

ARTICLES

DIALOGUE WITH A NEUROSURGEON: TOWARD A DÉPEÇAGE APPROACH TO ACHIEVE TORT REFORM AND PRESERVE CORRECTIVE JUSTICE IN MEDICAL MALPRACTICE CASES

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I. INTRODUCTION

Doctors are taking their frustrations about the costs of medical malpractice insurance premiums to the street; striking and even leaving certain states where premiums are higher have been staples of the news in the last year. Politicians are responding by shifting the blame to the “tort” system, which they characterize as dominated by “greedy” trial lawyers (with the implicit accusation that the lawyers are bringing unfounded claims against “good” doctors) and “runaway” juries (with the implicit assertion that juries render plaintiffs’ verdicts in unfounded cases and give away the insurer’s money with abandon through unjustifiably generous damages awards). The “bad actor” in the shared visions of many doctors and politicians is the civil legal system itself—and the “reforms” that are being touted (such as damages caps) are blunt instruments designed, it seems, to disable the ability of the legal system to adjudicate medical malpractice claims. To the extent that the civil legal

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system is a contributing factor to medical malpractice insurance premiums (an important topic beyond our ken here), the problem cannot be addressed in so sweeping a fashion. There are other key interests involved—principles of law, in the sense described by Ronald Dworkin, upon which the rules of medical malpractice litigation are based.¹ Those principles of law, including the principle of corrective justice, will be sacrificed if such heavy-handed measures are adopted.² The real problem, however, can be viewed as a much more subtle one, requiring finer tools of analysis to diagnose and repair. The level of subtlety is deep—as deep as the elements of the traditional *prima facie* case of medical malpractice, and the standard of care in particular—and requires more sophisticated analytic constructs to understand, analyze, and ultimately reform. I hope to develop some of those analytic tools in this article.

This article arose from modest Torts class discussions between professor and student: the author and Dr. Lawrence B. Schlachter. The discussions continued because of our mutual interest in medical malpractice issues. Dr. Schlachter was an unusual law student; he entered law school after a twenty-year career as a well-known neurosurgeon in Atlanta. We began discussing Dr. Schlachter's consultations on medical malpractice cases, in which he independently reviewed potential malpractice cases at the request of attorneys representing one of the potential parties to the case.

The question that inevitably arises is whether, when a doctor commits an error in surgical technique, can that be fairly described as a breach of duty by physician to patient? The question becomes considerably more difficult to analyze in specialties such as Dr. Schlachter's—neurosurgery, "the medical specialty concerned with the diagnosis and treatment of disorders or injuries to the brain, spinal cord or peripheral nerves"³

The medical malpractice standard of care has been virtually absent from otherwise plentiful torts scholarship.⁴ Yet, it is the heart of any medical

1. See generally Jeffrey A. Van Detta, *The Irony of Instrumentalism: Using Dworkin's Principle-Rule Distinction to Metaphorically Reconceptualize a Substance-Procedure Dissonance Exemplified by Forum Non Conveniens Dismissals in International Product Injury Cases*, 87 MARQ. L. REV. 425, 441–53 (2004) (discussing principle in the law, including Dworkin's views) [hereinafter Van Detta, *The Irony of Instrumentalism*].

2. See *id.* at 454–60 (discussing the corrective justice principle).

3. Neurosurgery://On-Call, What is Neurosurgery, <http://www.neurosurgery.org/> (last visited June 9, 2009).

4. But see Symposium, *Empirical Approaches to Proving the Standard of Care in Medical Malpractice Cases*, 37 WAKE FOREST L. REV. 663 (2002). Significantly, this Wake Forest symposium, which appeared well after the author commenced his work on this dialogue article, is the first law review symposium dedicated to a detailed examination of a range of issues raised by the medical standards of care.

malpractice action, for “[i]t is the normative assessment and legal judgment of whether the physician did anything wrong, and it is the aspect of the law that most directly signals to physicians how the law expects them to behave.”⁵ Even in the leading contemporary treatise on tort law, the general subject merits but a single line: “For board-certified medical specialists,⁶ the standard is usually said to be a single national standard of the specialty involved.”⁷ This “national standard” of care, as one commentator has observed, “hardly informs the jury more than to say that we should expect health care professionals to act the way that reasonable health care professionals usually act.”⁸ Thus, the law has become that “only a physician, as an expert witness, may testify as to the applicable standard of care and give an opinion as to whether or not the [specialist] breached that standard.”⁹ It is left to the judge, as gatekeeper of admissibility of an expert’s testimony, and jury, as the finder of facts and arbiter of witness credibility, effectively, to evaluate the persuasiveness of the competing experts as witnesses, rather than evaluating the specialist’s conduct directly. Furthermore, the experts testify about “how they would have conducted themselves” or how other physicians in the same specialty would have, causing the inquiry to “degenerat[e] into a contest of credentials between the opposing experts.”¹⁰ Indeed, “it is implausible to expect any one physician to know medical practices across the country. And, there is credible evidence that most physicians do not know how their peers practice.”¹¹

Ultimately, then, the question becomes whether there is an objective basis for classifying specific kinds of errors so that malpractice can be distinguished—and adjudication processes developed—that are optimally

5. Mark A. Hall & Michael D. Green, *Introduction*, 37 WAKE FOREST L. REV. 663, 664 (2002).

6. Boards of medical specialties are private, non-profit organizations that administer qualifying examinations and award the “diplomas” that allow one to hold oneself out as a specialist and to practice that specialty. For example, entry into neurosurgical practice is regulated by the American Board of Neurological Surgeons, which lists as its “primary purposes” the process of “conduct[ing] examinations of eligible candidates who seek certification by the Board and . . . issu[ing] Certificates to those who meet the Board’s requirements and satisfactorily complete its examinations, thereby conferring Diplomate status.” See American Board of Neurological Surgery, *Certification Purposes and Certification Process*, <http://www.abns.org> (last visited June 9, 2009). For a detailed discussion of the Board certification process, see http://www.abns.org/content/primary_certification_process.asp (last visited June 9, 2009).

