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RECOVERY FOR THE VALUE OF A CHANCE IN MEDICAL NEGLIGENCE CASES: BRINGING MINNESOTA'S STANDARD OF CAUSATION UP TO DATE

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To establish causation in a case involving ordinary negligence, Minnesota plaintiffs must establish that the tortfeasor's conduct was a "substantial factor" in bringing about the injury. However, the plaintiff in a Minnesota medical negligence case must prove that the doctor's negligence "more probably than not" caused the injury. This Article traces the development of the present standard of causation in medical negligence cases. Following a historical discussion, the authors identify what appears to be the source of the double standard that now exists between the causation test in medical negligence and the causation standard in other tort cases. This discussion focuses upon the developing value of a chance theory of recovery and its potential application in Minnesota medical negligence cases. Finally, the authors propose a unified approach to causation in Minnesota tort law encompassing the conduct of all tortfeasors.

INTRODUCTION	460
I. DEVELOPMENT OF A CAUSATION STANDARD IN MINNESOTA	462
II. IDENTIFICATION OF AN INADVERTENT ABHERRATION ..	467
A. Overview	467
B. <i>Development of Negligence and Causation in Minne- sota Medical Negligence Cases</i>	468

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1. <i>Negligence</i>	468
2. <i>Enter: "More Probable Than Not"</i>	471
3. <i>Causation: Birth of an Aberration</i>	472
C. <i>Application of the Standard</i>	477
D. <i>Effect of the "More Probable Than Not" Standard</i> ..	491
III. THE VALUE OF A CHANCE THEORY OF RECOVERY	492
A. <i>Recognition in Other Jurisdictions</i>	492
1. <i>Non-Medical Negligence Cases</i>	492
2. <i>Medical Negligence Cases</i>	494
B. <i>Imposition of Liability Without Probability Testimony in Minnesota</i>	504
IV. AN ARGUMENT FOR REFORM	511
A. <i>The Need for Reform</i>	511
B. <i>Options for Reform and a Recommendation</i>	514
CONCLUSION	517

INTRODUCTION

After receiving a blow to the head several days earlier, one of Dr. Healer's patients has been suffering from headaches, blackouts, memory lapses, and other symptoms that suggest the possibility of seizure activity. Dr. Healer conducts a neurological examination which is negative, and orders an electroencephalogram (EEG) to be conducted at the out-patient department of the local hospital later that morning. He tells the patient to return home after the testing is completed and remain inactive for the rest of the day: "I will call you this afternoon if the test is abnormal, and we will decide what to do from there."

The EEG results are returned to Dr. Healer's office that afternoon confirming evidence of seizure activity. The doctor is involved with other matters and forgets to call the patient. Three days later, the patient is found dead in his automobile, which left the roadway and struck a tree. He had sustained massive head injuries. The patient's widow commences a wrongful death action against Dr. Healer.

The plaintiff's expert testifies that Dr. Healer was negligent in failing to communicate the results of the EEG to the patient before he was allowed to resume his normal activities. Dr. Healer does not deny his error. It is undisputed that the positive EEG dictated the immediate prescription of Dilantin, a medication that is often effective in controlling seizures.

SCENARIO NO. 1

It cannot be determined whether the patient suffered a seizure, causing him to leave the road, and the autopsy report lists the head injuries as the cause of death. The accident was unwitnessed, and there are no physical facts that provide any clue as to why the accident occurred.

SCENARIO NO. 2

The patient's expert medical witness testifies that, in his opinion, the patient suffered a seizure causing him to lose control of his vehicle. He died as a result of the head injuries sustained in the collision with the tree. If the decedent had been on Dilantin, it is possible that he would not have suffered the seizure. He expresses the opinion that Dr. Healer's conduct constituted a substantial contributing factor in causing the patient's death. He admits, however, that Dilantin is not effective in controlling seizures in all cases. Consequently, the expert witness is unable to predict whether Dilantin therapy would have been effective in this patient's case. Although there are no statistics available to show what percentage of the population in this patient's position respond to Dilantin, it is known to be the most effective medication available, and the failure to prescribe the medication increased the patient's risk of having seizures.

SCENARIO NO. 3

The testimony of the plaintiff's expert witness is similar to that in Scenario No. 2, except that he is also able to demonstrate statistically that Dilantin is effective in preventing seizures in forty-five percent of the population to which it is administered.

In which, if any, of the three scenarios is a Minnesota patient presently able to recover damages from Dr. Healer? In which, if any, should he be able to recover? What is, or should be the measure of his damages? The authors will attempt to answer these questions according to their preceptions of the current status of Minnesota law regarding medical negligence causation issues. The Article will first examine the evolution of Minnesota's causation standard and identify a distinction that arose between the causation standard in ordinary negligence

cases and the standard in medical negligence cases. The necessity for this distinction and the propriety of its perpetuation will be questioned.

Second, the Article will focus upon the so-called "value of a chance" theory of tort recovery, its application to medical negligence cases in other jurisdictions, and its future in Minnesota. The value of a chance theory encompasses the simple idea that a physician may be held liable for an act or omission that deprives a patient of some statistical chance for cure or improvement, no matter how small the chance. The plaintiff in such a case argues that his chance of recovery from the condition for which he sought treatment has been lost or reduced because of the doctor's negligence. Certain jurisdictions have rejected the theory on the basis that it is inconsistent with the traditional causation standard in medical negligence cases. A majority of the jurisdictions that have considered the issue, however, have either altered their causation standard in medical negligence cases to permit recovery under the value of a chance theory, or have ruled that the theory satisfies traditional medical negligence causation standards.

Finally, this Article will explore Minnesota's approach to causation issues. The authors will review Minnesota cases that are consistent with the value of a chance theory and will propose the elimination of Minnesota's separate causation standard for medical negligence cases.

I. DEVELOPMENT OF A CAUSATION STANDARD IN MINNESOTA

Any discussion of the causation standard in Minnesota medical negligence cases must necessarily begin with an examination of its genesis, its evolution, and an understanding of why the present standard sometimes constitutes a bar to recovery even in cases of obvious negligence. Minnesota, as well as other jurisdictions, has long struggled to develop a definition of proximate cause that satisfies the various objectives that it is intended to serve. First, it must be comprehensible to a jury of lay persons. Second, it must be comprehensive enough to cover all of the factual situations to which it will be applied. Finally, it must be narrow enough to ensure an equitable assessment of responsibility proportionate to fault. Perhaps the primary difficulty in attaining the optimal definition has been

the necessity of applying the same definition to all fact situations involving tortious harm.

The first clear attempt to comprehensively define the elusive concept of proximate cause in Minnesota came in 1896 in *Christianson v. Chicago, St. P., M. & O. Ry. Co.*¹ The plaintiff was a railroad employee traveling on a handcar ahead of a second handcar being operated by other railroad employees. The second handcar was in the process of overtaking the first, and at the time of the accident, it was within sixty feet of the plaintiff's car.² Company rules required a trailing car to maintain a 500 foot interval, and the testimony disclosed that it would have taken at least 100 feet to stop the second car at the speed it was traveling.³ The plaintiff fell from the first car and was struck by the second, which was unable to stop within the short distance. The defendant operator of the trailing handcar contended that, although he may have been negligent for excessive speed and not maintaining a proper distance, he could not reasonably have anticipated that the plaintiff would fall from the first car into his path.⁴ The *Christianson* court stated:

The law is that if the act is one which the party ought, in the exercise of ordinary care, to have anticipated was liable to result in injury to others, then he is liable for any injury proximately resulting from it, although he could not have anticipated the particular injury which did happen. Consequences which follow in unbroken sequence, without an intervening efficient cause, from the original negligent act, are natural and proximate; and for such consequences the original wrongdoer is responsible, even though he could not have foreseen the particular results which did follow.⁵

In retrospect, it can be seen that *Christianson* devised not so much a test to determine whether there is a sufficient causal connection between the act and the result so as to justify imposition of liability, as it devised a test to determine whether there existed a duty of care in the first instance. Thus, if any adverse consequences are reasonably foreseeable, the actor has a duty to guard against all adverse consequences. Accordingly, the *Christianson* test did little to quantify the contribution

1. 67 Minn. 94, 69 N.W. 640 (1896) (Mitchell, J.).

2. *Id.* at 95, 69 N.W. at 640.

3. *Id.*

4. *Id.* at 96, 69 N.W. at 641.

5. *Id.*

that the tortious act must bear to the result in order to justify the imposition of liability.⁶

The first quantification occurred in *Anderson v. Mpls., St. P. & S. S. M. Ry. Co.*⁷ Prior to *Anderson*, Minnesota appeared to follow the "but for" causation standard.⁸ Under this test, liability follows only if the jury concludes that the injury would not have occurred "but for" the tortfeasor's conduct. Rejecting such a formulation, the *Anderson* court held that if a fire set by the defendant's railroad engine "was a material or substantial element in causing plaintiff's damages,"⁹ then the defendant is

6. In fact, subsequent Minnesota cases have emphasized the importance of keeping separate the distinction between foreseeability, as a part of negligence, and causation. Foreseeability is not the test of proximate causation because "negligence is tested by foresight but proximate cause is determined by hindsight." *Dellwo v. Pearson*, 259 Minn. 452, 456, 107 N.W.2d 859, 862 (1961). As such, a tortfeasor may be liable for causing an injury even though he could not have foreseen the particular results that followed. *Schulz v. Feigal*, 273 Minn. 470, 476-77, 142 N.W.2d 84, 89 (1966) (medical negligence case; not necessary for defendant to have anticipated the particular injury which occurred); *Thomsen v. Reibel*, 212 Minn. 83, 86, 2 N.W.2d 567, 569 (1942) (defendant may be liable even though he could not have anticipated the particular injury); *Keegan v. Minneapolis & St. L. R.R.*, 76 Minn. 90, 91, 78 N.W. 965, 965 (1899) (negligent wrongdoer "responsible, even though he could not have foreseen the particular results which did in fact follow").

Although Minnesota does not require foreseeability of the resultant harm as an element of causation, some states do. See generally W. PROSSER, W. KEETON, D. DOBBS, R. KEETON, D. OWEN, PROSSER AND KEETON ON TORTS § 43 (5th ed. 1984) [hereinafter cited as PROSSER & KEETON].

7. 146 Minn. 430, 179 N.W. 45 (1920).

8. According to Professor Prosser, no Minnesota case has specifically embraced the "but for" test. However, there are cases consistent with the rule. Prosser, *The Minnesota Court on Proximate Cause*, 21 MINN. L. REV. 19, 23 (1936).

9. *Anderson*, 146 Minn. at 434, 179 N.W. at 46 (quoting trial court's instructions to the jury). In *Anderson*, two fires converged on the plaintiff's property, one of unknown origin and one caused by the defendant's railroad engine. *Id.* at 432, 179 N.W. at 46. Rejecting a "but for" formulation of legal causation, the court stated: "If a fire set by the engine of one railroad company unites with a fire set by the engine of another company, there is joint and several liability, even though either fire would have destroyed plaintiff's property." *Id.* at 440-41, 179 N.W. at 49. Thus, the fact that one of the fires was of unknown origin did not prevent legal causation. The *Anderson* court's definition of causation became the foundation for the definition of causation in the *Restatement (First) of Torts*. See PROSSER & KEETON, *supra* note 6, § 42, at 278. The *Restatement (Second) of Torts* continues to define proximate cause in terms of whether the tortfeasor's conduct was a "substantial factor" in causing the harm. Section 431 of the *Restatement (Second)* specifically provides:

§ 431 What Constitutes Legal Cause

- The actor's negligent conduct is a legal cause of harm to another if
- (a) his conduct is a substantial factor in bringing about the harm, and
 - (b) there is no rule of law relieving actor from liability because of the manner in which his negligence has resulted in the harm.

RESTATEMENT (SECOND) OF TORTS § 431 (1965).

liable. The court viewed any other test as incapable of considering situations in which more than one cause contributes to the harm. Later, in *Peterson v. Fulton*,¹⁰ the court cited with approval section 306 of the *Restatement (First) of Torts*, which defined legal causation: "The actor's negligent conduct is a cause of another's injury if his conduct is a substantial factor in bringing it about."¹¹ Although this definition has become a standard jury instruction in Minnesota,¹² it has often been recognized that the definition is less than perfect.¹³ Nevertheless, Minnesota never returned to the "but for" test.¹⁴

The "substantial factor" test has withstood periodic attempts at improvement. In *Seward v. Mpls. St. Ry. Co.*,¹⁵ for example, the Minnesota Supreme Court seemingly rejected the substantial factor test as being wholly inadequate in a case in which the negligence of one of the actors might reasonably have been found to be too remote from the consequences so as to justify a finding of proximate cause. Writing for the majority, Chief Justice Loring opted once again for the *Christianson* foreseeability standard as the more appropriate test, calling

10. 192 Minn. 360, 256 N.W. 901 (1934).

In his 1936 Minnesota Law Review article, Professor Prosser attempted to trace the development of the substantial factor test in Minnesota. Prosser, *supra* note 8, at 19. He traced the test to an Article by Jeremiah Smith in the Harvard Law Review. *Id.* (citing Smith, *Legal Cause in Actions of Tort*, 25 HARV. L. REV. 103, 223, 303, 309 (1912)).

11. RESTATEMENT (FIRST) OF TORTS § 306 (1934). Substantially similar language is now found in section 431 of the *Restatement (Second) of Torts*. See *supra* note 9.

12. The approved jury instruction defining "proximate cause" speaks in terms of "direct cause:"

A direct cause is a cause which had a substantial part in bringing about the (harm) (accident) (injury) (collision) (occurrence) [either immediately or through happenings which follow one after another].

4 MINNESOTA PRACTICE JIG II, 140 G-S 2d ed. 1974) [hereinafter cited as MINNESOTA PRACTICE JIG II]. The word "substantial" is an undefined term in the Minnesota jury instructions. As discussed in the *Restatement*, the term encompasses both the notion of cause-in-fact and legal cause:

The word "substantial" is used to denote the fact that the defendant's conduct has such an effect in producing the harm as to lead reasonable men to regard it as a cause, using that word in the popular sense, in which there always lurks the idea of responsibility

RESTATEMENT (SECOND) OF TORTS § 431 comment a (1965).

13. See *infra* note 18 and accompanying text.

14. *But see* Fehling v. Levitan, 382 N.W.2d 901, 905 (Minn. Ct. App. 1986) ("but for" jury instruction "does not misstate the applicable law").

The "but for" rule is discussed in more detail *infra* notes 108-15 and accompanying text.

15. 222 Minn. 454, 25 N.W.2d 221 (1946).

the substantial factor test "a definition that needs defining."¹⁶

Despite *Seward*, the substantial factor test continues to be the basic definition of proximate cause given to Minnesota juries.¹⁷ Although less than perfect, the substantial factor test has persisted for decades as the most concise explanation of the elusive proximate cause concept.

The risk encountered in developing a more precise standard is the loss of jury comprehensibility. Since juries are ultimately responsible for applying whatever standard is utilized, a more perfect definition in the minds of legal theorists would not provide any greater assistance to jurors. In the final analysis, the concept of proximate cause is a theory that lay persons and judges must apply with little more than their common sense as a guide.¹⁸

16. *Id.* at 459, 25 N.W.2d at 224. Professor Prosser also criticizes the "substantial factor" test. He warns against using the definition as a "catch-all" formula:

As applied to the fact of causation alone, the test, though not ideal, may be thought useful. But when the "substantial factor" is made to include all of the ill-defined considerations of policy which go to limit liability once causation in fact is found, it has no more definite meaning than "proximate cause," and it becomes a hindrance rather than a help.

PROSSER & KEETON, *supra* note 6, § 42, at 278 (citations omitted); accord *Medved v. Doolittle*, 220 Minn. 352, 357-58, 19 N.W.2d 788, 790-91 (1945) (citing Prosser; combining the "substantial factor" and *Christianson* tests in a case involving superceding cause).

The committee that drafted the Minnesota Jury Instruction Guides felt that *Seward* was not so much a rejection of the "substantial factor" test as it was a recognition that juries need further assistance in cases involving concurring or superceding causes. MINNESOTA PRACTICE JIG II, *supra* note 12, § 140 G-S, Authorities, at 113. Accordingly, the rule of *Christianson* finds its way into the bracketed portion of the direct cause definition. See MINNESOTA PRACTICE JIG II, *supra* note 12, § 140 G-S.

17. *E.g.*, *Flom v. Flom*, 291 N.W.2d 914, 917 (Minn. 1980); *Danielson v. Johnson*, 366 N.W.2d 309, 313 (Minn. Ct. App. 1985).

18. Despite his criticism of the "substantial factor" test as a "catch all" formula, Professor Prosser recognized that the term is: "sufficiently intelligible to the layman to furnish an adequate guide in instructions to the jury, and it is neither possible nor desirable to reduce it to any lower terms." PROSSER & KEETON, *supra* note 6, § 41, at 267 (citations omitted). The committee that drafted Minnesota's jury instruction guides rejected the *Christianson* formulation of causation in favor of the "substantial factor" test since it is "more intelligible to jurors." 4 MINNESOTA PRACTICE JIG II § 140 G-S, Authorities, at 113. As such, enemies of the "substantial factor" test attack its vagueness while its friends praise the flexibility it provides juries.

Since the "substantial factor" test was recognized by the *Restatement*, it has gained widespread approval outside of Minnesota. For example, in *Kyriss v. State*, 707 P.2d 5 (Mont. 1985), the Montana Supreme Court recognized the "inadequacy" of the "but for" test in cases involving multiple causes and adopted the "substantial factor" test. *Id.* at 8. In so doing, the court observed that its approval of the substan-

II. IDENTIFICATION OF AN INADVERTENT ABHERRATION

A. Overview

[T]o avoid a directed verdict the plaintiff must introduce expert medical testimony that it was more probable than not that the death resulted from the doctor's negligence.¹⁹

The above-stated quotation is Minnesota's current causation standard for medical negligence cases. The standard does not quantify causation as being a substantial factor in producing a result. Rather, the standard quantifies causation as being a greater than fifty percent factor in producing a result. Why two causation standards developed in Minnesota can only be understood in the historical context of medical negligence cases.

