to the contrary, will be required by the court to do so. In other words, if the defendant rests without evidence, the plaintiff will be entitled to a directed verdict.").

[98] *Id.* at 243–44.

arising from res ipsa would permit a factfinder to find the defendant liable.[99] But because the inference of liability is only permissive, the factfinder could find the defendant not liable even if the defendant introduces no exculpatory evidence.[100] Of course, the strength of an inference depends upon the facts of a case. The inference may be so strong that no reasonable juror could absolve the defendant. Henry David Thoreau once wrote, "Some circumstantial evidence is very strong, as when you find a trout in the milk."[101] In that situation, the plaintiff would be entitled to judgment as a matter of law.[102] But the difference between the presumption and the inference is that if the defendant produces no evidence, the plaintiff is always entitled to a judgment as a matter of law when res ipsa creates a presumption whereas the plaintiff may or may not be entitled to such a judgment when res ipsa raises an inference.[103]

If the purpose of res ipsa is to induce the defendant to divulge information about an event that he or she has but the plaintiff does not have, then formulating res ipsa as a presumption is useful.[104] The incentive to come forward with evidence is greater when the consequences of failing to come forward are more severe. But if the purpose is to produce more accurate results based on whatever limited information is available to both parties, then treating res ipsa as an inference is more appropriate. The circumstances of the event considered along with any other evidence may or may not lead the factfinder to conclude that the defendant is liable. The dominant position today is that res ipsa creates an inference, not a presumption.[105]

The legal effect of res ipsa bears upon the need for the doctrine in the first place. Early on, some courts and commentators favored res ipsa as a procedural doctrine that could be used to achieve desirable substantive ends—a wolf in sheep's

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[99] *Id.*

[100] *Id.* at 244; *see also* 1 SPEISER, *supra* note 14, § 26:27 (discussing the difference between the legal meaning of a presumption and of an inference).

[101] 2 HENRY DAVID THOREAU, THE WRITINGS OF HENRY DAVID THOREAU: JOURNAL 94 (Bradford Torrey ed., 1850). Some scholars speculate that Thoreau was referring to dishonest dairy farmers "who added water to their milk to increase its volume." Rob Kyff, *Can You Find a Trout in the Milk? Well, Thoreau Seems to Think So*, HARTFORD COURANT, http://digitaledition.courant.com/tribune/article_popover.aspx?guid=56971c8e-fb3d-4b81-b398-7bd138633a90 [https://perma.cc/6RFW-46G5].

[102] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. j (AM. LAW INST. 2010) (noting that even where res ipsa creates an inference "the facts of an occasional case may be so compelling in pointing to the defendant's negligence that a court would rule that no reasonable jury could find otherwise and grant judgment as a matter of law"); *see* Prosser, *supra* note 28, at 261 (noting that in some cases "the inference of negligence from the circumstances is so strong that the jury could not reasonably be permitted to disregard it—where, in other words, the inference amounts to a presumption, and unless defendant offers evidence to meet it, a verdict must be directed for the plaintiff" and giving *Byrne v. Boadle* as an example).

[103] Prosser, *supra* note 28, at 243–44.

[104] *See* 4 WIGMORE, *supra* note 35, § 2509, at 3557 (noting that the reason for the "presumption" of liability established by res ipsa is that the evidence is accessible to the defendant and not the injured person).

[105] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. j (AM. LAW INST. 2010) ("Most jurisdictions employ res ipsa as a permissive inference: an inference of negligence that the jury is entitled to make, but is not required to make."). Even in 1936, Prosser concluded that "the greater number of courts treat res ipsa loquitur as giving rise to nothing more than a mere permissible inference, which neither creates a presumption, nor shifts any burden to the defendant." Prosser, *supra* note 28, at 245.

clothing.[106] Res ipsa was thus a way to impose strict liability on certain actors, such as product manufacturers, when these actors were predictably unable to prove that they exercised due care in all respects.[107] But this justification dissolved as the law evolved to impose some form of strict liability in the relevant categories of cases.[108]

Understood as a procedural doctrine in name and effect, res ipsa ran headlong into the doctrine that negligence can be proven by circumstantial as well as direct evidence.[109] The essence of circumstantial evidence is that it invites a logical abduction. It raises an inference. If res ipsa is a form of circumstantial evidence and raises merely an inference, the doctrine seems to have no independent function.[110] If, however, res ipsa creates a presumption, then it has independent utility, because other kinds of circumstantial evidence have a weaker legal effect. Circumstantial evidence sufficient to satisfy the conditions of res ipsa would be special. No persuasive reason has been offered to carve out res ipsa circumstantial evidence for special procedural treatment. But at least res ipsa would have some claim to recognition as an independent doctrine, some logical reason for being, if its effects differ from the effects accorded circumstantial evidence generally. Nevertheless, most jurisdictions indeed treat res ipsa as raising an inference,[111] and the reason for the doctrine is therefore obscure.

G. Relevance of Plaintiff's Conduct

In the first edition of his treatise, Wigmore specified that a limiting condition of res ipsa should be that the "injurious occurrence or coudition [sic] must have happened irrespective of any voluntary action at the time by the party injured."[112]

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[106] *See generally* Escola v. Coca Cola Bottling Co., 150 P.2d 436, 441 (Cal. 1944) (Traynor, J., concurring) (recognizing that use of res ipsa will ordinarily be sufficient to prove negligence in products liability but arguing for absolute liability instead; "It is needlessly circuitous to make negligence the basis of recovery and impose what is in reality liability without negligence."); Fleming James, Jr., *Proof of the Breach in Negligence cases (Including Res Ipsa Loquitur)*, 37 VA. L. REV. 179, 198-99 (1951) (observing that expansion of res ipsa "may well be attributable to the strong general trend towards strict liability and social insurance – a trend which is corroding a system of liability nominally based on fault"); DAVID G. OWEN, PRODUCTS LIABILITY LAW 98 (2d ed. 2008) (explaining that res ipsa served as important mechanism especially prior to the development of strict liability theories of products liability law in the 1960s).

[107] *See* RESTATEMENT (SECOND) OF TORTS § 328D cmt. b (AM. LAW INST. 1965) (noting that "[s]ome courts occasionally have applied 'res ipsa loquitur,' against certain defendants, as a rule of policy which goes beyond the probative effect of circumstantial evidence").

[108] *See, e.g.*, OWEN, *supra* note 106, at 24 (noting that the American Law Institute memorialized the rule of strict product liability in tort in § 402A of the Restatement (Second) of Torts, which it promulgated in 1965); Comment, *Res Ipsa Loquitur – A New Paradox in Blasting Cases*, 28 U. CHI. L. REV. 762, 771 (1961) (arguing that res ipsa was used to transition to a rule of strict liability in blasting cases).

[109] *See, e.g.*, KEETON ET AL., *supra* note 36, § 39, at 242 ("Negligence, like any other fact, may be proved by circumstantial evidence." (footnote omitted)); 1 SPEISER, *supra* note 14, § 1:7 (observing that circumstantial evidence is "competent and admissible" in negligence actions).

[110] *See* Carpenter, *supra* note 37, at 519 ("It is the belief of the writer that it is wholly useless and mischievous to have a distinct doctrine of *res ipsa loquitur* which has the effect merely of laying the foundation for a permissible inference of negligence, and that it best serves its excuse for being if it is treated as a presumption which shifts the burden of proof to the defendant.").

[111] *See supra* note 105 and accompanying text.

[112] 4 WIGMORE, *supra* note 35, § 2509, at 3557.

Res ipsa allows or requires a conclusion of both negligence and causation.[113] If the plaintiff's "voluntary action" was the sole legal cause of his or her own injury, then defendant's negligence could not have caused it. In this sense, specifying that the injury did not result from the plaintiff's action simply reinforces the other conditions of res ipsa designed to identify situations in which the defendant's negligence probably caused the plaintiff's injury. It would not matter whether plaintiff's action was negligent or careful, only that it was voluntary.

Some courts interpreted the plaintiff-contribution condition as directed to contributory negligence.[114] If contributory negligence bars recovery, then liability cannot be imposed on the defendant based on an inference of his or her negligence arising from the circumstances of an event when the plaintiff was also negligent and a legal cause of his or her own injury. But as the law shifted from a rule of contributory negligence to one of comparative negligence,[115] the condition requiring the absence of negligent conduct on the part of the plaintiff became anachronistic. Res ipsa could be used to establish the defendant's liability even if the plaintiff's recovery might be reduced through principles of comparative negligence. As a result, some courts eliminated the element from their canonical statement of the doctrine.[116] The Restatement Third takes the position that the doctrine concerning plaintiff contribution properly understood should continue to apply, but with a narrow scope: only when the plaintiff's conduct is a potential alternative cause of the plaintiff's injury is absence of plaintiff contribution an appropriate element of the

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[113] *See* RESTATEMENT (SECOND) OF TORTS § 328D cmt. b (AM. LAW INST. 1965) (observing that res ipsa allows a jury to "infer both negligence and causation from the mere occurrence of the event and the defendant's relation to it").

[114] For example, at one time, the relevant element in Wisconsin was "[a]bsence of contributory negligence by plaintiff." Turk v. H.C. Prange Co., 119 N.W.2d 365, 371 (Wis. 1963). *See also* Giles v. City of New Haven, 636 A.2d 1335, 1341-42 (Conn. 1994); Montgomery Elevator Co. v. Gordon, 619 P.2d 66, 70 (Colo. 1980); Cramer v. Mengerhausen, 275 Ore. 223, 229 n.2 (1976); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. h Reporter's Note (AM. LAW INST. 2010) (listing cases "that conclude that comparative negligence has displaced the requirement that the plaintiff disprove contribution").

[115] *See* VICTOR E. SCHWARTZ & EVELYN F. ROWE, COMPARATIVE NEGLIGENCE § 1.01 (5th ed. 2012) (describing a shift from contributory to comparative negligence); *see also* KEETON ET AL., *supra* note 36, §67, at 471 (same); Christopher J. Robinette & Paul G. Sherland, *Contributory or Comparative: Which is the Optimal Negligence Rule?*, 24 N. ILL. U. L. REV. 41, 41–43 (2003) (same).

[116] *See, e.g.*, Victory Park Apartments, Inc. v. Axelson, 367 N.W.2d 155, 159 n.3 (N.D. 1985) ("Numerous courts which have been faced with this issue have held that the adoption of comparative negligence in their respective States has abrogated the requirement that plaintiff establish lack of wrongful conduct on his own part before res ipsa loquitur may be applied."); *Turk*, 119 N.W.2d at 372 ("We therefore hold that [after enactment of the comparative negligence statute] this third element of freedom from contributory negligence is not a requirement for the application of *res ipsa loquitur* and that if the defendant is found negligent, plaintiff's contributory negligence, if any, goes to the question of comparison of negligence as between the plaintiff and the defendant."); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. h (AM. LAW INST. 2010) (noting that "[a] number of modern courts, noting that contributory negligence is no longer a full defense, have ruled that [the prerequisite that the plaintiff needs to exclude the possibility of the plaintiff's own contribution to the accident] is no longer appropriate").

doctrine, and then the plaintiff must affirmatively establish that absence to be entitled to res ipsa.[117]

H. Prevalence of Res Ipsa

A doctrine of res ipsa loquitur, though not referred to by that name, was recognized in England at least by 1863, in Byrne v. Boadle.[118] By 1905, Wigmore reported that the doctrine in the United States had "spread rapidly, although with much looseness of phrase and indefiniteness of scope."[119] By 1936, only two states, Michigan and South Carolina, had expressly rejected res ipsa as a distinct doctrine.[120] Michigan relented in 1987 and embraced its version of res ipsa by name.[121] But the Michigan Supreme Court explained that the concept of circumstantial evidence at the heart of res ipsa had long been accepted in the state.[122]

South Carolina takes the position that while it does not recognize res ipsa by name, it embraces the principle underlying res ipsa—that a plaintiff can prove the defendant's liability through circumstantial evidence relating to the relevant event:

> While our decisions uniformly state that the so called doctrine of res ipsa loquitur does not apply in this State, they have with equal uniformity recognized that negligence may be proved by circumstantial evidence as well as direct evidence. . . . Where circumstantial evidence is relied upon to establish liability, the plaintiff must show such circumstances as would justify the inference that his injuries were due to the negligent act of the defendant, and not leave the question to mere conjecture or speculation.[123]

Outside of the United States and England, Canada has expressly rejected the independent doctrine of res ipsa that it once recognized.[124] But like South Carolina,[125] it embraces the principle that circumstantial evidence relating to an event can be sufficient to establish liability.[126] The court explained:

> Whatever value res ipsa loquitur may have once provided is gone. Various attempts to apply the so-called doctrine have been more confusing than helpful. Its use has been restricted to cases where the facts permitted an inference of negligence and there was no other reasonable explanation for

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[117] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 17 cmt. h (AM. LAW INST. 2010).

[118] *See supra* Section II.A.

[119] 4 WIGMORE, *supra* note 35, § 2509, at 3556.

[120] Prosser, *supra* note 28, at 253–54.

[121] Jones v. Porretta, 405 N.W.2d 863, 872 (Mich. 1987) ("We, therefore, acknowledge the Michigan version of res ipsa loquitur which entitles a plaintiff to a permissible inference of negligence from circumstantial evidence.").

[122] *Id.* ("Whether phrased as res ipsa loquitur or 'circumstantial evidence of negligence,' it is clear that such concepts have long been accepted in this jurisdiction." (quoting Mitcham v. Detroit, 94 N.W.2d 388, 391 (Mich. 1959))).

[123] Chaney v. Burgess, 143 S.E.2d 521, 523 (S.C. 1965).

[124] Fontaine v. Ins. Corp. of British Columbia, [1998] 1 S.C.R. 424, paras. 26–27 (Can.).

[125] *Burgess*, 143 S.E.2d at 523.

[126] *See Fontaine*, 1 S.C.R. at para. 27.

> the accident. Given its limited use it is somewhat meaningless to refer to that use as a doctrine of law.
>
> It would appear that the law would be better served if the maxim was treated as expired and no longer used as a separate component in negligence actions. After all, it was nothing more than an attempt to deal with circumstantial evidence.[127]

In sum, the principle that the circumstances of an accident may constitute evidence that the defendant was negligent and caused the plaintiff's injury is universally recognized. Nearly but not quite all jurisdictions recognize a formal doctrine of res ipsa loquitur, though their formulations of it vary.[128] The doctrine in any formulation isolates specific circumstances as evidence of negligence and causation. Most jurisdictions treat this particular circumstantial evidence as permitting an inference of liability.[129] In these jurisdictions, therefore, satisfying the conditions of res ipsa permits an inference of liability from the circumstantial evidence provided by fulfillment of the conditions.[130]

All jurisdictions, however, also recognize that a verdict can be based on circumstantial or direct evidence and that neither kind of evidence is entitled to more weight than the other.[131] A factfinder may infer negligence and causation, therefore, from circumstantial evidence regardless of direct evidence.[132] An inference from circumstantial evidence on these issues is identical to an inference of negligence arising from satisfaction of the requirements of res ipsa.[133] Indeed, courts have held

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[127] *Id.* at paras. 26–27.

[128] 1 SPEISER, *supra* note 14, § 1:1; *id.* § 1:4.

[129] *See id.* § 1:4.

[130] *See id.* In some jurisdictions, circumstantial evidence cannot be used to establish the foundational elements of res ipsa, which, if established, constitute circumstantial evidence of the injury or accident. *See id.* § 2:3. These jurisdictions take this position on the ground that "[l]iability cannot result from an inference on an inference." *Id.*

[131] *See, e.g.*, DAN B. DOBBS ET AL., DOBBS' LAW OF TORTS § 166 (2d ed. 2019) ("Subject to the rules of evidence, circumstantial evidence is admissible at trial and often plays a major role in tort cases. Such evidence must of course be weighed case by case, but in general it is entitled to as much weight as direct evidence."); 29A AM. JUR. 2D *Evidence* §1345 (2019) ("No distinction is to be drawn between circumstantial and direct evidence, and one type of evidence is no more valuable than the other." (footnotes omitted)).

[132] *See* RESTATEMENT (SECOND) OF TORTS § 328D cmt. b (AM. LAW INST. 1965) ("Negligence and causation, like other facts, may of course be proved by circumstantial evidence.").

[133] The Restatement Second observes:

> Without resort to Latin the jury may be permitted to infer, when a runaway horse is found in the street, that its owner has been negligent in looking after it; or when a driver runs down a visible pedestrian, that he has failed to keep a proper lookout. When the Latin phrase is used in such cases, nothing is added. A res ipsa loquitur case is ordinarily merely one kind of case of circumstantial evidence, in which the jury may reasonably infer both negligence and causation from the mere occurrence of the event and the defendant's relation to it.

