Foresight in Hindsight: An Insight into *Ahmed v. Stefaniu* and De-biasing Legal Evaluations of Reasonable Care

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I. INTRODUCTION

On January 24, 1997, William Johannes flew into a psychotic rage and murdered his sister, Roslyn Knipe. The murder occurred seven weeks after his release from the Humber Memorial Hospital in Toronto, where he had been admitted as an involuntary patient pursuant to Ontario's *Mental Health Act*.[1] On October 20, 2006, the Ontario Court of Appeal released a decision that affirmed a jury verdict of negligence against Dr. Rodica Stefaniu, a psychiatrist at the hospital.[2] Dr. Stefaniu had been responsible for the care of William Johannes while he was an in-patient, and in December of 1996 she had made the decision to change his status from an involuntary, to a voluntary, patient. The jury determined that in so doing, Dr. Stefaniu had been negligent. That is, she had not met professional standards of care when she had made the assessment that Johannes satisfied the criteria for voluntary patient status under the *Mental Health Act*.

In considering the reasonableness of Dr. Stefaniu's decision to make Johannes a voluntary patient, the jury was required to consider whether she had acted in accordance with professional standards based only on the information about Johannes that was available to her at the time. In effect, a proper adjudication of the case required the jury to ignore the obvious fact that Dr. Stefaniu's actions failed to prevent the murder of Roslyn Knipe. Could the jury truly ignore their knowledge of this tragic outcome in assessing whether Dr. Stefaniu's

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1 R.S.O. 1990, c. M.7 [*Mental Health Act*].

2 *Ahmed v. Stefaniu* (2006), 2006 CarswellOnt 6390, [2006] O.J. No. 4185 (Ont. C.A.), leave to appeal to refused (2007), 2007 CarswellOnt 2152 (S.C.C.).

actions were reasonable in foresight? Empirical research on a phenomenon known as "hindsight bias" suggests that they could not.

Hindsight bias, also known as the "knew-it-all-along effect,"[3] refers to the human tendency to exaggerate or overestimate the extent to which a known outcome could have been predicted prior to its occurrence.[4] In other words, it is the after-the-fact feeling that a particular outcome was likely to happen, or was predictable, even though it was not predicted before hand. Negligence law requires that in evaluating the reasonableness of a defendant's conduct, legal judgments must be based on the defendant's knowledge *before* the occurrence of a negative outcome.[5] A judge or jury must assess the appropriateness of a defendant's conduct based only on what a reasonable person could have known at the time, irrespective of what was learned after the fact,[6] yet the legal system necessarily judges a defendant's actions *after* harm has occurred. As legal decisions are made primarily with the benefit of hindsight, the hindsight bias can be a factor that significantly influences assessments of liability; judgments that originally seemed quite reasonable in foresight may appear negligent in hindsight.

The potential for hindsight bias in legal decision-making is significant because verdicts reached under such influence are necessarily both unfair and inefficient.[7] They are unfair because decision-makers who evaluate the actions of another in hindsight have the advantage of knowing the end of the story.[8] Dr. Stefaniu's decision to make Johannes a voluntary patient may have been reasonable based on the information that was available to her at the time, but may still have been held to be negligent by a jury who overestimated the ability, in foresight, to predict the murder of Roslyn Knipe. Verdicts based on hindsight may also be inefficient because, at least in the context of tort law, defendants may be encouraged to engage in overly cautious conduct or invest resources in precautions that are not reasonably warranted from a foresight perspective.[9] For

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3 Wood, G., "The knew-it-all-along effect" (1978) 4 Journal of Experimental Psychology: Human Perception and Performance 345 [Wood].

4 Fischhoff, B., "Hindsight = foresight: the effect of outcome knowledge on judgment under certainty" (1975) 1 Journal of Experimental Psychology: Human Perception and Performance 288 [Fischhoff (1975)].

5 See, for example, *Arland v. Taylor*, [1955] O.R. 131 (C.A.), leave to appeal refused [1955] O.W.N. 135 (C.A.), per Laidlaw, J.A. who noted at p. 142 that the reasonable person is "not possessed of unusual powers of foresight" and stated at p. 143 "it is improper for a juryman to judge the conduct of a person in a given circumstances by considering, after the event, what he would or would not have done in the circumstances. See also *P. (M.N.) (Next Friend of) v. Whitecourt General Hospital* (2004), 2004 CarswellAlta 1602, [2004] A.J. No. 1342 (Alta. Q.B.) at paras. 218-224.

6 *Ibid.*

7 Peters, P., "Hindsight bias and tort liability: Avoiding premature conclusions" (1990) 31 Arizona State Law Journal 1277 at 1284 [Peters].

8 *Ibid.*

9 *Ibid.*

instance, in the mental health context, holding psychiatrists to an unreasonably high standard of care may increase false-positive determinations of patient "dangerousness," leading to undue deprivation of patient liberty and unnecessary hospitalization.[10] It is not surprising that a considerable body of empirical research has been devoted to quantifying the impact of hindsight bias in the courtroom and attempting to devise ways to undo or "de-bias" legal decision-making processes.

The case of *Ahmed v Stefaniu* illustrates the potentially iniquitous effects of hindsight bias on a judgment of liability in a scenario where evidence was, at best, equivocal as to whether the defendant met the requisite standard of care. This paper begins by setting out the facts of that case and reviews the empirical research into hindsight bias and its implications for legal evaluations of reasonable care. A number of strategies have been proposed to reduce hindsight bias in the legal context, including (1) placing greater reliance on customary practices when evaluating *ex ante* standards of reasonable conduct, (2) implementing "de-biasing" strategies during the trial process, and (3) using a "bifurcated" trial procedure in which the issues of liability and damages proceed in separate stages. The efficacy of these proposed remedies are discussed, and opportunities for their application are explored and developed. It may be said, in brief, that despite a plethora of tactics proposed by legal scholars and social scientists to reduce the effects of hindsight bias in the civil trial context, Canadian courts have been largely unresponsive to the adoption of remedies that might ameliorate its effects.

II. FACTS OF *AHMED V. STEFANIU*

In October 1995, William Johannes was admitted to the Scarborough General Hospital as an involuntary patient. He was displaying symptoms of a psychotic disorder and was said to have threatened his landlord. Upon his admission, he was prescribed antipsychotic medication. At some point, Johannes was released from the hospital and was re-admitted as a voluntary patient. After his hospital stay, he moved in with his sister, Roslyn Knipe, and her two daughters.[11]

Johannes began to exhibit unusual behavior during the summer of 1996. On September 25, 1996, he threatened his sister, prompting her to contact Johannes' family doctor and express concern about her brother's mental state.[12] As a result, on September 27, 1996, the police forcibly took Johannes to the

10 Wexler, D.B. & Schopp, R.F., "How and when to correct for juror hindsight bias in mental health malpractice litigation: Some preliminary observations" (1989) 7 Behavioral Sciences and the Law 485 at 486 [Wexler et al.].

11 *Supra* note 2 at para. 5.

12 *Ibid.* at para. 6.

emergency room of Humber Memorial Hospital where he was assessed by the defendant, Dr. Rodica Stefaniu. She considered him to be a threat to others and not mentally fit to consent to treatment[13] and so admitted him as an involuntary patient. Johannes appealed that status to the Consent and Capacity Review Board. On October 8, 1996, the Board upheld Johannes' involuntary patient status on the basis that he was suffering from a mental disorder that would likely "result in serious bodily harm to another person"[14] and that his condition would likely continue to deteriorate without treatment.[15]

Throughout October and November of 1996, Johannes continued to exhibit aggressive and abusive behaviour, threatening staff and assaulting other patients. On numerous occasions he had to be subdued with physical restraints.[16] Over the course of his stay in hospital, however, there was a general trend of improvement in his behaviour. He became less threatening in his manner, facial expressions and interactions with hospital staff.[17] On December 4, 1996, Dr. Stefaniu assessed Johannes and found him as having no signs or symptoms of paranoia or psychosis. She described him as having a great sense of humor, and found his behaviour to be appropriate and cooperative. Johannes stated that he had no intention of harming himself or anybody else, including his sister. He also claimed, however, that he had faked his psychosis and that he had staged his behaviour at the hospital. Dr. Stefaniu took this information "with a grain of salt" but concluded that Johannes probably no longer met the criteria for an involuntary patient.[18] She decided to follow up with him the next day for further assessment.[19]

On December 5, 1996, Dr. Stefaniu performed a further assessment of Johannes. She observed that he was in a good mood, pleasant, relaxed and he

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13 Pursuant to section 20(1)(c) of Ontario's *Mental Health Act, supra*, note 1. Note that this section was amended by S.O. 2000, c. 9, s. 7, effective December 1, 2000.

14 *Ibid.*

15 *Supra* note 2 at paras. 7-8.

16 *Ibid.* at paras. 10-11.

17 *Ibid.* at para. 13.

18 At the time, the relevant section of Ontario's *Mental Health Act, supra* note 1, provided as follows:

20(5) The attending physician shall not complete a certificate of involuntary admission or a certificate of renewal unless, after he or she has examined the patient, he or she is of the opinion both,

(a) that the patient is suffering from mental disorder of a nature or quality that likely will result in,

(i) serious bodily harm to the patient,

(ii) serious bodily harm to another person, or

(iii) imminent and serious physical impairment of the patient,

unless the patient remains in a psychiatric facility; and

(b) that the patient is not suitable for admission or continuation as an informal or voluntary patient.

Note that this section was amended by S.O. 2000, c. 9, s. 7, effective December 1, 2000.