Inherent in the concept of legal responsibility are two factors: (1) the tortfeasor's conduct must have been a contributing cause of the ultimate harm or damage; and (2) the tortfeasor's conduct must have contributed to such an extent as would justify the imposition of liability.²⁰ The first factor is

tial factor test was "relatively late in coming" and credited Minnesota's *Anderson* decision as the case leading to development of the standard. *Id.*

Attempts at quantifying causation seem to have ended with the "substantial factor" test. There is no way to measure how much "cause" must exist to find liability. This is left to the good judgment of the court and/or jury. See *Robinson v. Butler*, 226 Minn. 491, 495, 33 N.W.2d 821, 823 (1948) "Theorize as we may on the subject of proximate cause, it is in its last analysis a question of good common sense, to be solved by a practical consideration of the evidence in each particular case." (quoting *Moore v. Northern Pac. Ry.*, 108 Minn. 100, 101, 121 N.W. 392, 392 (1909)). For an excellent discussion of causation, see Green, *Proximate Cause in Texas Negligence Law*, 28 TEX. L. REV. 471, 475 (1950).

Minnesota's comparative fault statute requires juries to quantify causation in terms of legal causation and as a basis for liability. As a result, the flexibility provided by the "substantial factor" test takes on added significance. See MINN. STAT. § 604, subd. 1a (1984) ("Legal requirements of causal relation apply both to fault as the basis for liability and to contributory fault.").

19. *Cornfeldt v. Tongen*, 295 N.W.2d 638, 640 (Minn. 1980).

20. In a negligence case, the jury receives a single "direct cause" instruction. See *supra* note 12. This instruction encompasses the notion of whether the facts establish a connection between the tortfeasor's conduct and the result—cause-in-fact—and the notion of whether the negligence is so closely connected to the result that the tortfeasor should be legally responsible for the result—legal cause. It has been said that the former element of proximate cause (cause-in-fact) invokes problems of proof while the latter (the legal cause) primarily involves problems of argument. *Morris, Proximate Cause in Minnesota*, 34 MINN. L. REV. 185, 207 (1950). The distinction between these separate concepts has often been confused. When analyzing a proximate cause issue, the first step should be identification of which element(s) of proximate cause are in controversy. See *Prosser, supra* note 8, at 21 (consideration of proximate

a question of fact, which the plaintiff must prove by a fair preponderance of the evidence. The second factor is a conclusion to be drawn from the proven facts: assuming the defendant's conduct has been proven to have played a contributing role in causing the harm, is the extent of the contribution sufficient so as to justify the imposition of legal responsibility? The present "more probable than not" rule applicable to medical negligence cases results from a historical, seemingly inadvertent, mixture of these two concepts.

B. Development of Negligence and Causation in Minnesota Medical Negligence Cases

1. Negligence

The legal standards of negligence and causation used in Minnesota medical negligence cases were formulated against the backdrop of the state of medical science in the nineteenth century. In the rapid advance of technology since the end of World War II, it becomes all too easy to think of the nineteenth century as the dawn of enlightenment and discovery in medicine. Nothing could be further from the truth. Nineteenth century medicine was mostly characterized by "stationary theorizing" that had dominated all science for centuries.²¹ Surgery remained a primitive science due to the inability to control pain and infection. Anesthesia and sterilization did not become widely practiced until after the turn of the century.²² Operations were undertaken only in dire emergencies, and even then, they were usually performed to set broken bones or to amputate limbs.²³ Advances in diagnosis and treatment

cause involves: (1) the fact of causation; (2) responsibility for unforeseen or unanticipated events; (3) liability to person to whom no cause could reasonably be anticipated; (4) intervening forces; (5) amount of damages; and (6) shifting responsibility to others) (cited in *Robinson v. Butler*, 226 Minn. 491, 494, 33 N.W.2d 821, 823 (1948)).

21. F. GARRISON, AN INTRODUCTION TO THE HISTORY OF MEDICINE 425 (3rd ed. 1921).

22. See *id.* at 541, 633-63, 812-13; C. HAAGENSEN & W. LLOYD, A HUNDRED YEARS OF MEDICINE, ch. 24 (1943). The use of ether as an anesthetic was first published in the *Boston Medical and Surgical Journal* in 1846. Lord Lister of England began successfully experimenting with carbolic acid to sterilize operating rooms in 1865 but his idea that unsanitary conditions caused infection did not take hold for many years after. It was impossible to conduct effective medical research in humans until the two obstacles of pain and infection were overcome. *Id.*

23. It is no coincidence that nearly 60% of all medical negligence decisions in West Publishing Company's Northwest Region from 1851 to 1930 involved either

were stymied until doctors were able to safely probe the cavities of the body.

Minnesota courts were quick to recognize the doubt and uncertainty that plagued the medical profession. In the 1875 case of *Getchell v. Hill*,²⁴ the Minnesota Supreme Court held that a doctor would not be held liable merely for a failure to cure his patient.²⁵ The court ruled that a physician is only required to exercise reasonable diligence in skill, and when this is shown, he will not be held negligent regardless of the outcome of the treatment.²⁶ In 1907, the supreme court, in *Staloch v. Holm*,²⁷ formulated an exception to the ordinary rules of negligence in an effort to shield the medical profession from mistakes made when a doctor's decisions largely rested on "pure theory, judgment and opinion."²⁸ Unlike the stone mason, who can choose his materials and adjust them along objective mathematical lines, a physician does not confront an inanimate object in the exam room, the court noted.²⁹ Rather, he faces a suffering human being whose parts are complex and often mysterious beyond comprehension, rendering his treatment difficult, doubtful, and dangerous.³⁰ Thus, the common law rule measuring behavior against that of the ordinary, prudent person was too high a standard to be applied against the medical profession in most nineteenth and early twentieth century cases. While it is well-settled that the ordinary person is usually liable for an error of judgment, a doctor would be exempt from this liability if the course of treatment is doubtful and uncertain.³¹ The *Staloch* court reasoned that, "[i]t would be . . . unreasonable to hold a physician responsible for an honest error of judgment on so uncertain problems as are presented in surgery and medicine."³²

In both *Getchell* and *Staloch*, however, the court made it clear

bone fractures or amputations. See generally NORTHWESTERN DIGEST, *Physicians and Surgeons*, §§ 18(5)-(6) (1st ed. 1933).

24. 21 Minn. 464 (1875).

25. "A physician or surgeon is not an insurer that he will effect a cure." *Id.*

26. *Id.* at 464-65.

27. 10 Minn. 276, 111 N.W. 264 (1907).

28. *Id.* at 280, 111 N.W. at 266.

29. *Id.* at 283, 111 N.W. at 267 (quoting *Williams v. Poppleton*, 3 Ore. 139, 147 (1907)).

30. *Id.*

31. *Id.* at 281, 111 N.W. at 266.

32. *Id.* at 283, 111 N.W. at 267.

that the exemption was not intended for every situation a doctor faces. In *Getchell*, the court indicated that if an effective treatment is within the realm of medical knowledge, then a doctor may be held liable for not applying a treatment he knew or should have known was necessary. The *Getchell* court stated, “[t]here may be cases where, the mode of treatment having been shown, the practical common sense of the jury will enable them to determine that the injury or failure of cure is owing to unskillful or negligent treatment.”³³

In *Staloch*, the court made it clear that the exception does not apply if the doctor fails to apply widely-known and available techniques. In such cases, the doctor should be held to the ordinary rules of negligence. Only in areas of uncertainty would a doctor be absolved from liability for an honest mistake in judgment: “In some matters, medicine is a science; in others, an art. Generally, the exception governs cases in which it is a science; the rule, cases in which it is an art.”³⁴

This theme surfaces throughout early medical negligence case law in Minnesota,³⁵ and demonstrates that the courts did not intend that doctors be held to a lesser standard of care in cases in which the profession possessed the knowledge and experience that made a cure, or at least improvement, more likely. For example, in *Moehlenbrock v. Parke, Davis & Co.*,³⁶ the court said that a physician is “bound to observe plain physical laws.”³⁷ With regard to *Staloch*, the court stated: “[the honest error in judgment rule] is an exception to the general rules of negligence and the exception is not absolute. Every act of a physician is, in a sense, an exercise of judgment and usually of

33. *Getchell*, 21 Minn. at 465.

34. *Staloch*, 100 Minn. at 281-82, 111 N.W. at 266. The *Staloch* court lists examples in which medicine is an art and examples in which it is a science. According to the *Staloch* court, performing surgery is an art while operating with “an old rusty saw” is within the realm of fact. *Id.* It cannot be disputed that under the current state of modern medicine, the number of cases within the realm of science and fact, versus the realm of art, must be significantly higher than in the days of *Staloch*.

35. See, e.g., *Clark v. George*, 148 Minn. 52, 54, 180 N.W. 1011, 1012 (1921) (“physician not ordinarily liable for error of judgment in a doubtful case”); *Awde v. Cole*, 99 Minn. 357, 361, 109 N.W. 812, 813 (1906) (“physician no more liable for unsuccessful treatment than a lawyer for a losing lawsuit”); *Martin v. Courtney*, 87 Minn. 197, 200, 91 N.W. 487, 488 (1902) (too much expected of medical profession whose achievements are but an approximation of its ideals).

36. 145 Minn. 100, 176 N.W. 169 (1920).

37. *Id.* at 103, 176 N.W. at 170.

honest judgment. Yet, it may still be negligent.”³⁸

2. Enter: “More Probable Than Not”

The “more probable than not” causation standard first emerged in 1925 in *Schendel v. Chicago, M. & St. P. Ry.*³⁹ In *Schendel*, a switchman was run over by a railroad car and killed at 2:00 a.m. while attempting to uncouple two railroad cars. While no one actually witnessed the accident, a co-worker testified that as he viewed the events from a distance, the decedent’s lantern suddenly rose as if the decedent had climbed between two box cars. A short time later, the decedent was found dead lying across the tracks near where he had apparently climbed between the two cars.⁴⁰

There were two equally plausible explanations for how the switchman met his death. The plaintiff’s heirs theorized that the decedent was required to uncouple the cars while standing between them because of a defective coupling pin, which prevented the use of a safer uncoupling lever on the side of the car.⁴¹ If that were the case, the defendant would not be liable for allowing the car to be in use with a defective coupling device, a violation of federal law.⁴² The defendant argued that the decedent slipped and fell as he crossed between the box cars to get to the other side where a lever would have allowed him to safely disconnect the two cars.⁴³

The court held that since neither side’s evidence could “fairly preponderate” as to the intentions of the decedent, the jury was left to speculate as to the actual cause of death:

The rule is well-settled that, where the evidence presents two or more theories or possibilities as to the manner in

38. *Id.* at 102, 176 N.W. at 170. Although the early cases unquestionably refer to the “honest error in judgment” rule as an exception to be applied under certain defined circumstances, the exception has now become the rule. See MINNESOTA PRACTICE JIG II, *supra* note 12, § 425 G-S, (“A (doctor) (dentist) is not a guarantor of a cure or a good result from his treatment and he is not responsible for an honest error in judgment in choosing between accepted methods of treatment.”) Under the early cases, there is a clear distinction between the rule that a doctor is not a guarantor of a cure and the “honest error in judgment” exception. For a further discussion of the “honest error in judgment” rule, see generally Plunkett, *Minnesota’s “Honest Error in Judgment” Rule: An Error In Itself?*, 12 WM. MITCHELL L. REV. 519 (1986).

39. 165 Minn. 223, 206 N.W. 436 (1925).

40. *Id.* at 226-27, 206 N.W. at 437.

41. *Id.* at 227-28, 206 N.W. at 438.

42. *Id.* at 231, 206 N.W. at 439.

43. *Id.*

which an accident occurred, on one of which the defendant is liable, but on the other it is not, the proof must fairly preponderate in favor of the liability, or the action fails.⁴⁴

Schendel recognizes the problems that may result if it is forgotten that the burden of proof rests with the plaintiff. In cases in which a known result is brought about by one of several possible causes, the plaintiff must prove by a preponderance of the evidence that the cause for which the defendant would be responsible was the more probable cause. Therefore, in *Schendel*, a necessary element of legal responsibility, proof that the defendant's negligence contributed in some fashion to the decedent's death,⁴⁵ was not proved since the mechanism of death was not proved.

3. Causation: Birth of an Aberration

The conversion of the "more probable than not" standard of proof into a standard of causation came one step closer in *Yates v. Gamble*.⁴⁶ In *Yates*, the decedent underwent gallbladder surgery and died from an infection following the operation. The

44. *Id.* at 231-33, 206 N.W. at 439. The court recognized that, at most, the evidence was consistent with the plaintiff's theory. *Id.* The court went on to state: "It is incumbent upon the plaintiff, not upon the defendant, to show how the accident happened." *Id.* Thus, when the evidence will not support a reasonable inference of causal relation, the issue of proximate cause should not be submitted to the jury. Justice Dibell dissented on the basis that a jury question was adequately presented. *Id.* at 232-33, 206 N.W. at 440 (Dibell, J., dissenting).

45. See *supra* note 20 and accompanying text. *Schendel*, and the many Minnesota cases involving similar causation issues, focus upon the line between fair inference and conjecture. Since a determination of proximate cause is for the jury, *Frey v. Montgomery Ward & Co.*, 258 N.W.2d 782, 787 (Minn. 1977), the evidence must stray into the realm of conjecture before the court will step in and remove the case from the jury. See *id.* As the Minnesota Supreme Court has more recently stated:

Proof of a causal connection must be something more than merely consistent with the plaintiff's theory of the case. . . . If the facts furnish no sufficient basis for inferring which of several possible causes produced the injury, a defendant who is responsible for only one of such possible causes cannot be held liable.

Bernloehr v. Central Livestock Order Buying Co., 296 Minn. 222, 224, 208 N.W.2d 753, 754 (1973) (citations omitted). Similar language appears in numerous Minnesota decisions. See, e.g., *E.H. Renner & Sons, Inc. v. Primus*, 295 Minn. 240, 244, 203 N.W.2d 832, 835 (1973); *Huntley v. Wm. H. Ziegler Co.*, 219 Minn. 94, 111, 17 N.W.2d 290, 297 (1944); *Alling v. Northwestern Bell Telephone Co.*, 156 Minn. 60, 63, 194 N.W. 313, 315 (1923); *McNarnee v. Hines*, 150 Minn. 97, 101-02, 184 N.W. 675, 677 (1921); *Kludzinski v. Great No. Ry.*, 130 Minn. 222, 224, 153 N.W. 529, 529-30 (1915); *Crandall v. Chicago G. W. Ry.*, 127 Minn. 498, 1 N.W. 165, 167 (1914).

46. 198 Minn. 7, 268 N.W. 670 (1936).

source of the infection was bile that had secreted from the decedent's common duct. The decedent's heirs contended that the surgeon had penetrated the common duct with a probe either before or during surgery, thus allowing a secretion through the opening where the penetration had occurred, ultimately leading to the deadly infection.⁴⁷ The only evidence the plaintiff had to support this contention was an alleged admission by the defendant surgeon, which the defendant later denied.⁴⁸ Neither of the plaintiff's experts testified that such an opening or puncture was made in a common duct during the surgery or at any other time by the defendant. They were merely asked to assume that that was true, and did so for purposes of their testimony.⁴⁹ The defendant and his expert testified that the source of the infection was the natural secretion of bile from the common duct which sometimes occurs during surgery as a natural condition, over which the defendant had absolutely no control.⁵⁰

The supreme court affirmed a directed verdict in favor of the defendant. As in *Schendel*, the court observed that the facts were consistent with both the plaintiff's and the defendant's version of how the injury occurred.

In negligence cases and especially in malpractice cases, proof of causal connection must be something more than consistent with the plaintiff's theory of how the claimed injury was caused. The burden is on plaintiff to show that it is more probable that the harm resulted from some negligence for which defendant was responsible than in consequence of something for which he was not responsible.⁵¹

Yates was an appropriate application of *Schendel*'s "more probable than not" test. The only question in *Yates* related to medical causation, or causation in fact, and whether the defendant's conduct, negligent or not, had anything to do with the medical cause of death. On the issue of medical causation, the *Yates* jury was given no competent evidence upon which it could have concluded that the defendant's conduct in any way

47. *Id.* at 10, 268 N.W. at 672.

48. *Id.* at 11, 268 N.W. at 672.

49. *Id.* at 13, 268 N.W. at 672-73.

50. *Id.* at 14, 268 N.W. at 674.

51. *Id.* (citing *Schendel*). *Yates*, like *Schendel*, stands for the proposition that if the plaintiff fails to push the evidence over the line between conjecture and allowable inference, the court must step in. In other words, a speculative or conjectural factor cannot rise to the level of a substantial factor.

contributed to the decedent's death. Ironically, the *Yates* case, which remains the basic citation for the causation standard in medical negligence cases,⁵² did not even involve a legal causation issue.

The authors suggest that *Yates* represents the inadvertent departure point from the "substantial factor" test, which had previously been the sole indicia of legal responsibility for every tortfeasor, to the "more probable than not" test, which became the measure of legal cause only in medical negligence cases. It is the mingling of the separate issues of cause-in-fact and legal causation through application of the "more probable than not" test that has created the need for a "new" remedy such as value of a chance.

A distinction has to be made between the typical value of a chance case, and cases in which medical causation is in dispute, such as in *Yates*. Typically, the value of a chance case presupposes an illness, injury, or condition that the defendant physician did not cause. The claim is that the physician has failed to properly diagnose or treat the condition, thereby aggravating or failing to ameliorate the effects of the pre-existing condition. The most common case has been undiagnosed cancer in which the untreated patient dies. The *Yates* decision would, and properly should, require the plaintiff to prove that the decedent's death more probably resulted from cancer than from some other condition with respect to which the physician's services were not engaged. It is only when death by cancer has been established by a fair preponderance of the evidence that the jury can begin to consider whether the defendant's conduct was a substantial factor in bringing about, or failing to prevent, that harm. It is apparent that subsequent courts interpreting *Yates* have failed to make the crucial distinction between the burden of proof required for medical causation, or causation

52. See *infra* note 53 and accompanying text.

Instead of requiring the plaintiff to establish that the doctor's conduct was more probably than not a substantial contributing factor in producing the result, more recent courts have misinterpreted *Yates* to require the plaintiff to establish that the doctor's negligence more probably than not produced the result. This development more probably than not has all but obliterated the distinction between cause-in-fact and legal cause. Thus, the "more probable than not" causation standard that developed after *Yates* recasts the plaintiff's burden of establishing the cause-in-fact element of proximate cause into a legal standard.

in fact, and the legal test for imposition of responsibility.⁵³

It is perhaps unfortunate that the *Yates* court chose to include the phrase “especially in malpractice cases”⁵⁴ when discussing the test of causation. Such language obviously gave special emphasis to a class of tortfeasors that already had received a special immunity, not enjoyed by other tortfeasors, for an “honest error of judgment.”⁵⁵ With a special immunity in the area of negligence, it is not surprising that *Yates* would unknowingly expand the preferred treatment to a “more probable than not” definition of proximate cause unique to medical negligence actions.