RESTATEMENT (SECOND) OF TORTS § 328D cmt. b (AM. LAW INST. 1965). Similarly, McCormick notes, "Most frequently, the inference called for by the [res ipsa] doctrine is one that a court would properly have held to be reasonable even in the absence of a special rule. Where this is so, res ipsa loquitur certainly need be viewed no differently from any other inference." DIX ET AL., *supra* note 32, at 678–79; *see also* Morejon v. Rais Constr. Co., 851 N.E.2d 1143, 1149 (N.Y. 2006) ("Res ipsa loquitur is a phrase

that a plaintiff who is not entitled to rely on res ipsa for one reason or another is nevertheless entitled to rely on circumstantial evidence of whatever kind to defeat a motion for summary judgment.[134] The question, then, is this: why have a res ipsa doctrine?

III. JUSTIFICATION

In normal operation, the practical effect of res ipsa is to trigger a jury instruction.[135] In a bench trial, a judge might rely upon res ipsa in determining liability, but because a judge presumably understands that in reaching a verdict he or she can always rely upon circumstantial evidence whatever it may be, a separate doctrine of res ipsa is superfluous.[136] No trial judge could be reversed for failing to draw an inference of negligence and causation from satisfaction of the res ipsa requirements if the judge would not be reversed for failing to draw that inference from the totality of circumstantial evidence.[137]

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that, perhaps because it is in Latin, has taken on its own mystique, although it is nothing more than a brand of circumstantial evidence.").

[134] *See, e.g.*, Neal v. Fort, No. 3:15-cv-425, 2017 U.S. Dist. LEXIS 18590, at *16 (M.D. Tenn. Feb. 9, 2017) (suggesting that res ipsa was inapplicable because plaintiff alleged specific acts of negligence and supported the allegations with evidence, but holding that plaintiff did not need to rely on res ipsa to defeat defendant's summary judgment motion because he presented "evidence sufficient to support the reasonable inference" that defendant acted negligently and caused plaintiff's injury); McClure v. Sunshine Furniture, 283 P.3d 323, 331 (Okla. Civ. App. 2012) (noting that "a plaintiff may prove negligence by circumstantial or direct evidence of acts from which negligence may be inferred without the aid of *res ipsa loquitur*"). When res ipsa is found inapplicable and the case proceeds to trial, a verdict for either party will be upheld if supported by the manifest weight of the evidence. *See, e.g.*, Lukmann v. Wenesco Rest. Sys., No. A-1451-14T2, 2016 N.J. Super. Unpub. LEXIS 1089, at *6 (N.J. Sup. Ct. App. Div. May 12, 2016) (per curiam) (affirming judgment on jury verdict for defendant where trial court ruled res ipsa inapplicable).

[135] *See* 1 SPEISER, *supra* note 14, § 5:31 ("Where the doctrine is applicable, the jury must be instructed that if the defendant fails to produce evidence sufficient to meet the inference of negligence arising from the doctrine the finding is to be for the plaintiff.").

[136] *See, e.g.*, Green v. Shah, 2015 IL App (1st) 141512-U, at *7 (Ill. App. Ct. Dec. 14, 2015) (affirming judgment for defendant in bench trial as supported by the manifest weight of the evidence where plaintiff asserted res ipsa and appellate court could not determine whether trial court found that plaintiff failed to prove the elements of res ipsa or that plaintiff did prove them but that defendant presented sufficient evidence to overcome the res ipsa inference).

[137] Just why res ipsa would ever be asserted in a case tried by the bench is not obvious. The reason may be that the law in some jurisdictions suggests that res ipsa is a claim, rather than a method of proving liability, even though courts routinely explain that the doctrine is evidentiary in nature and does not create a claim. *See, e.g.*, Singer v. Sunbeam Prods., Inc., No. 15 C 1783, 2015 U.S. Dist. LEXIS 97918, at *9–10 (N.D. Ill. July 28, 2015) (observing that though "the complaint lists *res ipsa loquitur* as a separate count, it 'is not a distinct theory of recovery, but a rule of evidence applicable to a theory of negligence'" (quoting Rice v. Burnley, 596 N.E.2d 105, 108 (Ill. App. Ct. 1992))); Guttormson v. ManorCare of Minot ND, LLC, No. 4:14-cr-36, 2015 U.S. Dist. LEXIS 180146, at *5 (D.N.D. Feb. 13, 2015) (noting that plaintiffs alleged res ipsa loquitur as a substantive claim even though it is an evidentiary rule); Tamura, Inc. v. Sanyo Elec., Inc., 636 F. Supp. 1065, 1067–68 (N.D. Ill. 1986) ("[P]laintiffs allege *res ipsa loquitur* as a separate claim for relief. It is not a legal claim but rather a species of the law of evidence."); 1 SPEISER, *supra* note 14, § 1:4 (collecting cases and noting that "[m]any courts view the doctrine as merely a rule of evidence . . . and not as a substantive rule of law, to be relied on as an independent ground of liability" (footnotes omitted)). Plaintiffs may therefore believe that they must assert res ipsa as a claim to use the doctrine even though they expect the case to be tried to the judge.

The procedural path of a res ipsa charge is more complicated than it might seem at first glance. When a party requests a res ipsa instruction, the task of the judge is to determine whether a reasonable juror could find that the requirements of res ipsa are satisfied.[138] For example, if the judge in a jurisdiction that requires exclusive control concludes that no reasonable juror could find that the instrumentality causing the plaintiff's injury was in the defendant's exclusive control at the relevant time, the judge must deny the charge. To justify giving the charge, therefore, the evidence has to be sufficient to allow a jury to find all of the conditions of res ipsa satisfied. When the evidence is sufficient, the proponent of the instruction is entitled to it.[139] But satisfaction of the conditions does not ordinarily compel a jury to find in favor of the plaintiff. As explained above, in most jurisdictions res ipsa establishes only an inference.[140] When a jury returns a general verdict for the defendant, therefore, the implication is that the jury may have found that one or more of the conditions of res ipsa were unsatisfied and the evidence did not otherwise prove the plaintiff's case—the judge, after all, concluded before giving the instruction only that a reasonable juror could find the conditions satisfied—or that all of the conditions were satisfied but that the inference arising from res ipsa was not strong enough in light of any contrary evidence to warrant a verdict for the plaintiff.[141] To repeat, an inference is merely permissive by nature.[142]

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[138] *See* 1 SPEISER, *supra* note 14, § 5:25 (noting that the determination of whether the doctrine applies "must be made in the first instance by the trial court"); *see also* Maroules v. Jumbo, Inc., 452 F.3d 639, 643 (7th Cir. 2006) ("Whether the doctrine of res ipsa loquitur applies in any given negligence case is a mixed question of law and fact. The question of law is whether the plaintiff's evidence includes all of the underlying elements of res ipsa loquitur. The determination for the trier of fact is whether the permissible inference is to be drawn." (citations omitted)).

[139] For example, the Illinois Supreme Court has observed:

> The threshold for giving an instruction in a civil case is . . . not a high one. Generally speaking, litigants have the right to have the jury instructed on each theory supported by the evidence. Whether the jury would have been persuaded is not the question. All that is required to justify the giving of an instruction is that there be some evidence in the record to justify the theory of the instruction.

Heastie v. Roberts, 877 N.E.2d 1064, 1082 (Ill. 2007); *see also* Vespe v. DiMarco, 204 A.2d 874, 879 (N.J. 1964) ("We do not believe a trial judge discharges his burden fully when he fails to instruct the jury on the doctrine of *res ipsa loquitur* and its effect on the case when it is clearly applicable. In such cases he should advise the jury that from the evidence introduced by the plaintiff as to the manner in which the accident happened, they may infer causative negligence on the part of the defendant."); 1 SPEISER, *supra* note 14, § 5:31 ("Where the doctrine is applicable, the jury must be instructed that if the defendant fails to produce evidence sufficient to meet the inference of negligence arising from the doctrine the finding is to be for the plaintiff."). The mandatory instruction may be "conditional," in the sense that the jury is told that "if they do find the existence of these [res ipsa] elements then they may draw the inference of negligence." Sharp v. Labrec, Inc., 642 N.E.2d 990, 993 (Ind. Ct. App. 1994).

[140] *See supra* Section II.F.

[141] If a judge correctly finds that the evidence is sufficient to instruct the jury on res ipsa, the evidence is necessarily sufficient to preclude judgment notwithstanding a verdict in favor of the plaintiff. *See, e.g.*, K-Mart Corp. v. Gipson, 563 N.E.2d 667, 672 (Ind. Ct. App. 1990) ("It is axiomatic that since there was sufficient evidence to support giving the *res ipsa loquitur* instruction, there was sufficient evidence to withstand [defendant's] motion for judgment on the evidence."); Anderson v. Service Merchandise Co., Inc., 485 N.W.2d 170, 176 (Neb. 1992).

[142] *See supra* text accompanying notes 99–100.

As to timing, the judge's decision on whether to charge the jury on res ipsa necessarily depends upon evidence. Evidence sufficient to permit a jury to find in favor of the plaintiff on the basis of res ipsa may be present in the discovery record on a motion for summary judgment. But the court may instead choose or even be compelled to wait until trial to determine whether evidence supports a res ipsa instruction.[143]

Although a res ipsa charge could be requested by either party, it is requested almost exclusively by plaintiffs, and for good reason.[144] If the defendant obtains the charge and the jury finds that the elements of res ipsa are not satisfied, the jury may nevertheless return a verdict for the plaintiff based on the standard circumstantial evidence instruction that is always given.[145] The res ipsa charge in some sense gives the jury a second opportunity to find for the plaintiff. Moreover, if the res ipsa instruction creates a psychological bias in favor of the plaintiff, as we explain below,[146] the defendant would naturally resist it. Nevertheless, one could imagine a defendant reasoning that if the jury's attention is focused on the elements of res ipsa and the jury concludes they are not satisfied, the jury will be inclined to disregard the circumstantial evidence instruction and return a verdict for the defendant based on the unsatisfied res ipsa elements. But defense counsel apparently do not generally reason in this way, probably because the risks of the instruction far outweigh the rewards. Our search uncovered only one unusual case in which a defendant requested a res ipsa charge,[147] though undoubtedly a few others exist. Almost always the plaintiff requests the charge, and the defendant often opposes it.

Our theoretical explanation and empirical impression that plaintiffs seek res ipsa instructions is bolstered by anecdotal evidence. Prominent plaintiff's trial lawyer

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[143] *See, e.g.*, Elsawi v. Saratoga Springs City Sch. Dist., 141 A.D.3d 921, 923 (N.Y. App. Div. 2016) (holding that trial court's decision to issue a res ipsa instruction was premature where it was made before evidence was adduced at trial); *cf.* Weeks v. St. Peter's Hosp., 128 A.D.3d 1159, 1161–62 (N.Y. App. Div. 2015) (allowing the plaintiff to use the res ipsa doctrine to counter defendant's summary judgment motion even though "the proof adduced at trial may be insufficient to establish the required elements of res ipsa loquitur, thereby rendering the submission of such a charge to the jury unwarranted" (citation omitted)).

[144] *See infra* note 147 and accompanying text.

[145] *See supra* notes 131–133 and accompanying text.

[146] *See infra* Section IV.

[147] In *Cavero v. Franklin General Benevolent Society*, a child died during a tonsillectomy. Cavero v. Franklin Gen. Benevolent Soc'y, 223 P.2d 471, 472 (Cal. 1950). His father sued the surgeons and the hospital as the employer of the nurse-anesthetist. *Id.* The surgeons requested and received a res ipsa instruction applicable against them and effectively the anesthetist. *Id.* at 476. The court gave the instruction, and the jury returned a verdict in favor of the surgeons and against the hospital (for vicarious liability under the doctrine of respondeat superior). *Id.* at 472, 475–76. The hospital appealed, and the plaintiff sought to uphold the use of the instruction. *Id.* at 472, 477. The California Supreme Court concluded that the instruction was proper. *Id.* at 477. The instruction essentially permitted the jury to exonerate one set of defendants and assign liability to another defendant whose negligence was more likely to have caused the harm. *Id.* The instruction provided in part that the defendants could "not be held blameless except upon a showing . . . of such care in all possible respects as necessarily to lead to the conclusion that the accident could not have happened from want of care." *Id.* at 476 n.4. In other words, the jury was instructed to hold any defendant liable who did not prove his or her exercise of due care. *Id.* The implication is that some defendants sought a res ipsa instruction when they believed that they could prove their exercise of due care and another defendant could not prove his. Whether the surgeons would have requested a res ipsa charge if they had been the only defendants is uncertain.

Melvin Belli, the "King of Torts,"[148] observed: "Res Ipsa Loquitur is a crutch. So when trying an otherwise 'crippled case,' which badly needs its support, I use the crutch constantly during the entire trial. From the voir dire to and including argument, the expression 'res ipsa loquitur' is mentioned as frequently as possible."[149]

That plaintiffs seek a res ipsa instruction suggests only that they benefit from it, not why they benefit. The legitimate purpose of giving any jury charge is that it explains and thus clarifies the jury's obligation, thereby improving the quality of jury decision-making.[150] The claim that a res ipsa instruction improves the quality of decision-making has long been at least implied by courts, and modern cognitive science might provide some support for it.

Courts have justified giving the res ipsa instruction on the ground that it reduces confusion: absent the instruction, jurors will not realize that they may infer negligence and causation from the circumstances surrounding the accident.[151] Courts express this idea in various ways, but their core concept is that a res ipsa instruction clarifies the jurors' task. If a res ipsa instruction clarifies matters for jurors, then giving the instruction should improve the accuracy of jury verdicts. Accuracy in this context refers to the probability that a jury verdict is correct.[152] We define "correctness" from a procedural standpoint.[153] A correct result is one that would be

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[148] *See, e.g.*, Richard Severo, *Melvin Belli Dies at 88; Flamboyant Lawyer Relished His Role as King of Torts*, N.Y. TIMES (July 11, 1996), http://www.nytimes.com/1996/07/11/us/melvin-belli-dies-at-88-flamboyant-lawyer-relished-his-role-as-kingof-torts.html [https://perma.cc/N8TL-PAGG] ("In a profession storied as much for its histrionics as for its seriousness of purpose, Mr. Belli was a superstar.").

[149] 1 MELVIN M. BELLI, MODERN TRIALS § 7.1, at 396 (2d ed. 1982). Belli went on to observe that he was careful to explain to the jury in simple language the meaning of the term, lest the jury believe that "Res Ipsa Loquitur" is the name of a Mexican witness that he failed to call to testify despite promising to do so. *Id.* at 396–97.

[150] One scholar explains this as follows:

> No one would contend that the purpose of instructions should be to prejudice a case in favor of one party or the other. Nor would it be contended that the purpose of an explanatory instruction should be the direction of the jury to proceed to find for one party or the other without respect to the merits of the issue as supported by the law and the evidence. The purpose is to explain the issue so that its significance can be understood, intelligently considered and fairly determined.

Leon Green, *Blindfolding the Jury*, 33 TEX. L. REV. 273, 281–82 (1955).

[151] *See, e.g.*, Grajales-Romero v. Am. Airlines, Inc., 194 F.3d 288, 296 n.8 (1st Cir. 1999) ("The instruction assists jurors in the analysis of a particular kind of negligence/circumstantial evidence case."); Connors v. Univ. Assocs. in Obstetrics & Gynecology, Inc., 4 F.3d 123, 129 (2d Cir. 1993) (observing that the "res ipsa instruction was needed to allow the jury to make the inference" of negligence); Mireles v. Broderick, 827 P.2d 847, 849 (N.M. Ct. App. 1992), *rev'd*, 872 P.2d 863 (N.M. 1994) (noting that the res ipsa instruction serves "to inform the jury that it is permitted to draw a certain type of inference—an inference that might otherwise be considered improperly speculative"); George Foltis, Inc. v. City of New York, 38 N.E.2d 455, 464 (N.Y. 1941) ("[T]he jury cannot pass intelligently upon the question whether the inference of negligence should be drawn, unless, in language which it can understand, it receives an explanation of why the evidence would permit an inference of negligence, and why the jury may reject such inference if it sees fit.").

[152] *See* Bruce D. Spencer, *Estimating the Accuracy of Jury Verdicts*, 4 J. EMPIRICAL LEGAL STUD. 305, 306 (2007).

[153] *See id.* (describing the "procedural viewpoint" in interpreting the correctness of jury verdicts); *cf.* Chantelle M. Baguley et al., *Deconstructing the Simplification of Jury Instructions: How Simplifying the*

reached by jurors who assimilate all of the evidence presented, avoid consideration of extraneous information, understand the relevant law as presented in the instructions, apply the instructions properly, and process information rationally.[154] These jurors might be said to reach an objectively reasonable conclusion. Accuracy is a fundamental aim of trial, perhaps the fundamental aim. If a res ipsa instruction benefits plaintiffs by increasing accuracy, then it serves not only the interests of plaintiffs but also those of the public. Conversely, because the plaintiff ordinarily bears the burden of persuasion, confusion that takes the form of the jury failing to realize that it can find in favor of the plaintiff based on the evidence adduced benefits the defendant. The jury returns a verdict for the defendant because of its misunderstanding. Under this rationale, confusion causes errors in one direction—in favor of the defendant—and as noted above, this is one reason defendants would not seek a res ipsa instruction.