7. DAN B. DOBBS, *LAW OF TORTS* § 244, at 637 (citing *Jordan v. Bogner*, 844 P.2d 664 (Colo. 1993)).

8. Daniel W. Shuman, *The Standard of Care in Medical Malpractice Claims, Clinical Practice Guidelines, and Managed Care: Towards a Therapeutic Harmony?*, 34 CAL. W. L. REV. 99, 100 (1997).

9. Sam A. McConkey, IV, Note, *Simplifying the Law in Medical Malpractice: The Use of Practice Guidelines as the Standard of Care in Medical Malpractice Litigation*, 97 W. VA. L. REV. 491, 500 (1995).

10. *Id.*

11. Hall & Green, *supra* note 5, at 664.

effective and most efficient to adjudicate whether a particular error should mandate malpractice liability.

Parts II and III.A of this article are presented as a dialogue between physician and lawyer that partakes both of the Platonic tradition¹² and the more contemporary use of intellectual dialogue so successfully practiced by Richard Delgado.¹³ Embracing the advantages of the form carries the advantages Professor Henry Hart expressed long ago: “The purpose of the discussion is not to proffer final answers but to ventilate the questions and, in particular, to indicate the very distinct types of situations in which they may be presented [F]ull advantage has been taken of the ambivalence of the dialogue form”¹⁴ This dialogue, however, is between archetypes of the law professor—a lawyer of neutral perspective without allegiance to any particular constituency (e.g., malpractice plaintiffs, malpractice defendants, malpractice insurers, or judges who must manage malpractice litigation)—and seasoned physicians with insight both into realities of medicine and the legal context in which it is practiced and with which it is inextricably intertwined. In the process of the dialogue, each participant will bring professional experiences and expertise to the conversation. Each will raise questions, and most of those questions will either be answered from each of their perspectives, or refined into more sharply focused questions for future interlocutors to take up.¹⁵

However, one clear result of this dialogue is that the “one-size-fits-all” approach to adjudicating the standard-of-care issues in medical malpractice

12. E.g., PLATO, *Crito*, in THE COLLECTED DIALOGUES 27 (Edith Hamilton & Huntington Cairns eds., Pantheon Books 1961) (recounting a debate between Socrates and his friend Crito on the rightness of effecting Socrates’ escape from a capital sentence); PLATO, *Euthyphro*, in THE COLLECTED DIALOGUES 27 (Edith Hamilton & Huntington Cairns eds., Pantheon Books 1961) (recounting a debate between Socrates and Euthyphro, who is about to prosecute his own father for murder, about the definition of “piety”); PLATO, *Laws I & II*, in THE COLLECTED DIALOGUES 27 (Edith Hamilton & Huntington Cairns eds., Pantheon Books 1961) (recounting a dialogue among an Athenian, a Cretan, and a Spartan about discerning good laws from bad ones).

13. RICHARD DELGADO, *THE RODRIGO CHRONICLES: CONVERSATIONS ABOUT AMERICA AND RACE* (1995) (employing a dialogue between graduate student and professor); RICHARD DELGADO, *WHEN EQUALITY ENDS: STORIES OF RACE AND RESISTANCE* (2000) (employing a dialogue method among three participants: a young professor of color, an aging civil rights activist, and a young conservative); Richard Delgado, *Rodrigo’s Chronicle*, 101 YALE L.J. 1357 (1992) (reviewing DINESH D’SOUZA, *ILLIBERAL EDUCATION: THE POLITICS OF RACE AND SEX ON CAMPUS* (1991)) (using the dialogue between a professor and graduate student as well).

14. Henry M. Hart, Jr., *The Power of Congress to Limit the Jurisdiction of the Federal Courts: An Exercise in Dialectic*, 66 HARV. L. REV. 1362, 1363 (1953).

15. This dialogue is based on an extensive paper that Dr. Schlachter wrote for my benefit concerning the ACD&F procedure while he was still in law school. I have used the paper as the basis for Parts II and III.A. Any errors in condensing this material into the dialogue are entirely my own.

cases does not work. The dialogue leads to the conclusion that different aspects of the standard of care problem—and of individual medical malpractice claims as a whole—are better served by recognizing that different kinds of malpractice issues are best resolved by different kinds of resolution techniques—*e.g.*, professional licensure, arbitration, injury-fund, even products liability—whose specific nature correlates best with particular issues along the spectrum of standard-of-care and breach questions common in medical malpractice cases. Thus, the concept of *dépeçage*¹⁶—well known to conflict-of-laws scholars—becomes crucial to meeting the challenges raised by the dialogue. In Part III.B, I summarize the factors relevant to classifying the specific kinds of technical errors raised in the case study of the ACD&F procedure in our dialogue. I build in Part IV upon the dialogue to propose a *dépeçage*¹⁷ approach as “tort reform”—to make refined distinctions between specific kinds of actions or inactions that become the subject of medical malpractice suits and to propose that each should be matched to a form of conflict resolution most appropriate to the challenges raised by that species of malpractice.