Evidence that neither *Schendel*, decided in 1925, nor *Yates*, decided in 1936, intended to adopt a “more probable than not” definition of proximate cause for either medical or non-medical cases is contained in *Gamradt v. Dubois*.⁵⁶ In *Gamradt*, a medical negligence case, the court characterized the expert witnesses’ testimony on causation as follows:

[T]hat death resulted from ordinary blood poisoning and not from gas bacillus, therefore from an infection which by timely attention could have been more readily recognized and more successfully treated.⁵⁷

53. See, e.g., *Walton v. Jones*, 286 N.W.2d 710 (Minn. 1979); *Smith v. Knowles*, 281 N.W.2d 653 (Minn. 1979); *Fehling*, 382 N.W.2d 901.

An explanation of the elusive distinction between cause-in-fact and legal cause is provided by Professor Green. He cites the case of *Western Tel. Corp. v. McCann*, 128 Tex. 582, 99 S.W.2d 895 (1937), as illustrative:

Mrs. McCann was killed by lightning while standing on her front porch. The issue was whether this was due in part to the negligence of defendant in not removing a drop wire attached to the porch. Plaintiff’s contention was that the lightning coursed over defendant’s wire and detoured over the drop line to its terminus on the porch where it jumped to the body of Mrs. McCann and killed her. The issue was not complicated by “foreseeability of harm” for it was definitely conceded or at least found that the defendant was negligent in not removing the wire. The issue of causal relation required a scientific inquiry of fact. The court spoke of the problem as one of causal relation and “proximate cause,” seemingly using the terms synonymously, but the problem was resolved by the insufficiency of the evidence to show any causal relation as a matter of scientific fact between the lightning’s striking Mrs. McCann and defendant’s negligence. Here the issues of causal relation and negligence were completely isolated, and while the causal relation issue was difficult it was satisfactorily resolved. It is possible to isolate these issues in every case and if that were done the administration of negligence cases would be made relatively simple and inexpensive.

Green, *supra* note 16, at 476.

54. *Yates*, 198 Minn. at 14, 268 N.W. at 674.

55. See generally *Plunkett*, *supra* note 38.

56. 180 Minn. 273, 230 N.W. 774 (1930) (*Gamradt II*).

57. *Id.* at 275, 230 N.W. at 775.

Despite the absence in *Gamradt* of any expert testimony that the decedent would more likely than not have lived "but for" the failure of the defendant to properly attend and treat the patient, the court allowed the jury to determine the defendant's legal responsibility.⁵⁸ Thus, the court allowed the jury to decide legal causation, once cause-in-fact of the death had been adequately supported, even in the absence of "more probable than not" testimony from an expert.⁵⁹

The *Yates* rule of law became the popular standard in subsequent malpractice cases, even though the facts of those cases differed significantly from *Yates* and *Schendel*. By 1966, it appeared that the "more probable than not" test intended for medical causation issues, and the "substantial factor" test intended for legal causation issues, were merging into one. In *Schulz v. Feigal*,⁶⁰ the causation standard was stated without mention of the traditional substantial factor test:

Generally, it is held that, after a fair preponderance of evidence discloses facts and circumstances proving a reasonable probability that the defendant's negligence or want of skill was the proximate cause of the injury, the plaintiff has supported his burden of proof sufficiently to justify a verdict in his behalf.⁶¹

58. The *Gamradt* court stated: "The jury had also the right to conclude from the medical testimony that incipient infection could have been detected had he visited the patient Sunday, and that it likely could then have been arrested or cured." *Id.* at 277-78, 230 N.W. at 776. More revealing is the fact that upon first trial there was a general plaintiff's verdict on two counts of negligence. The supreme court reversed on the basis that "[t]he causal connection between the negligence claimed and the resulting injury or death . . . cannot be left to conjecture or speculation." *Gamradt v. DuBois*, 176 Minn. 312, 314, 223 N.W. 296, 297 (1929) (*Gamradt I*). Since the reversal was on only one of two negligence counts submitted, a new trial was granted since there was a general, rather than special, verdict. Reversal of the first verdict was based upon the plaintiff's failure to establish that the doctor's negligence more probably than not was the cause-in-fact of the result. However, on retrial, the plaintiff's verdict stood because the evidence was sufficient to create a jury issue even in the absence of direct "more probable than not" testimony from an expert. Thus, the jury was left to determine whether the inferences of causation were sufficiently substantial to establish both cause-in-fact and legal cause.

59. *Gamradt II*, 180 Minn. at 278, 230 N.W. at 776 (*Gamradt II*).

60. 273 Minn. 470, 142 N.W.2d 84 (1966).

61. *Id.* at 476, 142 N.W.2d at 89. The statement of the causation standard in *Schulz* does not rule out the substantial factor test. *Schulz* stated that the plaintiff must prove that the defendant's negligence in all "probability . . . was the proximate cause of the injury." *Id.* This statement is not inconsistent with a substantial factor analysis, *i.e.* that defendant's conduct was more probably than not a substantial factor in producing the injury. For a complete discussion of the facts in *Schulz*, see *infra* notes 85-91 and accompanying text.

If abandonment of the substantial factor test in medical malpractice cases in Minnesota was still uncertain after *Schulz*,⁶² however, all doubt was removed by *Cornfeldt v. Tongen*.⁶³ In its second *Cornfeldt* opinion, the Minnesota Supreme Court stated: “[T]o avoid a directed verdict a plaintiff must introduce expert medical testimony that it was more probable than not that the death resulted from the doctor’s negligence.”⁶⁴

C. Application of the Standard

Having concluded that the “more probable than not” causation standard is followed only in medical negligence cases,⁶⁵ an examination of those cases reveals that the standard is not uniformly applied.⁶⁶ Although nearly all of the decisions repeat the standard as representing the “law of the case,”⁶⁷ a number of the decisions resort to the foreseeability test of *Christianson*⁶⁸

62. *Id.*

63. 295 N.W.2d 638 (Minn. 1980) (*Cornfeldt* II).

64. *Id.* at 640. In *Cornfeldt*, a fifty-year old woman was admitted to a hospital complaining of stomach pains. During surgery, her surgeon became suspicious of tissue surrounding a perforated ulcer and lab tests indicated stomach cancer. The woman was advised to undergo a second operation as soon as possible. In the first operation an anesthetic was used that the doctors knew on very rare occasions caused a liver malfunction called halothane hepatitis. Just prior to the second operation two abnormal laboratory test results indicated liver dysfunction but the tests were merely noted and the surgery performed using the same anesthetic without informing the patient of the test results. After surgery she developed jaundice and it was determined she had hepatitis. Three months later the woman died from massive liver failure. *Id.*

The decedent’s heirs brought suit and the jury rendered a verdict in favor of plaintiff on the theory of negligent nondisclosure. In its opinion reversing the verdict, the court implied that the failure to introduce anything less than “expert medical testimony that it was more probable than not that the death resulted from the doctor’s negligence,” *id.*, would permit the jury to speculate on the issue of causation. The court stated:

Plaintiff introduced expert testimony that performing surgery on patients with underlying liver disease increases the risk of death or serious harm. Plaintiff’s expert did not state that it was his opinion that Mrs. Cornfeldt probably died as a result of this increased risk or that it was more probable than not that but for the operation she would have recovered.

Id. The court went on to indicate in a footnote that plaintiff’s expert testified viral hepatitis has a 95% recovery rate but offered no expert testimony on the recovery rate for halothane hepatitis or to what extent the stress of surgery increased the risk of liver failure. *Id.* at 641 n. 4. Accordingly, it is not clear from the *Cornfeldt* opinion whether plaintiff’s proof could have satisfied the traditional substantial factor test.

65. See *supra* notes 19-64 and accompanying text.

66. See, e.g., *Cornfeldt*, 295 N.W.2d at 640.

67. See *infra* notes 68-111 and accompanying text.

68. *Christianson*, 67 Minn. at 94, 69 N.W. at 641.

in order to allow recovery upon evidence that might otherwise have been deficient under the "more probable than not" standard. It would be helpful, of course, to identify a common pattern among those cases that fail the probability test and those that pass the foreseeability test. Such identification not only provides assistance in resolving the esoteric question of whether the appellate courts are intentionally imposing a more difficult burden upon plaintiffs in medical negligence cases, but it also provides guidance to the practitioner in determining the testimony that must be elicited in order to establish a *prima facie* case of causation.

As literally interpreted, the present causation standard requires an expert to testify that the defendant's conduct was, more probably than not, a cause of the plaintiff's injuries.⁶⁹ Are these then "magic words" that must be uttered by an expert to ensure that a verdict will not be directed for the defendant?⁷⁰ Or, is it enough that the expert merely testify to facts from which a jury will be allowed to determine the probabilities?⁷¹ If the former is correct, the jury has lost its

69. See, e.g., *Smith*, 281 N.W.2d 653.

70. The phraseology of the rule itself would seem to call for utterance of the magic words. A common criticism of the plaintiff's expert testimony is: "Nowhere in his testimony did Dr. Glass express the opinion that it is more probable than not that if defendant Woods had ended the procedure . . . the cardiac arrest would not have occurred. . . ." *Plutshack v. University of Minn. Hosp.*, 316 N.W.2d 1, 8 (Minn. 1982).

71. Oftentimes, a plaintiff's only expert witness is a subsequent treating physician who is in the best position to have observed the effects of the original negligence, and is called upon to attempt to correct the adverse effects thereof. Just as often, the subsequent treating doctor is a reluctant witness—perfectly willing to truthfully describe what he saw, what he did, and what might have been the factors that contributed to cause the plaintiff's problem, but unwilling to quantify the contribution of the various factors, particularly in terms of probabilities. Consider, for example, *Berkholz v. Benepe*, 153 Minn. 335, 190 N.W. 800 (1922), in which the court noted that Dr. Kelly, a subsequent treating physician ". . . sedulously avoided, whenever possible, giving any opinion that might reflect upon defendant's skill or care. . . ." *Id.* at 338, 190 N.W. at 801. Consider also *Sandhofer v. Abbott-Northwestern Hosp.*, 283 N.W.2d 362 (1979), in which the plaintiff's subsequent doctor also seemed to want to avoid directly accusing the treating physician. For a portion of his testimony see, *infra* note 98. There is, of course, the natural reluctance of one doctor to testify against another of the same specialty, in the same community. Testifying only as to well-recognized contributing factors, with which no brethren could reasonably disagree, is certainly less offensive to a physician than pointing a finger at one particular factor for which a fellow doctor may be responsible as being the most significant.

Furthermore, as Professor Larsen has noted:

It is a common experience of compensation and personal injury lawyers to

function to the experts, except to determine credibility, since in most cases, if the plaintiff produces expert probability testimony, the defendant will surely do so as well. Perhaps the greatest deficiency of the "more probable than not" standard is that these questions find no definitive answer in the decisions.

Decisions which imply that the expert must speak the "magic words"⁷² are difficult to distinguish from those in which the rule appears to have been overlooked. For example, in *Smith v.*

find that the more distinguished a medical witness is, the more tentative and qualified are his statements on the witness stand. . . . [t]he weight of such testimony, however, should not be too sharply discounted because of the disposition of the highly trained scientific mind to refrain from unqualified statements or opinions on such matters as causation.

3 A. LARSON, *THE LAW OF WORKMEN'S COMPENSATION* § 80-82 (1983).

There is also the practical reality that medical problems and legal issues are distinct entities, and apart from medical-legal implications, there is no reason for the medical profession to think in terms of "more probable than not" contributing factors. For example, medical science has clearly identified certain risk factors as being contributing agents to the development of heart disease and the occurrence of a heart attack. These include hypertension, elevated cholesterol, obesity, lack of exercise, family history, smoking, and stress. A majority of physicians would probably testify that each of these factors, if present, is a substantial factor in causing an eventual heart attack. However, it would be unlikely that any physician would dare identify any of the factors as a more probable than not cause. The language lawyers speak is just not, to a large extent, compatible with that of doctors.

72. The requirement that an expert witness actually utter the "magic words" which mirror the conclusion the jury must reach has come under criticism as favoring form over substance. The requirement has been compared to "the incantations of medieval sorcerers. . . ." 2 J. WIGMORE, *HANDBOOK OF THE LAW OF EVIDENCE* § 1976, at 122 (3d ed. 1940).

The opinion rule removes the trial of the case from the courtroom, and into the attorney's office, where counsel's greatest job of advocacy must be performed in convincing an expert witness that the circumstances support the utterance of the magic words. At best, the rule leads to the regular use of the sophisticated witness with courtroom savy rather than the more naive and perhaps frank witness who is not used to the machinations of the law. At worst, it leads to perjured testimony tailored to fit the rule. As Justice Hoffman commented in his concurring opinion in *Hamil v. Bashline*, 243 Pa. Super. 227, 364 A.2d 1366 (1976), *rev'd*, 481 Pa. 256, 392 A.2d 1280 (1978):

If we require such a standard of certainty, we bar recovery by plaintiff who can prove that the defendant was negligent because he failed to adopt diagnostic or treatment procedures which in the medical community are recognized as indispensable in preventing precisely the type of harm which flows with statistical certainty from the absence of timely or proper medical intervention. If the plaintiff's expert owns up to the limitations of medical knowledge, the majority would put the plaintiff out of court. If he retains an expert who is willing to perjure himself in order to meet the legally required omniscience which the majority imposes, then he recovers. The honest victim bears the loss; the less scrupulous recover. Our system of law should not tolerate such a rule.

Id. at 245-47, 364 A.2d at 1375-76 (Hoffman, J., concurring).

Knowles,⁷³ the plaintiff alleged that the defendant's failure to diagnose an extremely serious complication of pregnancy known as pre-eclampsia⁷⁴ caused the death of his wife and unborn child. There was testimony from the plaintiff and from friends of the decedent that Mrs. Smith exhibited many of the classic symptoms of pre-eclampsia throughout her pregnancy, although the defendant denied that any of these signs were present until a few hours before her death.⁷⁵

The plaintiffs did not call any experts, but attempted to rely upon a cross-examination of the defendant and certain medical treatises, which the defendant recognized as being authoritative, to establish both negligence and proximate cause.⁷⁶ Dr. Knowles admitted that the standard of care would have required a physician to make a diagnosis of pre-eclampsia in a patient exhibiting the symptoms that the plaintiff's wife allegedly exhibited. Dr. Knowles also admitted that the condition should be treated immediately and that immediate treatment increases the likelihood of avoiding complications. By use of the learned treatises, the plaintiff established that through prompt diagnosis and treatment, "the frequency of eclampsia will be greatly diminished and many lives will be saved."⁷⁷ If the jury believed that the decedent had been evidencing these symptoms, then there was sufficient evidence from which it could have concluded: (1) the defendant was negligent for failing to diagnose and treat the pre-eclampsia; and, (2) proper diagnosis and treatment is effective in greatly diminishing the incidence of eclampsia and saves many lives that might otherwise be lost. The trial court directed a verdict for the defendant.

The Minnesota Supreme Court noted that the plaintiff's case failed to establish the first element of the cause of action, a departure from the accepted standards. While the court found the evidence may have been sufficient to establish the applicable standard of care, it found the absence of any expert testimony that there was a departure from the standard to be

73. 281 N.W.2d 653 (Minn. 1979).

74. Pre-eclampsia, if not adequately treated, leads to an often fatal toxic condition known as eclampsia. *Id.* at 654 n.1.

75. *Id.* at 654.

76. *Id.* at 656.

77. *Id.* at 656 n.6.

fatal.⁷⁸

The court considered the lack of evidence on the issue of causation even more troubling, however, citing the *Yates*⁷⁹ standard: “[T]he record would have compelled the jury to speculate as to whether earlier diagnosis or different treatment would have resulted in a cure.”⁸⁰ Of course, there was no expert testimony that the decedent’s death was more probably than not caused by the defendant’s negligence. Yet, there was no doubt that the cause of death was eclampsia, and the evidence amply supported the proposition that proper diagnosis of pre-eclampsia greatly reduced the loss of life from that disease. Thus, a jury could have concluded that the doctor’s failure to diagnose was a substantial factor in producing plaintiff’s death. Following the *Christianson* test,⁸¹ it could unquestionably be reasoned that Dr. Knowles might foresee that some harm, including death, would come from his failure to make that diagnosis. The *Smith* court, however, made no reference whatsoever to the foreseeability test.

In *Walton v. Jones*,⁸² the plaintiff theorized that the defendant’s failure to utilize anticoagulant medication allowed the formation of clots at the site of an ankle fracture for which the defendant had been treating the decedent. The plaintiff claimed that the clots broke loose from the fracture site and traveled to the lungs, causing her husband’s death. There was expert testimony that anticoagulants were available which tended to prevent such clots from forming. In affirming the directed verdict, the Minnesota Supreme Court observed:

And no expert testimony whatsoever was introduced from which it could be reasonably inferred that anticoagulant treatment, begun after Mr. Walton’s emboli had been diagnosed by a doctor exercising due care would probably have saved Mr. Walton’s life.⁸³

The case failed on other grounds as well. No one was able to identify that the ankle the defendant was treating was even the source of the clots that ultimately caused the death.⁸⁴ Even

78. *Id.* at 656.

79. *Yates*, 198 Minn. 7, 268 N.W. 670.

80. *Smith*, 281 N.W.2d at 656.

81. *Christianson*, 67 Minn. at 94, 69 N.W. at 641.

82. 286 N.W.2d 710 (Minn. 1979).

83. *Id.* at 716.