Modern cognitive science can provide some insights into the effects of jury instructions. Human beings process information through two cognitive processes. One process, sometimes called System 1, peripheral, or heuristic processing, "operates automatically and quickly, with little or no effort and no sense of voluntary control."[155] In short, System 1 thinking is fast. The second process, sometimes called System 2, central, or systematic processing, "allocates attention to the effortful mental activities that demand it, including complex computations."[156] Compared to System 1, System 2 thinking is slow. It is deliberative and associated with concentration.[157] It is the process that society expects jurors to use in reaching conclusions. Because human beings have a finite amount of mental energy, both systems of thinking, though especially System 1 thinking, rely on cues, habits, and

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Features of Complexity Affects Jurors' Application of Instructions, 41 L. & HUM. BEHAV. 284, 286 (2017) (defining "legally correct verdicts" as "verdicts that correspond to [jurors'] decisions about the issues, in the way outlined in the instructions").

[154] *See* Baguley et al., *supra* note 153, at 284. Our definition of correctness differs from that based on an "omniscient viewpoint," which is the decision "that would be reached by an impartial and rational observer with perfect information (including complete and correct evidence) and complete understanding of the law." Spencer, *supra* note 152, at 307. A decision can be correct under the procedural viewpoint but incorrect under the omniscient viewpoint because the trial process does not yield perfect information. Indeed, particularly in the context of a case based largely or entirely on circumstantial evidence, perfect information is not presented. In the sense we use the term, a decision may be correct based on the evidence presented at trial but would be incorrect if jurors had been given additional evidence that might or might not have been available to the litigants. We adopt the procedural viewpoint because our objective is to determine the extent to which different jury instructions affect jurors' assessment of the actual circumstantial evidence presented.

[155] DANIEL KAHNEMAN, THINKING, FAST AND SLOW 20 (2011); *see* Joel Cooper et al., *Complex Scientific Testimony: How Do Jurors Make Decisions?*, 20 L. & HUM. BEHAV. 379, 381 (1996) ("[In peripheral or heuristic processing,] [i]nstead of attending to the quality and validity of the arguments, we resort to shortcuts, or heuristic decision rules, to determine the value of the message. We tend to rely on a variety of factors associated with the message or the messenger.").

[156] KAHNEMAN, *supra* note 155, at 21; *see* Cooper et. al, *supra* note 155, at 381 ("In systematic or central processing, people scrutinize a communication, analyze its content, and deduce its validity." (citation omitted)).

[157] KAHNEMAN, *supra* note 155, at 21–23.

heuristics, or cognitive shortcuts.[158] People are "cognitive misers."[159] They "use inferential shortcuts, or heuristics, to go from what they know to what they need to learn in order to classify, predict, or attribute responsibility."[160] A simple question is substituted for a difficult one. Reliance on heuristics frequently results in sound decisions, but it can create "cognitive illusions" that produce erroneous judgments.[161] Daniel Kahneman notes that "[s]ubstitution of questions inevitably produces systematic errors."[162] Reliance on heuristics can lead to biases, or systematic deviations from a norm of rational decision-making the thinker is prone to make in specified circumstances.[163] More specifically, bias in this context can be understood as a preference for a party that is not based on a neutral evaluation of the evidence. We are thus defining "bias" prescriptively, arguing that the decision of informed, attentive, and rational jurors is a desirable norm.[164]

Cognitive scientists have found that jurors struggle to understand complex instructions.[165] When jurors do not understand instructions, they shift from central processing to peripheral processing.[166] In general, people are more likely to engage in central processing when they have the ability and motivation to do so, and confusion reduces their ability to engage in this kind of processing.[167] The quality of decision-making declines when jurors shift from central to peripheral processing, which in this setting means that the accuracy of jurors' decisions declines.

An argument in favor of a res ipsa instruction based on the insights of cognitive science is that the standard evidentiary instructions are complex, thereby inducing jurors to shift to peripheral processing, and that the res ipsa instruction improves their comprehension, thereby inducing them to engage in central processing. Both premises are questionable, however. The complexity of standard evidentiary instructions is easily overstated, but even if jurors struggle to understand them, the addition of another pattern instruction alongside res ipsa may not lessen confusion.

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[158] *See* FEIGENSON, *supra* note 70, at 45–46 (noting that people "typically use these mental tools to make relatively rapid, even 'automatic,' judgments, but they are also involved in the more deliberate thinking that characterizes at least some juror decision making").

[159] SUSAN T. FISKE & SHELLEY E. TAYLOR, SOCIAL COGNITION: FROM BRAINS TO CULTURE 14 (2008); *see also* Shelley E. Taylor, *The Interface of Cognitive and Social Psychology*, *in* COGNITION, SOCIAL BEHAVIOR, AND THE ENVIRONMENT 189, 194 (John H. Harvey ed., 1981); Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2, 21 (2010).

[160] FEIGENSON, *supra* note 70, at 46.

[161] *See* KAHNEMAN, *supra* note 155, at 27–28.

[162] *Id.* at 130.

[163] *See id.* at 25.

[164] *See* Govind Persad, *When, and How, Should Cognitive Bias Matter to Law?*, 32 L. & INEQ. 31, 36 (2014) ("Legal commentators should be clear about whether they define bias descriptively or prescriptively. Employing a prescriptive definition of bias requires an argument that the model from which biased individuals' behavior diverges is normatively privileged." (footnote omitted)).

[165] *See, e.g.*, Reifman et al., *Real Jurors' Understanding of the Law in Real Cases*, 16 L. & HUM. BEHAV. 539, 540 (1992); Bradley Saxton, *How Well Do Jurors Understand Jury Instructions? A Field Test Using Real Juries and Real Trials in Wyoming*, 33 LAND & WATER L. REV. 59, 65–77 (1998); Walter W. Steele & Elizabeth G. Thornburg, *Jury Instructions: A Persistent Failure to Communicate*, 67 N.C. L. REV. 77, 78 (1988); Amiram Elwork et al., *Toward Understandable Jury Instructions*, JUDICATURE, Mar.–Apr. 1982, at 432, 434.

[166] *See* Baguley et al., *supra* note 153, at 285.

[167] *Id.*

Moreover, the argument depends upon the assumption that cognitive errors born of confusion disproportionately, if not exclusively, benefit defendants, an assumption that is also questionable.

One strain of the clarification rationale is that, absent a res ipsa charge, jurors will not understand that they are permitted to find negligence and causation based on the circumstances surrounding the event.[168] But the standard evidentiary instructions, which are always given, explicitly tell jurors that they may base a decision on circumstantial evidence, which of course includes the circumstantial evidence relating to the circumstances surrounding the accident. For example, the Vermont model civil jury instructions provide as follows:

> There are two kinds of evidence: Direct and circumstantial. Direct evidence is testimony by a witness about what a witness personally saw or heard or did. Circumstantial evidence is indirect evidence, that is, proof of one or more facts from which one can find another fact. You may consider both direct and circumstantial evidence in deciding this case. The law permits you to give equal weight to both, but it is for you to decide how much weight to give to any evidence.[169]

The argument that jurors need to be told twice that they may return a verdict for the plaintiff based on circumstantial evidence is questionable.

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[168] *See* Kevin J. Heller, *The Cognitive Psychology of Circumstantial Evidence*, 105 MICH. L. REV. 241, 252 (2006) (indicating that jurors "consistently overvalue direct evidence and undervalue circumstantial evidence" in criminal cases). But the issue under investigation is the content of jury instructions both of which permit the use of circumstantial evidence in civil cases and are given when direct evidence is lacking. The studies do not demonstrate that one instruction induces jurors to make better use of circumstantial evidence.

[169] VT. CIV. MODEL JURY INSTR. § E (2008); *see also* 4 MODERN FED. JURY INSTR.-CIV. 74–2 (2019) ("Circumstantial evidence is of no less value than direct evidence; for, it is a general rule that the law makes no distinction between direct evidence and circumstantial evidence but simply requires that your verdict must be based on (*e.g.*, a preponderance of) all the evidence presented."); PA. SUGGESTED STANDARD CIV. JURY INSTR. § 4.00 (2010) ("The evidence presented to you may be either *direct* or *circumstantial evidence*. *Direct evidence* is testimony about what a witness personally saw, heard, or did. *Circumstantial evidence* is testimony about one or more facts that logically lead you to believe the truth of another fact. You should consider both *direct* and *circumstantial evidence* in reaching your verdict. You may decide the facts in this case based upon circumstantial evidence alone. I will give you an example of the difference between direct and circumstantial evidence. *[insert example]*."); R.I. MODEL JURY INSTR. CIV. § 104 (2002) ("Since your role is to decide the facts of the case you should be aware that facts may be proved by two types of evidence. One type is direct evidence and the other is indirect evidence. When we speak of indirect evidence we are speaking of what is often called circumstantial evidence or circumstantial proof. Direct evidence is testimony by a witness about what the witness personally saw or heard or did. Circumstantial proof, that is, indirect proof, means proof of certain facts from which one can find or determine another fact . . . You may consider both direct and circumstantial evidence in deciding this case. If you believe that certain or particular circumstances or facts have been proved at trial then you may accept as true any fact which you believe is logically and reasonably deduced from those facts or circumstances. The law permits the jury to give as much weight and consideration to facts proved through circumstantial evidence as those proved by direct evidence. Where direct evidence in support of the truth of a particular fact is at odds with the circumstantial evidence, you are free to give as much weight or as little to the circumstantial proof if you believe that the evidence and your assessment of the credibility of the witnesses warrant it. Evidence need not be discounted simply because it is circumstantial or indirect.").

A second strain of the rationale is based on internal inconsistency among instructions, and it is more substantial. States typically include in their standard instructions some version of the statement that the "mere happening of an accident. . . raises no presumption of negligence"[170] and that the jury may not base a decision on "speculation" or "conjecture."[171] The argument is that these instructions will lead jurors to believe incorrectly that they are not permitted to return a verdict for the plaintiff based on circumstantial evidence surrounding the accident. The relevant confusion is confusion about the law, and a res ipsa charge reduces that confusion by instructing the jury that they may indeed infer negligence and causation from this evidence.[172] One response to this argument is that if the jury understands the "mere happening" and "speculation" instructions to forbid reaching a decision based on event-specific circumstantial evidence, further instructing the jury that they may indeed reach such a decision hardly clarifies matters. The jurors are told they can do what they are told they cannot do.

Another response is that any confusion resulting from tension in the instructions can be reduced by further explaining the "mere happening" and "speculation" instructions. South Carolina, for example, which as previously noted does not recognize a formal doctrine of res ipsa but adopts its animating principle,[173] instructs the jury as follows:

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[170] S.C. REQUESTS TO CHARGE-CIV. § 20-1 (2016); *see also* N.M. UNIFORM JURY INSTR.-CIV. § 13–1616 (2019) ("The mere happening of an accident is not evidence that any person was negligent. Neither the fact that damages are claimed due to the accident nor the fact that this lawsuit was filed is evidence of any negligence on the part of any person."); IOWA CIV. JURY INSTR. § 700.8 (2018) ("The mere fact an accident occurred or a party was injured does not mean a party was [negligent] [at fault]."). The Iowa instruction, however, may not be used if the res ipsa loquitur instruction is submitted. *Id.* § 700.8 cmt.

[171] N.M. UNIFORM JURY INSTR.- CIV. § 13–2005 (2019) ("Your verdict should not be based on speculation, guess or conjecture."); *see also* OR. UNIFORM CIV. JURY INSTR. § 5.03 (2015) ("In deciding this case, you are to consider all the evidence that you find worthy of belief. It is your duty to weigh the evidence calmly and dispassionately and to decide this case on its merits. All parties are equal before the law, so do not allow bias, sympathy, or prejudice to have any place in your deliberations. Do not decide this case on guesswork, conjecture, or speculation."); OKLA. UNIFORM JURY INSTR.-CIV. NO. 3.3 (2009) ("Your decision must be based upon probabilities, not possibilities. It may not be based upon speculation or guesswork.").

[172] For example, in *Mireles v. Broderick*, the court noted the uniform jury instruction prohibiting a verdict based on speculation and reasoned that the res ipsa instruction serves "to inform the jury that it is permitted to draw a certain type of inference—an inference that might otherwise be considered improperly speculative." Mireles v. Broderick, 827 P.2d 847, 849 (N.M. Ct. App. 1992), *rev'd*, 872 P.2d 863 (N.M. 1994). The court concluded that, in light of the uniform instruction, res ipsa instructions "give the jury a green light to cross what we shall call the 'res ipsa bridge' from the predicate facts to what might otherwise be considered a too-speculative conclusion regarding the probable causes of the injury." *Id.* at 851. Confusion is sometimes alleged to result from conflict between a res ipsa instruction and instructions other than a "mere happening" or "speculation" charge. *See, e.g.*, Kodjavakian v. Cheesecake Factory, Inc., No. 1-17-2024, 2018 Ill. App. Unpub. LEXIS 2166, at *12, *21–22 (Ill. App. Ct. Dec. 7, 2018) (rejecting plaintiff's argument that conflict between a res ipsa instruction and an instruction permitting an inference of due care from evidence "that the defendants were persons of careful habits" confused the jury), *cert. denied*, 119 N.E.3d 1050 (Ill. 2019). The primary sources of alleged inter-instruction confusion, however, concern the "mere happening" and "speculation" charges, and we focus on them.

[173] *See supra* text accompanying note 123.

> In a civil case such as this, proof of circumstances warranting a given inference is sufficient because proof of a certainty is not required in a civil suit. In civil actions, every other reasonable conclusion need not be excluded. But the circumstances established, if any, in the minds of the jury must have sufficient probative force to produce a reasonable and probable conclusion and not a mere conjecture. The conclusion reached must be in the minds of the jury the most probable and reasonable one. So, if there are several reasonable inferences that may be drawn from all the circumstances and evidence, it is for you, the jury, to say which is established by the greater weight of the evidence.[174]

To be sure, asking the jury to distinguish between "a reasonable and probable conclusion" on the one hand and "mere conjecture" on the other is asking a lot, but it is less than asking the jury to understand instructions that tack a res ipsa charge onto "mere happening" and "speculation" charges.

For example, Colorado law provides for a general instruction that "[t]he occurrence of an accident does not raise any presumption of negligence on the part of either the plaintiff or the defendant."[175] But if the res ipsa instruction applies, the "occurrence" instruction may not be given.[176] Theoretically, the "occurrence" instruction might be omitted in any case in which circumstantial evidence will be critical even if a res ipsa instruction is not given. Indeed, Colorado does not limit to res ipsa cases the circumstances in which the "occurrence" instruction is to be omitted but holds that the "instruction should not be given in cases where the happening of an accident does give rise to a presumption of negligence," citing a res ipsa case as merely one example.[177]

A third strain of the clarification rationale is that jurors struggle to follow a chain of logical inference without guidance. This strain does not depend upon confusion resulting from the interaction of potentially conflicting instructions. It asserts rather that jurors cannot readily follow the circumstantial evidence instruction in reaching a verdict. Thus, having been instructed on the meaning of circumstantial evidence, a concept that depends upon abductive reasoning, jurors will not be able to follow it. As one court asserted:

> [I]t is quite possible that without [a res ipsa] instruction the jury would not realize that it is permissible to draw the inference of defendant's negligence from the fact that in common experience the accident in question would not ordinarily occur in the absence of negligence on the part of the defendant.[178]

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[174] S.C. REQUESTS TO CHARGE-CIV. § 1-4 (2016) (emphasis added).

[175] COLO. PATTERN CIV. JURY INSTR. 9:12 (2019).

[176] *See id.* at Notes on Use 7 ("If the doctrine of res ipsa loquitur applies, it is reversible error for the court to instruct the jury that the mere happening of an accident does not give rise to a presumption of negligence." (citation omitted)); *see also* Dover Elevator Co. v. Swann, 638 A.2d 762, 776 n.5 (Md. 1994) (noting a conflict between res ipsa and "mere occurrence" instructions and suggesting that where res ipsa is potentially applicable, the judge may not give a "mere occurrence" instruction -- whether he gives res ipsa instruction or allows counsel to argue for inference of negligence without res ipsa instruction).

[177] COLO. PATTERN CIV. JURY INSTR. 9:12 Notes on Use 1 (2019).

[178] Powell v. Moore, 364 P.2d 1094, 1100 (Or. 1961).