16. “Dépeçage can be defined broadly to cover all situations where the rules of different states are applied to govern different issues in the same case.” Willis L.M. Reese, *Dépeçage: A Common Phenomenon in Choice of Law*, 73 COLUM. L. REV. 58, 58 (1973); accord P.M. NORTH & J.J. FAWCETT, CHESHIRE AND NORTH’S PRIVATE INTERNATIONAL LAW 56–57 (12th ed. 1992) (using *dépeçage* to indicate an ability to “pick and choose” different laws to govern different specific issues); RUSSELL J. WEINTRAUB, COMMENTARY ON THE CONFLICT OF LAWS § 3.4, at 94 n.206 (4th ed. 2001) (describing *dépeçage* as an approach in which “the law of one state [is] applied to one aspect of the problem, while the law of another state is applied to another aspect of the problem.”). *Dépeçage* literally means “to dismember.” In conflict law, it has come to represent the separation of specific issues within a case for separate choice-of-law analyses, and, possibly, application of a different sovereign’s law to certain of those issues. See, *e.g.*, SYMEON C. SYMEONIDES, WENDY COLLINS PERDUE & ARTHUR T. VON MEHREN, CONFLICT OF LAWS: AMERICAN COMPARATIVE, INTERNATIONAL 259–61 (2d ed. 2003). Analogously, I use *dépeçage* in the sense of dismembering, or separating, a medical malpractice claim, particularly standard-of-care issues, into discrete categories that, based on the nature and expertise required to resolve them, should be remitted to resolution using different modes of conflict resolution.

17. I am transplanting, to the analysis of substantive tort law issues, the *dépeçage* concept as it has been articulated in the conflict-of-laws realm. See *supra* note 16. To my knowledge, this is the first occasion in legal scholarship in which *dépeçage* is used outside of the conflict-of-laws realm. As discussed in note 85, *infra*, The Neurosurgeon has some different views on the proper legal recommendations that should flow from the matters explored in Parts II and III, *infra*.

II. A DIALOGUE ABOUT THE NATURE OF THE PROBLEM: TECHNICAL MISTAKES IN COMPLEX NEUROSURGERY

A. *The Contemporary Background*

The Neurosurgeon: Greetings, Professor Van Detta. Remember the sideline I've been discussing with you—trial attorneys who have been seeking me to review files and reports in potential medical malpractice lawsuits to offer my assessment about their viability?

The Professor: Yes, indeed, Doctor, I was very impressed with the opportunities you've had to review cases of patient injury allegedly caused by physician errors. Wearing both the doctor's and lawyer's hats at once! To paraphrase Oscar Hammerstein (with profound apologies), "Oh, the doctor and the lawyer can be friends!"¹⁸

The Neurosurgeon: Well, I'm not so sure about *that* and let me tell you why: I have been reviewing a good number of medical malpractice cases recently involving highly skilled surgeons performing sophisticated procedures but making ever so slight errors in technique producing catastrophic consequences. As I reviewed these cases, it struck me that these are quite different from the run-of-the-mill kinds of negligence that typically attract media attention—for example, the surgeon who left the operating theater in the middle of surgery to deposit a payroll check before the bank closed,¹⁹ or the repeated tale of surgeons who've performed a procedure on the wrong limb of a patient or even amputated a healthy limb. No, the cases I have in mind are much more subtle, both in terms of detecting the error and in terms of the surgeon's conduct that gives rise to the error. The concept of medical malpractice—negligence in the practice of medicine itself—intrigues me very much, particularly from the perspective of the neurosurgeon.

The Professor: Now that is an issue that has passed below the radar of many torts scholars. However, from a doctrinal perspective, it strikes me as terribly important to explore. The "one-size-fits-all" national practice standard for specialists²⁰ seems to me to be a potentially gross over-simplification of the

18. Richard Rogers & Oscar Hammerstein, II, *The Cowman and the Farmer*, Act 2, Scene 1, OKLAHOMA (1943).

19. Katherine Zezima, *Massachusetts: Suit Against Absent Surgeon*, N.Y. TIMES, Dec. 5, 2002, at A34 ("A man who was left on an operating table for 35 minutes during back surgery while his surgeon went to the bank has filed a malpractice lawsuit" contending that "the doctor's actions caused a nerve injury.").