84. *Id.* at 715.

if cause-in-fact had been established, however, the *Walton* court would have viewed testimony that effective clot-preventing drugs were available insufficient to allow the jury to attach responsibility to the doctor's omission. Although the *Walton* court's discussion of the legal causation issue was unnecessary in view of the plaintiff's failure to prove cause-in-fact, the decision appears to require either utterance of the "magic words" from an expert, or at least expert testimony expressed in terms of probabilities.

Of the recent medical negligence decisions, two seem to ignore not only the "magic words" requirement, but also the "more probable than not" standard itself. In *Schulz v. Feigal*,⁸⁵ a physician's assistant negligently injected the plaintiff with adrenalin instead of the vitamin she was supposed to receive. The injection caused the plaintiff to experience chills, rapid pulse, headaches, sensations of choking, and inability to speak. To counteract the adrenalin, the plaintiff was given a tranquilizer by Dr. Feigal and left on a cot to rest until the effects of the drugs wore off. Feeling nauseated, she attempted to walk to the bathroom, but passed out and fell, sustaining injuries to her hip. The evidence revealed that plaintiff had a history of fainting spells before and after this incident, due to a neurosis or functional overlay.⁸⁶ In the absence of any expert testimony confirming that the adrenalin or the tranquilizer was the probable cause of the fall, the trial judge allowed the jury to award only nominal damages for the inadvertent injection of the adrenalin.⁸⁷

The Minnesota Supreme Court reversed and seemed to ignore the requirement of expert probability testimony. In attempting to justify the absence of this otherwise crucial testimony, the court stated:

It is our view, moreover, that the rational and natural inferences which follow from the sequence of events here proved are sufficient to establish a causal connection without supporting medical testimony. The causal relation is not hidden from the lay mind by the mysteries of medical science. It is within the common knowledge of jurors from wide information of the social and health problems created by the general use of tranquilizers that their use produces an un-

85. 273 Minn. 470, 142 N.W.2d 84 (1966).

86. *Id.* at 473, 142 N.W.2d at 87.

87. *Id.*

natural impact on the mental, physical and emotional structure and may cause disorientation.⁸⁸

Justice Murphy's opinion assumes a great deal of sophisticated knowledge on the part of jurors. The assumption is bold enough when viewed in the abstract, but becomes all the more astonishing when considered in light of the other evidence in the case. The plaintiff had a known history of fainting spells with no organic cause. Further, the tranquilizer that had been administered was a special type of tranquilizer combined with adrenalin, the effect of which may not even be understood by some physicians. In addition, the particular type of tranquilizer was one that, according to the defendant, many people react to differently.⁸⁹

It is interesting that under these circumstances the court ignored the *Yates* "more probable than not" test⁹⁰ and resorted to the *Christianson* test of foreseeability,⁹¹ even though the issue was one of causation-in-fact. The question was, after all, what caused Mrs. Schulz to fall—a fact question which, under any theory, should require proof by a preponderance of the evidence.

Equally as puzzling is *Sandhofer v. Abbott-Northwestern Hospital*,⁹² involving the plaintiff's treatment for a fractured wrist. After surgical repair and casting of the wrist, the plaintiff was hospitalized for observation and evaluation of the arm. During the first five days of hospitalization, nursing personnel noted at various times symptoms indicative of impaired circulation in the hand, but did not notify the doctor until the fifth day.⁹³ The cast was then immediately removed, but from this point, there was disagreement concerning the appearance of plaintiff's arm. The defendant physician testified that the arm appeared normally pink in color, and that evidence of circulation in the arm was good, although his notes referred to some impairment of circulation in the hand.⁹⁴ The plaintiff testified that his arm was as hard as a baseball bat and that pieces of his

88. *Id.* at 479, 142 N.W.2d at 91.

89. *Id.* at 478, 142 N.W.2d at 90.

90. *Yates*, 198 Minn. 7, 268 N.W. 670.

91. *Christianson*, 67 Minn. at 94, 69 N.W. at 640.

92. 283 N.W.2d 362 (Minn. 1979).

93. *See id.*

94. *Id.*

arm came off with the cast.⁹⁵

A new, smaller cast was reapplied and the plaintiff remained hospitalized. After three weeks, he left the hospital against his doctor's advice and used his arm in manual activities such as driving a truck, sweeping, and lifting.⁹⁶ When he returned to the defendant ten days later in considerable pain, an examination revealed that the fracture had displaced and there was an open ulcer on his forearm. A diagnosis of ischemic necrosis was ultimately made, and the plaintiff's arm was eventually amputated below the elbow.⁹⁷

At trial, the plaintiff produced no testimony establishing the circulation problems that occurred during the first five days after casting as the probable cause of the gangrene which lead to the loss of his arm. For his expert, the plaintiff relied upon the subsequent treating physician who performed the amputation. A review of that physician's testimony reveals a very neat side-stepping of the "more probable than not" issue by both the expert and the plaintiff's counsel.⁹⁸

95. *Id.*

96. *Id.*

97. *Id.*

98. For the serious student of medical malpractice causation issues the transcript of the testimony of the plaintiff's expert is worth reading. Dr. James House, the subsequent treating physician testified for the plaintiff. Dr. House seemed to "sedulously" avoid giving any direct opinion pointing the finger of guilt at any of the defendants, which included two treating doctors and the hospital nursing staff. Dr. House testified more in generic terms than with specific reference to the actions of the parties. For example, after testifying that the amputation was made necessary because of death of muscle and nerve tissue due to inadequate blood supply, the following exchange occurred:

Q. In your opinion was that death of that muscle tissue and nerve tissue a result of circulatory impairment?

A. Certainly among the factors contributing to the necrosis of the tissues was in my opinion, was impairment of circulation. In addition, there was infection and other things that precluded the functional salvage. So the loss of circulation alone was there, but certainly was a factor. As you requested, or as you indicated, yes.

Q. And based upon that information and those events occurring, do you have an opinion as to whether the amputation was a direct cause of this circulatory impairment suffered by him?

A. You said whether the amputation was a direct result of the circulatory impairment? The context would have been the other, I think. Could you restate the question? I don't think I can answer it.

Q. Doctor, do you have an opinion based upon reasonable medical certainty as to whether the amputation of Mr. Sandhofer's right arm was a direct result of a circulatory impairment suffered by him during the period of time between June 22 and June 27, 1974?

A. It is my opinion that it was a cause.

Q. Doctor, is it your opinion that Mr. Sandhofer did sustain circulatory

Of particular significance in *Sandhofer* was the supreme court's approval of the trial court's refusal to give the following instruction requested by defendant:

The plaintiff, in a malpractice action has the burden of proving that there was negligence by defendant doctor and that such negligence was the cause of the injury complained of, in this regard proof of causation in a medical malpractice case cannot rest on conjecture and the mere possibility of

embarrassment of impairment during the period of time between June 22 and June 27, 1974?

A. On the basis of the subsequent findings, and on the basis of the information that has been presented, I think it would be a reasonable conclusion that there was circulatory impairment to the muscles.

Q. And what is your opinion caused that circulatory impairment?

A. Well, we reviewed the number of kinds of causes of circulatory impairment, and in circumstances where there is a closed fracture within the facial compartment of this arm, and furthermore, the arm is surrounded by circular cast, there are a number of elements that can contribute to compression or impaired circulation.

Q. And was it your opinion that one of those elements was the circular cast?

A. Yes, it would be my opinion.

Pertinent parts of transcript are on file at the William Mitchell Law Review Office.

At best, Dr. House identified the tight cast as only one of several elements that contributed to circulatory impairment which occurred during the hospitalization. On cross examination, he testified that the plaintiff's heavy use of his arm in manual activity constitutes yet another possible cause. At no time did he identify the tight cast as the most significant, or "more probable than not" cause.

Dr. House also was vague in identifying which defendant departed from the accepted standard of care:

Q. Doctor, do you have an opinion based upon reasonable medical certainty as to whether the departure from the standard of care on the part of the defendant doctors was a direct cause of the ischemic condition of the plaintiff's arm between June 22 and June 27, 1974?

...

A. On the basis of the facts known to me, it is difficult for me to separate one from the other as to where the departure came from. I spoke before about problems in communication. There were problems with timing in terms of the observations and in terms of the notations of the signs and symptoms of ischemia, and I was not there at the time and I have available to me the facts outlined in the hypothetical and the medical record that is here, and I think that it would be difficult for me to specifically identify which one or the other of the factors constitutes the important departure that makes it a direct cause.

Q. But doctor in your opinion was the direct—was the departure from the standard of care a direct cause to the ischemic condition of Mr. Sandhofer's arm between those dates?

A. Yes, I believe there was.

Id.

Despite the absence, then, of any direct testimony that the doctors' conduct departed from accepted standards, or that their conduct was a more probable than not cause of the injury, the jury's "yes" answer to the proximate cause question and assessment of 15% fault to each of the two treating physicians, and 60% to the hospital, was upheld.

such causation is not enough to sustain plaintiff's burden of proof, such burden of proof has to be something more than that which is consistent with plaintiff's theory of how the injury happened and plaintiffs are required to show that it is more probable that the harm resulted from some negligence for which defendant doctor is responsible rather than from some other cause or some other person's negligence.⁹⁹

The trial court determined that the general charge on burden of proof given in all tort cases, together with the general charge on direct cause, was sufficient.

It is apparent that in both *Schulz* and *Sandhofer*, the court utilized the foreseeability test of *Christianson*,¹⁰⁰ rather than the "more probable than not" test of *Yates*.¹⁰¹ In both cases, application of the foreseeability test resulted in a significantly lower burden of proof for the plaintiff. To a practitioner looking for common threads, perhaps the only common element is that the existence of negligence was well-established in both cases. In *Sandhofer*, the plaintiff's expert testified that the failure of hospital personnel to alert the treating physician concerning the obvious circulation problems at an earlier time was improper.¹⁰² In *Schulz*, the mistaken adrenalin injection was undisputed and there was ample evidence that the defendant should have maintained a closer watch over the plaintiff while she was left to rest after the tranquilizer was administered.¹⁰³

99. *Sandhofer*, 283 N.W.2d at 366-67.

100. See *supra* notes 1-6 and accompanying text.

101. See *supra* notes 46-55 and accompanying text.

102. See *Sandhofer*, 283 N.W.2d at 367.

103. *Schulz*, 373 Minn. at 479, 142 N.W.2d at 90-91.

Schulz is not the only Minnesota case, and Minnesota is not the only jurisdiction, in which there has been an unconscious, or even conscious, policy of easing the causation burden in cases of obvious negligence or grossly tortious conduct. In *State v. Southern*, 304 N.W.2d 329 (Minn. 1981), the defendant appealed her conviction of negligent vehicular homicide in part because evidence that her gross negligence caused the victim's death was legally insufficient. The State argued that defendant was grossly negligent in accelerating and leaving the scene of the accident after she struck the victim. The State further argued that the grossly negligent act of accelerating and leaving the scene resulted in the victim being dragged 175 feet, causing his death. In affirming a guilty verdict reached under the "beyond a reasonable doubt" standard of proof, the court stated:

The two main injuries which led to the child's death were a head injury which probably, but not necessarily, occurred at impact and a neck injury which may have occurred at impact or while the child was being dragged. But for defendant's gross negligence, the child may have survived. Of course, we will never know this because defendant, by her gross negligence

Just as one searching for the common thread is poised to pronounce that a strong case of negligence will make up for a weak case of causation, along comes the Minnesota Court of Appeals decision in *Fehling v. Levitan*.¹⁰⁴ In *Fehling*, the plaintiff was admitted to the hospital under the defendant's care in acute distress and died approximately forty-eight hours later. The autopsy report disclosed the cause of death as viral myocarditis.¹⁰⁵ There was ample testimony of negligent treatment on the part of both the defendant physician and defendant hospital and the jury found both negligent. On the issue of causation, the plaintiff produced testimony from two experts. The first testified that Fehling "may have survived" with proper care, and the second testified that his "chances of survival were high" with appropriate treatment. The defendants' experts all agreed that the plaintiff had virtually no chance of surviving regardless of the quality of care given.¹⁰⁶

The trial court, believing that the substantial factor definition of direct cause did not adequately deal with the defendants' claim that the plaintiff would have died even absent negligence, gave the following instruction on causation:

Before you can find that negligent conduct was a direct cause of the death of Robert Fehling, Jr., you must find that his death would not have occurred when it did on May 3, 1980, but for the negligent conduct, and that such negligent conduct played a substantial part in bringing about the death.¹⁰⁷

The jury answered the causation question as to both the doc-

in failing to stop and in leaving the scene, made it impossible to determine this. Further, her conduct also had the effect of ensuring the child's death. *Id.* at 330. The court's view of causation in *State v. Southern* and Chief Justice Knutson's special concurrence in *Schultz*, see *infra* note 108, constitutes the underlying basis for the value of a chance concept. The theory has developed in recognition of the difficulty plaintiffs face when the breach of a duty by the defendant precludes a determination of whether the plaintiff or decedent could have avoided injury or survived absent the negligence. See *infra* notes 114-66 and accompanying text. For example, in *O'Brien v. Stover*, 443 F.2d 1013 (8th Cir. 1971) (applying Iowa law), the court stated: "We have frequently held the issue of proximate cause is ordinarily for the jury where there is substantial evidence of a defendant's negligence." *Id.* at 1018 (quoting *Wilson v. Corbin*, 241 Iowa 593, 41 N.W.2d 707 (1950)).

104. 382 N.W.2d 901 (Minn. Ct. App. 1986).

105. Viral myocarditis is a disease of the heart for which, the experts all agreed, there is no known cure. The only treatment is supportive care to allow the body's immune defenses time to combat the virus. *Id.* at 903.

106. *Id.*

107. *Id.* at 903-04

tor and hospital in the negative. The court of appeals felt the addition of a "but for" test to the standard "substantial factor" causation instruction was not prejudicial, reasoning that, in general, the "but for" and "substantial factor" formulations produce the same legal conclusion.¹⁰⁸ However, the court also

108. *Id.* at 904 (citing PROSSER & KEETON, *supra* note 6, § 41, at 268).

One could debate at great length whether this reasoning is true. It is all too easy for law school professors and others learned in the law, who have likely never been on a jury, to conclude that a "but for" and "substantial factor" analysis of any given causation issue will yield the same result. Viewed from a layman's perspective in everyday application, the formulation would seem to invoke very different degrees of certainty. The "but for" standard seems to almost require an elimination of any substantial possibility of an opposite result.

Even when the "but for" test is met, however, it is a poor barometer with which to gauge legal responsibility. As Professor Prosser points out, the "but for" analysis might compel one to hold Columbus legally responsible for every tort which occurs in the country he discovered six centuries ago. *See* Prosser, *supra* note 8, at 22. The "but for" analysis has no relevance to the inquiry that the courts have struggled so hard to articulate: "Does there, within the conduct, lurk the idea of responsibility?"

It is apparent that the court disregards the "but for" analysis in testing the quality of the jurors' answers to the proximate cause question. In *Stewart v. Frisch*, 381 N.W.2d 1 (Minn. Ct. App. 1986), for example, one of the defendants was the owner of a horse, which had escaped by breaking through a fence and wandered onto a public highway at night. The other defendant was the operator of a motorcycle on which plaintiff's decedent was a passenger. The defendant operator and decedent were both drinking before the accident, the defendant's motorcycle was not equipped with a windshield, as required by law, and the operator was not wearing his goggles. The latter two factors contributed to some impairment of his vision. At the time of the collision, the horse was perpendicular to the centerline of the road and the motorcycle operator testified that he did not see the horse until it was 15 to 20 feet away, despite the fact that his headlight illuminated an area 300 feet ahead of the vehicle.

The jury found all three parties negligent and found the conduct of both the operator and decedent to be a proximate cause of the accident. Despite the fact that this accident obviously would not have occurred but for the defendant's negligence in allowing the escape of the horse, the court upheld the jury verdict finding no proximate cause with respect to the horse owner. The plaintiff argued that the verdict was perverse, particularly in view of the fact that the jury returned during its deliberation to inquire whether it was permissible to assign a percentage of fault to the owner. Even this fact did not convince the court that the no answer to the proximate cause question should be disturbed.

The method by which the "but for" inquiry is presented to the jury has a significant impact upon the outcome of the case. Prosser paraphrases the rule as follows: "The defendant's conduct is not a cause of the accident, if the accident would have occurred without it." Prosser, *supra* note 8, at 22.

Following Professor Prosser's characterization of the rule, the instruction to the jury in *Fehling* would have been as follows:

You cannot find the defendant's conduct to have been a substantial factor in causing the death if you find that the death would have occurred even absent the conduct.

As actually given, however, the effect of the instruction was as follows:

In order to find that the defendant's conduct was a substantial factor in caus-

recognized that: "The substantial factor rule was developed primarily for cases in which application of the 'but for' rule would allow each defendant to escape responsibility because the conduct of one or more others would have been sufficient to produce the same result."¹⁰⁹ The dissenting opinion recog-

ing the death, you must find that the death would not have occurred absent the conduct.

The difference in the phraseology is subtle, but the effect is devastating, particularly when the doctor's intervening care prevents the jurors from being able to conclude what would have happened with proper treatment. The method of phrasing shifts the burden of proof. In the first example, the defendant has the burden of proving that death would have occurred even absent his conduct. In the second, the plaintiff has the burden of ruling out all other causes of certain death. Minnesota courts have consistently ruled that the plaintiff should not have such a burden. *E.g.*, *Schulz*, 273 Minn. 470, 142 N.W.2d 84.

Professor Prosser notes that the "but for" analysis is really a rule of exclusion. That is, it serves only to eliminate liability but has little or no function in establishing legal responsibility. Prosser, *supra* note 8, at 23. It is really, then, a theory of avoidance. Viewed in that light it is, like the theories of intervening and superceding cause and like the defenses of contributory negligence and assumption of risk, an attempt to shift the blame to another cause. Like Professor Prosser's phrasing of the "but for" rule, sections 432 and 433 of the *Restatement (Second) of Torts* also characterize the rule as an exclusionary rule, rather than as a fact which plaintiff must, by proof, negate.

§ 432 Negligent Conduct as Necessary Antecedent of Harm.

(1) Except as stated in subsection (2), the actor's negligent conduct is not a substantial factor in bringing about harm to another if the harm would have been sustained even if the actor had not been negligent.

...