One can doubt that jurors follow any instructions, or at least certain kinds of instructions.[179] Of course, if jurors pay no attention to instructions, the benefits of a res ipsa instruction as a remedy for a general circumstantial evidence charge evaporate: the cure, as well as the disease, would be illusory. But the psychological literature suggests that jurors take their responsibility seriously.[180] Jurors fail to follow instructions not because they choose to ignore the charges, but because they do not understand the charges.[181] Jurors do tend to follow simple instructions stated in plain language, however.[182] Judge Frank famously observed:

> Time and money and lives are consumed in debating the precise words which the judge may address to the jury, although everyone who stops to see and think knows that these words might as well be spoken in a foreign language—that, indeed, for all the jury's understanding of them, they are spoken in a foreign language.[183]

The standard circumstantial evidence instruction is simple and clear. The idea that jurors do not understand it or are incapable of reasoning inferentially without a step-by-step guide is farfetched. Indeed, consider an example of circumstantial evidence often used in one form or another in pattern jury instructions:

> Assume that when you came into the courthouse this morning the sun was shining and it was a nice day. Assume that the courtroom blinds were drawn and you could not look outside. As you were sitting here, someone walked in with an umbrella which was dripping wet. Then a few minutes later another person also entered with a wet umbrella. Now, you cannot look outside of the courtroom and you cannot see whether or not it is raining. So you have no direct evidence of that fact. But on the combination of facts which I have asked you to assume, it would be reasonable and logical for you to conclude that it had been raining.[184]

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[179] *See, e.g.*, FEIGENSON, *supra* note 70, at 105 ("Many studies using many different types of cases have tended to support the common perception that jurors are reluctant or unable to follow instructions to disregard inadmissible evidence."); Nancy S. Marder, *Bringing Jury Instructions into the Twenty-first Century*, 81 NOTRE DAME L. REV. 449, 472–73 (2006) (noting judicial skepticism "on whether jurors listen to instructions no matter how well drafted they are").

[180] *See, e.g.*, VALERIE P. HANS & NEIL VIDMAR, JUDGING THE JURY 16 (1986) (discussing how the jury "took their task extremely seriously").

[181] *See* Steele & Thornburg, *supra* note 165, at 83–87 (summarizing social science research showing "a significant gap between what judges instruct and what jurors understand").

[182] *Cf. id.* (noting studies showing that "juror comprehension can be improved dramatically if jury instructions are rewritten to improve their vocabulary, syntax, and organization").

[183] JEROME FRANK, LAW AND THE MODERN MIND 181 (6th prtg. 1949).

[184] MODERN FED. JURY INSTR.-CIV. 74-2 (2019); *see also* MICH. MODEL CIV. JURY INSTR. 3.10 (2007) (referring to a raincoat with small drops of water); 8 TENN. PRAC. PATTERN JURY INSTR.-CIV. 2.02 (2019) (referring to a raincoat with drops of water and a wet umbrella). Similarly, the Alaska Civil Pattern Jury Instructions explain:

> Circumstantial evidence would be a witness testifying that the ground was bare when the witness went to sleep at 10:00 p.m., but the next morning when the witness awoke and looked out the window, the witness saw that the ground was covered with snow. From this evidence you could [] conclude that snow fell during the night.

Inferring that rain is falling outside from dripping umbrellas inside requires no intellectual feat. The instruction only serves to give the dripping umbrellas a name—circumstantial evidence—and to authorize the jurors to engage in reasoning that is natural to them. Certainly, the evaluation of circumstantial evidence in a given case can be challenging. The issue here is not the application of inferential reasoning to a set of facts, but the process of inferential reasoning itself.[185] One can argue that jurors would engage in this kind of reasoning even without explicit permission to do so and possibly even if they were forbidden from using it. The ability to produce knowledge by thinking is an innate human capacity.[186] If the law prohibited reliance on circumstantial evidence in reaching a verdict, the effect would not be to prevent jurors from relying on it, but to require courts to set aside jury verdicts.

The arguments in favor of a res ipsa instruction are weak in theory, but they exist.[187] If a res ipsa instruction could do no harm in promoting verdict accuracy, it could be justified by the mere possibility, however slight, of doing some good. But as we explain in the next section, a res ipsa instruction may do real harm.

IV. COMPETING HYPOTHESIS

Instead of clarifying the jury's task and thereby increasing accuracy, giving a res ipsa instruction along with a circumstantial evidence instruction may bias verdicts in favor of plaintiffs and thereby decrease accuracy. The American civil justice system is founded on the jury as primary arbiter of litigated disputes.[188] Courts and legal commentators have long understood that what the judge says can influence jurors' decisions, and judges are expected to avoid exerting undue influence on jurors. For example, the Supreme Court has observed:

The influence of the trial judge on the jury "is necessarily and properly of great weight" and "his lightest word or intimation is received with deference, and may prove controlling." This Court has accordingly emphasized the duty of the trial judge to use great care that an expression of opinion upon the evidence "should be so given

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ALASKA CIV. PATTERN JURY INSTR. 1.06 (2017).

[185] See Norbert M. Seel, *Inferential Learning and Reasoning*, *in* ENCYCLOPEDIA OF THE SCI. OF LEARNING (Norbert M. Seel ed., 2012), https://link.springer.com/referenceworkentry/10.1007%2F978-1-4419-1428-6_583 [https://perma.cc/N2JK-NJLJ], for an explanation of the types of reasoning involved in inferential learning, including deductive, inductive, and abductive reasoning.

[186] *See* ANTONIN SCALIA & BRYAN A. GARNER, MAKING YOUR CASE: THE ART OF PERSUADING JUDGES 41 (2008) ("[A]ll human beings are born with a capacity for logical thought. It is something we all have in common.").

[187] *See* Mireles v. Broderick, 827 P.2d 847, 850 (N.M. Ct. App. 1992), *rev'd*, 872 P.2d 863 (1994) ("Perhaps the best explanation for having a res ipsa instruction is that it rebuts the view that the expressed inference is too speculative to be permissible.").

[188] *See* Stephan Landsman, *The Civil Jury in America*, 62 L. & CONTEMP. PROBS. 285, 288 (1999) ("[T]he United States relies on a robustly adversarial form of justice. This means that Americans trust neutral and passive bodies to render decisions on the basis of the sharp clash of proofs presented by adversaries in a highly structured forensic setting. The jury is the most neutral and passive decisionmaker available." (footnote omitted)).

as not to mislead, and especially that it should not be one-sided"; that "deductions and theories not warranted by the evidence should be studiously avoided."[189]

Some states, indeed, prohibit the judge from commenting on the evidence.[190] The idea is that judicial commentary derogating or endorsing particular evidence points the jurors to a conclusion favored by the judge, undermining their role as the finder of fact.[191]

Legal commentators have cautioned that jury instructions, even if they properly state the law, can improperly lead jurors to a particular conclusion. For example, Lloyd Wiehl, a Washington state judge, explains as follows:

> Proposed instructions advising the jury that it may or should consider certain specific evidence in arriving at certain conclusions or findings or in arriving at a verdict should ordinarily be rejected. . . . While such instructions may be legally correct and, if worded properly, may not technically be a comment on the evidence, they approach "comment" since they intimate to the jury that the judge thinks that particular evidence commands special attention or has more weight than the other evidence. They tend to "highlight" or "pinpoint" certain evidence to the detriment of other evidence in the case. In that way they do constitute "comment."[192]

Some courts have recognized that a res ipsa instruction falls into the category of suspect charges, though nearly all states nevertheless embrace its use. For example, the Washington Supreme Court, endorsing the reasoning of Judge Wiehl, concluded at one time that the res ipsa instruction generally should not be given:

> Res ipsa is properly treated the same as other circumstantial evidence in instructions to the jury. The remaining question is whether, instead of or in addition to these instructions, the so-called "res ipsa instruction" should be given. We are of the opinion that such instructions should not be given. To do so is to emphasize one particular inference over others which may be, and usually are, in the case. When added to other, general instructions which inform the jury of what they may or should do with the evidence before them, such particularized instructions are unnecessary and redundant.[193]

The New Mexico appellate court observed that in a case in which a party is relying on circumstantial evidence, the party "ordinarily is not entitled to an instruction specifically describing the chain of inference upon which the party relies,"

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[189] Quercia v. United States, 289 U.S. 466, 470 (1933) (first quoting Starr v. United States, 153 U.S. 614, 626 (1894); and then quoting Hickory v. United States, 160 U.S. 408, 421–23 (1896)).

[190] *See* GEORGE E. DIX ET AL., MCCORMICK ON EVIDENCE 727 (Kenneth S. Broun ed., student ed., 7th ed. 2014).

[191] *See* Lloyd L. Wiehl, *Instructing a Jury in Washington*, 36 WASH. L. REV. 378, 401 (1961).

[192] *Id.* at 401. Apart from recognizing the potential harm an instruction might do, Judge Wiehl argued that instructions on considering certain evidence ordinarily can do no good: "Such instructions are ordinarily needless since the jury will consider all evidence not stricken by the court, and it is the attorneys' function to (and they undoubtedly will) call attention to such evidence in their argument." *Id.*

[193] Zukowsky v. Brown, 488 P.2d 269, 279 (Wash. 1971).

apparently because such an instruction would improperly insert the judge into the jury's decision-making process.[194] The court nevertheless held that a res ipsa instruction does not necessarily run afoul of this principle, so long as the instruction is used only to "give the jury the green light to cross . . . from the predicate facts to what might otherwise be considered a too-speculative conclusion."[195]

The suggestion that a res ipsa instruction may be "unnecessary" or "redundant" hints at an objection more serious than that it will waste everyone's time. The suggestion that a res ipsa instruction may be "unnecessary" or "redundant" hints at an objection more serious than that it will waste everyone's time. Most importantly, giving such an instruction may point the jurors toward a particular conclusion they are expected to reach, much as a leading question suggests to a witness the desired answer.[196] In general, instructing the jury on an issue not raised in the evidence is prejudicial error.[197] For example, instructing the jury on contributory negligence when the evidence does not support such a finding is prejudicial error because it implicitly invites the jury to find contributory evidence.[198] The jury might reason, "Why would we be told what contributory negligence is unless we are expected to find it?" Courts and legal commentators seem to be alluding to the same concern when they criticize redundant instructions: "Why would we be told this again unless we are expected to make something of it?" Even if a needless instruction does not lead the jury to a particular conclusion favored by the judge, it may distract or confuse the jury, leading to less accurate decisions.[199]

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[194] Mireles v. Broderick, 827 P.2d 847, 850 (N.M. Ct. App. 1992), *rev'd*, 872 P.2d 863 (1994). The court explained:

> Although instructions permitting the jury to draw inferences from such acts or omissions would correctly state the law, these are matters for argument to the jury by counsel. The approach taken in our uniform jury instructions is to keep the court out of disputes concerning the inferences that may be drawn from the evidence. Such matters are left to the skills of counsel.

Id.

[195] *See id.* at 851.

[196] *See, e.g.*, GEORGE E. DIX ET AL., MCCORMICK ON EVIDENCE § 6, at 25 (Kenneth S. Broun & Robert P. Mosteller eds., 7th ed. 2016) (observing that a danger of "leading or suggestive phrasing" is "that the witness may acquiesce in a false suggestion by the questioner" and noting that a suggestion "can plant a belief in its truth in the witness's mind"); Mark P. Denbeaux & D. Michael Risinger, *Questioning Questions: Objections to Form in the Interrogation of Witnesses*, 33 ARK. L. REV. 439, 448 (1979) (recognizing that leading questions pose a risk of suggestion, which "occurs when a question indicates the answer a lawyer desires from the witness"); Richard Ogle et al., *Questions: Leading and Otherwise*, 19 JUDGES J. 42, 44 (1980) ("Specific questions themselves, [], are suggestive in a general sense because they focus the attention of the witness. When they are too suggestive, they become leading.").

[197] *E.g.*, Dover Elevator Co. v. Swann, 638 A.2d 762, 775 (Md. 1994) ("[S]everal decisions of this State and from the courts of other jurisdictions hold it is error for a trial judge to instruct the jury on *res ipsa loquitur* where the doctrine is clearly *inapplicable* to the evidence before it."); Archibeque v. Homrich, 543 P.2d 820, 824 (N.M. 1975) ("We have held that it is error to instruct on issues which are unsupported by the evidence or which present a false issue."); Zukowsky v. Brown, 488 P.2d 269, 273 (Wash. 1971).

[198] *See Zukowsky*, 488 P.2d at 273; *see also* Jablinsky v. Cont'l Pac. Lines, Inc., 364 P.2d 793, 794 (Wash. 1961).

[199] For example, one court observed as follows:

> "Jury instructions should be confined to the issues presented by the pleadings and supported by the evidence. Ordinarily, it is error to submit to the jury an issue which is not pleaded in the

In sum, these courts and legal commentators have complained that a res ipsa instruction slants results toward plaintiffs. Modern cognitive science provides a basis for their impression, just as it can be used to support the claim that standard evidentiary jury instructions by themselves result in confusion and bias. As particularly relevant here, one scholar observes, "[T]he evidence that common-sense social judgments, including judgments about responsibility and compensation for accidents, may systematically diverge from legal (and/or scientific) norms is overwhelming."[200]

People process information through the use of "knowledge structures, such as theories, schemas, scripts, and cultural models."[201] These intuitive mental tools make thought possible by organizing a person's perceptions, memories, and expectations. A schema is a mental framework that allows a person to classify stimuli and to form expectations.[202] A small aquatic creature that has a bill and webbed feet is a duck, and it is expected to quack. A script, or event schema, is a mental structure with a dynamic component.[203] It defines the way an event or series of events is expected to transpire.[204] Like heuristics, schemas and scripts allow people to conserve cognitive energy, but also like heuristics, they can lead to cognitive errors. The duck-billed, web-footed creature may actually be a platypus and growl.[205] A person may supply unknown facts to fit a script. The bias is in favor of the preconceived script, where unknown facts supplied by the person are actually not true.

One of the most important and well-documented cognitive shortcuts is the availability heuristic. In making judgments, people tend to rely on information that comes most readily to mind or can be retrieved from memory most easily.[206] Many variables can affect how easily information can be called to mind. For example, a salient, or vivid, event is easier to recall than one that is not. A dramatic event is readily brought to mind. Personal experiences are easier to recall than experiences

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> case." It is more than mere probability that an instruction on a matter not an issue in litigation distracts a jury in its effort to answer legitimate, factual questions raised during trial. Submitting a factual issue on which there is no evidence can only obfuscate a jury's deliberation.

Bump v. Firemens Ins. Co., 380 N.W.2d 268, 277 (Neb. 1986) (citation omitted) (quoting Simon v. Christie, 316 N.W.2d 303, 304 (Neb. 1982)); *cf.* Smoot v. Mazda Motors of Am. Inc., 469 F.3d 675, 679–80 (7th Cir. 2006) (observing that giving a res ipsa instruction in a case in which the plaintiff has introduced expert evidence on the defendant's negligence may confuse the jury "because the expert's evidence would have provided a complete explanation of the accident, superseding any inference that might have been drawn from the accident itself").

[200] FEIGENSON, *supra* note 70, at 44.

[201] *Id.* at 46.

[202] *Id.*

[203] *See id.*

[204] For example, Feigenson explains:

> By prescribing one or more scenarios for how things typically happen, and thus defining the social roles involved, the script guides how people perceive and remember actual events, classify and understand the participants' behavior, and judge whether that behavior is normal or deviant. It also guides how people infer missing information from what is explicitly provided.

Id.

[205] *See Platypus*, ANIMALIA (2018), http://animalia.bio/platypus [https://perma.cc/JFX7-CCBY].

[206] *See* FEIGENSON, *supra* note 70, at 46–48; KAHNEMAN, *supra* note 155, at 129–36.

that other people have had. In ease of retrieval, a picture really might be worth a thousand words. As the heuristic is related to a res ipsa instruction, a specific charge may be more salient, and therefore come more readily to mind, than a general evidentiary charge, especially when the specific charge is added to the general charge. When a juror begins deliberating, the res ipsa charge will dominate his or her System 2 thinking.

A res ipsa instruction implicitly evokes a script in a way that a general evidentiary charge does not. An instrumentality caused the plaintiff's harm. The instrumentality was in the control of the defendant (assuming the actual res ipsa charge contains the control element). And crucially, the accident or injury ordinarily would not have happened unless the party in control of the instrumentality (the defendant) was negligent.[207]

A particular cognitive bias that likely works in tandem with the bias inherent in scripts when a res ipsa instruction is given is the framing effect. Framing can be understood as "the process of defining the context or issues that surround a problem or event in a way that serves to influence how the context or issues are seen and evaluated."[208] A res ipsa instruction frames the problem to be solved by the jurors—whether to find the defendant liable for the plaintiff's injury—in a particular way, reducing the task to three or so discrete determinations.[209] That particular frame is likely to produce different results than would general evidentiary instructions, which, of course, are themselves an alternative frame.[210] The res ipsa frame apparently favors the plaintiff, for recall that the instruction is sought almost always by the plaintiff. One possibility, therefore, is that the res ipsa frame evokes a script that leads jurors to find in favor of the plaintiff.

V. RESEARCH METHODOLOGY

Both traditional legal analysis and modern cognitive science can be marshaled for either of two conclusions: (1) adding a res ipsa charge to standard evidentiary (and other) instructions clarifies the jury's task and thereby improves

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[207] As we discuss elsewhere, states vary in the elements of the res ipsa doctrine they recognize. *See supra* Section II.H. A res ipsa instruction may not contain a control element, and an instruction might require that when an adverse event occurs it is usually the result of negligence. For now, we focus on a typical res ipsa charge to illustrate the cognitive habits that may be at work. These habits may have less severe effects as a res ipsa charge becomes less specific.