19 *Supra* note 2 at para. 14.

jokingly insisted that they go out for dinner together. Johannes discussed his future job plans, his intention to pick up a car and his desire to restart his life once he got out of the hospital. He did not show any signs of paranoia, delusional thinking or psychosis, and he denied having any suicidal or homicidal thoughts. Dr. Stefaniu concluded that Johannes no longer met the criteria to be forcibly detained in the hospital under the *Mental Health Act.*[20] In making this determination, she considered a number of factors including (1) Johannes' general trend of improvement during his stay at the hospital, (2) his response to medications, (3) his stated intention that he did not plan to harm himself or others, (4) the decision of the Consent and Capacity Review Board, (5) his previous admission to the Scarborough General Hospital, (6) consultations with other psychiatrists, and (7) conversations with his employer. Dr. Stefaniu changed Johannes' status to that of a voluntary patient. He refused to remain in the hospital, however, and moved back into his sister's apartment. [21]

A month and a half later, on January 21, 1997, Johannes attended the emergency room at the North York General Hospital. He was assessed by another psychiatrist, Dr. Weinstein, who considered Johannes' psychiatric history and noted that he was depressed, but concluded that his symptoms did not warrant involuntary admission at the hospital.[22] The next day, Johannes went to the Toronto General Hospital's emergency department and requested immediate psychiatric consultation. He was seen by a resident who consulted with the supervising psychiatrist, Dr. Caravaggio, and concluded that Johannes did not meet the criteria for involuntary admission under the *Mental Health Act.* Johannes was released with out-patient care.[23]

On January 24, 1997, Johannes murdered Roslyn Knipe at her apartment. He was in a psychotic, acutely delusional rage in which he believed his sister was possessed by the devil.[24] The family of the deceased then sued Dr. Stefaniu on the basis of her decision, in December of 2006, to change Johannes' status to that of a voluntary patient.

At trial, two experts were called on behalf of Dr. Stefaniu. They expressed the opinion that she had acted honestly, in an intelligent manner, and that she had met the standard of care required of her. The plaintiffs called two experts who testified that, by changing Johannes' status to that of a voluntary patient, Dr. Stefaniu had failed to meet the standard of care of a psychiatrist in the case. One of the plaintiffs' experts, in reaching this conclusion, agreed that Dr. Stefaniu had considered the appropriate factors, but disagreed with the weight that she had put on some of them.[25] The jury found that Dr. Stefaniu was

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20 *Supra* note 1.
21 *Supra* note 2 at paras. 15-18.
22 *Ibid.* at para. 20.
23 *Ibid.* at para. 21.
24 *Ibid.* at para. 22.
25 *Ibid.* at paras. 23-25.

negligent in changing Johannes' status from involuntary to voluntary and awarded damages to the deceased's husband and two children.

The decision was appealed. Counsel appointed by the Canadian Medical Protective Association (CMPA) raised several arguments, all of which were rejected by the Court of Appeal, including the argument that, even if Dr. Stefaniu had exercised her judgment incorrectly, this had been a mere error rather than an act of incompetence or carelessness. The Court stated that based on the expert testimony, Dr. Stefaniu had

> . . .considered the appropriate factors, but failed to appreciate, not just their weight, but the clear message that should be taken from them, i.e. this patient should not be permitted to leave the hospital because of continuing psychotic illness and the opinion of the Consent and Capacity Review Board that he was likely to cause serious bodily harm to another person.[26]

In dismissing the appeal, the Court determined that the jury's finding that Dr. Stefaniu had been negligent was supported on the evidence and that but for the change in Johannes' status to that of a voluntary patient, the murder of his sister would not have occurred.[27] In reaching this decision, the jury must have determined that the opinion of the experts who testified that Dr. Stefaniu had not been negligent did not constitute a "respectable body of medical opinion."[28] Yet, as the Ontario Medical Association's Legal Services Department has observed, "[a]ssessments under the *Mental Health* Act are time-consuming and difficult, with a complicated mixture of information to consider. . .The range of factors considered by Dr. Stefaniu, and the weight attributed to each, could be analyzed indefinitely with the benefit of hindsight."[29]

Research on hindsight bias shows that people blame others for failing to have predicted negative outcomes that could not have been predicted beforehand. In a trial situation this bias may have the effect of skewing judgments of a judge or jury, with the result that defendants appear more culpable than they really are. Clearly this is a problem with serious implications. The decision in *Ahmed v. Stefaniu* provides a timely canvas on which to review them.

III. WHAT IS HINDSIGHT BIAS?

It has long been known that people tend to consider events predictable and almost inevitable once they have occurred.[30] People often express little

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26 *Ibid.* at para. 34.

27 *Ibid.* at para. 44.

28 *Ibid.* at paras. 36 and 40.

29 Lee, R., "Ontario Court of Appeal decision in Ahmed v. Dr. Rodica Stefaniu: a cautionary tale for psychiatrists" (2007) 74 Ontario Medical Review 43 at 45.

30 Fischhoff, *supra* note 4.

doubt that the September 11, 2001 terrorist attacks in New York were "just a matter of time,"[31] that they knew the Soviet Union would collapse, or that Charles' and Diana's marriage was certain to end in divorce. Although not every purported intuition about an outcome is unjustified, research by cognitive psychologists has shown that there is nonetheless a human tendency to perceive a known outcome as having been more foreseeable or likely to occur than it actually was in foresight.

The first systematic investigation of hindsight bias was conducted in 1975 by psychologist Baruch Fischhoff.[32] In his seminal study, undergraduate students were given descriptions of four obscure events: the nineteenth-century war between the British and the Gurkhas of Nepal, a racially motivated near-riot in Atlanta, Georgia in 1967, and two clinical psychology case-studies. Students were placed either in a "foresight" group, which was given a list of possible outcomes for these events, or a "hindsight" group which was given the same list of outcomes but was also told that one of the outcomes had actually occurred. All of the students were asked to estimate the probability that each possible outcome could have occurred. Although the hindsight group was specifically instructed to make these estimates *as if they did not know the "actual" outcome,* students in the hindsight group consistently reported a higher probability for the outcome which they were told actually occurred than did students in the foresight group.[33]

Significantly, Fischhoff found that although learning the outcome had a profound effect on people's beliefs, they exhibited the hindsight bias with little awareness and appeared to be *unable* to disregard information that they already possessed when attempting to reproduce judgments that they would have made without that information.[34] Despite various creative attempts to get rid of the bias, he was unable to do so.[35] Educating individuals about hindsight bias and then asking them to be careful not to be influenced by it had no effect.[36] Neither did entreating individuals to "please concentrate harder."[37]

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31 *Ibid.*; Gonzalez, R., Lerner, L. & Small, D., "Evolving judgments of terror risk: Foresight, hindsight and emotion" (2005) Journal of Experimental Psychology Applied, 11(2), 124.

32 *Supra* note 4.

33 *Ibid.*

34 *Ibid.*

35 *Ibid.*

36 *Ibid.* See also Fischhoff, B., "Perceived informativeness of facts" (1977) 3 Journal of Experimental Psychology: Human Perception and Performance 349 [Fischhoff (1977)]; Kurtz, R.M. & Garfield, S.L., "Illusory correlation: A further exploration of Chapman's paradigm" (1978) Journal of Consulting and Clinical Psychology, 46, 1120 [Kurtz et al.]; Wood, G., *supra* note 3.

37 Fischhoff (1977), *ibid.*

The pervasiveness of this phenomenon has now been documented by social scientists in a variety of contexts, including medical diagnoses,[38] employee evaluations,[39] athletic wins and losses,[40] election results,[41] nuclear power accidents,[42] accounting situations,[43] investment decisions[44] and historical events.[45] Researchers have also demonstrated that, although the magnitude of the effect of hindsight bias on any given judgment may vary with the type of decision-making involved, as a statistical probability, knowledge of an outcome typically causes between 18 and 27 per cent of the population to make a *different*

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38 *Ibid.* See also Arkes, H.R., Faust, D., Guilmette, T.J. & Hart, K., "Eliminating the hindsight bias" (1988) 73 Journal of Applied Psychology 305 [Arkes et al. (1988)]; Arkes, H.R., Wortmann, R.L., Saville, P.D. & Harkness, A.R., "Hindsight bias among physicians: Weighing the likelihood of diagnoses" (1981) 66 Journal of Applied Psychology 252; Berlin, L., "Malpractice issues in radiology: Hindsight bias" (2000) 17 American Journal of Roentgenology 597 [Berlin]; Dawson, N.V., Arkes, H.R., Siciliano, C., Blinkhorn, R. Lakshmanan, M. & Peterelli, M., "Hindsight bias: An impediment to accurate probability estimation in clinicopathic conferences" (1988) 8 Medical Decision Making 259 [Dawson et al.]; Wears, R.L. & Nemeth, C.P., "Replacing hindsight with insight: Toward a better understanding of diagnostic failures" (2007) 49 Annals of Emergency Medicine 206; Caplan, R. et al., "Effect of outcome on physician judgments of appropriateness of care" (1991) 265 JAMA 1957, 1960; Detmer, D.E., Fryback, D.G. and Gassner, K., "Heuristics and biases in medical decision making" (1978) 53 Journal of Medical Education 682.

39 Fischhoff (1977), *supra* note 36; Mitchell, T.R. & Kalb L.S., "Effects of outcome knowledge and outcome valence on supervisors' evaluations" (1981) 66 Journal of Applied Psychology 604.

40 Sanna, L.J. & Schwartz, N. "Debiasing the hindsight bias: The role of accessibility experiences and (mis)attributions" (2003) 39 Journal of Experimental Social Psychology 287 [Sanna et al.]; Leary, M.R., "The distorted nature of hindsight" (1981) 115 Journal of Social Psychology 25.

41 Leary, M.R., "Hindsight distortion and the 1980 presidential election" (1982) 8 Personality and Social Psychology Bulletin 257; Powell, J.L., "A test of the knew-it-all-along effect in the 1984 presidential statewide elections" (1988) 18 Journal of Applied Social Psychology 760; Synodinos, N.E., "Hindsight distortion: 'I knew it all along and I was sure about it'" (1986) 16 Journal of Applied Social Psychology 107; Tufte, E.R. & Sun, R.A., "Are there bellwether electoral districts?" (1975) 39 Public Opinion Quarterly 1; Sanna et al., *supra* note 40.

42 Verplanken, B. & Pieters, R.G., "Individual differences in reverse hindsight bias: I never thought something like Chernobyl would happen. Did I?" (1988) 1 Journal of Behavioral Decision Making 131.