20. See, e.g., Tim Cramm, Arthur J. Hartz & Michael D. Green, *Ascertaining Customary Care in Malpractice Cases: Asking Those Who Know*, 37 WAKE FOREST L. REV. 699, 700 (2005) (stating that the unitary standard of care in medical malpractice cases "rests on a false assumption" because "[p]hysicians

kind of standard-of-care issue that can present in cases involving complex medical procedures.²¹

The Neurosurgeon: That's precisely what concerns me and what I came to discuss with you: the critical "medico-legal" issues that present when a serious technical complication occurs during a surgical procedure. I get the sense from my empirical experience of hearing narratives from other surgeons and lawyers talk that courts have tended to classify such an event as a misadventure, a mistake, a maloccurrence, or a known risk or complication depending on their critical analysis of the circumstances.²² However, I am not so sure that the matter can be simplified quite so much. It seems to me that a legal analysis of a technical complication should focus on how one classifies those occurrences—expected and unexpected—that lead to serious clinical problems.²³

The Professor: Yes; I see your point. Given the pressure-filled situation of assembling a charge to a jury in a medical malpractice lawsuit that involves

simply do not know how other physicians practice medicine."); Hall & Green, *supra* note 5, at 673 (explaining the problem of providing content to the unitary legal standard known as the "standard of care" and expressing surprise at the "pervading reluctance of the legal system to change the status quo, despite strong reasons to consider doing so"); William Meadow, *Operationalizing the Standard of Medical Care: Uses and Limitations of Epidemiology to Guide Expert Testimony in Medical Negligence Allegations*, 37 WAKE FOREST L. REV. 675, 675–76 (2002) (discussing standard jury instruction on the professional medical standard of care and observing "[n]o additional instructions are offered regarding the mechanism by which the expert witness is supposed to convert experience, knowledge, and training into an opinion."); Michelle M. Mello, *Using Statistical Evidence to Prove the Malpractice Standard of Care: Bridging Legal, Clinical, and Statistical Thinking*, 37 WAKE FOREST L. REV. 821, 823 (2005) (observing that "physicians and judges have been content to rely on expert opinion informed by personal experience to benchmark the clinical and legal standards of care for physicians in malpractice cases.").

21. See Cramm et al., *supra* note 20, at 710–13 (providing specific examples); David L. Meredith, *The Medical Expert Witness in Mississippi: Outgunning the Opposition*, 64 MISS. L.J. 85, 88–89 (1994) (observing that "[t]he 'expert from afar' surfaced during the eulogy for the so-called 'locality rule' and at the conception and infancy of the now accepted 'national standard of care'"); John Kimbrough Johnson, Jr., Note, *An Evaluation of Changes in the Medical Standard of Care*, 23 VAND. L. REV. 729, 730 (1970); *contra* Jon R. Waltz, *The Rise and Gradual Fall of the Locality Rule in Medical Malpractice Litigation*, 18 DEPAUL L. REV. 408 (1969) (recounting specific cases that contributed to a national standard of care replacing the locality rule). As Professor Richard Lempert has observed of the medical malpractice standard of care, "[c]aught between what best practice demands of doctors and what doctors can reasonably be expected to do, the common law has arrived at one of its disingenuous but highly practical compromises." Richard Lempert, *Following the Man on the Clapham Omnibus: Social Science Evidence in Malpractice Litigation*, 37 WAKE FOREST L. REV. 903, 906 (2002).

22. See Cramm et al., *supra* note 20, at 710–13 (providing specific examples).

23. See, e.g., John W. Ely, Arthur J. Hartz, Paul A. James & Cynda A. Johnson, *Determining the Standard of Care in Medical Malpractice: The Physician's Perspective*, 37 WAKE FOREST L. REV. 861 (2002) (explaining in detail ways in which doctors find the current approach to the standard-of-care question to be incoherent and misguided).

a specialist, a judge would most likely find it appealing to make a cut-and-dry determination. The question raised then is: Should a judge be willing to go further than merely asking whether an error in technique is a known and acceptable complication, known to occur during the performance of a surgical procedure, or whether it is unacceptable and is it caused by negligence? To me, it seems that the analytic problem comes in drawing a line between these two categories. How can we distinguish “mere error” from “negligent error” when we are dealing with the level of complexity in some of the procedures you’ve described to me? Until we identify a principle to distill this distinction, we will be hopelessly lost in the shadows like the spelunkian inhabitants of the cave allegory.²⁴

The Neurosurgeon: You make an intriguing point. It certainly sounds like the law in this area has cast more shadow than light!

The Professor: Indeed! Allow me to elaborate: Although oft-cited for many things, the cave allegory is essentially straightforward. People in the world are like the prisoners in the cave who believe that reality is the dim shadows cast on the back wall of the cave, since they have never seen anything else. Should one of the cave dwellers emerge from the cave into the light of day, she would initially recoil from the luminescence of the surface world and struggle to return to the comfort zone of the cave. However, should we restrain her flight and enjoin her to stay, her eyes would become adjusted to the bright light—and at that point, she could look about her and survey the surface world directly, without the interstitial medium of shadows. At that moment, she would understand how limited her conception of reality had been. Similarly, without a principle to illuminate the boundary between negligent and non-negligent technical errors, the law struggles with only a shadowy conception of when medical malpractice has occurred in complex operations.²⁵

The Neurosurgeon: Well, that makes sense—without a principled basis for deriving useful rules of distinction and demarcation, we really have nothing more than a battle of expert witnesses and jury credibility determinations—shadowy means of regulating modern medical science!