[208] Pam M. S. Nugent, *Framing*, PSYCHOL. DICTIONARY (May 11, 2013), https://psychologydictionary.org/framing/ [https://perma.cc/38SV-X5JR].

[209] The res ipsa instruction can be understood as an instance of "goal framing," in which the instruction frames the issue of liability in a way that increases the probability of a juror finding liability over the probability that is produced by the evidentiary instruction alone, even if such an increase is not a "goal" of the court. *See* Irwin P. Levin et al., *All Frames are Not Created Equal: A Typology and Critical Analysis of Framing Effects*, ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES, Nov. 1998, at 149, 167–68.

[210] *See* Noam Shpancer, *Framing: Your Most Important and Least Recognized Daily Ment*, PSYCHOL. TODAY (Dec. 22, 2010), https://www.psychologytoday.com/us/blog/insight-therapy/201012/framing-your-most-important-and-least-recognized-daily-ment [https://perma.cc/4MFD-DB3Y] ("Framing cannot be avoided. There is no such thing as the view from everywhere; or the view from nowhere. There's always a point of view, and it biases the view by emphasizing or including certain aspects of the situation or experience while omitting or devaluing others.").

decision-making; or (2) adding the charge biases decisions in favor of plaintiffs and thereby degrades decision-making.[211] Specifically, the confusion that the instruction might reduce takes one of two forms: (1) the juror mistakenly believes that he or she is not allowed to reach a verdict in favor of the plaintiff on the basis of circumstantial evidence; or (2) the juror is unable to follow a chain of inferential reasoning. Critically, the confusion-based errors, understood in this context to include possible cognitive processing inability, cut solely in one direction: to the benefit of the defendant. The clarification of the jury's task thus reduces erroneous decisions in favor of the defendant. We find the arguments that the instruction improves decision-making less convincing than the opposing arguments, but neither set is conclusive. Experimental testing could shed additional light on the instruction's effect.

Our primary hypothesis is that the addition of the res ipsa instruction biases juror decisions in favor of plaintiffs. We tested this hypothesis by presenting various fact scenarios to mock jurors who were asked to render a verdict in favor of the plaintiff or the defendant. For each scenario, one group of mock jurors was given standard evidentiary instructions without a res ipsa charge, and another group was given the same instructions with such a charge. Thus, the only difference in the instructions in these tests was that one and only one set included the res ipsa charge. The methodology allowed us to isolate the effect of the res ipsa instruction. In a variation of this test, we added for one scenario an instruction informing the juror that the mere happening of an accident does not establish negligence. This change allowed us to study another kind of potential juror confusion—confusion born out of a conflict between standard evidentiary instructions and a "mere happening" instruction—which might be reduced by a res ipsa instruction.

We created three fact scenarios. The first, which we label an "easy plaintiff's case," should result in a plaintiff's verdict. The facts, in an objective sense, present a strong case for the plaintiff. When presented with this scenario, any verdict for the defendant is an error; no verdict for the plaintiff is an error. Thus, the percentage of verdicts favoring the defendant is the error rate. The second scenario is the obverse of the first: it should result in a defendant's verdict. The facts, in other words, present a strong objective case for the defendant, or an "easy defendant's case." A verdict for the plaintiff and only such a verdict constitutes an error. The percentage of plaintiff verdicts is the error rate. The third scenario could lead a conscientious, objective, unbiased juror—a neutral juror—to reach a verdict in favor of the plaintiff or the defendant. We call this a "close case." Our goal was to devise a scenario that

[211] Theoretically, a res ipsa instruction might create a bias in favor of defendants. We do not investigate this possibility for two reasons. First, we are aware of no theory as to why a res ipsa instruction would create a defendant bias. Second, if a res ipsa instruction biases verdicts in favor of the defendant, we would expect defendants to seek the charge, and yet historic practice demonstrates that defendants virtually never request it. Historic practice leads us to eliminate the possibility that the charge increases confusion, where an increase in confusion is the only effect of the charge. In theory, a res ipsa instruction might increase confusion by suggesting that a juror can reason in a way that other instructions (though not standard evidence instructions) suggest he or she may not. Confusion would lead a juror to believe that he or she was not permitted to rely on circumstantial evidence. That confusion only benefits the defendant. If the res ipsa instruction increases confusion, we would expect defendants to request the charge, and they generally do not.

had a prior probability of 50% of unbiased and informed verdicts for the plaintiff and 50% for the defendant, though an even probability split, which could not be objectively determined in any event, is not critical to our analysis. All that matters is that a neutral juror could decide either way. For the close case, neither a verdict for the plaintiff nor a verdict for the defendant is an error; tests of the close case, therefore, do not yield an error rate.

It is possible, of course, that the res ipsa instruction neither clarifies nor biases. If that is correct, then the proportion of plaintiff's verdicts should be the same in each of the three scenarios when the res ipsa instruction is given and when it is not. The instruction simply would have no effect on outcomes. In that event, one implication would be that plaintiff's attorneys have been mistaken in believing that the instruction benefits them, an insight they might find valuable. But another implication would be that as a matter of administration of the law, the instruction should be abolished, as it reduces the efficiency of litigation while producing no benefits. Unquestionably, litigation resources are now expended on the issue of whether the instruction should be given in a particular case, and if the instruction has no effect, these resources are wasted.

If the instruction has an effect, in a close case we would expect a higher percentage of plaintiff verdicts when the res ipsa instruction is given that when it is not. An increase in the proportion of plaintiff verdicts, however, would not demonstrate whether the res ipsa instruction (1) reduces confusion that disproportionately and adversely affects plaintiffs or (2) creates a plaintiff bias. Because we cannot be sure whether the prior probability of a 50-50 split is accurate absent bias, an increase in plaintiff verdicts is wholly ambiguous. It may represent an increase or decrease in accuracy.

In the Easy Plaintiff's Case, if the charge reduces confusion, we would expect a higher percentage of defendant verdicts when jurors are not given the charge than when they are. Confusion benefits the defendant, and without the charge some jurors would be inclined to reach an erroneous verdict in favor of the defendant. If the charge instead creates plaintiff bias alone, we would expect the same percentage of defendant verdicts whether the jurors are given the instruction or not. Thus, a fully informed, unbiased juror not given the instruction would find in favor of the plaintiff; a juror biased in favor of the plaintiff because of the instruction would also find in favor of the plaintiff.

In the Easy Defendant's Case, if the charge reduces confusion, we would expect the same proportion of defendant verdicts whether or not the jurors are given the charge. A confused juror not given the instruction would decide in favor of the defendant because the person does not understand that he or she can rely on circumstantial evidence despite the circumstantial evidence instruction or is incapable of engaging in the requisite inferential reasoning leading to a plaintiff's verdict. A juror who, because he or she is given the res ipsa instruction, understands the law and is capable of the requisite inferential reasoning will also decide in favor of the defendant. If, however, the instruction creates plaintiff bias, we would expect a higher proportion of plaintiff verdicts when the instruction is given than when it is not. The instruction creates cognitive errors, and those errors will result in incorrect verdicts for the plaintiff.

These expectations are summarized in the following Table. For the Easy Plaintiff's Case and the Easy Defendant's Case, the addition of a res ipsa instruction may (1) create plaintiff's bias or (2) clarify. For each possibility, a relative error rate can be predicted. We label an error rate as "High" or "Low" relative to the error rate that would result in the same case if the res ipsa charge is or is not given.

		With Res Ipsa Charge	**Without Res Ipsa Charge**
Easy Plaintiff's Case	Biases	Same Error Rate	Same Error Rate
	Clarifies	Low Error Rate	High Error Rate
Easy Defendant's Case	Biases	High Error Rate	Low Error Rate
	Clarifies	Low Error Rate	High Error Rate

As the Table indicates, in the Easy Plaintiff's Case, bias in favor of the plaintiff cannot be shown by a relatively high error rate when the res ipsa instruction is given. This case, however, can show that the instruction improves accuracy by clarifying the jurors' task if the error rate when the instruction is given is relatively low. The Easy Defendant's Case can indicate bias, and it does so if the res ipsa charge results in a relatively high error rate. Conversely, it indicates that the instruction clarifies if the charge results in a relatively low error rate.

The analysis so far assumes that a res ipsa instruction has only one effect: it either creates plaintiff bias or clarifies. The instruction might, however, have multiple effects. First, it might create plaintiff bias and clarify. Both effects benefit the plaintiff. In the Easy Plaintiff's Case, we would expect a higher percentage of plaintiff verdicts with the charge than without it. An unbiased, unconfused juror would return a verdict for the plaintiff based on the strength of the facts. An unbiased, confused juror, however, might return a verdict for the defendant. The res ipsa instruction would not increase the percentage of plaintiff verdicts by creating bias, but it could increase the percentage to the extent that it eliminates confusion. In the Easy Defendant's Case, we would expect the instruction to result in a higher percentage of plaintiff verdicts. The clarifying effect of the instruction would not affect the conclusion of an unbiased juror, because a confused or unconfused juror would find in favor of the defendant. But if the instruction also creates plaintiff bias, some unconfused jurors would be expected to return a plaintiff verdict.

A second possibility of multiple effects is that the res ipsa instruction creates plaintiff bias and increases confusion. We discount the possibility that the instruction only increases confusion, because we would in that event expect to see the charge requested by defendants, and it almost never is.[212] But the creation of plaintiff bias and confusion cut in opposite directions, the first effect benefitting the plaintiff and

[212] *See supra* note 147 and accompanying text.

the second benefitting the defendant. Plaintiffs might request the charge if they believe the first effect dominates the second and that bias will affect results. In the Easy Plaintiff's Case, the plaintiff would not request the charge because an unbiased juror would find in favor of the plaintiff, and a confused but biased juror might not. But the results in the easy plaintiff's case are unpredictable. Plaintiff bias might or might not dominate confusion. In the easy defendant's case, if plaintiffs believe that bias dominates confusion, they would request the charge. Confusion would lead an unbiased juror to find in favor of the defendant, but plaintiff bias would lead a juror to find against the defendant. In theory, because which effect dominates is indeterminate, the results again are indeterminate.[213] Our experiments are not designed to test the possibility, however remote, that the res ipsa instruction produces plaintiff bias and increases confusion.

As we explain in detail below, in two scenarios we used a conventional res ipsa instruction with three elements. A juror may infer negligence when he or she finds the following conditions satisfied: (1) the plaintiff's harm is caused by an instrumentality in the exclusive control of the defendant; (2) the event ordinarily does not occur in the absence of negligence; and (3) other responsible causes, including the plaintiff's negligence, are eliminated.[214] In one scenario, we used an alternative

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[213] For similar reasons, if the instruction creates plaintiff bias and confusion, the results in the close case cannot be predicted.

[214] Many states use some variant of this three-element instruction. *See, e.g.*, 1 ME. JURY INSTR. MANUAL § 7-65 (2019) ("If the plaintiff proves by a preponderance of the evidence that: 1. injury to the plaintiff was legally caused by an unexplained accident; 2. at the time of the injury the instrument causing the injury was under the defendant's control or management; 3. in the ordinary course of events, the accident would not have occurred in the absence of negligence; and 4. other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated by the evidence—then you may find that the accident and resulting injury were caused by the defendant's negligence."); 1 NEV. PATTERN JURY INSTR. CIV. 4.18 (2019); IND. MODEL CIV. JURY INSTR. 325 (2018) ("If [*plaintiff*] proves all of the following by the greater weight of the evidence: (1) [*plaintiff*] was [injured][harmed][damaged] [as a result of][when] [*here insert event which plaintiff claims was a responsible cause of injury/damage/harm*]; (2) only the [*defendant*][*defendant's agent*] controlled [*insert name of instrumentality*]; and (3) under normal circumstances the [event][*insert event*] would not have occurred unless the [*defendant*][*defendant's agent*] was negligent, then you may infer that the incident resulted from [*defendant*]'s negligence."); PA. SUGGESTED STANDARD CIV. JURY INSTR. 13.30 (4th ed. 2016); ALASKA PATTERN JURY INSTR.-CIV. 3.05 (2008) ("You may decide the defendant was negligent based on the circumstances if you find it more likely true than not true that: (1) the event that caused the harm does not ordinarily happen unless someone is negligent; (2) the harmful event was caused by something that was under the defendant's exclusive control; and (3) the plaintiff in no way contributed to or caused the harmful event.").

Some states eliminate the element relating to the plaintiff's contributive conduct. *See, e.g.*, ILL. PATTERN JURY INSTR.-CIV. 22.01 (2019) ("The plaintiff has the burden of proving each of the following propositions: First: That [the plaintiff was injured] [or] [the plaintiff's property was damaged.] Second: That the [injury] [damage] was received from a name of instrumentality, e.g., a folding chair which [was] [had been] under the defendant's [control] [management]. Third: That in the normal course of events, the [injury] [damage] would not have occurred if the defendant had used ordinary care while the instrumentality was under his [control] [management]. If you find that each of these propositions has been proved, the law permits you to infer from them that the defendant was negligent with respect to the instrumentality while it was under his control or management."); 8 TENN. PRAC. PATTERN JURY INSTR.-CIV. 4.01 (2019) ("In this case, plaintiff contends you should infer from the occurrence that defendant was negligent and the defendant's negligence caused the occurrence. In order to draw this inference, you must find: 1. That the device [*activity*] does not ordinarily cause such an occurrence unless it has been carelessly

res ipsa instruction that deleted the reference to an instrumentality in the exclusive control of the defendant, a charge that at least seven states use.[215]

Our methodology, as we noted above, depends upon fact scenarios that fall within three categories: easy plaintiff's cases, easy defendant's cases, and close cases. In developing scenarios, we looked to the facts of actual cases, which we modified. We relied to some extent on our subjective judgment, as experienced torts professors, and to some extent on objective criteria based on the procedural history of the cases. For the easy plaintiff's case, we used a case in which the trial court rejected the plaintiff's attempt to rely on res ipsa and granted the defendant's motion for summary judgment, and the appellate court reversed.[216] For the easy defendant's case, we used a case in which the trial court rejected the plaintiff's assertion of res ipsa and entered summary judgment for the defendant, and the appellate court affirmed.[217] For the close case—one in which, in our judgment, an unbiased, unconfused juror could sensibly reach a verdict either way—we chose a case in which a Canadian trial court dismissed a complaint, apparently finding res ipsa inapplicable; the appellate court affirmed, explicitly finding res ipsa inapplicable with one judge dissenting, who would have reversed with or without recourse to res ipsa; and the supreme court affirmed, holding that res ipsa should no longer be treated as a separate doctrine.[218]

VI. RESULTS AND IMPLICATIONS OF STUDY

Although much has been written on the theoretical aspects of res ipsa, no one, to our knowledge, has conducted an experiment attempting to determine whether a res ipsa instruction affects a juror's decision as to whether the defendant is liable for a plaintiff's injury. To test our hypothesis that the res ipsa instruction reduces the

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[*constructed*] [*inspected*] [*used*]; and 2. That defendant was in exclusive control or management of the device [*activity*] at the time of the occurrence. If you find these elements exist you may infer defendant was negligent unless you decide there is sufficient evidence to overcome that inference.").

[215] *See, e.g.*, COLO. JURY INSTR.-CIV. 9:17 (4th ed. 2019) (omitting reference to exclusive control and permitting an inference of negligence if jurors find "[a]t the time and in the way such negligence probably occurred, it was more likely that the negligence of the defendant (or someone for whom the defendant was legally responsible), rather than the negligence of anyone else, caused the plaintiff's (injuries) (damages) (losses)"); N.M. UNIFORM JURY INSTR.-CIV. 13-1420 (2019); 1 MASS. SUPERIOR COURT CIV. PRAC. JURY INSTR. § 4.11 (2018) ("In order for you, the jury, to draw an inference of negligence, it must be shown by the evidence that (1) the event is of a kind which ordinarily does not occur in the absence of negligence; (2) other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated by the evidence; and (3) the indicated negligence is within the scope of the defendant's duty to the plaintiff."); 4 MINN. PRAC. JURY INSTR. GUIDES-CIV. 25.50 (6th ed. 2018); OR. UNIFORM CIV. JURY INSTR. NO. 24.01 (2017); W. VA. PATTERN JURY INSTR. CIV. § 428 (2016); R.I. MODEL CIV. JURY INSTR. § 402.4 (2002) ("It may be inferred that the harm suffered by the plaintiff is caused by the defendant's negligence when: a) the event is of a kind which ordinarily does not occur in the absence of negligence, and b) other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated by the evidence.").

[216] *See* Blasius v. Angel Auto., Inc., 839 F.3d 639, 642, 644, 653 (7th Cir. 2016).