The plaintiff is not, however, required to prove his case beyond a reasonable doubt. He is not required to eliminate entirely all possibility that the defendant's conduct was not a cause.

RESTATEMENT (SECOND) OF TORTS §§ 432, 433(B), comment 6 (1965). Such theories of avoidance are typically considered affirmative defenses, with respect to which the defendant has the burden of both proceeding with the proof, and persuading the jury that his allegations (the defendant would have died anyway) are true.

Herr and Haydock recognize that the current list of affirmative defenses set forth in rule 8.03 of the Minnesota Rules of Civil Procedure is not exhaustive: "As the law changes or new defenses are created, any additional defenses which serve to avoid liability should be pleaded." D. HERR & R. HAYDOCK, MINNESOTA PRACTICE—CIVIL RULES ANNOTATED § 8.5, at 197 (2d ed. 1985).

The concurring opinion of Chief Justice Knutson in *Schulz* advocates this concept, although in somewhat less definite terms. Chief Justice Knutson said:

The case differs from many others in that here proof of original negligence on the part of the defendants was established beyond any doubt. . . . It is not a case where the original negligence of the defendants is not established. . . . It would seem to me that once the original negligence was established . . . the defendants should have the burden of going forth with the evidence and showing, if they can, that the effect of the drug originally administered had worn off to the extent that it was not the proximate cause of the fall.

Schulz, 373 Minn. at 480, 142 N.W.2d at 91-92 (Knutson, C.J., concurring specially).

109. *Fehling*, 382 N.W.2d at 904.

nizes that this statement is precisely why the "but for" instruction was inappropriately given in *Fehling*.¹¹⁰ The "but for" test potentially eliminates a tortfeasor as a source of responsibility not only in multiple defendant cases, but also in other multiple cause cases. The "but for" language itself seems to impose a more formidable burden upon the plaintiff than does even the "more probable than not" standard. The former test implies almost a "beyond a reasonable doubt" characterization of the evidence, which would require a plaintiff to eliminate even a slight possibility of the same harm occurring in the absence of the negligent conduct. The combined instruction in *Fehling*, at a minimum, told the jurors that they must find the conduct of the defendant to have contributed more than fifty percent to the plaintiff's death before they could conclude that the conduct was a substantial factor, or a direct cause. Surprisingly, this combined instruction, according to the court of appeals, "does not misstate the applicable law."¹¹¹

110. *Id.* at 906 (Leslie, J., dissenting). As the court of appeals observed, the defendants in *Fehling* were not attempting to avoid liability by shifting the blame to each other. They were both attempting to transfer blame to another cause, the preexisting condition. However, the mere existence of a preexisting condition does not preclude a finding of proximate cause. As stated *supra* note 108, a preexisting condition is an exclusionary factor rather than a fact that plaintiff must disprove. Under section 432 of the *Restatement*, the combination of a natural cause and a negligently produced cause may result in liability:

(2) If two forces are actively operating, one because of the actor's negligence, the other not because of any misconduct on his part, and each of itself sufficient to bring about harm to another, the actor's negligence may be found to be a substantial factor in bringing it about.

Restatement (Second) of Torts § 432(2) (1965). The operation of this section is demonstrated by Illustration 4 from section 432:

[O]ne fire is set by the negligence of the A Company and the other is set by a stroke of lightning or its origin is unknown. It may be found that the negligence of the A Company is a substantial factor in bringing about C's harm.

Id., Illustration 4.

In *Kyriss v. State*, 707 P.2d 5 (Mont. 1985), the Montana Supreme Court recognized that the "substantial factor" test must be used in lieu of a "but for" analysis when natural and negligently produced causes concur to harm a plaintiff. *Kyriss* involved the alleged misdiagnosis of a gangrenous foot. The defendant claimed that the plaintiff's preexisting condition of arteriosclerosis caused the amputation of plaintiff's right leg. The Montana court affirmed the trial court's use of a "substantial factor" instruction rather than defendant's proposed "but for" instruction. Without citing *Restatement* section 432(2), the court held that the "substantial factor" test applies whenever "two or more actors or factors may be substantial causes of harm." *Id.* at 8.

111. *Fehling*, 382 N.W.2d at 905.

D. *Effect of the "More Probable Than Not" Standard*

Probably the most obvious defect of the special causation rule in medical negligence cases is the confusion it creates at the trial level. Faced with the enunciated standard, the trial court must examine the evidence to determine whether a jury has a sufficient basis upon which to determine probabilities. The standard direct cause instruction¹¹² understandably seems incomplete, even inconsistent with the enunciated standard, thereby resulting in confusing attempts to fashion a better explanation for the jury.¹¹³ Due to inconsistent application of the causation standard, a variety of jury instructions with sharply conflicting language may be submitted as accurately stating the applicable law.

The most insidious impact of the rule occurs in those cases that never make it to the appellate level. Many cases end in a directed verdict for the defense because the plaintiff's expert cannot testify as to probabilities. Unquestionably, many cases end in a jury verdict for the defense under instructions that in some fashion incorporate the "more probable than not" hurdle. Many cases are never pursued in the first place owing to the lack of a supporting medical opinion. The perceived rule is thus, if nothing else, a semantic sword utilized by the defense to intimidate opposing experts, plaintiff's counsel, and the trial court.

The intimidating effect begins in the early stages of the investigation of a medical negligence claim. The plaintiff's attorney must obtain an expert witness willing to testify both as to negligence and causation. The manner in which the causation question is presented to the potential witness will often determine whether or not the claim can be pursued. A witness who might readily agree that the defendant's conduct was a substantial factor in bringing about a particular harm will often stop short of expressing his opinion in terms of percentage or probabilities, and will surely confess absence of Divine wisdom if required to address the "but for" question.

If the court is not going to uniformly enforce the "more probable than not" standard, it should not remain the enunciated test, honored at the trial level and selectively ignored on

112. MINNESOTA PRACTICE JIG II, *supra* note 12, 140 G-S.

113. *See, e.g., Fehling*, 382 N.W.2d at 905.

appeal. The practitioner should be able to more accurately predict whether the testimony in any given case, though short of probabilities, will nevertheless be sufficient if measured by the *Christianson* standard, or some other standard. Minnesota, like other jurisdictions that have incorporated the "more probable than not" causation test into their medical negligence law, has a problem that demands resolution. Many jurisdictions have recognized the problem and utilize the value of a chance doctrine to correct what has been perceived as an inequitable distinction between medical negligence and other tort cases.

III. THE VALUE OF A CHANCE THEORY OF RECOVERY

A. Recognition in Other Jurisdictions

1. Non-Medical Negligence Cases

The value of a chance doctrine evolved from application of common law proximate cause precepts. Yet, in medical negligence cases, the doctrine has received inconsistent treatment even in jurisdictions in which, unlike Minnesota, the law of proximate cause in the area of medical negligence is well-settled and consistently applied.

The strongest argument in favor of the value of a chance doctrine is its general acceptance in non-medical negligence cases. The issue has arisen in non-medical cases under the same circumstances as in medical negligence cases. In most personal injury cases, the plaintiff is healthy before the tort occurs, and it is relatively easy to trace the subsequent injuries directly to the negligent act. In the typical value of a chance case, the plaintiff already has a condition or is subject to risk from a hazard, the harm from which ultimately becomes the basis for the damages sought. The claim is that the negligence has increased the risk of harm by hastening or aggravating the effect of the pre-existing condition or risk. In addition, the typical loss of a chance case frequently involves a situation in which the duty breached by the tortfeasor is imposed to prevent the harm that ultimately occurs. These cases present difficult causation questions because the tort often prevents a determination of whether the exercise of ordinary care under the circumstances could have produced a better result. Most courts have permitted recovery under these circumstances in non-medical negligence cases on the basis that existence of a

legal duty pre-supposes a means of imposing responsibility upon the tortfeasor for a violation of the duty.

For example, in *Gardner v. Nat'l Bulk Carriers, Inc.*,¹¹⁴ the master of a seagoing vessel made no attempt to rescue a seaman whose loss overboard was not reported until five and one-half hours after he had been last seen.¹¹⁵ The Fourth Circuit Court of Appeals had no trouble finding the necessary proximate cause, even absent testimony that an attempted rescue would probably have succeeded, stating:

[T]his view ignores the underlying character of the duty. It was less than a duty to rescue him, but it was a positive duty to make a sincere attempt at rescue. The duty is of such nature that its omission will contribute to cause the seaman's death. The duty arises when there is a reasonable possibility of rescue. . . . Therefore, proximate cause here is implicit in the breach of duty. Indeed, the duty would be empty if it did not itself embrace the loss as a consequence of its breach.¹¹⁶

In *Gardner*, the pre-existing risk of drowning was increased by the negligent failure to attempt rescue. It was left to the jury to decide whether the increased risk of harm was a substantial factor in producing the ultimate harm. There are numerous cases in which various courts have held that because the defendant's conduct increased the risk of the harm that occurred, the plaintiff need not produce probability testimony to create a jury issue.¹¹⁷

114. 310 F.2d 284 (4th Cir.), *cert. denied*, 372 U.S. 913 (1963).

115. *Id.* at 285.

116. *Id.* at 287.

117. *The Iroquois*, 194 U.S. 240 (1904) (failure of ship to put into port destroyed at least a chance of healing by proper medical treatment); *Maryland ex rel. v. Manor Real Estate & Trust Co.*, 176 F.2d 414 (4th Cir. 1949) (defendant landlord's negligent failure to rid apartment house of rats was substantial factor in causing decedent's death from typhus, and as such, defendant landlord had burden of proving that the required precautions would have proved unavailing); *Kirincich v. Standard Dredging Co.*, 112 F.2d 163 (3rd Cir. 1940) (jury issue presented when failure to provide safety rope might have prevented seaman from being washed overboard); *Zinnel v. United States Shipping Bd. Emergency Fleet Corp.*, 10 F.2d 47 (2d Cir. 1925) (plaintiff need only prove "some likelihood" that guard rope would have prevented seaman from being swept overboard in rough sea); *Rosario v. American Export-Isbrandtsen Lines*, 395 F. Supp. 1192 (E.D. Pa. 1975) (failure to treat fracture destroyed possibility that the permanent injury would have been lessened or prevented); *Stockwell v. Board of Trustees of Leland Stanford Junior Univ.*, 64 Cal. App. 2d 197, 148 P.2d 405 (1944) (failure properly to maintain premises in a safe condition was cause of plaintiff's injury caused by third person firing a BB gun even though it is unknown whether injury would have occurred anyway); *Rovengo v. San*

Cases such as *Gardner* implicitly, and sometimes explicitly, embrace section 323 of the *Restatement (Second) of Torts*. Section 323 provides:

One who undertakes, gratuitously or for consideration, to render services to another which he should recognize as necessary for the protection of the other's person or things, is subject to liability to the other for physical harm resulting from his failure to exercise reasonable care to perform his undertaking, if

- (a) his failure to exercise such care increases the risk of such harm¹¹⁸

Section 323 was applied by the Massachusetts Supreme Court in *Mullins v. Pine Manor College*.¹¹⁹ After being raped on a college campus, the plaintiff filed suit against the college claiming that inadequate security was to blame.¹²⁰ Observing that improper security increased the risk of attack on the plaintiff, the court affirmed a judgment in favor of the student absent any evidence that proper security could have prevented the attack from taking place.¹²¹ Non-medical negligence cases decided under section 323 illustrate that proof of a substantial factor does not necessarily require probability testimony of greater than fifty percent.

2. Medical Negligence Cases

Although section 323 sets forth a standard of care for negligence rather than a proximate causation standard, this section

Jose Knights of Columbus Hall Ass'n, 108 Cal. App. 591, 291 P. 848 (1930) (absence of lifeguard at swimming pool was cause of child drowning even though it is unknown whether accident would have occurred without guard); *Daly v. Illinois Cent. R.R.*, 248 Iowa 758, 80 N.W.2d 335 (1957) (failure to give signal was cause of grade crossing accident, even though it was uncertain as to whether accident would have occurred anyhow); *Louisville Trust Co. v. Morgan*, 180 Ky. 609, 203 S.W. 555 (1918) (negligent failure to provide fire escape was cause of decedent's death in absence of evidence that he would not have been able to reach fire escape if there); *Dixie Drive It Yourself System New Orleans Co. v. American Beverage Co.*, 248 La. 471, 137 So. 2d 298 (1962) (failure of vehicle disabled on highway to display signal flags was cause of vehicle striking it in rear even though the accident might have occurred anyway); *Burt v. Nichols*, 264 Mo. 1, 173 S.W. 681 (1915) (even though plaintiff's building may have burned anyway, it is up to the jury to decide whether defendant's failure to provide safety appliances and fire escape was cause of the loss). See generally *Malone, Ruminations on Cause-In-Fact*, 9 STAN. L. REV. 60 (1956-57).

118. RESTATEMENT (SECOND) OF TORTS § 323 (1965).

119. 389 Mass. 47, 449 N.E.2d 331 (1983).

120. *Id.* at 62, 449 N.E.2d at 336.

121. *Id.* at 58, 449 N.E.2d at 339.

has been at the center of the national value of a chance debate. The crucial question is whether the plaintiff, to create a jury issue, needs only establish that the negligence increased the risk of harm, or whether the plaintiff must also prove that the increased risk caused the resulting harm. Most courts addressing the issue have ruled that proof of the breach establishes a prima facie case permitting the jury to decide the causation.¹²² In other words, acceptance of the value of a chance doctrine recognizes that if the defendant's conduct increases the risk of harm or deprives the plaintiff of a significant chance for survival, the jury may decide whether there is a probability that the defendant's negligence was a cause of the result. Over the past twenty years, this concept has quietly become the majority rule in those jurisdictions that have considered the issue.¹²³

In *Jeanes v. Milner*,¹²⁴ the Eighth Circuit Court of Appeals became the first modern court to permit recovery in a medical negligence case in which the patient had a less than fifty percent chance of recovery. In *Jeanes*, a thirteen year old boy developed throat cancer. His condition was misdiagnosed and he later died.¹²⁵ Expert testimony established that even with proper treatment the boy had only a thirty-five percent chance of survival.¹²⁶ Due to the delay in treatment caused by the misdiagnosis, he had only a twenty-four percent chance of survival.¹²⁷ Applying Arkansas law, the court said it could be inferred from the record that the boy's life would have been saved or at least prolonged with proper treatment.¹²⁸ Reversing the trial court, the case was remanded with instructions that the delay in diagnosis presented a jury question as to whether it was the proximate cause of the boy's death.

A year later, in *O'Brien v. Stover*,¹²⁹ the Eighth Circuit again considered the issue and applied Iowa law in permitting recovery due to a doctor's delayed diagnosis of cancer. Quoting an older Iowa case, the *O'Brien* court stated:

Of course the original injury, even if promptly diagnosed

122. See *infra* notes 124-66 and accompanying text.

123. See *id.*

124. 428 F.2d 598 (8th Cir. 1970) (applying Arkansas law).

125. *Id.* at 599.

126. *Id.* at 604.

127. *Id.*

128. *Id.*

129. 443 F.2d 1013 (8th Cir. 1971) (applying Iowa law).

and treated, would naturally cause much pain, loss of time, and perhaps some permanent stiffness. And it may be difficult to determine precisely how much of the plaintiff's total damage is due to the injury and how much to defendant's negligence. Indeed pain is of course incapable of exact pecuniary compensation in any case. But we think the testimony affords a substantial basis for an intelligent award of damages. . . . We have frequently held the issue of proximate cause is ordinarily for the jury where there is substantial evidence of a defendant's negligence.¹³⁰

Both *Jeanes* and *O'Brien* relied heavily upon *Hicks v. United States*.¹³¹ Although the plaintiff in *Hicks* had a greater than fifty percent chance of survival, the defendant claimed that there was insufficient evidence to raise a jury issue on causation.¹³² Without citing section 323 of the *Restatement*, the Fourth Circuit Court of Appeals stated:

When a defendant's negligent action or inaction has effectively terminated a person's chance of survival, it does not lie in the defendant's mouth to raise conjectures as to the measure of the chances that he has put beyond the possibility of realization. If there was any substantial possibility of survival and the defendant has destroyed it, he is answerable. Rarely is it possible to demonstrate to an absolute certainty what would have happened in circumstances that the wrongdoer did not allow to come to pass. The law does not in the existing circumstances require the plaintiff to show to a *certainty* that the patient would have lived had she been hospitalized and operated on promptly.¹³³

The first case in which an appellate court connected section 323 to the value of a chance theory is also the most frequently cited case in support of the doctrine. In *Hamil v. Bashline*,¹³⁴ as in *Hicks*, the plaintiff had a greater than fifty percent chance of recovery with proper treatment.¹³⁵ Nevertheless, the *Hamil* court found it unnecessary to require medical testimony concerning what might have happened with proper treatment

130. *Id.* at 1018 (quoting *Wilson v. Corbin*, 241 Iowa 593, —, 41 N.W.2d 702, 707-08 (1950)).

131. 368 F.2d 626 (4th Cir. 1966).

132. *Id.* at 632 ("both of plaintiff's experts testified categorically that if operated on promptly, Mrs. Greitens would have survived, and this is nowhere contradicted by the government expert.").

133. *Id.* (emphasis in original).

134. 481 Pa. 256, 392 A.2d 1280 (1978).

135. *Id.* at 263, 392 A.2d at 1283.

when the plaintiff could establish, to a reasonable degree of medical certainty, an increased risk of sustaining the harm that ultimately occurred. The Pennsylvania Supreme Court held that a prima facie case of liability is established with proof of a section 323 violation:

Once a plaintiff has introduced evidence that a defendant's negligent act or omission increased the risk of harm to a person in plaintiff's position, and that the harm was in fact sustained, it becomes a question for the jury as to whether or not that increased risk was a substantial factor in producing the harm.¹³⁶

The leading recent case permitting recovery when the plaintiff had less than a fifty percent chance of survival is the Washington Supreme Court's decision in *Herskovits v. Group Health Cooperative*.¹³⁷ In *Herskovits*, expert testimony established that a physician's failure to diagnose lung cancer caused a fourteen percent reduction, from thirty-nine percent to twenty-five percent, in the decedent's chances of surviving five years.¹³⁸ Ad-

136. *Id.* at 269, 392 A.2d at 1286.