43 Buchman, T.A., "An effect of hindsight on predicting bankruptcy with accounting information" (1985) 10 Accounting, Organizations and Society 267.

44 Louie, T.A., "Hindsight bias and outcome-consistent thoughts when observing and making service provider decisions" (2005) 98 Organizational Behavior and Human Decision Processes 88.

45 Fischhoff, B. & Beyth, R., "'I knew it would happen': Remembered probabilities of once future things" (1975) 13 Organizational Behavior and Human Performance 1 (Nixon's trips to Peking and Moscow); Hilton, D.L., Mathes, R.H., & Trabasso, T., "The study of causal explanation in natural language: Analyzing reports of the Challenger disaster in *The New York Times*" in McLaughlin, M.L., Cody, M.J., & Read, S.J., eds., *Explaining One's Self to Others: Reason-Giving in a Social Context* (Hillsdale, New Jersey: Erlbaulm, 1992) 41-59.

decision than they would have made in foresight.[46] This effect may be more pronounced where a decision-making task is new to the individual,[47] or where the final outcome is negative or damaging, rather than positive or pleasant.[48]

Given that a defendant's actions are evaluated only after an outcome, typically negative, is known and since jurors are generally new to the task of making judgments of liability, the effect of hindsight bias must be quite significant in the legal context. In most negligence cases, the plaintiff has the onus of persuading a judge or jury "on a balance of probabilities," that is, on a 51 per cent likelihood, that a defendant has been negligent. An 18 per cent "boost" in a plaintiff's favour will unfairly result in many defendants being found liable, especially in cases where judgments of liability are difficult or equivocal.[49]

Although a number of theories have been put forward to explain why people show hindsight bias, the most widely accepted explanation is based on the idea that people are constantly trying to "make sense" of events in the world around them, and that they do this by creating stories to explain how a given outcome could have occurred. For example, in their analysis of jury decision-making, Pennington and Hastie have pointed out that legal decision makers do not base their decisions on a complete and rational analysis of a situation, but often represent a legal dilemma as a story that best fits into the representation that they have constructed.[50] When people learn about the final outcome of a series of events, they create a story from back to front "so that the beginning and middle are causally connected to its end."[51] The result is that, when thinking back to the events leading up to the outcome, facts that are consistent with the conclusion of the story come more easily to mind than facts that are inconsistent or irrelevant to the conclusion. When people are asked to disregard their knowledge of a given outcome, the facts which *explain* that outcome seem more salient than facts which supported other possible endings, so that the given

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46 Christensen-Szalanski, J. & Jay, J., "The hindsight bias: A meta-analysis" (1991) 48 Organizational Behavior and Human Decision Processes 147.

47 *Ibid.*

48 See, for example, Schkade, D.A. & Kilbourne, L.M., "Expectation-outcome consistency and hindsight bias" (1991) 49 Organizational Behavior and Human Decision Processes 105 [Schkade et al.]. This study measured hindsight bias using scenarios involving employee evaluations.

49 Jolls, C., Sunstein, C. & Thaler, R., "A bchavioral approach to law and economics" (1998) 50 Stanford Law Review 1471, 1529-32 [Jolls et al.]; Raschlinski, J.J., "A positive psychological theory of judging in hindsight" (1998) 65 University of Chicago Law Review 571 at 576-86 [Raschlinski]; Korobkin, R.B. & Ulen, T.S., "Law and behavioral science: Removing the rationality assumption in law and economics" (1989) [unpublished] at 50-51 [Korobkin et al.] as referred to in Peters, *supra* note 7 at 1291.

50 Pennington, N. & Hastie, R., "Explanation-based decision making: Effects of memory structure on judgment" (1993)14 Journal of Experimental Psychology: Learning, Memory and Cognition 521.

51 Wasserman, D., Lempert, R.O., & Hastie, R., "Hindsight and causality" (1991) 17 Personality and Social Psychology Bulletin 30.

outcome begins to seem almost inevitable or pre-determined.[52] Psychologists have labeled this process "creeping determinism."[53]

IV. HINDSIGHT BIAS AND LEGAL DECISION-MAKING

The empirical effect of hindsight bias in the context of legal judgments is well-documented. In a 1990 study by Bodenhausen, undergraduate students were asked to read case studies of jury deliberations that were in all respects identical except for the juries' final decision about the defendant's culpability. The study revealed that the juries' verdicts heavily influenced the participants' own assessments of the defendant's conduct.[54] In a study by Casper, Benedict and Perry, mock jurors assessed a civil lawsuit brought by a plaintiff against two police officers who had illegally searched his apartment without probable cause.[55] Even though the outcome of the search was irrelevant to its legality and jurors were specifically instructed to disregard the outcome when awarding damages, jurors who learned that the search uncovered evidence of illegal activities awarded less money to the plaintiff than jurors who were told that the search had not uncovered any such evidence or were not told an outcome.[56] The outcome of the search persistently influenced the juror's sentiments about the legality of the search itself.

In a study conducted in 1995 by Kamin and Raschlinski, college students were asked to judge the reasonableness of precautions taken by a city to prevent a river from flooding either before or after a flood had occurred.[57] Students in

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52 Fischhoff (1975), *supra* note 4. For example, Fischhoff found that people's ratings about the importance of various pieces of information differed based on the outcome information they had been given. Fischhoff interpreted this as an indication that people reinterpret the available evidence and draw inferences once outcome information is available. When this reconstruction of events takes place, information, consistent with the reported outcome becomes more accessible and inconsistent information becomes less accessible. Subsequent studies have used this conception and have proposed models suggesting how participants interpret the available evidence may mediate the relationship between hindsight bias and judgments about the event. See, for example, Casper, J. D., Benedict, K. & Perry, J.L., "Juror decision making, attitudes, and the hindsight bias" (1989) 13 Law and Human Behavior 291.

53 *Ibid.*

54 Bodenhausen, G.V., "Second-guessing the jury: Stereotypic and hindsight biases in perception of court cases" (1990) 20 Journal of Applied Social Psychology 1112.

55 Casper, J.D., Benedict, K. & Kelly, J., "Cognition, attitudes and decision-making in search and seizure cases" (1988) 8 Journal of Applied Social Psychology 331 [Casper]. See also Kagehiro, D.K., Taylor, R.B., Laufer, W.S., & Hartland, A.T., "Hindsight bias and third party consent to warrantless police searches" (1991) 15 Law and Human Behavior 305.

56 *Ibid.*

57 Kamin, K. & Raschlinksi, J., "Ex Post = Ex Ante: Determining liability in hindsight" (1995) 19 Law and Human Behavior 89-90 [Kamin et al.].

the "foresight" condition were presented with the facts and attorney arguments in the context of a city committee hearing and were asked to assess whether the city should hire a bridge operator during the winter months when the risk of the river flooding over was relatively low. Participants judging in foresight were instructed to recommend the precaution if they believed that the flooding was more than 10 per cent likely to occur in any given year (which was based on a cost-benefit comparison of the precaution, and the damage that a flood would likely cause). Participants in the "hindsight" condition were presented with the identical facts and arguments, but in the context of a trial where a flood was said to have occurred which caused one million dollars worth of damage, and which would have been averted had the operator been hired during the winter months. In the foresight condition, only 24 per cent of the participants chose to hire the bridge operator. In the hindsight condition, 57 per cent of the participants decided that the city should have hired the operator. The hindsight group also estimated that flooding was significantly more likely to have occurred than the foresight group, even though both groups heard the same evidence in this regard.[58] The decision to refrain from taking the precaution seemed reasonable to most participants in foresight, but seemed unreasonable in hindsight.[59]

With respect to medical malpractice cases, cognitive psychologists and legal scholars have considered that, since a failure to diagnose a disorder could appear much more blameworthy after the true nature of the disorder was discovered, doctors could be held liable based on the application of unfairly harsh diagnostic standards.[60] Wexler and Schopp expressed similar concerns about doctors who are sued for releasing patients who later commit violent acts.[61] As reflected in *Ahmed v. Stefaniu,* jurors could be inclined to view psychiatric assessments, which are often based on a complicated weighing of various patient factors, as more culpable than are truly warranted. Additionally, hindsight effects are documented as being stronger where there are high expectations about a person who is believed to be responsible for a negative outcome, a finding labelled the "disappointment effect."[62] Professors Susan LaBine and Gary LaBine have raised the disconcerting possibility that, since society generally has high expectations of professionals, it is possible that jurors could be most harsh on good doctors with positive work histories.[63]

These concerns are borne out by empirical research. In a study conducted in 1996, participants were asked to read clinical case scenarios involving the

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58 *Ibid.*

59 *Ibid.* See also Peters, *supra* note 7 at 1284.

60 Arkes, H.R., "Principles in judgment/decision making research pertinent to legal proceedings" (1989) 7 Behavioral Sciences & the Law 429 [Arkes (1989)]; Wexler et al., *supra* note 10.

61 Wexler et al., *ibid.*

62 Schkade et al., *supra* note 48; LaBine, S.J. & LaBine, G., "Determinations of negligence and the hindsight bias" (1996) 20 Law and Human Behavior 501 at 512 [LaBine et al.].

63 LaBine et al., *ibid.*

treatment of potentially dangerous patients with past histories of violence.[64] Each scenario described a dangerous patient, provided a therapist's assessment of the potential danger and set out a course of treatment.[65] The scenarios varied only by their outcome: (1) the patient became violent; (2) the patient did not become violent, or (3) no outcome was specified. After reading the case scenarios, participants were asked to estimate how foreseeable it was that the patient would commit violence, rate the reasonableness of the therapist's actions and make an assessment of whether the therapist had been negligent. Participants who were told that a violent outcome had occurred were more likely than the other participants to predict that the violence had been foreseeable, even though the case scenarios were in all ways identical except for the outcome.[66] Participants who learned of a violent outcome also judged the therapist's actions to be less reasonable, and were more likely to indicate that the therapist should have done more to prevent the violence.[67] Most importantly, the participants who learned of a violent outcome were significantly more likely to regard the therapist as negligent than participants in the other two groups. 24 per cent of the participants who were told of a violent outcome held the therapist to be negligent, whereas only between six and nine per cent of the other groups found the therapist to be negligent.[68] The implications for the decision in *Ahmed v. Stefaniu* are obvious.