[217] *See* Singletary v. Gatlinburlier, Inc., No. E2015-01621-COA-R3-CV, 2016 Tenn. App. LEXIS 278, at *3–4, *10 (Tenn. Ct. App. Apr. 25, 2016).

[218] *See* Fontaine v. Ins. Corp. of British Columbia, [1998] 1 S.C.R. 424, paras. 8, 14–15, 26, 36 (Can.).

accuracy of jury decision-making, we created three hypothetical fact patterns.[219] All three involved an incident where one party was injured. The participant was informed that he or she was a juror and that the provided facts were presented at the trial. Each participant also received several instructions typically given in a negligence case. In particular, these instructions explained when a plaintiff is entitled to recover for an injury and defined the meaning of negligence and legal cause. The instructions also explained the burden of proof a plaintiff must meet to recover, defined the kinds of evidence—direct and circumstantial—a juror may consider in determining the outcome of the case, and informed the mock juror that a decision can be based on either kind and that neither is entitled to more weight than the other.[220] Approximately half the participants received both these instructions and a res ipsa instruction. This instruction, drawn from state model res ipsa instructions, explained in general that the mock juror may infer from the accident itself that the defendant is liable. In one scenario, we added to the general negligence instructions given to two groups of participants a charge, frequently employed, instructing the juror that the mere happening of an accident is not evidence of negligence.[221]

In each experiment, participants were recruited via the internet marketplace website "Amazon Mechanical Turk" ("AMT"). Each participant completed an online survey in return for nominal payment. Participants were restricted to those who were over eighteen years of age and who, at the time of the survey, resided in the United States.[222] In each study, all participants were told that they were "a juror in a trial." They were asked to read a narrative and jury instructions. Finally, they were asked to state whether the defendant was liable to the plaintiff. In an attempt to ensure that our results were based on participants who actually read and considered the facts and instructions, we excluded from our results the responses of any participant who answered the liability question in less than 60 seconds.

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[219] The full versions of each scenario are provided in the appendix of this Article. *See infra* Appendices 1–3.

[220] Jurors in a negligence case typically receive many other standard instructions. *See* Leon Green, *The Submission of Issues in Negligence Cases*, 18 U. MIAMI L. REV. 30, 31–32 (1963); Patrick J. Kelley & Laurel A. Wendt, *What Judges Tell Juries About Negligence: A Review of Pattern Jury Instructions*, 77 CHI.-KENT L. REV. 587, 602–609 (2002). We purposely chose to limit the instructions given in our tests to highlight the effects of the instructions we set out to investigate. The evidence instruction provided as follows:

> Kinds of evidence and weight: Facts can be proved by direct evidence. Direct evidence is evidence about what we actually see or hear. For example, if you look outside and see rain falling, that is direct evidence that it is raining. Facts can also be proved by indirect, or circumstantial, evidence. Circumstantial evidence is evidence that normally or reasonably leads to other facts. So, for example, if you see a person come in from outside wearing a raincoat covered with small drops of water, that would be circumstantial evidence that it is raining. Circumstantial evidence by itself, or a combination of circumstantial evidence and direct evidence, can be used to prove or disprove a proposition. You must consider all the evidence, both direct and circumstantial. The law permits you to give equal weight to both, but it is for you to decide how much weight to give any evidence.

[221] *See supra* note 207; *see also, e.g.*, ALASKA PATTERN JURY INSTR.-CIV. 3.05 (2008); COLO. JURY INSTR. FOR CIV. TRIALS § 9:12; N.M. JURY INST. (CIV.) § 13-1616.

[222] The restrictions were selected to mimic actual jury qualifications. See *Juror Qualifications*, U.S. COURTS, https://www.uscourts.gov/services-forms/jury-service/juror-qualifications [https://perma.cc/GX82-JRM5], for a list of juror qualifications.

A. Experiment 1—Easy Plaintiff's Case

For the easy plaintiff's case, the narrative involved the destruction of the plaintiff's used SUV, which caught fire.[223] At the plaintiff's request, the defendant body shop had made extensive modifications to the vehicle, including the replacement of the vehicle's fuel lines running underneath and for the length of the vehicle, and had detached and reattached brake fluid lines.[224] The plaintiff picked up the vehicle from the defendant the day before the fire and had driven it some 200 miles before the fire occurred.[225] The evidence strongly indicated that the fire was caused by the defendant's negligence in attaching the fuel lines or in reattaching the brake fluid lines.[226] After reading the jury instructions, the participant was asked whether the defendant was liable to the plaintiff.

For the easy plaintiff's case, jurors received a res ipsa instruction that did not refer to an instrumentality in the exclusive control of the defendant,[227] a form of instruction that some states use.[228] The SUV was not in the exclusive control of the defendant when the vehicle caught fire, but it was when the likely negligence occurred. Rather than invite misunderstanding as to the meaning and relevant time of "exclusive control" or further explain the meaning of the term, as model instructions in some states do,[229] we chose to eliminate the element from the res ipsa instruction.[230] Any effect of the res ipsa instruction on the minds of the mock jurors

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[223] The hypothetical is based on *Blasius v. Angel Automotive, Inc.*, 839 F.3d 639 (7th Cir. 2016), a Seventh Circuit case. In that case, the district court rejected plaintiff's argument that res ipsa applied and granted the defendant's summary judgment motion. *Id.* at 642. The appellate court reversed. *Id.* at 642, 653. The full scenario is set out in the appendix to this Article. *See infra* Appendix 1.

[224] *Blasius*, 839 F.3d at 642–43.

[225] *Id.* at 643–44.

[226] *See id.* at 644.

[227] The res ipsa instruction stated:

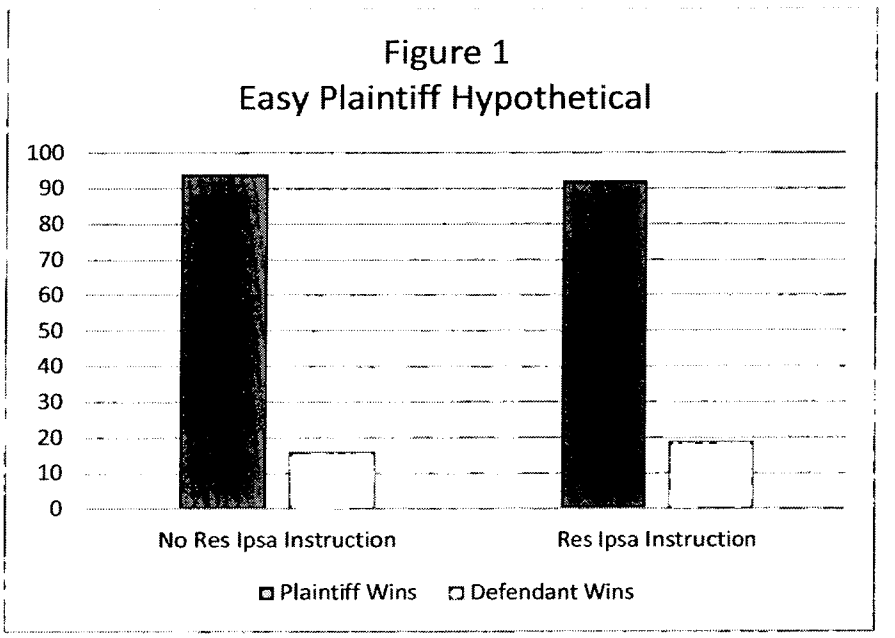
> Inference from accident: It may be inferred that the harm suffered by the plaintiff is caused by the defendant's negligence when (1) the event is of a kind which ordinarily does not occur in the absence of negligence, and (2) other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated by the evidence. Therefore, if you find that the incident at issue in this case is of a kind which ordinarily does not occur in the absence of negligence and if you find that other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated so that it is reasonable to conclude that the defendant's negligence is the more probable explanation for its cause, then you may but need not infer that the defendant was negligent in causing the incident. On the other hand, if you find that the incident is one which ordinarily occurs in the absence of negligence or if you find that it is at least equally probable that the negligence was that of some third person then the law does not permit you to find the defendant's negligence as having been inferentially established.

[228] *See supra* note 214 and accompanying text.

[229] *See infra* note 244.

[230] In *Blasius*, the case on which our hypothetical is based, the district court held that res ipsa was inapplicable because the doctrine under Indiana law requires exclusive control of the relevant instrumentality, and the vehicle was not under the body shop's exclusive control at the time of the fire. *Blasius*, 839 F.3d at 650. The appellate court reversed on this ground, holding essentially that "exclusive control" does not mean what it appears to mean. *See id.* at 650–52. The court observed, "The 'concept of control under Indiana's *res ipsa loquitur* case law is expansive.' To prove 'exclusive control,' a plaintiff 'simply is required to show either that a specific instrument caused the injury and that the defendant had control over that instrument *or that any reasonably probable causes for the injury were*

would consequently not be caused by a mistaken belief about application of an exclusive control element. If "exclusive control" is itself a source of confusion, then a res ipsa instruction sans the exclusive control element might reduce confusion emanating from the evidentiary instructions. Dropping the element allowed us to measure the clarification effect of the clearest form of res ipsa.[231] In the first test, the only difference in instructions was that one group received conventional evidentiary and other standard instructions while the other group also received a res ipsa instruction. The results of the first test are below.



under the control of the defendant.'" *Id.* at 650 (citation omitted) (quoting Maroules v. Jumbo, Inc., 452 F.3d 639, 643 (7th Cir. 2006)). Moreover, the "defendant need not be in control . . . at the *exact* moment of injury." *Id.* (quoting *Maroules*, 452 F.3d at 643). Rather than complicate our res ipsa instruction with additional instructions on the meaning of "exclusive control," we chose to use an instruction that simply omits the element. For example, when exclusive control is at issue, the model res ipsa charge in New Jersey includes the following provision: "As to the requirement of 'defendant having exclusive control', [sic] this implies that the control was of such type that the probabilities that the negligent act was caused by someone else is so remote that it is fair to permit an inference of negligence by defendant." N.J. MODEL CIV. JURY INSTR. 5.10D (2009). We find the explanation opaque at best.

[231]The fact that the content of a res ipsa instruction varies to some extent across states complicates the task of determining the effect of the charge. The more general the charge, the less dramatic its effects are likely to be either in reducing confusion or generating bias. Even a two-element charge, however, might theoretically have either effect. For two of our three scenarios, we chose to use the three-element charge because most states include the element of exclusive control. *See supra* note 214 and accompanying text. If the res ipsa instruction creates plaintiff bias, the correct policy prescription is to eliminate the charge entirely. A second-best policy is to moderate bias by eliminating the exclusive control element. If the instruction reduces confusion, arguably it does so more effectively when it retains the exclusive control element.

As shown in Figure 1, the res ipsa instruction made little difference. One hundred and ten (110) participants completed the survey without receiving the res ipsa instruction. Of that group, 94 participants (85.45%) found that the defendant was liable and 16 (14.55%) found that he was not. One hundred and eight participants (108) completed the survey and received the res ipsa instruction. Of that group, 92 participants (82.88%) found that the defendant was liable and 19 (17.12%) that he was not. Thus, a small percentage more of the participants correctly found for the plaintiff without the res ipsa instruction, but the difference is not statistically significant.[232]

In a second test, we added an instruction informing the juror that "[t]he occurrence of an accident does not raise any presumption of negligence on the part of either the plaintiff or the defendant."[233] We gave this additional instruction to one group of mock jurors who were not given a res ipsa instruction and to another group who were given such a charge. As noted previously, one argument for giving a res ipsa charge is that jurors will be confused by receiving the "mere happening" charge, which is commonly given in states and seems to prohibit reliance on circumstantial evidence of liability arising from the occurrence of the accident, and the evidentiary instructions that purport to allow them to rely on circumstantial evidence.[234] The res ipsa charge dissipates that confusion by informing jurors specifically that they may rely on circumstantial evidence surrounding the accident to find the defendant liable.[235]

The error rates when the "mere happening" instruction is and is not given suggest whether the res ipsa instruction increases accuracy by negating a misleading interpretation of the former instruction. If the error rate (i.e., the proportion of verdicts in favor of the defendant) is higher for the group that receives the "mere happening" instruction without the res ipsa instruction than it is for the group that receives both instructions, the implications would be that a "mere happening" instruction confuses jurors and that adding a res ipsa instruction reduces that confusion. We tested this argument only in the easy plaintiff's case because only in this case can we be sure that errors are not a product of plaintiff bias. We then compared the error rate of the group that received both the "mere happening" and res ipsa instructions to the error rate of the group that received neither instruction. If the error rate of the both-instructions group is lower than the error rate of the "mere happening" instruction group alone but higher than the error rate of the

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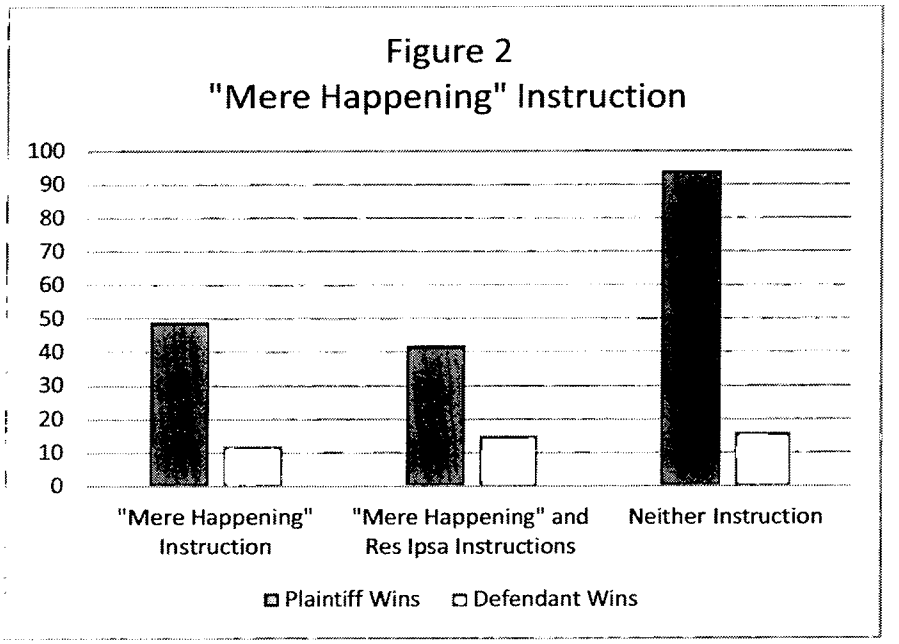
[232] The p-value is 0.600575, and the Chi-square value is 0.2741.

[233] COLO. JURY INSTR. CIV. TRIALS 9:12 (2019).

[234] *See supra* notes 206–208 and accompanying text.

[235] We also noted above that states often require an instruction prohibiting jurors from relying on speculation and that some courts reason that this instruction confuses jurors in that it leads them to believe that they cannot rely on circumstantial evidence, contrary to the evidentiary instructions, because it is speculative. *See supra* notes 170–171 and accompanying text. For example, the relevant New Mexico instruction provides, "*Your verdict should not be based on speculation, guess or conjecture.*" N.M. UNIFORM JURY INSTR.-CIV. 13-2005 (2019). One argument is that the res ipsa instruction clarifies the jurors' task by informing them that they may rely upon circumstantial evidence surrounding the accident. We did not separately test the effect of a "speculation" instruction because we believe the "mere happening" instruction has the greater potential to mislead and testing the "speculation" instruction would therefore needlessly complicate the study.

neither-instruction group, the implication is that the confusion caused by the "mere happening" instruction is more effectively reduced by eliminating the "mere happening" charge than by adding a res ipsa charge.[236] Our results are summarized in Figure 2.



Sixty-one (61) participants received the "mere happening" instruction without a res ipsa charge.[237] Of these, 49 (80.33%) found in favor of the plaintiff and 12 (19.67%) found in favor of the defendant. Fifty-seven (57) participants received both the "mere happening" and res ipsa instructions. Of these, 42 (73.68%) found in favor of the plaintiff and 15 (26.32%) found in favor of the defendant. If the res ipsa instruction reduces confusion caused by the combination of the "mere happening" and evidentiary instructions, then the error rate when the res ipsa instruction is added should be lower. Yet, in our test, when the res ipsa charge is added to the "mere happening" charge the error rate increases, from 19.67% to 26.32%. The difference, however, is not statistically significant.[238] Recall that the error rate when mock jurors received neither the res ipsa nor the "mere happening" instruction was 14.55%. Giving the "mere happening" instruction increases the error rate slightly, to 19.67%,

[236] Notably, Colorado takes the position that the "mere happening" instruction can cause confusion because of its apparent conflict with a res ipsa instruction. *See supra* note 175 and accompanying text. The "mere happening" instruction in Colorado, therefore, is not to be given in res ipsa cases.

[237] As in our other tests, we removed from our results participants who reached a conclusion in 60 seconds or less.