Of course, as the *Hamil* court acknowledged, the plaintiff has the burden of proving violation of section 323 by a preponderance of the evidence. Thus, under *Hamil*, if it is more probable than not that negligent treatment increased the risk of harm, a prima facie case of causation has been established. *Id.* at 272 n.9, 392 A.2d at 1288 n.9.

Because the plaintiff's expert testified to a 75% chance of recovery with proper treatment, the *Hamil* court also acknowledged that the evidence provided a sufficient basis upon which the jury could have concluded that it was more likely than not that the defendant's omissions were a substantial factor in causing Mr. Hamil's death.

Id.

Thus, it appears that proof of a prima facie case under section 323 does not obviate the need to instruct the jury on causation. In fact, in *Jones v. Montefiore Hosp.*, 494 Pa. 410, 431 A.2d 920 (1981), the Pennsylvania Supreme Court held that a trial court instructing a jury on the increased risk theory of recovery must also require the jury to consider whether the increased risk was a substantial factor in bringing about the resultant harm. The trial court's instruction implying that liability automatically followed from a finding of increased risk was rejected. *Id.* at 417 n.8, 431 A.2d at 924 n.8; see *Curry v. Summer*, 136 Ill. App. 3d 468, —, 483 N.E.2d 711, 717-18 (1985) (words "resulting from" in section 323 require an independent finding of proximate cause based upon "the usual standards of proximate cause"). Under the Pennsylvania formulation, therefore, probability testimony from an expert is not required when the section 323 duty has been violated because the defendant's conduct created the uncertainty regarding causation. However, the jury must nevertheless receive the applicable proximate cause instruction to determine whether the plaintiff has proved that, by a preponderance of the evidence, the harm sustained "resulted from" the increased risk.

137. 99 Wash. 2d 609, 664 P.2d 474 (1983).

138. *Id.* at 612, 664 P.2d at 475.

mitting negligence, the defendant argued that there could be no liability because the plaintiff was unable to show that an earlier diagnosis made it more likely than not that the decedent would have survived.¹³⁹

Rejecting the "all or nothing" approach of the "but for" standard, the *Herskovits* court adopted the reasoning of *Hamil*.¹⁴⁰ The Washington Supreme Court viewed negligence that produces an increased risk of harm to a patient as equivalent to depriving the patient of a rightful opportunity for treatment. It is sufficient to pose a jury question on the issue of causation.¹⁴¹ The court held that a policy barring recovery for negligence when there is less than a fifty percent chance of recovery or cure with successful treatment, would give doctors and hospitals a "blanket release from liability . . . regardless of how flagrant the negligence."¹⁴²

Since the Eighth Circuit decision in *Jeanes*, a majority of courts considering the issue have permitted recovery without

139. *Id.* at 619, 664 P.2d at 476.

140. *Id.* at 614-17, 664 P.2d at 477.

141. *Id.* at 619, 664 P.2d at 479.

142. *Id.* at 614, 664 P.2d at 477.

Herskovits is not so much a leading case because it permitted recovery for loss of a chance as much as because it refined application of the theory. First, the court made it clear, as did the court in *Hamil*, that the existence of a negligently caused increased risk of harm does not result in a finding of liability per se—the case goes to the jury for consideration of the causation issue. The court stated: "We hold that medical testimony of a reduction of chance of survival from 39 percent to 25 percent is sufficient evidence to allow the proximate cause issue to go to the jury." *Id.* at 619, 664 P.2d at 479.

Second, the court recognized the shortcomings of requiring expert probability testimony as a prerequisite to avoiding a directed verdict. In response to the argument that less than 51% probability testimony requires the jury to engage in speculation and conjecture, the court stated:

Where percentage probabilities and decreased probabilities are submitted into evidence, there is simply no danger of speculation on the part of the jury. More speculation is involved in requiring the medical expert to testify as to what would have happened had the defendant not been negligent.

Id. at 618, 664 P.2d at 478. Since *Herskovitz*, the court in *Thompson v. Sun City Comm. Hosp., Inc.*, 141 Ariz. 597, 688 P.2d 605 (1984) has stated:

It [the "but for" rule] puts a premium on each party's search for the willing witness. Human nature being what it is, and the difference between scientific and legal tests for "probability" often creating confusion, for every expert witness who evaluates the lost chance of 49% there is another who estimates it at closer to 51%. Also, the rule tends to defeat one of the primary functions of the tort system—deterrence of negligent conduct because cases based on statistical possibilities the rule prevents any individual in a group from recovering, even though it may be statistically irrefutable that some have been injured.

Id. at 607, 688 P.2d at 615. See generally King, *Causation, Valuation, and Chance in Per-*

any probability testimony of the loss of a less than fifty percent chance of cure or survival with proper treatment.¹⁴³ Most of

sonal Injury Torts Involving PreExisting Conditions and Future Consequences, 90 YALE L.J. 1353, 1377 (1981).

Finally, the majority and concurring opinions in *Herskovitz* elaborated upon the extent of permissible recovery once liability for loss of a chance is established. The issue of damages arose due to the proof that the decedent's life expectancy was reduced even with proper treatment. The majority ruled that although the jury could find the defendant legally responsible for the death or harm, "[d]amages should be awarded . . . based only on damages caused directly by the premature death, such as lost earnings and additional medical expenses, etc." *Herskovitz*, 99 Wash. 2d at 619, 664 P.2d at 479. The concurring justices concluded that the injury being compensated was not death but the loss of a statistical chance of survival.

The concurring opinion viewed this analysis as preferable to both the all or nothing approach of the "but for" rule and the "increased risk" test of the *Restatement*. *Id.* at 634, 664 P.2d at 486 (Pearson, J., concurring). Under this view, a plaintiff may establish a prima facie case for the cause of action for the "loss of a less than even chance" of recovery "by producing testimony that defendant probably caused a substantial reduction in [the decedent's] chance of survival." *Id.* at 634-35, 664 P.2d at 487 (Pearson, J., concurring). Damages would then be calculated based upon the analysis of Professor King. Thus, if the decedent had a 40% chance of survival with proper treatment, the plaintiff's compensation would "be 40% of the compensable value of the victim's life had he survived . . ." *Id.* (quoting King, *supra*, at 1382).

The approach suggested by Judge Pearson was followed in *Mays v. United States*, 608 F. Supp. 1476 (D. Colo. 1985). In *Mays*, the decedent's 40% chance of surviving lung cancer was reduced to "15% or less." *Id.* at 1481. Finding a cause of action for "the lost chance of survivability," the court computed total damages based upon decedent's life expectancy absent negligence and awarded 25%, representing the percent of chance lost. *Id.* at 1481-83.

There is a real question whether the end result would be any different under the approach taken by the *Herskovitz* majority versus that taken by the concurring justices. Under the former, the jury must reduce the award of damages by taking into account the plaintiff's pre-existing condition. Under the latter, a reduced measure of damages is required by the nature of the plaintiff's cause of action. All things being equal, the same award of damages should result under either approach. The only real difference between the approaches is that the latter provides the plaintiff a recovery without "relaxing" the proximate cause standard.

143. See, e.g., *O'Brien v. Stover*, 443 F.2d 1013 (8th Cir. 1971) (applying Iowa law) (30% survival rate prior to negligent treatment); *Jeanes v. Milner*, 428 F.2d 598 (8th Cir. 1970) (applying Arkansas law) (recovery permitted for reduction of chance of survival from 35% to 24%); *James v. United States*, 483 F. Supp. 581 (N.D. Cal. 1980) (evidence insufficient to establish statistical loss of chance of survival, but recovery permitted for aggravation of pre-existing condition or shortening of lifespan; "[n]o matter how small that chance may have been . . . no one can say that the chance of prolonging one's life or decreasing suffering is valueless."); *Mays*, 608 F. Supp. 1476 (recovery permitted for reduction of 40% chance of survival to 15% or less); *Thompson*, 141 Ariz. 597, 688 P.2d 605 (no probability testimony; expert testified that transfer of indigent patient increased the risk involved; section 323 adopted and case may go to the jury upon proof of increased risk of harm); *Thomas v. Corso*, 265 Md. 84, 288 A.2d 379 (1972) (no probability testimony; although section 323 not cited, improper treatment "increased the danger" of loss of life; plaintiff might have been saved with prompt treatment); *Clayton v. Thompson*, 475 So. 2d 439 (Miss. 1985)

the adopting courts have either accepted the increased risk test of section 323 or have recognized that the loss of a significant chance of survival or cure is an actionable harm.¹⁴⁴ In permitting recovery, however, several courts have commented that damages are not necessarily based upon the ultimate harm or death. The jury must take into account reduced life expectancy and other factors which, due to the pre-existing condition, served to limit damages.¹⁴⁵ Thus, jurisdictions recognizing an action for the value of a chance have taken care

(expert testified there was "probably" a "good chance" of better thumb function with proper treatment; verdict reversed for new trial because causation instruction requires jury to find "substantial probability" rather than "good chance" of improvement); *Aasheim v. Humberger*, 695 P.2d 824 (Mont. 1985) (adopts section 323 and case may go to the jury upon proof of increased risk of harm; probability testimony establishing a greater than 50% chance of good result unnecessary); *Evers v. Dollinger*, 95 N.J. 399, 471 A.2d 405 (1984) (delayed diagnosis of cancer creates an increased risk that the patient will have a 25% chance of future metastasis; judge refuses to permit such evidence to go to the jury; metastasis occurs while appeal pending; although value of a chance issue became moot, court held that section 323 applied to medical negligence cases and ruled that proof of increased risk created a jury issue on causation); *Kallenberg v. Beth Israel Hosp.*, 45 A.D.2d 177, 357 N.Y.S.2d 508, *aff'd*, 37 N.Y.2d 719, 337 N.E.2d 128, 374 N.Y.S.2d 615 (1974) (proper treatment would have provided a 20-40% chance of survival; issue of proximate cause is for the jury); *Gradel v. Inouye*, 491 Pa. 534, 421 A.2d 674 (1980) (application of *Hamil* to case with no probability testimony; plaintiff's expert testified to a "much greater likelihood" of saving arm with timely diagnosis); *Clark v. Ross*, 328 S.E.2d 91 (S.C. Ct. App. 1985) (applying section 323; judgment affirmed against two doctors negligently failing to diagnose Rocky Mountain Spotted Fever; chances of survival at time of second doctor's negligence only one in three); *Cloys v. Turbin*, 608 S.W.2d 697 (Tex. Civ. App. 1980) (increase in size of tumor due to negligent delay in diagnosis is actionable no matter how small the increase in size); *Herskovits*, 99 Wash. 2d 609, 664 P.2d 474 (cites *Hamil* with approval; reduction in chances of survival from 39% to 25% sufficient to create jury issue on proximate cause).

In addition to the above-listed cases, a number of other jurisdictions have approved the value of a chance theory in cases in which there was a greater than 50% chance of a good result with proper treatment. *See, e.g.*, *Daniels v. Hadley Memorial Hosp.*, 566 F.2d 749 (D.C. Cir. 1977) (only 15-25% mortality rate when allergic reaction to penicillin properly treated; recovery permitted if negligence removes an "appreciable" chance of saving life); *McBride v. United States*, 462 F.2d 72 (9th Cir. 1972) (applying Hawaii Law) (proper treatment would have increased chances of surviving by 50%; jury issue presented if negligence deprives patient of significant improvement in chances of recovery); *Hicks v. United States*, 368 F.2d 626 (4th Cir. 1966); *Hamil*, 481 Pa. 256, 392 A.2d 1280; *Brown v. Koulizakis*, 331 S.E.2d 440 (Va. 1985) (95-98% chance of survival with proper treatment; recovery permitted if negligence deprives patient of "substantial possibility of survival").

144. *See supra* note 143.

145. *See supra* note 142. In *Chester v. United States*, 403 F. Supp. 458, 461 (W.D. Pa. 1975), the court noted that damages recovered for the loss of a chance of recovery must be reduced to take into account the plaintiff's reduced life expectancy before the defendant's negligence treatment.

to ensure that the traditional rule limiting recovery to damages flowing naturally and proximately from the defendant's breach of duty is applied.

The first post-*Hicks* rejection of the value of a chance theory came in the 1971 Ohio Supreme Court case of *Cooper v. Sisters of Charity of Cincinnati, Inc.*¹⁴⁶ In *Cooper*, the plaintiff's expert testified that the mortality rate with proper treatment "may be some place around 50%."¹⁴⁷ Finding his testimony insufficient to create a jury issue on causation, the *Cooper* court expressed the concern that any other standard would dilute the traditional requirement that the defendant's negligence more probably than not was a proximate cause of the harm. Stating that "[p]robable is more than 50% of actual,"¹⁴⁸ the court observed that:

Lesser standards of proof are understandably attractive in malpractice cases where physical well being, and life itself, are the subject of litigation. The strong intuitive sense of humanity tends to emotionally direct us toward a conclusion that in an action for wrongful death an injured person should be compensated for the loss of any chance for survival, regardless of its remoteness. However, we have trepidations that such rule would be so loose that it would produce more injustice than justice. Even though there exists authority for a rule allowing recovery based upon proof of causation by evidence not meeting the standard of probability, we are not persuaded by their logic.¹⁴⁹

The cases following *Cooper* have all viewed the value of a chance doctrine as a weakening of the traditional standard of causation. These cases generally view anything less than "but for" probability testimony as introducing an element of speculation and conjecture.¹⁵⁰ The minority rule views proof of the

146. 27 Ohio St. 2d 242, 272 N.E.2d 97 (1971).

147. *Id.* at 247, 272 N.E.2d at 101.

148. *Id.* at 253, 272 N.E.2d at 104.

149. *Id.* at 251-52, 272 N.E.2d at 103.

The *Cooper* opinion reveals that Ohio has been on both sides of the issue. In *Craig v. Chambers*, 17 Ohio St. 253 (1867), the court observed that "any want in the proper degree of skill or care which diminishes the chances of a patient's recovery . . . would, in a legal sense, constitute injury." *Id.* at 254, 261. However, in *Kuhn v. Banker*, 133 Ohio St. 304, 13 N.E.2d 242 (1938), the court labeled the *Craig* language *obiter dictum* and stated that "[l]oss of chance of recovery, stated alone, is not an injury from which damages will flow." *Id.* at 315, 13 N.E.2d at 247.

150. *Gooding v. University Hosp. Bldg., Inc.*, 445 So. 2d 1015, 1018 (Fla. 1984) (plaintiff's chances with proper treatment no more than even; if probabilities evenly

loss of a chance as failing to show that the doctor's negligence probably affected the outcome.¹⁵¹

In *Curry v. Sumner*,¹⁵² the Illinois Court of Appeals ruled that even the "substantial factor" test could not support the value of a chance theory of recovery. The court observed that negligence is not a substantial factor if the harm more probably than not would have occurred in the absence of negligence.¹⁵³ Moreover, the court held that liability under section 323 of the *Restatement* required proof that the doctor's negligence more probably than not increased the risk of harm before a jury issue on causation could be established.¹⁵⁴ Interestingly, of the jurisdictions that originally rejected section 323 and the value

balanced, the "matter is left to pure speculation or conjecture"; mistakenly views *Cooper* as representing the majority view of jurisdictions considering the issue); *Curry v. Sumner*, 136 Ill. App. 3d 468, 474, 483 N.E.2d 711, 717 (1985) (discussed in detail at *infra* notes 152-54 and accompanying text); *Cooper v. Sisters of Charity of Cincinnati, Inc.*, 27 Ohio St. 2d 242, 251, 272 N.E.2d 97, 103 (1971); *Hanselmann v. McCardle*, 275 S.C. 46, 267 S.E.2d 531 (1980) ("but for" rule prevents recovery for negligent diagnosis of tuberculosis; value of a chance doctrine not specifically addressed).

Interestingly, the Washington Supreme Court recently refused to extend *Herskovits* to legal negligence cases. Instead, the court applied that jurisdiction's "but for" standard of causation. The court also refused to apply the substantial factor test. *Daugert v. Pappas*, 104 Wash. 2d 254, 259, 704 P.2d 600, 605 (1985).

151. See *supra* note 150.

152. 136 Ill. App. 3d 468, 483 N.E.2d 711 (1985). *Curry* should be considered the leading case rejecting value of a chance because it is the only case from a rejecting jurisdiction that gives consideration to all of the arguments that value of a chance advocates have advanced.

153. *Id.* at —, 483 N.E.2d at 717. The plaintiff's expert in *Curry* testified that, with proper treatment, the plaintiff "had a very good chance" of surviving. *Id.* at —, 483 N.E.2d at 715. The plaintiff's expert declined to give any testimony that survival was "probable" or "reasonably likely." *Id.*

154. *Id.* at —, 483 N.E.2d at 717-18. The plaintiff in *Curry* proposed a jury instruction that would require an imposition of liability if the doctor's negligence increased the risk of harm. The proposed instruction went one step beyond *Hamil*. The *Curry* court properly observed that use of the words "resulting from" in section 323 represented a causation standard. *Id.* at —, 483 N.E.2d at 718. Thus, in Illinois, recovery under section 323 would still require additional testimony that the negligently created increased risk of harm more probably than not resulted in the actual harm sustained. The court felt that it did not have to consider whether section 323 created a *prima facie* case for the jury because *Curry* went to the jury. *Id.* at —, 483 N.E.2d at 719. *Curry* did not discuss the substantial factor causation standard.

Illinois has also rejected recovery for the loss of a substantial possibility of survival. See *Wise v. St. Mary's Hosp.*, 64 Ill. App. 3d 587, 381 N.E.2d 809 (1978).