24. PLATO, *THE REPUBLIC* 240–45 (Robin Waterfield trans., Oxford University Press 1993).

25. See, e.g., Timothy P. Terrell, *Flatlaw: An Essay on the Dimensions of Legal Reasoning and the Development of Fundamental Normative Principles*, 72 CAL. L. REV. 288, 302–04 (1984) (using the “Allegory of the Cave” to describe the process by which legal problems can be viewed from another dimension, resolving “distortion, misconstruction, and limited understanding” through “the recognition that legal rules and institutions are only ‘evidence’ or ‘data’ of larger social phenomena associated with the concepts of other disciplines”).

B. The Case Study: The Anterior Cervical Discectomy and Fusion

The Professor: Perhaps the most efficient way to approach the problem of theory is to begin at the level of practicality. In analyzing circumstances in which errors in technique occur, each complication must be considered in the realm of its own fact-specific situation along with any attendant circumstances. In other words, we need a case study of a particular kind of complex medical procedure where there is the risk that even the most transient error of technique can produce the most catastrophic patient injury.

The Neurosurgeon: In that event, let me propose that we examine a procedure from my own specialty. A good place to begin the standard-of-care analysis is to evaluate problems that can occur during the anterior cervical discectomy and fusion (“ACD&F”) procedure because it is a commonly performed operation of some complexity and demand on the neurosurgeon’s technique. During the course of my active surgical career, I performed over 2,500 of these procedures, and so I speak with some experience in the analysis of these problems.

The Professor: A wonderful choice. Before we delve more deeply into the ACD&F, perhaps it would help if you placed it in the broader context of medical advances over the last thirty or so years.

The Neurosurgeon: I would be delighted to! Advances in medicine and surgery have improved the spinal surgeon’s ability to do increasingly complex procedures to treat human diseases and ease patients’ pain. Spinal surgeons are performing procedures involving the brain and spinal cord more safely than ever before because of the development of better imaging devices, monitoring devices, instruments, and microscopes. The training programs for neurosurgeons and spine-trained orthopedic surgeons are now six or seven years in length. In the years after formal training, there are constant continuing education opportunities as new advances occur in the fields of bone grafting techniques, bone fusion biology, internal biomechanical instrumentation, the ability to alter genes, technological discoveries, and improvements in general medical care in the perioperative period.

One of the procedures that has figured prominently in the work of spinal surgeons is directed at the degenerating discs of the cervical spine—the ACD&F procedure.²⁶

26. The surgical procedure to remove a herniated cervical disc or to decompress a stenotic cervical spinal canal secondary to spondylolytic disease (bone spurs) is well-described in Volker K.H. Sonntag, Patrick P. Han & Giancarlo A. Vishteh, *Anterior Cervical Discectomy*, 49 NEUROSURGERY 913 (2001).

The Professor: What is the ACD&F procedure, and when is it medically indicated?

The Neurosurgeon: The operation is almost always done to decompress the spinal cord or the nerve roots of the cervical spine. These nerve roots supply the shoulders, arms, and hands with movement and sensations. These functions are critical to our ability to use our extremities in all the tasks of life. The surgery is usually done after all nonsurgical options of treatment have been exhausted and the patient is ready to have the problem addressed by the surgeon.

The Professor: Can you describe the steps that compose what you call the ACD&F procedure?

The Neurosurgeon: Certainly. The process isn't what is tricky; as I'll get to later, when the surgeon falters, it is largely upon technique. The patient is given a general anesthetic and an endotracheal tube is inserted through the mouth and into the trachea to provide an airway during the procedure. The patient is lying on his back with the neck slightly extended and supported. The location and type of incision depends on the number of vertebrae to be exposed and on the condition to be addressed. In a routine one level procedure, the incision is usually horizontal and is positioned either by radiographic localization or by palpation of the structures of the anterior cervical area. Once through the superficial anatomic layers, a plane of dissection is created between the trachea and esophagus medially and the carotid artery and jugular vein laterally. Enough mobilization of these structures needs to be obtained to place self-retaining retractors over the anterior aspect of the cervical spine. The cervical level is then ascertained by radiograph so that the surgeon knows that he is in the correct location and titanium posts are screwed into the appropriate vertebral bodies.

The Professor: At this point, it sounds like we've simply been setting the table, so to speak, to prepare to do the true remedial work that this surgery promises.

The Neurosurgeon: That's right. Now the real work begins. Most skilled surgeons will use the operating microscope to do this part of the procedure although some will use magnifying loops. The disc space spreader is then placed, the disc distracted and the disc level is entered. By gradually removing disc material or osteophytes, the disc is emptied of all material down to the posterior longitudinal ligament. The posterior longitudinal ligament is the anatomic structure on the back side of the disc. The dura of the spinal cord is beneath it.

The posterior ligament is then carefully opened and all disc material and bone spurs are removed or trimmed using curettes, drills, or rongeurs so as to decompress the spinal canal and foramina where the nerves' roots exit.

Once the decompression has been done, the disc space is prepared for a bone graft. A rectangular type box is created with the drill and the graft is fitted into the space. The distracting posts are removed and a radiograph confirms good anatomic placement of the graft. Many surgeons are using titanium anterior cervical plates to provide immediate postoperative stability to the spine and graft.²⁷

C. How Patient Injury Occurs in the ACD&F Procedure

The Professor: So far, so good. Now, as the neurosurgeon makes his odyssey through these layers of steps, maneuvers, tools, and tissues, where are the “watch-out” points—the points at which an error can occur?