The opinions of expert witnesses who testify at trial may also be tainted by the effects of hindsight. In a study by Neal Dawson and his colleagues, 160 physicians who attended a medical conference were presented with a clinical case scenario. Half of the doctors at the conference were asked to estimate the probability that each of five possible diagnoses were correct. The experimenters then announced the correct diagnosis and asked the remaining doctors to momentarily disregard their knowledge of the correct diagnosis and estimate the probability that they would have assigned to each of the five possible diagnoses. These doctors gave significantly higher probabilities for the correct diagnosis than did the doctors who had not been told the correct diagnosis.[69] These results suggest that even clinicians who serve as expert witnesses in malpractice tort cases are likely to be biased by their knowledge of a given outcome. As Polythress and his colleagues have observed, "not only is there concern that financial

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64 *Ibid.*

65 *Ibid* at 505. These case scenarios had previously been sent to a group of clinicians (psychologists and psychiatrists) of whom the majority endorsed the therapist's actions as constituting reasonable care.

66 *Ibid.*

67 *Ibid.*

68 *Ibid.* at 511.

69 Dawson et al., *supra* note 38; see also Berlin, *supra* note 38 (physician hindsight in judging missed abnormalities in a medical image); Muhm, J.R., Miller, W.E., Fontana, R.S., Sanderson, D.R. & Uhlenhopp, M.A., "Lung cancer detected during a screening program using four-month chest radiographs" (1983) 148 Radiology 609.

incentives may influence expert witnesses' judgments of the appropriateness of the defendants' diagnosis, treatment, or clinical judgment,. . .the literature on hindsight bias suggests that mere knowledge of an outcome may impair the ability of expert witnesses to accurately judge probabilities as they existed from the defendant's perspective."[70]

Perhaps most significantly, even experienced judges appear to be as susceptible as the rest of us to hindsight effects. In a study of judgment biases affecting U.S. federal court judges, Guthrie, Rachlinski and Wistrich demonstrated that learning the alleged outcome of an appeal of a case influenced judges' assessments of which outcome had been most likely.[71] Judges in the study showed hindsight bias to the same extent as mock jurors and other laypersons, with 24 per cent of judges making a different choice because of hindsight bias.[72] As the authors remarked, "[w]hether they were aware of it or not, the judges' judgments in hindsight were influenced by knowledge that they could not have had in foresight."[73]

The effects of hindsight on legal judgments may not just lead to legal results that are unfair, but also lead to results that are inefficient.[74] General negligence law purports to hold defendants liable only for a failure to take *reasonable* precautions to prevent injury or harm to a plaintiff.[75] Yet because the law of negligence necessarily involves evaluating *ex post* judgments of whether a defendant took reasonable care to prevent an accident or hazard, it is possible that no matter what degree of care is taken by the defendant at the outset, *any* untaken precaution may appear unreasonable in hindsight, even where the precaution could not reasonably have been justified in foresight.[76] Consequently, defendants who fear being judged with hindsight may engage in overly cautious conduct or invest resources in precautions that are not reasonably warranted from a foresight perspective.[77] For instance, in the medical malpractice context, holding physicians to an unreasonably high standard of care may cause them to practice excessively defensive medicine. This may encourage overly conservative assessments of patient "dangerousness" causing unjustified deprivation of patient liberty and unnecessary hospitalization.[78] Arkes has posited that holding physicians responsible for bad outcomes viewed in hindsight, where liability is otherwise unwarranted, leads to higher malprac-

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70 Polythress, N.G., Wiener R. & Schumacher, J.E., "Reframing the medical malpractice tort reform debate: Social science research implications for non-economic reforms" (1992) 16 Law and Psychology Review 66 at 100 [Polythress et al.].

71 Guthrie, C., Rachlinski, J.J. & Wistrich, A., "Inside the Judicial Mind" (2001) 86 Cornell Law Review 777 [Guthrie et al.].

72 *Ibid* at 818.

73 *Ibid* at 803.

74 Peters, *supra* note 7 at 1284.

75 Linden, A.M., *Canadian Tort Law*, 7th Ed. (2001) at 120-121 [Linden].

76 Kamin et al., *supra* note 57.

77 *Ibid.*

78 Wexler et al., *supra* note 10 at 486.

tice insurance premiums which may, in turn, create an economic distortion in medical care by prompting physicians to move from "risky" specialties to "safe" ones. Access to care in some specialties may become limited if physicians fear that bad outcomes will be unfairly attributed to their incompetence.[79]

V. PROPOSALS FOR DE-BIASING LEGAL JUDGMENTS

At first glance, it appears that the law is not blind to the influence of hindsight bias. Negligence law holds defendants to an *objective* standard of care, and many judicial opinions explicitly recognize that the trier-of-fact must be cognizant of hindsight bias when assessing whether a defendant has taken reasonable precautions to avoid an accident.[80] In the medical malpractice context, physicians are held to a standard of care that requires them to possess and exercise the degree of skill ordinarily exercised by other members of that profession.[81] The Supreme Court of Canada has recognized the unfairness of applying hindsight as a method of determining whether this threshold has been met. In *Lapointe v. Hopital Le Gardeur,*[82] the Court instructed that:

> [C]ourts should be careful not to rely upon the perfect vision afforded by hindsight. In order to evaluate a particular exercise of judgment fairly, the doctor's limited ability to forsee future events when determining a course of conduct must be borne in mind. Otherwise, the doctor will not be assessed according to the norms of the average doctor or reasonable ability in the same circumstances, but rather will be held accountable for mistakes that are apparent only after the fact.[83]

In *ter Neuzen v. Korn,*[84] the Supreme Court reiterated its warnings to lower courts not to use the benefit of hindsight to "judge too harshly doctors who act in accordance with prevailing standards of professional knowledge" at

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79 Arkes, H. R. & Schipani, C.A., "Medical malpractice v. the business judgment rule: Differences in hindsight bias" (1994) 73 Oregon Law Review 587 at 593-594 [Arkes et al. (1994)].

80 See, for example, *People's Department Stores Ltd. (1992) Inc., Re*, [2004] 3 S.C.R. 461 at para. 64; *Ontario (Ministry of Labour) v. Ontario Food Terminal Board* (2004), 2004 CarswellOnt 4046, [2004] O.J. No. 4075 (Ont. S.C.J.) at paras. 62-65; *Fish v. Shainhouse* (2005), 2005 CarswellOnt 5265, [2005] O.J. No. 4575 (Ont. S.C.J.) at paras. 13-14.

81 *ter Neuzen v. Korn*, [1995] 3 S.C.R. 674 at p. 693 [*ter Neuzen*]; *Gemoto v. Calgary Regional Health Authority* (2006), 2006 CarswellAlta 1315, [2006] A.J. No. 1278 (Alta. Q.B.) at paras. 19-22; *Hollis v. Birch* (1990), [1990] B.C. J. No. 1059, 1990 CarswellBC 1758 (B.C. S.C.), reversed (1993), 1993 CarswellBC 164 (B.C. C.A.), affirmed [1995] 4 S.C.R. 634 at p. 17 of 32 [B.C.J. No. 1059].

82 (1992), 90 D.L.R. (4th) 7 (S.C.C.) [*Lapointe*].

83 *Ibid.* at14.

84 *ter Neuzen*, *supra* note 81.

the time of giving treatment.[85] Yet, as discussed above, empirical studies demonstrate that the influence of hindsight bias is difficult to avoid.[86] Psychologists have not been able to find a way to instruct people on how to evaluate decisions in hindsight in a way that completely avoids the hindsight bias.[87] Understanding hindsight bias does nothing to reduce its influence,[88] nor do instructions to be careful to avoid its effects.[89] Given that judges appear to be as susceptible to hindsight bias as everyone else,[90] it is questionable whether the Supreme Court's articulation of these common law principles is, in effect, anything more than mere rhetoric.

The growing understanding of the risks that hindsight bias poses to fair and accurate verdicts has prompted several commentators to look for solutions to the problem of hindsight bias in tort law. Professor Raschlinski has suggested that because hindsight bias is caused by such a deeply ingrained cognitive process, avoiding its influence altogether is probably impossible; a single, all-encompassing remedy for hindsight bias is unlikely to be available to the legal system.[91] As a result, some academics have gone so far as to suggest pre-empting tort law by placing broader reliance on prospective safety regulations or replacing negligence law with a regime of strict liability.[92] Although both methods would sidestep the hindsight bias by avoiding after-the-fact assessments of a defendant's conduct,[93] they represent too novel and radical a departure from the current legal regime to present a pragmatic solution. Likewise, Jolls and her colleagues have contemplated raising the standard of persuasion in tort law to accommodate the effects of hindsight bias so that instead of requiring a plaintiff to prove his or her case on a balance of probabilities, a plaintiff would be required to show "clear and convincing evidence" of a defendant's negligence.[94] It is not clear, however, that raising the standard of persuasion would actually

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85 *Ibid.* at para. 34.

86 Fischhoff (1977), *supra* note 36.

87 Raschlinski, *supra* note 49 at 586-588; See also Guilbault, R.L., Bryant, F.B., Brockway, J.H. & Posavac, EJ., "A meta-analysis of research on hindsight bias" (2004) 26 Basic and Applied Social Psychology 103 [Guilbault et al.]. These experimenters performed a meta analysis of 95 studies on hindsight bias. Their results showed that studies that included manipulations to reverse hindsight bias did not produce lower effect sizes. For an excellent review, see Hawkins, S. & Hastie, R., "Hindsight: Biased judgments of past events after outcomes are known" (1990) 107 Psychological Bulletin, 311 [Hawkins, et al.].

88 Raschlinski, *supra* note 49 at 586-588.

89 *Ibid.* at 586.