[238] The p-value is .3906, and the Chi-square value is .737.

but again the increase is not statistically significant.[239] Adding both the "mere happening" and res ipsa instructions increases the error rate appreciably, from 14.55%, when neither instruction is given, to 26.32%, a difference that is not statistically significant at the 5% level but is at the 10% level.[240] In all, the error rate is lowest when jurors receive general evidence instructions without also receiving either a "mere happening" or res ipsa instruction. At a minimum, our data provide no support for the assertion that the res ipsa instruction reduces confusion generated by the "mere happening" instruction.

As previously explained, the easy plaintiff's case is not designed to test the possible biasing effect of the res ipsa instruction. We would expect either an unbiased juror or a juror biased in favor of the plaintiff to return a verdict for the plaintiff. The easy plaintiff's case can test the contention that the res ipsa instruction reduces juror confusion whether or not it also creates plaintiff bias, and confusion might result from a juror's inability to follow a chain of inferential reasoning, from inability to understand the circumstantial evidence instruction in its own right, or from an apparent conflict between instructions. A lower error rate when the res ipsa instruction is added to evidentiary instructions would indicate that the instruction improves the quality of inferential reasoning or clarifies that jurors are permitted to engage in it, dissipating this kind of innate confusion. In our first test, the res ipsa instruction resulted in an insignificant increase in verdicts for the plaintiff. The lack of a statistically significant difference in results provides some evidence that the instruction does not reduce innate confusion, but it is only suggestive. The scenario itself might favor the plaintiff so strongly that even confused jurors find in favor of the plaintiff. The results do at least suggest that the instruction, if it performs a clarifying function, is not necessary in a category of cases—those in which the facts strongly favor the plaintiff. Nevertheless, use of the instruction increases the costs of litigation.

Our second test investigates the possibility of confusion caused by conflicting instructions. The most likely conflict is that between evidentiary instructions that permit reliance on circumstantial evidence and an instruction that prohibits an inference of negligence from the mere happening of an accident. Our test results indicate that adding a res ipsa instruction to evidentiary and "mere happening" instructions increases the error rate. In fact, in a case involving circumstantial evidence, the jurors reached the most accurate decisions when the evidentiary instructions were given without either the "mere happening" or res ipsa instructions. Any confusion emanating from internal inconsistency among instructions is most effectively reduced by paring down instructions.

B. Experiment 2—Easy Defendant's Case

For the easy defendant's case, the narrative involved the death of the plaintiff when she unexpectedly fainted and fell into an antique glass display case in the

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[239] The p-value is .3855, and the Chi-square value is .753.

[240] The p-value is .0636, and the Chi-square value is 3.441.

defendant's store, resulting in a shard of broken glass lacerating her aorta.[241] The mock jurors were informed that the same type of display case was used by other merchants in town, that the case in question over the course of 30 years had withstood collisions, and that the case had shown no signs prior to the accident of fragility, damage, or breakage risk.[242] The evidence strongly suggested that the plaintiff, through no fault of the defendant, lost consciousness, fell into a common and sturdy display case, and died of a freak injury.[243] After reading the jury instructions provided, the participants were asked whether the store owner was liable to the plaintiff.

Unlike the easy plaintiff scenario, exclusive control was not an issue here. Because it did not create a risk of confusion and is a typical element of a res ipsa charge,[244] we included it in the res ipsa instruction.[245] The results of the surveys are presented graphically in Figure 3.

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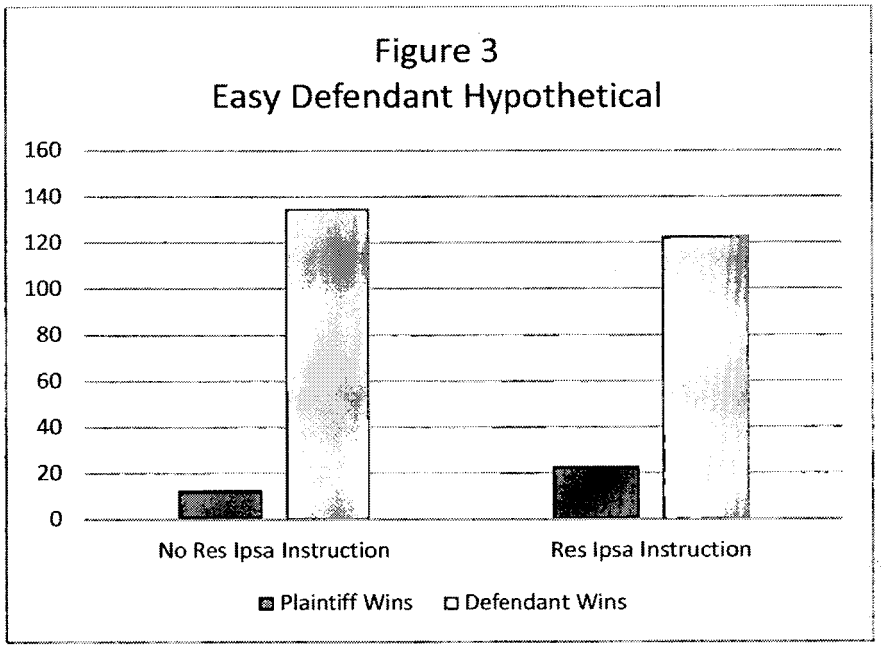
[241] The hypothetical is based on *Singletary v. Gatlinburlier, Inc.*, No. E2015-01621-COA-R3-CV, 2016 Tenn. App. LEXIS 278 (Tenn. Ct. App. Apr. 25, 2016), an unreported Court of Appeals of Tennessee case. The appellate court affirmed summary judgment in favor of the defendant, concluding that res ipsa was inapplicable in that the evidence in the record established as a matter of law that the defendant was not negligent. *See id.* at *1, *6–8. The full scenario is set out in the appendix to this Article. *See infra* Appendix 1.

[242] *Singletary*, 2016 Tenn. App. LEXIS 278, at *6–7.

[243] *See id.* at *1–2, *9.

[244] At least 31 states include some variant of the exclusive control element in their model res ipsa jury instructions, including Alabama (2 ALA. PATTERN JURY INSTR. CIV. 28.16 (3d. ed. 2018)); Alaska (ALASKA PATTERN JURY INSTR.-CIV. 3.05 (2008)); Arizona (ARIZ. JURY INSTR.-CIV. NEGLIGENCE 7 (6th ed. 2017)); Arkansas (ARK. MODEL JURY INSTR.-CIV. 610 (2018)); California (CAL. CIV. JURY INSTR. 417 (2011)); Delaware (DEL. PATTERN JURY INSTR. CIV. § 10.3 (2000 ed. 2006)); Florida (1 FLA. STANDARD JURY INSTR. CIV. CASES 401.7 (2019)); Georgia (1 GA. SUGGESTED PATTERN JURY INSTR.-CIV. § 60.800 (2018)); Idaho (IDAHO CIV. JURY INSTR. 2.26 (2013)); Illinois (1 ILL. PATTERN JURY INSTR.-CIV. 22.00–02 (2019)); Indiana (1 IND. MODEL CIV. JURY INSTR. 325 (2018)); Iowa (IOWA CIV. JURY INSTR. § 700.7 (2018)); Kansas (KAN. PATTERN INSTR.-CIV. 123.10-A (4th ed. 2012)); Maine (1 ME. JURY INSTR. MANUAL § 7-65 (2019)); Maryland (MD. CIV. PATTERN JURY INSTR. 19:8 (2019)); Michigan (MICH. MODEL CIV. JURY INSTR. 30.05 (2015)); Nebraska (NEB. JURY INSTR. CIV. 2.13 (2d ed. 2019)); Nevada (1 NEV. PATTERN JURY INSTR. CIV. 4.18 (2019)); New Hampshire (1-6 N.H. CIV. JURY INSTR. 6.15 (2018)); New Jersey (N.J. MODEL CIV. JURY CHARGES 5.10D (2009)); New York (N.Y. PATTERN JURY INSTR.-CIV. 2:65 (2018)); North Carolina (N.C. PATTERN JURY INSTR.-CIV. 809.03A (2018)); North Dakota (N.D. PATTERN JURY INSTR.-CIV. § 80.54 (2017)); Ohio (OHIO JURY INSTR.-CIV. 417.05 (2016)); Oklahoma (OKLA. CIV. JURY INSTR. § 14.3 (2016)); Pennsylvania (PA. SUGGESTED STANDARD CIV. JURY INSTR. 13.30 (4th ed. 2016)); Tennessee (TENN. PATTERN JURY INSTR.-CIV. § 4.01 (2019)); Texas (TEX. PATTERN JURY CHARGES-CIV. 51.8 (2019)); Utah (MODEL UTAH JURY INSTR.-CIV. CV327 (2d ed. 2011)); Virginia (1 VA. MODEL JURY INSTR.-CIV. NO. 7.050 (2019)); Washington (6 WASH. PATTERN JURY INSTR.-CIV. 22.01 (7th ed. 2019)). The model res ipsa instructions in some of these states are limited by subject matter, such as medical malpractice and product liability. *See, e.g.*, TEX. PATTERN JURY INSTR.-CIV. 51.8 (2019); MICH. MODEL CIV. JURY INSTR. 30.05 (2015); KAN. PATTERN INSTR.-CIV. 123.10-A (4th ed. 2012). A few of the states use instructions that either qualify or explain the meaning of control. For example, the New Jersey instruction, which refers to exclusive control, includes a further instruction that is given when "exclusive control" is an issue: "[a]s to the requirement of 'defendant having exclusive control', [sic] this implies that the control was of such type that the probabilities that the negligent act was caused by someone else is so remote that it is fair to permit an inference of negligence by defendant." N.J. MODEL CIV. JURY CHARGES 5.10D (2009). The New York instruction states, "[t]he requirement of exclusive control is not rigid. It implies control by the defendant of such kind that the probability that the accident was caused by someone else is so remote that it is fair to permit an inference that the defendant was negligent." N.Y. PATTERN JURY INSTR.-CIV. 2:65 (2018); *see also* 1 NEV. PATTERN JURY INSTR. CIV. 4.18 (2019); IOWA CIV. JURY INSTR. § 700.7 (2018); CAL. CIV. JURY INSTR. 417 (2011); N.J. MODEL CIV. JURY CHARGES 5.10D (2009); DEL. PATTERN JURY INSTR.-CIV. § 10.3 (2000 ed. 2006).

[245] The full res ipsa instruction stated:



One hundred and forty-eight (148) participants completed the survey without receiving the res ipsa instruction. Of that group, 13 participants (8.78%) determined that the defendant was liable to the plaintiff and 135 (91.22%) determined that the defendant was not liable. One hundred and forty-six (146) participants completed the survey and received the res ipsa instruction. Of that group, 23 (15.75%) found the defendant liable and 123 (84.25%) not liable.

In this hypothetical, a neutral juror would be expected to find in favor of the defendant, and any finding for the plaintiff is inaccurate. In a case the defendant should win, decisions in favor of the plaintiff are wrong. Because the clarification rationale for the res ipsa instruction implies juror confusion that works in only one direction, leading jurors to find in favor of the defendant when unconfused jurors would have found in favor of the plaintiff, an increase in plaintiff verdicts when the res ipsa charge is given cannot represent an increase in accuracy. A relative increase in plaintiff verdicts when the charge is given would have to be attributed to bias whether or not the instruction also clarifies. As predicted, the error rate increases

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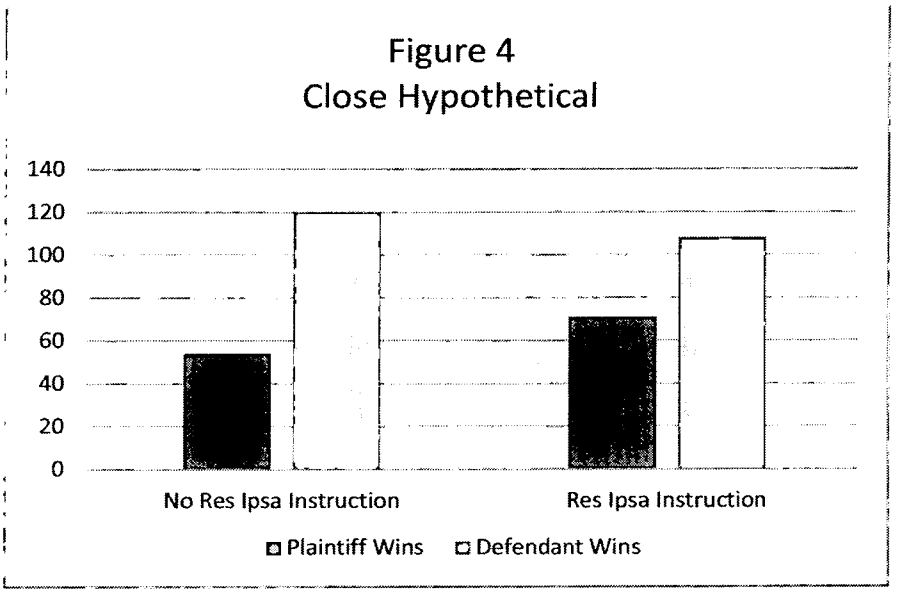
Inference from accident: If a thing (1) legally causes injury to the plaintiff, (2) is under the exclusive control of the defendant, and (3) is involved in an accident that does not ordinarily occur without negligence on the part of the person in exclusive control of it, you may but need not infer that the defendant failed to exercise ordinary care in the control of the thing, thus giving rise to liability of the defendant to the plaintiff. The requirement of exclusive control is not rigid. It implies control by the defendant of such kind that the possibility that the accident was caused by someone else is so remote that it is fair to permit an inference that the defendant was negligent. Whether negligence should be inferred in such a situation is for you to determine under all of the evidence and these instructions.

when the jurors receive the res ipsa instruction. The difference is not statistically significant at the 5% level but is at the 10% level.

C. Experiment 3 – Close Case

For the "close" case, the scenario involved a car accident where both the driver and passenger died in a remote area.[246] Evidence suggested that if the driver had not been speeding, he would not have lost control of the vehicle and swerved off the road.[247] But the evidence also permitted the inference that the driver swerved to avoid hitting an animal on the road.[248] After reading the jury instructions,[249] the mock juror was asked whether the defendant was liable to the plaintiff. The results of the surveys are shown graphically in Figure 4.



[246] Fontaine v. Ins. Corp. of British Columbia. The hypothetical is based on the case of *Fontaine v. Insurance Corp. of British Columbia*, [1998] 1 S.C.R. 424 (Can.), a Canadian case.

[247] *See id.* at para. 7.

[248] *Id.*

[249] The same res ipsa instruction that was used for the easy defendant scenario was used for the close case. The full instruction stated:

> Inference from accident: If a thing (1) legally causes injury to the plaintiff, (2) is under the exclusive control of the defendant, and (3) is involved in an accident that does not ordinarily occur without negligence on the part of the person in exclusive control of it, you may but need not infer that the defendant failed to exercise ordinary care in the control of the thing, thus giving rise to liability of the defendant to the plaintiff. The requirement of exclusive control is not rigid. It implies control by the defendant of such kind that the possibility that the accident was caused by someone else is so remote that it is fair to permit an inference that the defendant was negligent. Whether negligence should be inferred in such a situation is for you to determine under all of the evidence and these instructions.

One hundred and seventy-four (174) participants completed the survey without receiving the res ipsa instruction. Of that group, 54 participants (31.03%) determined that the defendant was liable, and 120 (68.97%) determined that the defendant was not. One hundred and seventy-nine (179) participants completed the survey and received the res ipsa instruction. Of that group, 71 participants (39.66%) determined that the defendant was liable, and 108 (60.34%) determined that the defendant was not.

In our view, the correct resolution of this case is indeterminate. A reasonable, unbiased, unconfused juror could decide either for or against the plaintiff, even taking into account that the plaintiff has the burden of persuasion in establishing the defendant's liability. No decision, therefore, is inaccurate. We did not use this hypothetical to measure the relative accuracy of verdicts with and without a res ipsa instruction. Instead, we used it to determine whether a res ipsa instruction affected liability determinations and, if so, whether the instruction increased the relative proportion of verdicts in favor of the plaintiff. Our hypothesis was that the res ipsa instruction does have an effect and it is to benefit the plaintiff.

The results support the hypothesis, though not as strongly as we anticipated. The proportion of plaintiff's verdicts was nearly nine percent higher when jurors received the res ipsa instruction (39.66%) than when they did not (31.03%). The difference, however, is not statistically significant at the 5% level.[250]

D. No Significance?

In none of the scenarios did giving the res ipsa instruction yield statistically significant differences in outcome at the conventional 5% level. The thing is supposed to speak for itself, but our data does not. Our hypothesis was that in the close case, the res ipsa instruction would increase the proportion of verdicts in favor of the plaintiff. Because by definition the close case does not have a correct outcome, an increase in the proportion of plaintiff verdicts when the instruction is given cannot indicate whether the instruction clarifies or biases. An increase in plaintiff verdicts indicates only that the instruction matters, as attorneys in tort litigation have long believed. Indeed, the res ipsa instruction did result in a higher proportion of plaintiff's verdicts, though the difference was not as large as we had expected.