Both *Curry* and *Herskovits* cited *Cornfeldt* as a case applying "traditional standards" in lieu of the lost chance approach. *Curry*, 136 Ill. App. 3d at —, 483 N.E.2d at 717; *Herskovits*, 99 Wash. 2d at 614, 664 P.2d at 476.

of a chance theory, one has completely reversed its position,¹⁵⁵ another has at least partially reversed its position,¹⁵⁶ and a third has provided a means for partial recovery while precluding recovery for the ultimate harm.¹⁵⁷

The controversy over this theory of recovery has centered upon each jurisdiction's perception of how traditional rules of tort law should be applied. Courts on each side of the issue have expressed the view that the result reached was consistent with common law proximate cause precepts.¹⁵⁸ This should come as no surprise. As Professor Prosser has noted, the question of causation-in-fact ". . . is one upon which all the learning, literature and lore of the law are largely lost."¹⁵⁹ This is not because courts are unwilling to engage in reasoned analysis, but because the extent to which the law is applied is often determined by policy reasons, ". . . with our more or less inadequately expressed ideas of what justice demands, or of what is administratively possible and convenient."¹⁶⁰ Thus, one cannot perceive cause-in-fact as solely a fact issue because "the mysterious relationship between policy and fact is likely to be in the foreground" of every discussion involving causation.¹⁶¹

155. *Thompson*, 141 Ariz. 597, 607-08, 688 P.2d 605, 616 (overruling *Hiser v. Randolph*, 126 Ariz. 608, 617 P.2d 774 (Ariz. Ct. App. 1980)).

156. Compare *Hanselmann v. McCardle*, 275 S.C. 46, 267 S.E.2d 531 (1980) (applying "but for" rule) with *Sherer v. James*, 334 S.E.2d 283 (S.C. App. 1985) (proper treatment would create better than 50% chance of saving testicle; section 323 violation one factor to take into account when jury applies "but for" test of *Hanselmann*) and *Clark*, 328 S.E.2d 91 (applies section 323 in case with less than 50% chance of recovery without citing *Hanselmann*).

157. Compare *Gooding*, 445 So. 2d 1015 (Fla. 1984) (rejecting recovery for the value of a chance) with *Williams v. Bay Hosp., Inc.*, 471 So. 2d 626 (Fla. Dist. Ct. App. 1985) (distinguishing *Gooding*; while action for ultimate death not permitted, survivorship action by heirs to recover pain and suffering and other damages while decedent lived is permissible).

158. Compare, e.g., *Curry*, 483 N.E.2d at 717 ("more likely than not" is the "traditional standard") with e.g., *Hamil*, 481 Pa. 256, 392 A.2d 1280 (section 323 has been part of negligence law in Pennsylvania for a dozen years) and e.g., *Thompson*, 141 Ariz. 597, 608, 688 P.2d 605, 616 ("this rule fits only in those situations where the courts traditionally have allowed juries to deal more loosely with causation—the cases where the duty breached was one imposed to prevent the type of harm which plaintiff ultimately sustained"). These citations illustrate that the value of a chance debate does not center on the type of evidence needed to prevent juries from speculating on causation issues as much as it involves a policy decision as to where to place that arbitrary line separating conjecture from permissible inference.

159. PROSSER & KEETON, *supra* note 6 § 41, at 264. Yet, "[i]t is a matter upon which lay opinion is quite as competent as that of the most experienced court." *Id.*

160. *Id.*

161. *Malone*, *supra* note 117, at 61.

The resolution of the cause-in-fact issue depends largely on how each jurisdiction defines the role of proximate cause in the tort system. The meaning of "causation" to a judge is often different than what it means to a physician, and the term has yet a different meaning to a lay person sitting on the jury.¹⁶² Causation, therefore, is not a fact but an inference or a deduction reasonably drawn from the evidence. As such, it defies any effort at tangible classification.¹⁶³ The intangibility inherent in the concept of causation renders arbitrary any attempt to condition a finding of causation upon tangible percentages and rules of probability.¹⁶⁴ For this reason, policy considerations always surface when courts formulate rules for allowing recovery in various classes of torts. A court, for example, may well allow a jury to engage in considerable speculation in determining causation in the case of the intentional wrongdoer.¹⁶⁵ On the other hand, many jurisdictions apply strict legal standards in medical negligence cases. The reason most often cited is that the doctor serves a vital function in society and yet his profession "affords him only an inexact and often experimental science by which to discharge his duty."¹⁶⁶ This, of course, becomes more and more questionable as medical technology advances to perfect methods of diagnosis and treatment. The growing acceptance of the loss of a chance doctrine, therefore, may be due to the increasing awareness that in many areas, medicine is no longer an inexact and experimental science.

B. Imposition of Liability Without Probability Testimony in Minnesota

It is apparent that the value of a chance doctrine has evolved as a method of allowing some measure of recovery in cases in which there is not an identifiable chance of survival or cure that exceeds fifty percent. The theory has been utilized in many jurisdictions which, like Minnesota, have otherwise required causation testimony to meet the probability standard in medical negligence cases. It is also apparent that both of the

162. *Id.* at 64, 66.

163. *Id.* at 61, 69.

164. "The fact of causation is incapable of mathematical proof." PROSSER & KEETON, *supra* note 6, at 269.

165. Malone, *supra* note 117, at 81.

166. *Herskovits*, 99 Wash. 2d at 638, 664 P.2d at 488 (Brachtenbach, J., dissenting).

Minnesota appellate courts regard the doctrine as one that is currently antithetic to Minnesota law.¹⁶⁷ It is likely, therefore, that the doctrine will be adopted only if the appellate courts find the theory to be compatible with this jurisdiction's treatment of legal responsibility factors¹⁶⁸ in other areas of tort law. Because the loss of a chance doctrine presupposes the unavailability of "more probable than not" proof of legal causation, the future prospects for the doctrine must be evaluated in terms of that shortcoming.

Imposition of liability without "probability" testimony in Minnesota tort cases is far from unprecedented. In *Dunshee v. Douglas*,¹⁶⁹ for example, the jury was permitted to base a damage award, in part, upon the chance that the plaintiff might develop an aneurysm as a result of trauma to his carotid artery sustained in the car accident. Viewed in light of traditional standard, the testimony was clearly insufficient to support a finding that the plaintiff would, more likely than not, suffer a future aneurysm.¹⁷⁰ The court may have assumed that a rea-

167. In *Cornfeldt*, 295 N.W.2d 638, the Minnesota Supreme Court noted that the doctrine had been urged by plaintiff as another theory upon which recovery could be allowed and observed: "We have not heretofore adopted the rule in *Hamil* and, in view of the evidentiary differences between *Hamil* and the present case, we need not accept or reject the rule here." *Id.* at 641 n.4.

More recently in *Kalsbeck v. Westview Clinic, P.A.*, 375 N.W.2d 861 (Minn. Ct. App. 1985), the Minnesota Court of Appeals was asked to consider the doctrine, but found it unnecessary since the doctrine applies only when negligence has been established and the plaintiff failed to establish negligence. Again, the appellate court clearly recognized that the doctrine would have to be adopted as a new theory of recovery in Minnesota before recovery would be allowed: "Once a jury has found negligence on the part of a doctor, loss of chance is one of different theories a court can use to instruct a jury on the other needed threshold, i.e., proximate cause." *Id.* at 870.

168. The term "legal responsibility factors" is used by the authors to encompass all of the considerations that influence the philosophical decision to impose or not impose liability, and to what extent. The term would include the concept of negligence itself, along with causation in fact, and legal causation; factors avoiding liability, such as superseding and intervening cause; and considerations that are directed to the measure of liability, such as apportionment of fault and damages, deduction for pre-existing infirmities, and the doctrine of joint and several liability.

169. 255 N.W.2d 42 (1977).

170. The testimony from plaintiff's physician indicated that people who suffer injury to the carotid artery may develop aneurysms related to weakness in the artery some 5 to 10 years following the trauma. Despite the following exchange between the doctor and defense counsel, the court found the testimony sufficient:

Q. But there is no way of saying to a degree of reasonable medical certainty that the plaintiff is going to have that, is there?

A. No, there is not.

sonable jury, in reliance upon this testimony, would compensate the plaintiff commensurate only with the *possibility* of the future harm, and not for the *certainty* of such future harm. If so, this assumption embodies the very essence of the loss of a chance doctrine.

Similarly, in *Schore v. Mueller*,¹⁷¹ the Minnesota Supreme Court reaffirmed the principle that a wrong should not go uncompensated merely because it may be difficult to determine precisely the amount of damages for which the tortfeasor may be responsible. In *Schore*, the plaintiff's pre-existing back condition was allegedly aggravated in an automobile accident. While limiting the plaintiff's recovery to "the additional injury over and above the consequences which normally would have followed"¹⁷² even absent the accident, the Minnesota Supreme Court observed:

[I]t is usually no easy task in cases of this kind to separate plaintiff's claims into those which are properly attributable to defendant's negligence and those which would have normally resulted from his preexisting back condition had there been no aggravation caused by defendant's negligence.¹⁷³

The courts have long recognized that in many cases a fair adjudication of the relative rights and responsibilities of the parties would be imprecise, particularly when varying degrees of causation were involved.¹⁷⁴ Thus, when an employee's work injury was subsequently aggravated by negligent medical care, the court, recognizing the difficulty in sorting out the physician's precise share of the responsibility, noted that this case presented no greater problems than in any other area of tort law:

It is inevitable that the determination of damages in all cases of personal injuries is indefinite and unsatisfactory. In no such case is a mathematical calculation possible. The matter must rest largely in the exercise of good judgment by the jury and of the sound discretion of the courts. The

Q. So your testimony that he will have these problems is only in the realm of possibility.

A. That is right.

Id. at 46 n.1.

171. 290 Minn. 186, 186 N.W.2d 699 (1971).

172. *Id.* at 189, 186 N.W.2d at 701.

173. *Id.*

174. See *Viou v. Brooks-Scanlan Lumber Co.*, 99 Minn. 97, 108 N.W. 891 (1906).

result is as close an approximation to justice as is permitted by our system of jurisprudence.¹⁷⁵

In cases of multiple cause injuries, the philosophy of our system has been to ensure full compensation to the plaintiff even at the risk of requiring one of the tortfeasors to pay more than his fair share.¹⁷⁶

In *Walsh v. Pagra Air Taxi, Inc.*,¹⁷⁷ represents Minnesota's most recent and closest embracement of the value of a chance philosophy. In *Walsh*, the owner of an airplane attempted to start the plane's engine knowing there was a fuel leak. The plane caught fire and was destroyed. The airport company, under contract with the city to provide trained firefighters, was unable to save the plane due to the inaccessibility of firefighting equipment. The equipment was locked in a city-owned garage and the garage door could not be opened. The jury found the airport company forty-two percent at fault, the city thirty-six percent responsible and the owner twenty-two percent liable. The defendants argued that legal liability could not be imposed because there was no evidence to support a finding that proper firefighting activities would more likely than not have saved the aircraft. The court, relying upon section 324A of the *Restatement*,¹⁷⁸ found such testimony unnecessary, in part, because the parties had voluntarily provided fire protection, and thus had a duty to exercise reasonable care in providing such a service. The court reasoned that damage to the plane could have been extensively reduced had reasonable

175. *Id.* at 104-05, 108 N.W. at 894.

176. The philosophy is best reflected in the rule of joint and several liability, which requires that even a minimally at fault tortfeasor bear the full responsibility for an innocent plaintiff's injuries, if other defendants are financially unable to contribute their fair share, have special immunities, or for some other reason cannot or are not required to contribute. See, e.g., *Erickson v. Hinckley Mun. Liquor Store*, 373 N.W.2d 318, 325 (Minn. 1985). It is a legislative, as well as a judicial philosophy, as evidenced by MINN. STAT. § 604.02(2) (1984), which reapportions uncollectible product liability judgments, in part, to financially sound defendants, rather than imposing the full loss upon plaintiff.

Minnesota's philosophy is also reflected in the rule that shifts the burden of segregating damages to the defendant who, in multi-defendant cases, claims that he is only responsible for a portion of the loss. See *Erickson*, 373 N.W.2d 325.

177. 282 N.W.2d 567 (Minn. 1979).

178. Section 324A of the *Restatement* provides:

One who undertakes, gratuitously or for consideration, to render services to another which he should recognize as necessary for the protection of a third person or his things, is subject to liability to the third person for physical

care been exercised.¹⁷⁹ Although the court had to acknowledge that some damage would have occurred regardless of the defendant's conduct, consistent application of this state's public policy resulted in the defendants being found liable, to the extent of their proportionate fault, for all damages.¹⁸⁰

The Minnesota Supreme Court has looked beyond the requirement of probability testimony in areas other than causation. The first element of any medical negligence action, negligence itself, is often a matter requiring probability testimony. The plaintiff's first burden is to establish the requisite standard of care in the community, and that there has been a departure from that standard.¹⁸¹ The rule that negligence cannot be established without expert testimony is well-settled in Minnesota.¹⁸² In the name of achieving an equitable result, however, even this sacrosanct rule has been overlooked. In *Berkholz v. Benepe*,¹⁸³ for example, the court recognized the ability of jurors to decide a medical negligence issue even in the absence of an expert's conclusions. In *Berkholz*, the plaintiff's expert, a subsequent treating physician,¹⁸⁴ was a reluctant witness who would give no opinions.

harm resulting from his failure to exercise reasonable care to protect his undertaking, if

(a) his failure to exercise reasonable care increases the risk of such harm, or

(b) he has undertaken to perform a duty owed by the other to the third person, or

(c) the harm is suffered because of reliance of the other or the third person upon the undertaking.

RESTATEMENT (SECOND) OF TORTS § 324A (1965).

179. *Walsh*, 282 N.W.2d at 567.

180. Under comparative fault, the defendant's liability was, of course, reduced by the percentage of the plaintiff's own negligence. However, the measure of damages initially was the full loss, without reduction for whatever damage might certainly have occurred by virtue of the fire even with exemplary fire fighting activities.

It would be interesting to know how the jury arrived at this ultimate apportionment of fault in this case. Did they determine the degree to which the conduct of each party contributed to the total loss of the plane? Or, did they determine that 22% of the damage occurred before the negligence of either defendant became a causative factor? Perhaps it does not matter. But in either event, it is clear that there was no evidence which would have passed the "more probable than not" test, had it been applied, and either method, of necessity, involved a good deal of speculation and arbitrariness.

181. See *Cornfeldt*, 262 N.W.2d at 701.

182. See, e.g., *Reinhardt v. Colton*, 337 N.W.2d 88, 95 (Minn. 1983) (discussing role of expert testimony).

183. 153 Minn. 335, 190 N.W. 800 (1922).

184. *Id.* at 338, 190 N.W. at 801.

We are also inclined to the view that there was enough in Dr. Kelly's testimony, considered in connection with defendant's, to raise an issue of negligent treatment for the jury. Dr. Kelly was called by plaintiff, but sedulously avoided, whenever possible, giving any opinion that might reflect upon defendant's skill or care in the treatment of this fracture Nevertheless, he did testify that, when plaintiff came to him a day or so after the last cast of defendant's was taken off, a mere inspection . . . was enough to disclose that the leg could never be used unless the bones were rebroken and reset.¹⁸⁵

Finally, the comparative fault system is itself a rejection of the "more probable than not" test of legal causation, in favor of the "substantial factor" test.¹⁸⁶ For example, in *Walsh*, fault was divided among three parties, none of whom was found more than fifty percent to blame.¹⁸⁷ It is perhaps ironic that the only party against whom the "more probable than not" standard would have established liability was the owner,¹⁸⁸ and

185. *Id.*

186. The comparative fault system may be the best illustration why attempts to develop a quantifying definition of proximate cause, such as "more probable than not," or even "substantial factor" are really irrelevant to the basic issue. It is inconsequential whether the jury believes any particular party's conduct constitutes a "but for," "more likely than not," or "substantial" cause of the ultimate harm. All that matters is that the jury believe a defendant's conduct justifies allocation of at least one percent of the fault. Legal causation is, therefore, just one consideration in the determination of how much of plaintiff's damages the defendant is to pay, the options ranging from zero to 100%. While the determination of proximate cause and the apportionment of fault are, in theory and instruction, maintained as distinct functions, they are inextricably interwoven in actual practice. A jury verdict which, for example, found a defendant's conduct to be a proximate cause of plaintiff's injury, but apportioned zero percent of the fault to that defendant, would be considered perverse. However, if as little as one percent were attributed to defendant, presumably the finding that defendant's conduct was a substantial factor in the harm would not be questioned.

Use of a separate proximate cause question in the jury verdict form, regardless of the definition used in the jury instructions is arguably superfluous. Why should the jury be required to first wrestle with an incomprehensible definition of direct cause and then be allowed to apportion in a manner which clearly indicates that they did not consider the contribution to be substantial in comparison to other causes?

Having answered "yes" to the negligence question, would not the jury's response to the following question satisfy all of the causation-in-fact and legal causation issues:

Taking all of the fault which has contributed to cause plaintiff's damages at 100%, what amount do you attribute to each of the parties whom you have found negligent?

187. *Walsh*, 282 N.W.2d 567.

188. It unquestionably could have been concluded that, absent the owner's negligence, no damage would have occurred. If the defendant's assertion that no evi-

the court upheld a jury finding that he was the least responsible. The comparative fault system precludes a plaintiff more negligent than the party against whom his claim is asserted.¹⁸⁹ The supreme court has never rejected a jury's imposition of legal liability based solely upon an apportionment of fault that was perceived as being too small to adequately reflect the conduct as a substantial factor in producing the harm. Presumably, even an assessment of as little as one percent of the fault to a party would satisfy the court that the substantial factor criteria had been met.

The conclusion one reaches is that loss of a chance is consistent with this jurisdiction's philosophy with respect to all other legal responsibility issues, from the basic concept of negligence itself, to the methods employed to enforce the delivery of compensation. At its simplest, the philosophy may be described as one that places recompense of innocent parties ahead of pleas for equitable treatment by or among tortfeasors. It is a philosophy that places great trust in jurors not only to determine fault, but also to apportion fault in the

dence was produced by plaintiff showing the extent to which the fire damage would have been reduced by proper fire fighting activities is borne out by the record, there seems to be no basis for a "more probable than not" conclusion by the jury. The court's opinion seems to support the defendant's allegation, since the court cited no evidence to the contrary. The method by which the court eliminated the need for such evidence, however, is interesting:

Defendant Pagra also argues that, since no evidence was introduced showing the extent to which the fire damage would have been reduced had Pagra properly responded to the fire risk, the jury verdict was based purely on speculation and conjecture and must be overturned. Pagra's contention fails *because sufficient evidence was admitted to justify the jury's apportionment of negligence.*

Id. at 571 (emphasis added). The opinion then goes on to cite the evidence from which the jury could have concluded that Pagra was negligent, but offers no evidence tending to show proximate cause.