90 Guthrie et al., *supra* note 71.

91 Rachlinksi, *supra* note 49 at 581.

92 Kolstad, C.D., Ulen, T.S. & Johnson, G.V., "*Ex post* liability for harm vs. *ex ante* safety regulation: Substitutes or complements?" (1990) 80 The American Economic Review 888; Korobkin et al., *supra* note 49.

93 *Ibid.*

94 Jolls et al., *supra* note 49.

influence the outcome of a case.[95] Even if raising the burden of proof were to make it more difficult for the party that benefits from hindsight to win a case, the effect of this increased threshold of liability would be unpredictable and could potentially *overcorrect* the bias, resulting in unfairness to plaintiffs.[96]

Over the past 20 years, a number of less radical strategies have been proposed to mitigate the effects of hindsight bias in the civil trial context. One proposal has been to place greater reliance on evidence of customary practice to evaluate the reasonableness of a defendant's conduct. A second tactic, which appears more promising, involves introducing hindsight "de-biasing" strategies that have been developed by cognitive psychologists, into the trial process. The most viable alternative, however, may be to use a "bifurcated" trial procedure in which issues of liability and damages proceed in separate phases. These proposals will now be discussed in more detail.

1. Reliance on Customary Standards

Some scholars have proposed that negligence law might be able to sidestep problems created by hindsight bias if a defendant's conduct were to be measured against a "neutral" benchmark such as customary practices established by an industry or profession before an accident occurred. Evidence of customary practice can provide an independent and reliable measure of what constitutes an adequate precaution, honing the ordinarily vague standard of reasonable care and providing direction to a judge or jury.[97] Professor Rachlinski has argued that using customary practice to judge a standard of care can be a solution to the hindsight bias because it steers a legal decision-maker's focus away from an open-ended evaluation of a defendant's conduct and towards a more defined assessment of whether the defendant complied with previously established norms.[98] That is, reliance on custom provides a method for avoiding the need to make an after-the-fact assessment about the foreseeability of an injury and the reasonableness of the precautions taken by a defendant.

Although most courts have agreed that evidence of customary behaviour is, at the very least, relevant to a determination of negligence,[99] custom cannot represent a complete answer to the problem of hindsight bias. Courts may treat compliance with custom as evidence that a tort defendant's actions were not

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95 Kagehiro, D.K., & Clark, W.C., "Legal vs. quantified decisions of standards of proof" (1985) 9 Law and Human Behavior 159 at 163-73. In this empirical study, the experimenters found that varying the standard of persuasion nonetheless produced similar jury verdicts.

96 Jolls et al., *supra* note 49; Peters, *supra* note 7.

97 Linden, *supra* note 75 at 185; *Waldick v. Malcolm*, [1991] 2 S.C.R. 456 at para. 31 [*Waldick*], quoting in part from Linden, A.M., "Custom in negligence law" (1968) 11 Canadian Bar Journal 151.

98 Rachlinski, *supra* note 49.

99 Linden, *supra* note 75 at 184.

negligent, but customary practice is not ordinarily dispositive.[100] The law does not recognize compliance with custom as a total defence to liability and courts will still independently assess the reasonableness of a defendant's actions.[101] This is perhaps best illustrated by an exception to the general rule; namely, medical malpractice lawsuits where courts have expressly acknowledged that custom *is* the benchmark of reasonableness.[102] Yet in a review of medical malpractice cases by Professor Linden, he notes that:

> In spite of several dogmatic judicial statements to the effect that compliance with custom is conclusive evidence of due care, careful analysis of the decisions discloses that the practices in question were either found to have been reasonable or, alternatively, their reasonableness was not challenged by expert evidence. It is wrong, therefore, to contend that a court cannot, even upon expert evidence to that effect, declare certain customary practices to be negligent. In the medical context as well, then, compliance with custom is significant evidence of reasonableness, but not conclusive.[103]

It is unlikely that courts will ever agree to fully relinquish their discretion to assess the reasonableness of customary practices, nor should they do so.[104] To the extent, however, that customary practices are themselves open to after-the-fact evaluations of reasonableness, hindsight bias will continue to influence

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100 As explained by Justice Iaccobucci in *Waldick, supra* note 97 at para. 35, ". . .tort courts have not abdicated their responsibility to evaluate customs, for negligent conduct cannot be countenanced, even when a large group is continually guilty of it. In short, no amount of general community compliance will render negligent conduct 'reasonable. . .in all the circumstances'." Quoting in part from Linden, *supra* note 95.

101 Linden, *supra* note 75 at 184 and 186.

102 As a general rule, doctors who have followed customary medical procedure are not supposed to be considered negligent, for two reasons. First, courts have stated that evidence of general practice is to be accorded respect in medical matters because the judicial system places trust in the medical profession to dictate its own standards of competence.[1] Secondly, the court has professed a lack of expertise to properly assess the standards of the medical profession. Linden, *supra* note 75 at 190. For instance, one judge has asserted that the courts "are in no position to say that the expert evidence was wrong in stating that the usual practice among surgeons was followed and reasonable care was exercised." See Richards, J.A., dissenting in *Anderson v. Chasney*, [1949] 4 D.L.R. 71 (Man. C.A.), affirmed [1950] S.C.R. viii at p. 80 [D.L.R.].

103 Linden, *supra* note 75 at 193. As stated by Justice Sopinka in *ter Nuezen, supra* note 78 at p. 698-98,"[W]hile it is true that in the majority of alleged malpractice cases a charge of negligence can be met by evidence to the effect that what was done was in accordance with general and approved practice, nevertheless, it is the Courts and not the particular profession concerned which decide whether negligence is established in a particular case."

104 As noted by Linden, *ibid* at 183: "[C]ustom is 'a two-edged sword'; it preserves the useful adjustments of the past, while at the same time it hinders the progress of the future." In other words, custom is the enforcer of what is good in society, but at the same time is a "barrier to all that might be better." (Citing Bernard, *Social Control in its Sociological Aspects* (1939) at 554).

assessments of liability. Additionally, defendants who rely on their own compliance with custom or general practice bear the onus of proving that a particular custom is in effect. For example, if a surgeon asserts, in defence of her conduct, that she conformed to general practice, "the onus is on the surgeon to prove it by evidence."[105] This is normally done by introducing experts in the field, who themselves are subject to the effects of hindsight, to inform the court about their general practice or customs.[106] Consequently, defendants who comply with customary practice or standards may still be vulnerable to hindsight-biased judgments, especially where there is conflicting evidence as to the customs or standards themselves. This is illustrated by *Ahmed v. Stefaniu* where two medical experts expressed the opinion that Dr. Stefaniu had met the standard of a reasonable psychiatrist in changing Johannes' status from a voluntary to involuntary patient.[107] The jury nonetheless found that Dr. Stefaniu was negligent. The Court of Appeal concluded that in reaching this decision, the jury must have formed the opinion that the experts who testified on behalf of Dr. Stefaniu did not constitute a "respectable body of medical opinion."[108] That is, despite the expert opinion of two professional psychiatrists that Dr. Stefaniu's actions complied with medical standards, the jury nonetheless found her conduct to be negligent.

Rachlinski recommends that courts look more broadly for instances in which to apply customary standards as the legal norm. "The refusal to rely more heavily on custom" he concludes, "presents a lost opportunity to avoid a biased assessment of liability."[109] Evidence from medical malpractice cases, however, suggests that even where this rule is strictly applied, compliance with custom or general practice will not necessarily insulate a defendant from the effects of hindsight in a negligence action.

2. Using De-biasing Strategies in the Courtroom

Through the use of opening and closing statements which allow counsel to provide a "framework" for the evidence tendered at trial, the trial process provides a defendant's lawyer an opportunity to implement strategies to reduce the hindsight bias. However, the traditional mechanism used to guide jurors as to proper considerations in rendering a verdict has been through the use of judicial instructions. Although judges may warn jurors not to be influenced by hindsight when making decisions about a defendant's liability, they do not

105 *Waldick, supra* note 97 at p. 472.
106 Linden, *supra* note 75 at 202.
107 *Ibid.* at paras. 23-25.
108 *Ibid.* at para. 36 and 40.
109 Rachlinski, *supra* note 49.

suggest how to accomplish this complex cognitive task.[110] As discussed above, psychologists have not found effective ways to instruct people on how to evaluate decisions in a way that completely avoids the hindsight bias,[111] and instructions to disregard the effects of hindsight are no more effective when employed by judges to instruct juries in a trial context.[112] Casper, Benedict and Perry found that mock jurors in their simulated search and seizure trial disregarded instructions not to be influenced by information about the outcome of a search when they made a decision about damages.[113] Professors Wexler and Schopp proposed that alternatively, a court could use cognitive psychologists as expert witnesses to instruct and educate the jury about hindsight bias.[114] To date, however, there are no empirical studies of the impact that such testimony might have on jurors. Given the general findings that educating individuals about hindsight bias and warning people not to be influenced does not appear to be effective,[115] it is questionable whether expert evidence on hindsight bias would be at all useful to jurors.

Smith and Green hypothesized that if jurors were instructed about how to properly apply evidence at critical junctures in the trial when the evidence was being presented, instead of at the end of a trial, then perhaps the effects of hindsight could be avoided. In their study, mock jurors were instructed by a judge on three occasions during a trial about how to properly apply the discrete sources of information that were being presented: (1) at the outset of the trial before any evidence was heard; (2) after the plaintiff put forward evidence about the defendant's conduct but before evidence was heard about the plaintiff's injuries; (3) after all the plaintiff's evidence had been presented but before the defendant presented his case.[116] For instance, when the plaintiff's lawyer introduced evidence regarding the severity of the plaintiff's injuries, the judge instructed the jurors that this information should only be used to assess damages and not liability. The experimenters found that these instructions had little or no effect. Even after hearing the judge's instructions on three separate occasions, jurors still tended to fuse the evidence and show a hindsight bias.[117]

Despite these disappointing results, there are other cognitive strategies to reduce hindsight bias that may be effective. One such technique encourages

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110 *Ibid.* at 582; Sopinka, J., Houston, D.B. & Sopinka, M., *The Trial of an Action*, 2nd ed. (1998) at 162-185.