The Neurosurgeon: Let us start by looking at the approach to the spine, which requires dissecting and retracting the esophagus, trachea, carotid artery, and jugular vein so as to provide surgical access to the anterior cervical spine. Any of these vital structures could be damaged during the approach to the spine and the resultant complications would vary according to the circumstances in each instance.

The Professor: What kinds of injuries to the major blood vessels are possible?

The Neurosurgeon: In the case of the carotid artery or jugular vein, an injury to the wall of the blood vessel would result in sudden and extensive bleeding that would result in an immediate crisis. The extent of the injury would determine the subsequent course of events. A small tear or cut in the carotid artery would probably be reparable with a suture at which time the surgeon would have to make a judgment as to whether he considered it safe to proceed with the rest of the procedure or whether to let the artery heal and come back another day to do the disc operation. If the damage is more severe, the repair may be more extensive and might involve having to mobilize the

27. There are a number of websites that feature helpful descriptions of the ACD&F procedure with effective illustrations of the structures and techniques involved. See, e.g., Medtronic Sofamor Danek, Anterior Cervical Discectomy and Fusion (2005), <http://sofamordank.com/spineline/ACDF.pdf> (last visited Dec. 9, 2008); NeckSurgery.com, Anterior Cervical Discectomy with Fusion, <http://www.necksurgery.com/treatment-surgical-fusion.html> (last visited Dec. 7, 2008); Robert Bohinski, Overview of Anterior Cervical Discectomy & Fusion, <http://www.mayfieldclinic.com/PE-ACDF.htm> (last visited Dec. 8, 2008); Robert S. Pashman, Cervical Case Reviews, <http://www.espine.com/cervical-cases.htm#ACDF> (last visited Dec. 8, 2008).

artery in order to stop the blood flow temporarily and repair the arterial wall. In such a case, the discectomy would most likely wait for another day unless the need to decompress the spinal cord was so compelling. Injuries to the jugular vein during this operation would present essentially the same difficulties but those injuries are much harder to repair because of the fragility of the vessel walls and it might be a more problematic situation as to what to do to stop the bleeding or repair the vessel wall. Sometimes the vein has to be ligated which then raises a host of other possible problems.

The Professor: What lapses in the surgeon's technique may produce major blood vessel injuries?

The Neurosurgeon: There are a number of ways in which these vessels may be injured. They include sharp injuries in which the surgeon either cuts into the vessel with a knife inadvertently or cuts the vessel with a scissor. The retractor can injure the vessel through either a torquing movement of the retractor when it is in the self-retaining mode or when it is handheld by the surgeon. Fortunately, provided that there is not a serious lapse of technique, severe injuries to these blood vessels are not a common problem during anterior cervical disc surgery.

The Professor: To complement a pair of blood vessels, you also mentioned injuries to conduits for air and food. When there is a lapse of surgical technique, how are the trachea and esophagus injured?

The Neurosurgeon: As the surgical exposure progresses, the trachea and esophagus are mobilized medially so as to expose the anterior cervical spine.²⁸ These injuries may be the result of retractor injury, sharp dissection or blunt dissection. Because the bleeding may be minimal, this complication may go unrecognized during the surgery. It is most common that in the post-operative period, the wound will develop crepitus, which is air in the subcutaneous tissues, and a virulent infection will begin. Immediate recognition of this complication is imperative to avoid the inevitable tracheal displacement and airway compromise. Delay in recognition of this complication will increase the morbidity and potential mortality associated with the complication.

The Professor: How should the neurosurgeon follow up on these telltale signs of potential tracheal or esophageal injuries?

The Neurosurgeon: Imaging studies with contrast, endoscopic evaluations, and clinical judgment are needed to identify the problem. Identification of the problem should be followed by surgical repair and drainage at the site of the opening in the esophagus or trachea. Severe infections, including osteomyelitis

28. See *supra* note 27 (providing Internet links to the diagrams illustrating the procedure).

and bone graft infections and bone resorption are possible. Multiple surgeries for debridement and re-grafting of the spine may become needed. If the injury to the esophagus or trachea occurs during the routine dissection and mobilization of the organ without errors in technique that are considered gross deviations, the injury is within the surgical standard of care. Recognition and appropriate responses to the complication are critical. If all the right decisions and treatments are done, whatever result occurs is within the standard of care. This can mean that there are further surgeries to debride the wound, to regraft and instrument the spine, to drain an epidural abscess, or any other possible sequelae.

The Professor: Besides the injuries to major blood vessels, the trachea, and the esophagus, what are the other potential immediate consequences of a lapse of technique in the ACD&F procedure?

The Neurosurgeon: Other potential surgical complications can occur if the recurrent laryngeal nerve is stretched during retraction. This nerve is located in the sheath that encloses the carotid artery and the jugular vein. The anatomic pathway of this nerve is such that it is susceptible to stretch injuries. This stretching will cause a transitory or permanent paralysis of the vocal cord because the nerve innervates the muscle that moves the vocal cord. When this complication occurs, some patients or attorneys think that the nerve has been cut by the doctor. This is almost never the case. The nerve is almost never seen by the surgeon and until recently there has been no good way to identify the nerve during the operation or to protect it beyond the use of gentle surgical technique. Newer techniques of monitoring nerve function intraoperatively with electromyographs may reduce the occurrence of this complication. Laryngeal nerve injury would only rarely occur as a result of negligence. Since electromyographic monitoring of the muscle innervated by the recurrent laryngeal nerve is now available, surgeons must consider whether to use this technique to protect the nerve. At the present time, such expertise is not available in all places; where it is, many surgeons consider it an option, not a requirement. If such monitoring becomes a standard of care in this operation, the occurrence of the laryngeal nerve palsy in a case without laryngeal muscle monitoring might support an inference of negligence.