The two easy cases were designed to investigate the reason the res ipsa instruction benefits plaintiffs. First, in the easy plaintiff's case, an increase in the proportion of plaintiff's verdicts when the res ipsa instruction is given would indicate that jurors are somehow confused without the instruction. The confusion might result from an inability to engage in inferential reasoning or failure to understand the circumstantial evidence and related instructions. Our experiment showed a slight but insignificant increase in accuracy when the res ipsa instruction was given. A second test was designed to determine whether jurors were confused when a circumstantial evidence instruction was combined with a "mere happening" instruction. The data indicate that adding a res ipsa instruction increased the error rate by an insignificant amount

[250] The p-value is 0.09006, and the Chi-square value is 2.8733.

and that the error rate was minimized by adding neither a "mere happening" nor res ipsa instruction to the circumstantial evidence instruction.

Second, in the easy defendant's case, bias would explain any increase in the proportion of plaintiff's verdicts brought about by the res ipsa instruction. The correct answer is a defendant verdict, and a plaintiff's verdict cannot be explained by clarification because an unconfused juror would find in favor of the defendant. Our data demonstrated an increase in the error rate, but not a statistically significant one.

The failure to obtain statistically significant differences in results may be a function of our testing methodology.[251] Our methodology was relatively easy to use and therefore practical, but practicality came at the expense of realism. In actual cases, jurors do not read factual summaries. They listen to live testimony and see visual evidence. They observe witness demeanor. They hear the statements and arguments of opposing counsel.[252] A participant in our experiment might have spent five to ten minutes reading the script and the instructions; an actual trial might have lasted a day or more. In short, our testing methodology lacked verisimilitude and that may account for failure to obtain statistically significant results.[253] We anticipate using a more realistic jury simulation methodology in future experiments.

VII. CONCLUSION

Res ipsa loquitur is some kind of a doctrine in search of a justification. As a practical matter, the doctrine authorizes a jury instruction when direct evidence is scarce. It tells jurors that they may infer negligence and causation when its elements are satisfied. It authorizes jurors to rely upon the facts isolated by its elements as circumstantial evidence in reaching a verdict. But in every case jurors are also instructed on the definition of circumstantial evidence and their right to rely on it in reaching a verdict. No one doubts that circumstantial evidence is valuable and can support a verdict. The mystery is why the res ipsa instruction is necessary or desirable given the circumstantial evidence instruction.

Nearly every court authorizes the use of a res ipsa instruction, but courts and commentators have struggled to explain why. The justifications are unconvincing. In theory, the res ipsa instruction could improve the quality of jury decision-making if it reduces confusion, but the arguments that it does so, including arguments based on modern cognitive science, are weak. Another possibility is that the instruction degrades quality by introducing pro-plaintiff bias. Some commentators through the years have objected to the use of the instruction, but for reasons more intuitive than analytical. Modern cognitive science offers a more rigorous basis for believing that

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[251] *See, e.g.*, Brian H. Bornstein, *The Ecological Validity of Jury Simulations: Is the Jury Still Out?*, 23 L. & HUM. BEHAV. 75, 76–84 (1999) (surveying the literature on the validity of different jury simulation methodologies); Shari S. Diamond, *Illuminations and Shadows from Jury Simulations*, 21 L. & HUM. BEHAV. 561, 563–64 (1997).

[252] *See* 1 BELLI, *supra* note 149, at 396 (emphasizing that the author, when trying a res ipsa case, repeats the phrase as often as possible).

[253] *See* Bornstein, *supra* note 251, at 82–83 (reporting that studies of trial presentation media in experiments have reached differing conclusions).

the instruction produces bias. We conclude that, as a matter of theory, the res ipsa instruction is substantially more likely to produce bias than to reduce confusion.

Our theoretical analysis is susceptible to testing. We therefore conducted a series of experiments designed to demonstrate the effects of the instruction. Our experiments were inconclusive, perhaps because of the methodology we used. They did not establish with a high degree of confidence either that the instruction produces bias or reduces confusion. At a minimum, they provide no support for the theoretically dubious claim that the instruction improves the accuracy of jury decision-making by clarifying the jury's task, and judicial experience proves that the instruction increases the cost of litigation by forcing the court to decide whether the plaintiff is entitled to it. An instruction that does no good and is costly has little to commend it.

APPENDIX 1 – EASY PLAINTIFF HYPOTHETICAL

In June 2011, Adam Anderson purchased a used 2007 Ford Excursion for towing his motorcycle racing trailer. Three years later, in June 2014, Adam brought the vehicle to Bob's Auto Shop for modifications. Adam told Bob to inspect various components of the vehicle and to make whatever modifications Bob thought were desirable in improving its performance. The components included the vehicle's engine, suspension, turbocharger, intake and exhaust manifolds, exhaust, transmission, brakes, spark plugs, and oil pump. Adam also requested that Bob inspect the rest of the vehicle and recommend any additional modifications.

To properly inspect the vehicle, Bob and other mechanics working for him first removed the Excursion's body from its chassis, a process that required disconnecting (and eventually reconnecting) the vehicle's various fluid transfer lines. Bob's overhaul included replacing the vehicle's fuel pump, auxiliary fuel filter, and fuel lines. The new fuel lines ran from the fuel tank at the rear of the vehicle to the engine at the front; a return line was run out of the engine back to the fuel tank. Because of the extent of the modifications, Bob felt rushed to finish the repairs by the date Adam needed the vehicle, but by that date he had finished the planned work and believed no further work was required. When the repairs were finished, Bob and another mechanic test drove the vehicle and found that it was operating properly.

On July 1, 2014, Adam picked up the Excursion from Bob and drove it 200 miles back to his home. He noticed heavy exhaust smoke and some engine rattling during the drive, and when he arrived at his home he complained to Bob in an e-mail. Bob replied that he would resolve the issues but did not suggest that Adam refrain from driving the vehicle.

The next day, Adam left his home in the Excursion with his motorcycle trailer in tow. After traveling 12 miles, Adam noticed smoke emanating from the vehicle's interior vents. As he began to pull over to the shoulder, he noticed in his rearview mirror that smoke was coming from the back of the vehicle as well and discovered that his parking, emergency, and trailer breaks were nonresponsive. The vehicle eventually came to a stop after three-fourths of a mile. Adam exited the vehicle and observed burning diesel fuel running along its bottom and sides. The fire could not be extinguished. The vehicle was destroyed, and the trailer was damaged.

A certified vehicle investigator conducted an inspection and concluded that the fire originated under the vehicle, but he could not determine its exact cause. An expert retained by Adam inspected the vehicle and found that the cause of the fire was likely related to the fuel and brake fluid systems.

Adam, as plaintiff, has sued Bob, as defendant, for negligence in causing the fire damage to Adam's vehicle and trailer. The facts set out above were presented at trial. Based on the above evidence and the following instructions, please state whether Bob is or is not liable to Adam.

1. Liability for negligence: A plaintiff is entitled to recover compensation for an injury that was legally caused by the negligent conduct of a defendant. In this case, the plaintiff has the burden of proving:

That the defendant was negligent; and

That the negligence was a legal cause of injury to the plaintiff.

2. Meaning of negligence: Negligence is the failure to use ordinary or reasonable care. It is either doing something that a reasonably careful person would not do, or the failure to do something that a reasonably careful person would do, under all of the circumstances in this case.

3. Meaning of legal cause: A legal cause of any injury is a cause which, in natural and continuous sequence, produces an injury, and without which the injury would not have occurred.

4. Burden of proof: The plaintiff has the burden of proving by a preponderance of the evidence that the defendant was negligent and that the defendant's negligence caused the plaintiff's injury. The term "preponderance of the evidence" means that amount of evidence that causes you to conclude that an allegation is probably true. To prove an allegation by a preponderance of the evidence, a party must convince you that the allegation is more likely true than not true.

5. Kinds of evidence and weight: Facts can be proved by direct evidence. Direct evidence is evidence about what we actually see or hear. For example, if you look outside and see rain falling, that is direct evidence that it is raining. Facts can also be proved by indirect, or circumstantial, evidence. Circumstantial evidence is evidence that normally or reasonably leads to other facts. So, for example, if you see a person come in from outside wearing a raincoat covered with small drops of water, that would be circumstantial evidence that it is raining. Circumstantial evidence by itself, or a combination of circumstantial evidence and direct evidence, can be used to prove or disprove a proposition. You must consider all the evidence, both direct and circumstantial. The law permits you to give equal weight to both, but it is for you to decide how much weight to give any evidence.

[Approximately half the participants in the first test received all of the above and the following res ipsa instruction]

6. Inference from accident: If a thing (1) legally causes injury to the plaintiff, (2) is under the exclusive control of the defendant, and (3) is involved in an accident that does not ordinarily occur without negligence on the part of the person in exclusive control of it, you may but need not infer that the defendant failed to exercise ordinary care in the control of the thing, thus giving rise to liability of the defendant to the plaintiff. The requirement of exclusive control is not rigid. It implies control by the defendant of such kind that the possibility that the accident was caused by someone else is so remote that it is fair to permit an inference that the defendant was negligent. Whether negligence should be inferred in such a situation is for you to determine under all of the evidence and these instructions.

[Approximately half the participants in the second test received instructions numbered 1 through 5 above and the following "mere happening" instruction, though the instruction was listed as number 3]

No presumption of negligence from happening of accident: The occurrence of an accident does not raise any presumption of negligence on the part of either the plaintiff or the defendant.

[Approximately half the participants in the second test received instructions numbered 1 through 5 above, the "mere happening" instruction, and the res ipsa instruction (number 6 above)]

APPENDIX 2 – EASY DEFENDANT HYPOTHETICAL

Alice Adams owned and operated Alice's Antique Shop in Centreville, Florida. The shop was full of items, and its aisles were narrow. While visiting the shop on the afternoon of June 30, Barbara Bell unexpectedly fainted and fell into an antique glass display case. The glass in the display case shattered, and a triangular shard of glass pierced Barbara's chest, lacerating her aorta and causing her to hemorrhage. Barbara died of her injuries.

The display case was made in 1950 and had been in use in Alice's shop for 30 years at the time of the incident. Over the years, the glass in the case had withstood collisions from baby carriages, children pushing on it, and the impact of a large purse falling on it. Alice knew that the glass in the case, because of its age, was not shatterproof, but she cleaned the glass regularly and testified that it never appeared to be fragile or insubstantial. Similar antique display cases were used by other merchants in Centreville.

Barbara's estate, as plaintiff, has sued Alice, as defendant, for negligence in causing Barbara's death. The facts set out above were presented at trial. Based on the following instructions and the evidence, please state whether the defendant (Alice) is or is not liable to the plaintiff (Barbara's estate).

1. Liability for negligence: A plaintiff is entitled to recover compensation for an injury that was legally caused by the negligent conduct of a defendant. In this case, the plaintiff has the burden of proving:

That the defendant was negligent; and

That the negligence was a legal cause of injury to the plaintiff.

2. Meaning of negligence: Negligence is the failure to use ordinary or reasonable care. It is either doing something that a reasonably careful person would not do, or the failure to do something that a reasonably careful person would do, under all of the circumstances in this case.

3. Meaning of legal cause: A legal cause of any injury is a cause which, in natural and continuous sequence, produces an injury, and without which the injury would not have occurred.

4. Burden of proof: The plaintiff has the burden of proving by a preponderance of the evidence that the defendant was negligent and that the defendant's negligence caused the plaintiff's injury. The term "preponderance of the evidence" means that amount of evidence that causes you to conclude that an allegation is probably true. To prove an allegation by a preponderance of the evidence, a party must convince you that the allegation is more likely true than not true.

5. Kinds of evidence and weight: Facts can be proved by direct evidence. Direct evidence is evidence about what we actually see or hear. For example, if you look

outside and see rain falling, that is direct evidence that it is raining. Facts can also be proved by indirect, or circumstantial, evidence. Circumstantial evidence is evidence that normally or reasonably leads to other facts. So, for example, if you see a person come in from outside wearing a raincoat covered with small drops of water, that would be circumstantial evidence that it is raining. Circumstantial evidence by itself, or a combination of circumstantial evidence and direct evidence, can be used to prove or disprove a proposition. You must consider all the evidence, both direct and circumstantial. The law permits you to give equal weight to both, but it is for you to decide how much weight to give any evidence.

[Approximately half the participants received all of the above and the following res ipsa instruction]

6. Inference from accident: If a thing (1) legally causes injury to the plaintiff, (2) is under the exclusive control of the defendant, and (3) is involved in an accident that does not ordinarily occur without negligence on the part of the person in exclusive control of it, you may but need not infer that the defendant failed to exercise ordinary care in the control of the thing, thus giving rise to liability of the defendant to the plaintiff. The requirement of exclusive control is not rigid. It implies control by the defendant of such kind that the possibility that the accident was caused by someone else is so remote that it is fair to permit an inference that the defendant was negligent. Whether negligence should be inferred in such a situation is for you to determine under all of the evidence and these instructions.

APPENDIX 3 – CLOSE CASE HYPOTHETICAL

On November 1 at 2:00 p.m., Adam Anderson and Bart Baker set off on Highway 101 in Adam's truck from their town of Centreville for a weekend hunting trip. They were expected back on November 4. They did not return and were reported missing late that day. Their bodies were found on December 15 in Adam's badly damaged truck, which was lying in Clark Creek bed adjacent to Highway 101 four miles from town. There were no witnesses to what happened.

It had been raining heavily in the Centreville area for two days before Adam and Bart left on their trip. The rain had stopped by noon on November 1, the sky was overcast, and the wind was calm. Police investigators concluded that at the time of the accident Adam's truck was travelling westbound on Highway 101 and left the roadway at a point near the entrance to a rest area. The vehicle then tumbled down a rock-covered embankment into the waters of swollen Clark Creek and was swept downstream. The vehicle left the road with sufficient momentum to break a path through some small alder trees. Adam was found with his seatbelt in place in the driver's seat, and Bart was found in the passenger's seat with his seatbelt in place.

An investigator testified that Highway 101 has a depression at the point where the truck is believed to have left the road. As much as one and one-half inches of water may collect in it. In the investigator's opinion, if a driver travelling within the speed limit continued straight at this point, he or she would not lose control of the vehicle. However, if the driver were speeding, were to suddenly turn the vehicle's wheels in an attempt to avoid the pool of water, or were to engage in any other sudden driving maneuvers, the vehicle might hydroplane causing the driver to lose control of it, particularly if the vehicle had worn tires. The police report indicated that the two front tires of Adam's truck showed excessive wear, with 0.2 inch of tread. The investigator also acknowledged that the driver might have swerved to avoid hitting an animal on the road surface.

Bart's estate, as plaintiff, has sued Adam's estate, as defendant, for negligence in causing Bart's death. The facts set out above were presented at trial. Based on the above evidence and the following instructions, please state whether Adam's estate is or is not liable to Bart's estate.

1. Liability for negligence: A plaintiff is entitled to recover compensation for an injury that was legally caused by the negligent conduct of a defendant. In this case, the plaintiff has the burden of proving:

That the defendant was negligent; and

That the negligence was a legal cause of injury to the plaintiff.

2. Meaning of negligence: Negligence is the failure to use ordinary or reasonable care. It is either doing something that a reasonably careful person would not do, or the failure to do something that a reasonably careful person would do, under all of the circumstances in this case.

3. Meaning of legal cause: A legal cause of any injury is a cause which, in natural and continuous sequence, produces an injury, and without which the injury would not have occurred.

4. Burden of proof: The plaintiff has the burden of proving by a preponderance of the evidence that the defendant was negligent and that the defendant's negligence caused the plaintiff's injury. The term "preponderance of the evidence" means that amount of evidence that causes you to conclude that an allegation is probably true. To prove an allegation by a preponderance of the evidence, a party must convince you that the allegation is more likely true than not true.

5. Kinds of evidence and weight: Facts can be proved by direct evidence. Direct evidence is evidence about what we actually see or hear. For example, if you look outside and see rain falling, that is direct evidence that it is raining. Facts can also be proved by indirect, or circumstantial, evidence. Circumstantial evidence is evidence that normally or reasonably leads to other facts. So, for example, if you see a person come in from outside wearing a raincoat covered with small drops of water, that would be circumstantial evidence that it is raining. Circumstantial evidence by itself, or a combination of circumstantial evidence and direct evidence, can be used to prove or disprove a proposition. You must consider all the evidence, both direct and circumstantial. The law permits you to give equal weight to both, but it is for you to decide how much weight to give any evidence.

[Approximately half the participants received all of the above and the following res ipsa instruction]

6. Inference from accident: If a thing (1) legally causes injury to the plaintiff, (2) is under the exclusive control of the defendant, and (3) is involved in an accident that does not ordinarily occur without negligence on the part of the person in exclusive control of it, you may but need not infer that the defendant failed to exercise ordinary care in the control of the thing, thus giving rise to liability of the defendant to the plaintiff. Whether negligence should be inferred in such a situation is for you to determine under all of the evidence and these instructions.