111 *Ibid.* at 586-588; See also Guilbault et al., *supra* note 87; Hawkins, et al., *supra* note 87.

112 Thomson, W.C., Fong, G.T. & Rosenham, D.L., "Inadmissable evidence and juror verdicts" (1981) 40 Journal of Personality and Social Psychology 453.

113 Casper, *supra* note 55.

114 Wexler et al., *supra* note 10 at 490. They point to the broad discretion that lies with a trial judge to determine the admissibility of expert testimony as a basis for introducing expert evidence on hindsight bias.

115 Fischhoff (1977), *supra* note 36; Kurtz et al., *supra* note 36; Wood, *supra* note 3.

116 Smith, A.C. & Greene, E., "Conduct and its consequences: Attempts at debiasing jury judgments" (2005) 29 Law and Human Behavior 505 [Smith et al.].

117 *Ibid.* at 520-521.

people to think about alternative outcomes, a process called "counterfactual thinking."[118] Ideally, by urging people to think back to the beginning of a series of events and consider other ways that events might have developed, what initially may have seemed to be "predestined" causal links between the beginning, middle and end of a "story" are broken down so that a known outcome seems less inevitable.[119] For example, in a study by Arkes and his colleagues, a group of neuropsychologists were given a case study of a 55-year-old male patient and were asked to estimate the probability that the man had each of three possible diseases: alcohol withdrawal, Alzheimer's disease, or brain damage due to alcohol abuse. Psychologists who were told that one of the diagnoses was correct gave higher estimates for that diagnosis than did psychologists who were not told of a correct diagnosis. In the same experiment, however, another group of psychologists were told that one of the diagnoses was correct but were also instructed to write down one piece of evidence from the patient's case history in support of *each* of the three possible diagnoses. The estimates given by this group of psychologists did not exhibit a hindsight bias. By requiring these individuals to provide reasons supporting each of the alternative outcomes, they came to recognize that the other diagnoses were not so improbable after all, and adjusted their estimates accordingly. [120]

The experimenters hypothesized that this technique of reducing hindsight bias by generating alternative outcomes may already be in use in legal proceedings, since defence lawyers may put forward scenarios in which their clients are not liable as an alternative course of events.[121] There is evidence to support the notion that this technique can be successfully employed in the trial context. Stallard and Worthington presented mock jurors with a videotaped trial where a plaintiff sued the board of directors of a financing company when the company's construction loan investments failed.[122] The plaintiff's lawyer argued that the loan had failed because the directors lacked experience and did not have appropriate supervision when underwriting the loan. The defence lawyer argued that the loan failure was caused both by unforeseeable economic conditions and by the fact that federal agencies deregulated interest rates. The study found that the defence lawyer was able to reduce the effect of hindsight bias by focusing the jurors' attention on the time prior to the loan failure. The defence lawyer warned the jurors of the plaintiff's strategy of wanting them to be "Monday-morning quarterbacks," in other words, to judge the directors with the information that was not available when the directors made their decision

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118 Robbennolt, J.K. & Sobus, M.S., "An integration of hindsight bias and counterfactual thinking: Decision-making and drug courier profiles" (1997) 21 Law and Human Behavior 539 at 540.

119 *Ibid.*

120 Arkes et al. (1988), *supra* note 38 at 307.

121 Arkes (1989), *supra* note 60 at 450.

122 Stallard, M.J. & Worthington, D.L., "Reducing the hindsight bias utilizing attorney closing arguments" (1998) 22 Law and Human Behavior 671 [Stallard et al.].

years earlier, and concluded his closing statement with an appeal not to second-guess the decisions of the defendants. The experimenters concluded that "[h]aving the defence attorney argue to focus on the pre-outcome time frame acted as an effective [hindsight] reduction tool, providing participants with an alternative story upon which they could draw."[123]

The problem with asking people to consider alternative outcomes as a trial strategy is that it is not always successful, and it can even backfire. Thinking about alternatives to reality is believed to reduce hindsight bias because it brings alternative outcomes more easily to mind and makes the reported outcome seem less obvious, presumably helping to restore a forward-looking perspective in which other outcomes were more conceivable.[124] However, when alternative outcomes do not readily come to mind, this may reinforce the feeling that the known outcome was inevitable, *strengthening* the hindsight bias. Sanna, Schwarz and Stocker applied this logic to Fischoff's original hindsight experiment involving the British-Gurkha war. Participants read about the war, and were then asked to generate either two or ten thoughts about how the war might have turned out differently. Generating only two thoughts was experienced as easy, and slightly reduced the hindsight bias. In contrast, generating ten thoughts was experienced as difficult and actually *increased* the hindsight bias. Trying to generate many reasons why the war might have turned out otherwise "backfired" and only convinced participants all the more that the outcome was inevitable.[125] As noted by the experimenters, [t]his finding suggests that, ironically, people may be more likely to succumb to hindsight bias the more they try to avoid it."[126]

This may explain the lack of success that some studies have when attempting to use this strategy to reduce hindsight bias in juries. In Kamin and Rachlinksi's simulated negligence trial where a city's decision not to hire a bridge operator in winter caused a flood, one group of mock jurors in the study were warned by a judge of the danger of viewing the accident in hindsight and were instructed by both the judge and the defence lawyer to "think of all the ways" that the accident could have happened.[127] At the end of the trial, the judge gave a final admonishment to the jurors:

> Making a fair determination of probability may be difficult. As we all know, hindsight vision is always 20/20. Therefore it is extremely important that before you determine the probability of the outcome that did occur, *you fully explore all other possible alternative outcomes which could have occurred.* Please take a

123 *Ibid.* at 680.

124 Sanna et al., *supra,* note 40 at 287.

125 *Ibid.* at 288; Sanna, L.J., Schwarz, N. & Stocker, S.L., "When debiasing backfires: Accessible content and accessibility experiences in debiasing hindsight" (2000) 28 Journal of Experimental Psychology: Learning, Memory, and Cognition 497.

126 Sanna et al., *supra,* note 40 at 288.

127 Kamin et al., *supra* note 57 at 97.

> moment to think of *all the ways* in which the event in question may have happened differently or not at all. [emphasis added].[128]

These instructions did nothing to reduce the effect of the hindsight bias on the jurors.[129] Kamin and Rachlinski concluded that judges' instructions to disregard hindsight bias are ineffective in the trial context and that "more intrusive procedures might be necessary to counteract the bias' influence."[130] However, it is also possible that these instructions failed to reduce hindsight bias because the jurors found it difficult to think of *many* other ways in which the flooding could have happened and thus felt, intuitively, that the accident must really have been quite foreseeable. This reasoning may similarly explain the strategy's success in Stallard and Worthington's study where jurors assessed the negligence of a board of directors for their failed loan investments.[131] In that instance, the defence counsel painted a specific, alternative story for the jurors that they could easily turn to when considering the board's actions in light of the known outcome.

This research suggests that psychological de-biasing strategies, when used properly, may be able to reduce the hindsight bias. A well-crafted charge to the jury would ask the jury to consider one or two alternative possible outcomes in order to make the known outcome seem less obvious in hindsight. Defence counsel would also be able to implement de-biasing techniques in their opening and closing statements by providing jurors with reasons why a defendant is not at fault, urging jurors to focus on the pre-outcome time period during their deliberations, and providing jurors with an alternative story or version of preceding events to explain how and why a known outcome occurred. For instance, during Dr. Stefaniu's trial, defence counsel may have asked the jury to consider two or three factors in Johannes' clinical history that had supported Dr. Stefaniu's decision to change his status to that of a voluntary patient, and encouraged the jury to consider alternative explanations for why Johannes' psychosis worsened and caused him to murder his sister; e.g., perhaps Johannes' deliberately chose to cease taking anti-psychotic medications because of unpleasant side effects.

3. Bifurcating the Trial Process

In a typical "unitary" trial, the judge or jury is presented with all the evidence in the case, and then is asked to make a decision about the defendant's liability and the plaintiff's entitlement to damages. Judges have the option, however, of conducting a civil trial so that liability and damages issues are

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128 *Ibid.*
129 *Ibid.* at 98-99.
130 *Ibid.* at 100.
131 Stallard et al., *supra* note 122.

decided separately, a procedure known as bifurcation.[132] In the most common form of bifurcated trial, a jury first hears evidence about a defendant's conduct and makes a decision about whether the defendant has failed to meet a requisite standard of care. Only after a jury makes a decision as to whether a defendant has been negligent does the jury hear evidence about whether the defendant's conduct caused the plaintiff's damages and the quantum of those damages. That is, one jury eventually decides both liability and damages, albeit in separate phases of the trial.[133] Alternatively, but less frequently, two different juries are used to assess liability and damages.[134] One potential benefit of a bifurcated trial is that when jurors are making a decision about liability, they may be shielded from knowledge of the outcome, thus minimizing the possibility of a hindsight bias effect.

Had the case of *Ahmed v. Stefaniu* been conducted as a bifurcated trial, the jury would initially have only heard evidence relating to the reasonableness of Dr. Stefaniu's decision to make Johannes a voluntary patient. Ideally, in making this assessment, the jury would not have known about the fact that Johannes had murdered his sister. In effect, this bifurcated procedure would have forced the jury to assess the reasonableness of Dr. Stefaniu's conduct on its own merits. Only if the jury nonetheless judged Dr. Stefaniu to have deviated from the appropriate standard of care would the second phase of the trial have proceeded. Only then would the jury have learned about the murder of Rosyln Knipe, and be asked to decide whether Dr. Stefaniu's negligence was a cause of the murder, and if so, assess the plaintiffs' damages.

Canadian courts have the inherent jurisdiction to bifurcate the issues in a civil trial in cases where to do so may enhance the fairness of a jury's determination of liability.[135] However, the law of bifurcation in Canada is in its

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132 Smith et al., *supra* note 116 at 508.