The Professor: How about spinal cord injuries? Are these a possible consequence when the neurosurgeon makes a mistake?

The Neurosurgeon: Yes, indeed; during the part of the operation where the disc or bone spurs are being removed, it is possible to inadvertently open the dura, thus creating a cerebrospinal fluid leak. This can happen in two major ways. It can occur as the surgeon incises the disc with a number 11 or 15 knife blade or when the surgeon opens the posterior longitudinal ligament. This first

type of injury, which has occurred to most surgeons, is a result of placing the knife blade much further in the disc space than one should. It usually occurs when making the cut before the microscope is brought into the operative field. In this case the surgeon is actually damaging a structure outside the confines of the surgical field even though it will shortly become part of the surgical field. In most cases, the dural opening is identified and sealed off with cryoprecipitate and thrombin or closed by secondary methods with lumbar spinal drainage to divert the cerebrospinal fluid. Think about the difference between this complication, which causes no damage or consequences other than a prolonged hospital stay, versus what would happen if the knife went a little deeper and damaged the spinal cord.

The Professor: The difficult question is whether the first, shallower incision breaches the standard of care or whether it is the second, deeper incision that causes much more severe injury. The deeper incision seems “more” negligent, but we say that primarily because the resulting injury is worse. Yet both are the result of a surgeon allowing his or her technique to lapse. Is it better to be lucky than good? Is it the lack of significant damage that separates these two similar surgical mistakes from each other? This pair of contrasting complications provides the paradigm for our discussion of how the standard of care ought to be set and what its content ought to be.

The Neurosurgeon: Yes, and the analysis of injuries to the spinal cord presents a very complex issue because the injuries involve permanent neurological damages.²⁹ Even if the complication is recognized and treated appropriately and aggressively, the resultant damages may be unmitigated. Most injuries that occur to the spinal cord occur as an unintended technical error. Most commonly, the surgeon slips with a Kerrison rongeur while removing a difficult osteophyte or the surgeon loses control of a drill or pushes an instrument or bone graft too deep. These injuries usually occur at a time during the operation when the surgeon is on a heightened alert to be careful because the spinal cord and dura are exposed. Since spinal cord surgeons are aware that most spinal cord injuries result in permanent damages, the surgeons have a healthy respect for the possibilities and they will be extremely careful.

29. The Neurosurgeon notes: For purposes of this discussion, we address only those damages that are iatrogenic, or caused by the surgeon. The rare spinal cord “stroke” is not being addressed. Injury may also occur to the nerve roots that branch from the spinal cord and innervate the arms and hands. The analysis in those situations is essentially the same as with injury to the spinal cord, only the damages are not as severe. There are problems that can occur with displaced bone grafts, poor placement of plates, and screws that are inserted to provide immediate reduction of the fused bones. There are many other issues, including but not limited to instability, deformities, and mechanical failures of instrumentation.

Even in the situation of heightened carefulness, mistakes in technique do result that can cause permanent neurological impairment. The rongeur injuries are particularly noteworthy because the common way in which this procedure is performed requires the physician to hold the rongeur in a variety of positions, some awkward, while squeezing the handles of the instrument to exert several pounds of pressure. This can cause fatigue and even neurological injury to the surgeon. And a reality of modern, “managed-care” medicine is that a surgeon typically performs six to eight ACD&F procedures on his or her surgery days, which may be four, or even five days per week. The wear and tear to the physician’s hands, wrists, and arms are a potential source of errors—although the prevalence of these errors probably goes undocumented since no study has been made of these “human factors” as a contributing cause to a lapse in the surgeon’s technique.

The Professor: A flood of questions comes to mind that we need to explore for these spinal cord injuries: Is the standard of care greater when a particularly dangerous part of an operation is being done as compared to less dangerous parts of the same operation? Is it ever excusable to make a mistake during a routine elective procedure that results in paralysis of the patient? Are we to judge the degree of deviation from the standard of care by the degree of damages? Who is watching when this mistake of spinal cord injury occurs? How many surgeons dictate in the operative report that they iatrogenically caused a spinal cord injury? If they do not dictate the occurrence of a problem and the patient is injured, do they order appropriate post-operative studies to diagnose the problem? If they do and they see a problem, what do they tell the patient? Is spinal cord monitoring essential to prevent injuries to the nerve roots? How are we as a society and as a profession monitoring those who seem to make more errors than most? And, ultimately, is the present medico-legal system fair? Does it provide fair compensation to damaged patients? Does it regulate physician acquisition, maintenance, and exercise of skill to optimize patient safety? Yet at the same time, does it allow medical doctors who are trying to help a patient take the risks necessary to help patients?

The Neurosurgeon: With this level of complexity, tort litigation using the rules of medical malpractice seems to be a problematic mechanism for dealing with patient injuries in the ACD&F procedure. The threshold question here is which of these maloccurrences should be considered to breach the standard of care—and how do we define the standard of care more meaningfully so that we may answer that question?