The quoted language could be perceived as the emergence of yet another causation standard, more consistent with comparative fault than either the "more probable than not" or "substantial factor" test. Perhaps it is, and should be enough that the jury feels it has some basis for assigning some percentage of fault to a party, to justify the causation test. The suggestion that *Walsh* may have created a new causation test is strengthened by the fact that the *Walsh* jury answered the proximate cause question as to the defendant city in the negative, but apportioned 36% of the fault to the city. The trial court changed the "no" answer on the special verdict form to "yes". *Id.* The trial court received no criticism from the supreme court for this change.

189. MINN. STAT. § 604.01 (1984). As originally enacted, the comparative fault law required that defendant's negligence be greater than plaintiff's in order for plaintiff to recover. Act of May 23, 1969, ch. 624, § 1, 1969 Minn. Laws (codified at MINN. STAT. § 604.01). As amended in 1978, equal fault on the part of plaintiff and defendant results in a recovery. Act of Apr. 5, 1978, ch. 738, 1978 Minn. Laws 839.

absence of any guidelines other than their own good common sense. It is a system in which the same appellate body might well find it within the discretion of two separate juries to reach totally opposite results, upon the same evidence, without calling either decision speculative or conjectural. Certainly, it is not a philosophy that would knowingly deny all compensation to a completely innocent plaintiff, in the face of clearly negligent treatment, merely because no one can express opinions in probabilities.

IV. AN ARGUMENT FOR REFORM

A. *The Need for Reform*

The “more probable than not” causation standard, unique in its application to medical negligence cases, at a minimum needs clarification, and ideally, reform. It needs clarification because it undoubtedly discourages meritorious lawsuits, creates confusion and inconsistency at both the trial and appellate levels, and places an impossible burden upon the jury of guessing what might have occurred in circumstances the defendant has not allowed to come to pass.¹⁹⁰

The standard needs reform because it is repugnant to this jurisdiction’s basic tort philosophy. As the standard is repeatedly stated and usually applied, the negligent practice of medicine is the only tortious activity in which the wrongdoer may engage with impunity, unless it can be demonstrated that his conduct contributes more than fifty percent of the causal harm. If, as this Article has suggested, the special causation rule has evolved from an inadvertent intermingling of the cause-in-fact/legal cause dichotomy in post-*Yates* cases, little need be said in support of correcting this mistake. If it was an intentional exception, perhaps owing to the vagaries of medical practice at the time,¹⁹¹ one must question whether whatever

190. See *supra* notes 112-13 and accompanying text.

191. It may well be argued that what the authors have characterized as an inadvertent application of an appropriate burden of proof test to an attempted proximate cause definition, was not unintentional at all. The more probable than not standard developed, of course, in the shadow of the “honest error of judgment” exception with respect to negligence issues. Perhaps, for public policy reasons, an intentionally more difficult standard of proof of causation was expounded, owing in part to the then current state of medical mystique.

If the causation exception was intentional, the courts have concealed that intent much better than they concealed their design to fashion an exception in the defini-

justification it once had is still present, and its continuation ought to be left to those whose function it is to create policy. Whatever its source, the continued existence of the rule is not supported by the reasoning customarily employed in its defense.

The principal rationale cited for the rule is its impact in preventing verdicts based upon speculation and conjecture. That reasoning seems to imply that the "substantial factor" test, which is employed in every other tort area, is incapable of preventing jury speculation. It can be argued, however, that the most speculative jury function in most personal injury cases involves apportionment of fault,¹⁹² and the jury has absolutely no guidelines in determining the percentage of fault to be assigned to each party.¹⁹³ Likewise, the appellate courts are not inclined to question a jury's allocation of fault.¹⁹⁴ The same may be said with respect to a jury's determination of the award to be made for pain and suffering, both as to the dearth of guidelines and the court's tolerance of arbitrary figures.¹⁹⁵ If there is a logical basis for prohibiting all speculation in the determination of whether a defendant is to pay anything, while imposing few, if any, guidelines on the determination of how much he is to pay, the distinction is not obvious.

If the propagation of the "more probable than not" stan-

tion of negligence. Whereas the courts have consciously acknowledged the distinction in the negligence rule, they have always publicly denied any difference in the causation rule among different classes of tortfeasors. If it was an intentional exception, one must question why it did not come about until 1936, when medical science was certainly a great deal more sophisticated than at the turn of the century.

192. In *Sandhofer*, 283 N.W.2d at 364, for example, the jury apportioned fault 10% to the plaintiff, 15% to each of two defendant doctors, and 60% to the hospital. *Id.* What possible formula could they have followed in arriving at their distribution? At least in answering the proximate cause question the jury had the benefit of the expert's opinion that the tight cast was one of the direct causes of the injury. But with respect to the assignment of percentages, the law does not require, and in fact would prohibit, expert assistance, since any opinion from an expert as to percentages, even though an expert is much more qualified to determine percentages than is a layman, would invade the exclusive prerogative of the jury.

193. There is no recommended instruction to assist the jurors in determining how fault is to be apportioned, other than the admonition that all fault assigned must total 100%.

194. In *Sandhofer*, the court stated: "Apportionment of negligence is the function of the jury. . . . Unless the verdict is manifestly and palpably contrary to the evidence, it will not be set aside." *Sandhofer*, 283 N.W.2d at 368 (citations omitted).

195. The jury is, in fact, instructed that there are no guidelines: "There is no yardstick by which you can value pain and suffering exactly" 4 MINNESOTA PRACTICE JIG II, § 155 G-S.

dard results from a conscious judicial attempt to provide a special insulation against liability to the medical profession, on that basis, too, the time has come for reconsideration. Historically, exempt classes of tortfeasors have steadily disappeared under the realization that immunity from liability contravenes, rather than serves, public policy. One of the primary functions of tort law is to promote due care through the imposition of liability based upon negligence.¹⁹⁶ Thus, historical immunities such as those once accorded charitable organizations,¹⁹⁷ governmental units,¹⁹⁸ and even family members,¹⁹⁹ have given way to the philosophy that liability ought to follow fault.²⁰⁰ A

196. See PROSSER & KEETON, *supra* note 6, at 173.

197. *Mulliner v. Evangelischer Daikonniessenverein*, 144 Minn. 392, 398, 175 N.W. 699, 701 (1920).

198. *Nieting v. Blondell*, 306 Minn. 122, 128-32, 235 N.W.2d 597, 601-03 (1975) (prospective abrogation of state tort immunity); *Spanel v. Mounds View School Dist.* No. 621, 269 Minn. 279, 281, 292-93, 118 N.W.2d 795, 796, 803 (1962) (prospective abolition of municipal tort liability).

199. *Anderson v. Stream*, 296 N.W.2d 595 (Minn. 1980) (abolition of parental immunity); *Beaudette v. Frana*, 285 Minn. 366, 371-73, 173 N.W.2d 416, 420 (1969) (abrogating interspousal immunity).

200. In recent years, the Minnesota Supreme Court has consistently eliminated artificial barriers to recovery in favor of a system in which liability follows fault. This philosophy, in some cases, has resulted in recognition of new causes of action. The court has eliminated for the purpose of automobile accidents the doctrine that imputes the negligence of a servant to a master so as to bar a third-party suit by the master, see *Weber v. Stokely-Van Camp, Inc.*, 274 Minn. 482, 491, 144 N.W.2d 540, 545 (1966), applied strict liability in products liability cases, see *McCormack v. Hanksraft Co.*, 278 Minn. 322, 339-40, 154 N.W.2d 488, 501 (1967), allowed a wife to recover for her loss of consortium, see *Thill v. Modern Erecting Co.*, 284 Minn. 508, 513, 170 N.W.2d 865, 869 (1969), merged assumption of the risk in the secondary sense with contributory negligence, see *Springrose v. Willmore*, 292 Minn. 23, 24, 192 N.W.2d 826, 827 (1971), abolished the legal status of property entrants as the determinative factor for the liability of property owners, see *Peterson v. Balach*, 294 Minn. 161, 164, 199 N.W.2d 639, 642 (1972), allowed a manufacturer to obtain indemnity from an installer who failed to discover the defect in the manufacturer's product, see *Tolbert v. Gerber Indus., Inc.*, 255 N.W.2d 362, 367-68 (Minn. 1977), ruled that a third party can obtain limited contribution from a negligent employer under the Minnesota workers' compensation statute, see *Lambertson v. Cincinnati Corp.*, 312 Minn. 114, 128-30, 257 N.W.2d 679, 689 (1977), recognized a cause of action from wrongful conception, see *Sherlock v. Stillwater Clinic*, 260 N.W.2d 169, 174 (Minn. 1977), discussed in Comment, *Wrongful Conception*, 5 WM. MITCHELL L. REV. 464 (1979), held that a strictly liable manufacturer can obtain contribution from a negligent co-tortfeasor and that contributory negligence can be compared with the strict liability of a co-tortfeasor under the Minnesota comparative negligence statute, see *Busch v. Busch Constr., Inc.*, 262 N.W.2d 377, 393 (Minn. 1977), noted in 5 WM. MITCHELL L. REV. 517 (1979), adopted the doctrine of informed consent in medical malpractice cases, see *Cornfeldt*, 262 N.W.2d 684, 699, and recognized the tort of intentional infliction of emotional distress. See *Hubbard v. United Press International, Inc.*, 330 N.W.2d 428, 438-39 (Minn. 1983).

rule that requires a physician to render those services that he had agreed to provide only if the patient has a greater than fifty percent chance of cure without them, or to withhold such services under circumstances in which he knows the state of medical knowledge will not reveal the extent to which his omission has contributed to the outcome, requires sharp examination.

B. *Options for Reform and a Recommendation*

Three possible solutions to the inequity created by the "more probable than not" causation standard have been identified:

- (1) Adoption of value of a chance in its purest sense, recognizing that the harm for which the tortfeasor is made to answer is the worth of the chance that is lost, and not the total harm;
- (2) Adoption of section 323 of the *Restatement*, in a form which recognizes that a breach of the duty imposed by that section carries with it an implication of causation; or
- (3) Retraction of the "more probable than not" language, the inadvertent creation of which has led to the problem in the first place, along with a return to the original "substantial factor" test that has worked so well in every other area of tort law.

All three of the alternatives have firm support in Minnesota caselaw. The value of a chance doctrine recognizes that the loss of a less than even probability for successful result is compensable. A jury does not engage in speculation when considering whether to award damages for such a loss because the existence of a loss must be supported by expert testimony. The theory is certainly consistent with the many Minnesota cases approving submission to a jury without requiring fifty percent or greater probability testimony.²⁰¹

Section 323 of the *Restatement* has been used by some courts to permit recovery for loss of a chance based upon negligence that increases the risk of harm. Proof of an increased risk cre-

201. In fact, something seems amiss if a person can lose her liberty through use of the criminal standard of guilt beyond a reasonable doubt under the circumstances of *Southern*, 304 N.W.2d 392 (discussed *supra* note 103) yet fail to establish a jury issue within the meaning of the supposedly less stringent civil standard of more probable than not under the circumstances of *Smith*, 281 N.W.2d 653 (discussed *supra* notes 73-81 and accompanying text).

ates a prima facie case of causation, which is submitted to the jury along with the appropriate causation instruction. Once again, the section 323 approach is consistent with both Minnesota cases imposing liability without probability testimony and the *Pegra* case.²⁰² *Pegra*, through its adoption of section 324A of the *Restatement*, approved a cause of action for increasing the risk of harm even though the relationship between the parties was significantly more distant than the doctor/patient relationship covered by section 323.

Finally, eliminating the special "more probable than not" causation rule and replacing it with the "substantial factor" test would place medical negligence cases on the same footing as all other negligence cases. Because the substantial factor test has never been quantified so as to require greater than fifty percent probability testimony as a prerequisite for submission to the jury, testimony that the doctor's negligence was a substantial factor in producing the harm should create a jury question on the issue of causation. As such, cases in which the plaintiff has lost a less than even chance of a good result should get to the jury with the appropriate substantial factor expert testimony.

The authors recommend the third alternative for several reasons. The value of a chance doctrine has become so closely associated with a movement to ease the plaintiff's burden in medical negligence cases as to make it appear to be as detrimental to the medical profession as the current "more probable than not" standard appears to be beneficial. Its adoption might convey to the medical profession an intent to change its status in causation matters from one which is preferred over other wrongdoers, to one which is subordinate. Certainly the goal ought to be conformance to a common standard for all, and any perception of the existence of a special, less than equal rule, ought to be avoided.

While adoption of section 323 would be less antagonistic, that alternative would be the second best approach in the opinion of the authors. Section 323, like the foreseeability test of *Christianson*, is really better directed at establishing the duty and standard of care elements of a cause of action, rather than the causation elements. Because of its focus upon the existence of a contract or "undertaking" between the parties, its

202. See *supra* notes 103, 167-89 and accompanying text.

primary application is likely to be in medical negligence cases, thereby giving it the same “special rule” taint as loss of a chance.

Return to the “substantial factor” test is viewed as the best solution. Such a return must be accompanied by a realization that most medical negligence cases arise from multiple cause events and the plaintiff should not be required to rule out every possible cause other than the physician’s negligence as being a contributing factor. It must be remembered that whatever causation standard is utilized, it is a minimum standard—that is, what is the least amount of causal contribution that would justify a jury’s finding of liability without having engaged in pure speculation. If our faith in the jury system is not misplaced, defendants should not fear that the “substantial factor” test will impose liability disproportionate to fault, since they will have ample opportunity to present their own evidence.

Perhaps the greatest barrier to the acceptance of less than fifty percent probability testimony in medical negligence cases is the fear that juries will hold the physician accountable for the full loss even though there is only a possibility that he was responsible for the whole loss. The possibility of overcompensation under any of the alternative standards cannot be denied, just as the possibility of undercompensation under the current standard cannot be disputed. Utilization of the pre-existing illness instruction,²⁰³ together with close scrutiny of awards by both the trial and appellate courts, and liberal use of the courts’ authority to modify awards, should prove an adequate safeguard against potential abuse. In every case of personal injury, the jury is required to place a monetary figure upon the value of such nebulous items as pain and suffering. The task of evaluating a defendant’s contribution to loss of life or failure to cure will be no more difficult, nor any easier, than in any other case.

203. JIG II, 1635 provides:

A person who has a defect or disability at the time of an accident is nevertheless entitled to damages for any aggravation of such pre-existing condition, even though the particular results would not have followed if the injured person had not been subject to such pre-existing condition. Damages are limited, however, to those results which are over and above those which normally followed from the pre-existing condition, had there been no accident.

MINNESOTA PRACTICE JIG II, *supra* note 12, § 1635, at 157.

CONCLUSION

In this Article, the authors have concluded that a separate and more stringent causation standard applies to plaintiffs in medical negligence cases. The existence of two causation standards has resulted in inconsistent application of the law by Minnesota's appellate courts as those courts attempted to correct, on a case-by-case basis, what they perceived to be an inequitable result at the trial level. Although this approach may result in justice for the parties to those appeals, it has left trial judges and attorneys without clear guidance as to what standard of causation applies to medical negligence cases and under what conditions the standard will be relaxed.

In jurisdictions that apply the "but for" test to all tort cases and in those jurisdictions with a "more probable than not" test similar to Minnesota's, most courts have approached the inequitable all-or-nothing result through adoption of the value of a chance doctrine or its cousin, *Restatement* section 323. A Minnesota appellate court has yet to directly address the problems that have been raised by this Article. The authors have concluded that the court could take a number of different approaches to the problem. First, the "more probable than not" test could be reaffirmed but application of the test standardized through formulation of a medical negligence jury instruction. Although this would provide more guidance for trial judges and attorneys, it would not eliminate the special causation rule from medical negligence cases or address the problems faced by requiring probability testimony. Second, the court could, when the circumstances are appropriate, carve out an exception to the "more probable than not" test through adoption of the value of a chance doctrine or *Restatement* section 323. Finally, the court could eliminate the two-tiered causation system by recognizing the substantial factor test as the sole test of legal causation.

The authors have proposed that the latter alternative be pursued.²⁰⁴ The threshold for establishing a prima facie case of

204. At the beginning of this Article, the authors set forth a hypothetical with three accompanying scenarios. Based upon the proposals contained in this Article, the authors suggest that the three scenarios be approached as follows.

First, under any standard, a jury issue is not created under scenario number one. Pursuant to the *Schendel-Yates* analysis, the jury would be required to speculate whether the doctor's conduct in any way contributed the patient's death.

Second, under the "more probable than not" standard, the plaintiff's case would

causation in a medical negligence case should be no different than in any other tort case. It is appropriate that the plaintiff be required to present competent evidence showing that the defendant's negligence in failing to properly diagnose or treat a pre-existing illness was a direct cause in the outcome. However, the plaintiff has never been required to eliminate all other causes, including the natural cause of the untreated condition, as contributing factors.

A defendant's assertion that proper care would not have made any difference in the outcome ought to be viewed as an affirmative defense, the establishment of which would preclude defendant's conduct from constituting a substantial factor in causing plaintiff's damages. However, no special instruction beyond the standard "direct cause" charge should be necessary in order to permit the defendant to argue a theory of avoidance if the defense is supported by the evidence.

The "substantial factor" test would restore to juries the function of taking into account probability testimony as a factor in arriving at a causation determination rather than requiring experts to dictate to the court and jury the standard of causation. It is hoped that uniform application of this test to all tortfeasors will result in a more efficient presentation of cases to juries, provide the predictability that affords counsel a basis upon which to prepare their witnesses for trial, provide a means by which juries may consider recovery for plaintiffs who, through negligence, have been deprived of a measurable loss, and still protect defendants from determinations based upon speculation or conjecture.

not get to the jury under scenario two. However, application of the "substantial factor" test would create a jury issue on causation because plaintiff's expert testified that Dr. Healer's conduct constituted a substantial contributing factor in causing the patient's death.

Finally, under scenario three, the "more probable than not" standard would prevent jury consideration of the case. Nevertheless, the substantial factor testimony provided by plaintiff's expert should be sufficient to create a jury question on the issue of causation under the "substantial factor" test.

Under scenarios two and three, a jury issue should exist through use of both the value of a chance theory and the Restatement 323 formulation. The former theory permits the jury to reach the issue of causation when negligence prevents a substantial probability of survival. The latter theory recognizes a prima facie case of causation with evidence that negligence increased the risk of the adverse result.