133 *Ibid.*

134 *Ibid.* As explained by Smith & Greene, in this model, one jury would assess the liability of the defendant. If the defendant was held to be liable, another jury would decide the compensation to be awarded to the plaintiff. The second jury is typically informed that the defendant's liability has been established either: (i) in a previous hearing; (ii) by the defendant's own admission, or (iii) by summary judgment, and a brief statement of the case is typically provided to these jurors.

135 The basis for entertaining bifurcation is found in the Supreme Court of Canada decision of *Whiten v. Pilot Insurance Co.*, [2002] 1 S.C.R. 595 by Binnie J., on behalf of a seven-judge majority. A jury had found that a defendant insurer had wrongfully alleged arson and refused to pay the plaintiff's claim for a residential fire loss. The jury found that the insurer's conduct towards the plaintiff was so reprehensible that it was deserving of a punitive damages award of $1 million. At the Court of Appeal, a majority found that this quantum was excessive and substituted an award of $100,000. The Supreme Court of Canada restored the $1 million award, and in so holding, Binnie J. opened the door for trial judges to consider bifurcation of a trial in circumstances of prejudice with the following wording:

121 The fact the respondent's assets of $231 million were mentioned to the jury in this case was unhelpful. Pilot was obviously a substantial corporation. Disclosure of detailed

fledgling stages, and there is minimal jurisprudence on the issue. The courts of provinces such as British Columbia and Prince Edward Island appear to be somewhat amenable to bifurcation as a tool to reduce prejudice and enhance fairness in the liability stages of proceedings.[136] Conversely, in Ontario and Newfoundland, courts have rarely ordered bifurcation of the issue of liability and damages, particularly so in cases scheduled to be tried by juries.[137] These

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financial information before liability is established may wrongly influence the jury to liability where none exists (i.e., the subliminal message may be "What's a $345,000 insurance claim to a $231 million company?"). . .

122 Where a trial judge is concerned that the claim for punitive damages may affect the fairness of the liability trial, bifurcated proceedings may be appropriate. On the facts of this case, no harm was done by the procedure following, including the mention of the $231 million figure.

136 See, for example, *Wonderful Ventures Ltd. v. Maylam* (2001), 2001 CarswellBC 1516, [2001] B.C.J. No. 1144 (B.C. S.C. [In Chambers]); *Stevens v. Sun Life Assurance Co. of Canada* (2004), 2004 CarswellBC 718, [2004] B.C.J. No. 661 (B.C. S.C.); *Lawrence v. Insurance Corp. of British Columbia*, 2001 BCSC 1530 (S.C.); *Read v. Insurance Corp. of British Columbia* (2002), 2002 CarswellBC 2793, [2002] B.C.J. No. 2617 (B.C. S.C.); *Sanders v. Clarica Life Insurance Co.* (2003), 2003 CarswellBC 597, [2003] B.C.J. No. 596 (B.C. S.C. [In Chambers]); *Collins v. Prince Edward Island Mutual Insurance Co.* (2003), 2003 CarswellPEI 136, [2003] P.E.I.J. No. 124 (P.E.I. T.D. [In Chambers]).

137 In Ontario, the leading case in this area of law is the Court of Appeal decision of *Elcano Acceptance Ltd. v. Richmond, Richmond, Stambler & Mills* (1986), 1986 CarswellOnt 618, [1986] O.J. No. 578 (Ont. C.A.) [*Elcano*], a decision of Morden, J.A. as he then was. This decision has since been quoted for the proposition that the court has inherent jurisdiction to hear bifurcation applications, but that orders to bifurcate issues to be determined at trial ought rarely to be made, made only in the clearest of cases, and not where one of the parties has served a jury notice. Recently, the Divisional Court in *Carreiro (Litigation Guardian of) v. Flynn* (2005), 2005 CarswellOnt 903, [2005] O.J. No. 877 (Ont. Div. Ct.) has cast doubt on the need to restrict bifurcation orders to non-jury cases by saying, at para. 12, "It may be the case that there are some trials that might appropriately be split, even where the result would be to have two different juries trying separate issues in the case." The application of bifurcation to jury cases was also addressed in *Aghasani v. Briglio* (2006), 2006 CarswellOnt 3161, [2006] O.J. No. 2071 (Ont. S.C.J.) where Power J. specifically referred to *Elcano, supra* and interpreted it to read that there exists an inherent jurisdiction to bifurcate, even in a jury trial, albeit one that should be exercised only in limited circumstances. See also *Ahmed v. Azzizzada* (2006), 2006 CarswellOnt 7972, [2006] O.J. No. 4995 (Ont. S.C.J.) at para. 14, concluding that there can be an application of a bifurcation remedy to a case in which one of the parties has delivered a jury notice. In *Manielly v. Moran* (April 14, 2004), Doc. Barrie 00-B1029, 03-B5710, [2004] O.J. No. 2438 (Ont. S.C.J.), Howden J. drew a distinction between cases where one jury was to hear all the evidence in one sitting, and cases where bifurcation would require two separate juries or trials. The judge was of the opinion that where the relief sought was to have one trial with one jury as a trier-of-fact but have issues of liability determined first followed by the evidence on damages, rather than to have two separate juries or trials, the caution exercised by the Court of Appeal in *Elcano* did not apply. Howden J. consequently ordered bifurcation of the issues of liability and damages at a jury trial. See also *Marrelli v. Deathe* (2003), 2003 CarswellOnt 5434, [2003] O.J. No. 2204 (Ont. S.C.J.). For the approach adopted by courts in New-

courts have regarded the right to bifurcate a trial as a "narrowly circumscribed power" and held that "the power should be exercised, in the interests of justice, only in the clearest cases."[138] The factors to be considered by a court in deciding whether to bifurcate a trial relate primarily to the perceived savings of time and expense, and the relative efficiency of segregating the issues of liability and damages.[139] These courts have not considered bifurcation as a tool to reduce the potential for bias in jury decisions, and in fact, some courts have expressly

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foundland, see *Lundrigan v. Non-Marine Underwriters, Lloyd's London* (2002), 36 C.C.L.I. (3d) 263 (Nfld. T.D.) [*Lundrigan*].

138 *Elcano, ibid.* In *Lundrigan. ibid*, the Newfoundland Supreme Court followed other Newfoundland cases that have held that a separate trial should be ordered "only in exceptional cases" and where the issues are not interwoven. See also *Royal Bank v. Kilmer van Nostrand Co.* (1994), 29 C.P.C. (3d) 191 (Ont. Gen. Div.); *Little v. Ottawa (City)* (2003), 2003 CarswellOnt 4816, [2003] O.J. No. 5075 (Ont. S.C.J.), additional reasons at (2004), 2004 CarswellOnt 46 (Ont. S.C.J.); *General Refractories Co. of Canada v. Venturedyne Ltd.* (2001), 2001 CarswellOnt 613, [2001] O.J. No. 746 (Ont. S.C.J.).

139 In *Bourne v. Saunby* (1993), 23 C.P.C. (3d) 333 (Ont. Gen. Div.) at pp. 342-343, the Court set out 14 criteria to be considered when considering the issue of bifurcation, as follows:

i) Are the issues to be tried simple?

ii) Are the issues of liability clearly separate from the issue of damages?

iii) Is the factual structure upon which the action is based so extraordinary and exceptional that there is good reason to depart from normal practice requiring that liability and damages be tried together?

iv) Does causation touch equally upon the issues of liability and damages?

v) Will the trial judge be better able to deal with the issues of the injuries of the plaintiff and his financial losses by reason of having first assessed the credibility of the plaintiff during the trial of the issue of damages?

vi) Can a better appreciation of the nature and extent of injuries and consequential damage to the plaintiff be more easily reached by trying the issues together?

vii) Are the issues of liability and damages so inextricably bound together that they ought not to be severed?

viii) If the issues of liability and damages are severed, are facilities in place which will permit these two separate issues to be tried expeditiously before one court or before two separate courts, as the case may be?

ix) Is there a clear advantage to all parties to have liability tried first?

x) Will there be a substantial saving of costs?

xi) Is it certain that the splitting of the case will save time, or will it lead to unnecessary delay?

xii) Has there been an agreement by the parties on the quantum of damages?

xiii) If a split is ordered, will the result of the trial on liability cause other plaintiffs in companion actions, based on the same facts, to withdraw or settle?

xiv) Is it likely that the trial on liability will put an end to an action?

These considerations were recently restated in a more limited form by Nordheimer J. in *Air Canada v. WestJet Airlines Ltd.* (2005), 2005 CarswellOnt 7420, [2005] O.J. No. 5512 (Ont. S.C.J.) at para. 31; adopted in *Donino v. Robinson* (2006), 2006 CarswellOnt 8289, [2006] O.J. No. 5114 (Ont. S.C.J.) at para. 24.

rejected the notion that bifurcation may have such benefits.[140] This is unfortunate, since empirical research suggests that greater use of bifurcated trials might be made to ensure fair and impartial judgments by juries on determinations of negligence.[141]

Smith and Greene examined the effects of bifurcation in a simulated personal injury case arising from a car accident. Jurors who heard evidence about a defendant's conduct but no evidence of the plaintiff's injuries judged the defendant's behavior to be less negligent than did jurors who heard about both conduct and injuries. These jurors were also less likely than jurors who also heard evidence about damages to say that their decision about negligence was motivated by a desire to compensate the plaintiffs.[142] In other words, bifurcation steered the jurors' attention towards legally appropriate factors to consider when making their decisions. Statistical studies have shown that defendants are more likely to prevail when decisions about liability are made prior to the presentation of testimony about damages.[143] Commentators have suggested that the greater number of verdicts for defendants may reflect judgments in which the jury has considered the evidence of negligence on its own merits, thus representing an increase in judgments that are more fair and accurate. [144]

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140 Consider, for example, *Sempecos v. State Farm Fire & Casualty Co.* (2001), 2001 CarswellOnt 4384, [2001] O.J. No. 4887 (Ont. S.C.J.), affirmed (2002), 2002 CarswellOnt 3991, [2002] O.J. No. 4498 (Ont. Div. Ct.), affirmed (2003), 2003 CarswellOnt 2734 (Ont. C.A.) where in refusing a motion to bifurcate a trial, Killeen J. states at paras. 40-42:

> At bottom, Mr. Bedard's major thrust was. . .that the evidence on the bad faith and damages issues, including the potential unfolding of privileged communications, would unfairly and inefficiently distend the trial and irretrievably contaminate it. I take a much more robust and positive approach to jury trials, criminal or civil. Mr. Bedard's argument is tinged with a veiled criticism of the jury trial system in suggesting inherent contamination and the possibility that the jury will not be able to address the issues put before it impartially and fairly. I do not agree with him and think that the history and record of the jury system is against his argument.

141 Wissler, R., Rector, K & Saks, M., "The impact of jury instructions on the fusion of liability and compensatory damages" (2001) 25 Law and Human Behavior 125. See also, William E. McNally and Barbara E. Cotton, "The Case for Bifurcation of Issues in a Class Action Proceeding" (2002) Advocates Quarterly, Vol. 25.

142 Smith et al., *supra* note 116.

143 Zeisel and Callahan surveyed 186 civil trials in the U.S. in order to examine the effects of bifurcation in civil trials. They reported that defendants prevailed in 56 per cent of bifurcated trials, but only in 34 per cent of unitary trials. Zeisel, H. & Callahan, T., "Split trials and time saving: A statistical analysis" (1963) Harvard Law Review 1606 at 1610 [Zeisel et al.]; see also Horowitz, I.A. & Bordens, K.S., "An experimental investigation of procedural issues in complex tort trials" (1990) 14 Law and Human Behavior 269 at 282 [Horowitz et al.].

144 Arkes et al. (1994), *supra* note 79 at 634.

A growing body of anecdotal[145] and experimental studies have also reported on the other merits of the bifurcated trial procedure. There is strong evidence to indicate that bifurcated trials are more efficient; if a jury decides that a defendant is not liable in the first phase of the trial, the trial is concluded, whereas if the jury finds for the plaintiff on liability, the parties are likely to settle the case rather than continue to a hearing on damages. In a statistical analysis of the effects of bifurcation in U.S. federal tort cases, Zeisel and Callahan found that 78 per cent of regular trials, but only 15 per cent of bifurcated trials, went through their full course.[146] Bifurcation decreased average jury deliberation time by 22 minutes, but did not lead to an increase in hung juries or jury waivers.[147] Significantly, the experimentors found that it was not possible to predict in which cases bifurcation would prove to be most effective, however bifurcation *still* resulted in an overall savings of 20 per cent of trial time.[148] The experimentors concluded that it was unlikely that bifurcation would *ever* substantially add to trial time.[149] Another study polled U.S. state and federal court judges who had ordered or permitted bifurcation in their courts.[150] 84 per cent of the judges in both groups reported that, in their opinion, bifurcation had "helped the process."[151] A similar majority stated that bifurcation had a positive impact on the "fairness of the outcome."[152]

In the medical malpractice context, bifurcation also appears to be viewed favorably by practitioners. Polythress and Murin asked mental health professionals to envision themselves in the role of a defendant in a hypothetical medical malpractice trial, as follows:[153]

> We ask that you imagine that you have been sued for failure to protect the public from the violent actions of one of your clients. A client that you were treating in outpatient therapy assaulted someone in the community, resulting in serious injuries. The injured person later learned that the perpetrator was under your care and clinical supervision; they have filed a civil suit against you asking for mon-

145 Tobin, D.L., "To B or not to B: 'B' means bifurcation" (2000) 14 The Florida Bar Journal at 16.

146 Zeisel et al., *supra* note 143 at 1610

147 *Ibid.* at 1621-1623.

148 *Ibid.* at 1623.

149 *Ibid.*

150 Louis Harris & Associates Inc., "Judges' opinions on procedural issues: A survey of state and federal trial judges who spend at least half their time on general civil cases" (1989) 89 Boston University Law Review 731 at 744. This study surveyed 800 state judges and 200 federal judges in the United States, revealing that 82 per cent of state judges and 94 per cent of federal judges had ordered bifurcation at least once.

151 *Ibid.* at 744.

152 *Ibid.* at 745.

153 Polythress, N.G. & Murrin, M.R., "Mock defendants' procedural justice judgments of alternative trial procedures in a medical malpractice case" (1997) 21 Law and Human Behavior 257 at 267.

> etary damages, attributing their harm to your failure to meet professional standards in managing this assaultive client.

The doctors were asked to rank their preference for a standard adversarial trial or a bifurcated trial. Bifurcation was viewed much more favorably by doctors, who felt that in terms of procedural justice, bifurcation would give them a greater voice in the presentation of their case, and greater control over the outcome than in a unitary trial.[154]

Some scholars have already concluded that bifurcated trials present a viable solution to the hindsight bias problem in medical malpractice cases.[155] However, there are at least two reasons why bifurcated trials may not present a complete solution to the problem.[156] First, jurors in a bifurcated trial will still presume that there has been a negative outcome—the case would not have been brought to trial otherwise. Although this fact cannot be eliminated from a jury's knowledge by special trial procedures,[157] it should be noted that bifurcation still appears to reduce hindsight effects. Horowitz and Bordens examined the effects of bifurcation on a mock jury in a simulated toxic tort case. The experimenters discovered that when mock jurors were not told about an outcome in the first half of a bifurcated trial, they either (i) did not assume any outcome, or (ii) assumed an outcome which created less hindsight bias than the actual outcome. Both circumstances were an improvement on the jury decisions in the unitary trial process.[158]

The second reason why bifurcation is not a fool-proof solution to the elimination of hindsight bias in the trial context is that bifurcation is only possible to the extent that the issues to be tried are, in fact, distinct and separable.[159] There may be instances in which it is necessary to tell jurors of the nature of an injury in order for them to determine whether a defendant exercised the appropriate level of care. Even where issues can be separated, plaintiff's lawyers may attempt to adduce information about damages during the half of the trial supposedly devoted solely to the determination of liability.[160] For example, plaintiffs may regard bifurcation in tort litigation as being prejudicial because by removing evidence of damages during an assessment of liability, the plaintiff may be unable to present a sympathetic view of his or her case.[161] Some lawyers recommend that plaintiff's counsel should always fight against

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154 *Ibid.* at 265.
155 Arkes et al. (1994), *supra* note 79 at 634.
156 *Ibid.*
157 *Ibid.;* Rachlinski, *supra* note 49.
158 Horowitz et al., *supra* note 143 at 282.
159 Wexler et al., *supra* note 10 at 494.
160 Arkes et al. (1994), *supra* note 79 at 634.
161 Wexler et al., *supra,* note 10 at 493-494.

a motion for bifurcation and, if bifurcation does occur, strive to apprise the jury of damages during the first phase of the trial.[162]

These issues notwithstanding, it is contended that although the decision to permit bifurcation should continue to be one of judicial discretion, empirical demonstrations that bifurcating trials may lead to a speedier and more cost-effective trial process for all concerned, and a fairer trial outcome, should no longer be ignored. In order for courts to effectively implement bifurcated trials, however, the legal system will have to develop ways to deal with factors that could undermine or minimize their usefulness.[163] For example, if jurors were to be initially kept from knowing about an injury or harm that had occurred in a given case, they would have to be told something that would bring understanding and meaning to their purpose for being in court.[164] The court would also have to find ways to control the information conveyed to jurors during opening and closing statements in order to ensure that lawyers did not use these procedural mechanisms to circumvent the purpose of bifurcation.[165] As noted by Polythress and his colleagues, "these are practical problems, however, that should not prove insurmountable to system architects determined to find a set of workable rules for the implementation of this potentially valuable procedure."[166]

VI. CONCLUSION

In negligence actions, defendants are supposed to be judged by the reasonableness of their conduct, not by the outcome. Legal decision-makers are required to evaluate a defendant's conduct based on what was known *before* an accident occurred, yet the law necessarily judges a defendant's conduct *after* an outcome is known. Because of this a careful and prudent defendant may be unfairly judged to be negligent by decision-makers who, in hindsight, view a defendant's conduct as *less reasonable,* or an accident as *more foreseeable,* than it truly was at the time.[167] This is a problem with potentially serious ramifications, as illustrated by the outcome for Dr. Stefaniu, who made a considered decision in the light of complex information; a decision that was judged to have met a professional standard of care by some of her peers, yet was judged unreasonable by a jury.

A number of methods have been proposed to reduce hindsight bias in the legal context. Although some of these methods, such as placing greater reliance

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162 Curry, W.C. & Snide, R.T., "Bifurcated trials: How to avoid them – how to win them" (1988) 47 Trial 51.

163 Polythress et al., *supra* note 70 at 110.

164 *Ibid.*

165 *Ibid.*

166 *Ibid.*

167 Peters, *supra* note 7 at 1284.

on customary practices when evaluating *ex ante* standards of reasonable conduct, are unlikely to be effective in practice, other strategies that encourage a trier-of-fact to imagine alternatives to the known outcome, or that focus attention on the pre-outcome time frame during a trial, have had some success. The most viable method may be to employ a "bifurcated" trial procedure in which the issues of liability and damages proceed in separate stages. Not only do bifurcated trials have the advantage of potentially reducing hindsight effects, there is strong evidence to suggest that bifurcated trials are more efficient, cost effective and just.

It is clear from the empirical research presented above that the effects of hindsight bias in Dr. Stefaniu's case might have been reduced, if not eliminated, had one or the other of the methods proposed been employed. It can be expected that if professionals like Dr. Stefaniu cannot anticipate being fairly judged on the reasonableness of their assessments, untainted by hindsight bias, then this knowledge will be used to set unreasonable practice standards, leading to overly-defensive and inefficient medical care. Such people, no matter how highly qualified, are human and fallible, but are nevertheless required to make difficult decisions based on all of their experience, expertise and the information available to them. They should not stand condemned for their inability to see the future.