D. The Problem with Current Law

The Professor: You've now presented the \$64,000 Question! There are few writings in the legal or medical literature that analyze specific occurrences that might occur during common surgical procedures.

The Neurosurgeon: This is the case because such writings are certain to create controversy.³⁰ My colleagues in the medical community would not want writings that invite litigation by establishing a standard of care that they would have to live up to.³¹

The Professor: Our colleagues in the legal community on the other hand would not wish to limit their options to litigate because of guidelines that set standards of non-negligent behavior.

The Neurosurgeon: Precisely! The information gap left by the paucity of literature in discussing surgical complications has left the courts with a lack of basic information on which to evaluate the credibility of experts who testify as to the standard of care and in a sense, leaves the entire process particularly unsatisfying since it is guided as much by one's success in selecting the "right" expert and shaping his or her testimony as it is by any guidance from a set of principles from which rules are derived. I think that this lack of principles plays a significant role in creating the present problems in malpractice litigation, which present increasingly difficult public policy and social problems that are interfaced with problems in health care delivery, managed care, cost control, and the very ability of individual physicians to practice their profession.

The Professor: That is an excellent point! Principle seems utterly absent in the development of the standard of care. If anything, it appeared originally to be self-serving and political—a precise locality standard of care, which we may infer was the choice of early medical lobbyists because they knew that doctors in most communities would be reluctant to provide testimony against colleagues. Even if they agreed to provide testimony, the insistence on expert

30. Joan Vogel & Richard Delgado, *To Tell the Truth: Physicians' Obligation to Disclose Medical Mistakes*, 28 UCLA L. REV. 52 (1980).

31. See, e.g., *Austin v. Am. Ass'n of Neurological Surgeons*, 120 F. Supp. 2d 1151 (N.D. Ill. 2000) (illustrating the challenges establishing the standard of care through physician testimony. A neurosurgeon testified in trial that the surgeon fell below the standard of care when this complication occurred. Such a controversy ensued that the American Association of Neurological Surgeons, which the testifying doctor was a member of, sanctioned the testifying doctor with revocation of his membership. The organization felt that a professional organization has the right and the duty to monitor its members' conduct in testimony that establishes standard-of-care issues. The courts have ruled in the organization's favor.), *aff'd*, 253 F.3d 967 (7th Cir. 2001), *cert. denied*, 534 U.S. 1078 (2002).

testimony to establish a standard—really, an industry custom—of care actually allowed the medical profession to set its own standards of negligence.³² In no other area of negligence is this the case. This very different standard allows what Learned Hand ruled in *The T.J. Hooper*³³ would not occur in other areas of negligence law—reliance upon industry custom to set the standard of care without regard to whether that custom met an objective test of reasonableness, such as Judge Hand’s *Carroll Towing* formula.³⁴ Thus, medical malpractice claims are part of a relatively small class of professional negligence claims that are adjudicated under a standard created by one’s own peers and not by the principles used in the rest of the tort system where the standard of reasonable behavior is that of a reasonable person.

32. See, e.g., Fred C. Zacharias, *The Politics of Torts*, 95 YALE L.J. 698, 720–22 (1985) (discussing historical lobbying efforts by physicians and their associations); Michael J. Poller, *Who’s on First, and What’s a Professional?*, 33 U.S.F. L. REV. 205, 210–12 (1999) (describing the development of physician associations from the medieval guild and noting that “[i]t is not surprising, therefore, that these two paradigms of professionalism—law and medicine—should retain many guild characteristics . . . modern professions have typically used their power to acquire privileged social positions and to prevent outside interference with the administration of their professions.”); Jeffrey S. O’Connell & Andrew S. Boutros, *Treating Medical Malpractice Claims under a Variant of the Business Judgment Rule*, 77 NOTRE DAME L. REV. 373, 382 (2002) (“Historically, a physician’s conduct was measured and judged by the prevailing level of care practiced in the defendant’s community. This strict locality rule originated in response to the perceived inequity in holding rural physicians to the same standards expected of urban practitioners who possessed greater resources and access to information.”). See generally Theodore Silver, *One Hundred Years of Harmful Error: The Historical Jurisprudence of Medical Malpractice*, 1992 WIS. L. REV. 1193 (1992) (exploring early case law). See also Hal R. Arkes & Cindy A. Shipani, *Medical Malpractice Versus the Business Judgment Rule: Differences in Hindsight Bias*, 73 OR. L. REV. 587, 587 (1994) (arguing that the rule is the result of trying to avoid “hindsight bias” or “the tendency for people with knowledge of an outcome to exaggerate the extent to which they believe that outcome could have been predicted”). See also William G. Peters, *The Quiet Demise of Deference to Custom: Malpractice Law at the Millennium*, 57 WASH. & LEE L. REV. 163, 173 (2000) (illustrating that states are leaning toward a “reasonably prudent physician” standard of care. “Seventeen states have appellate cases that explicitly reject deference to custom in medical malpractice cases. In at least twelve of those states, the cases rejecting custom-based standards appear to be authoritative today.”).

33. *The T.J. Hooper v. Northern Barge Corp.*, 60 F.2d 737, 739 (2d Cir. 1932); Richard Epstein, *The Path to the T.J. Hooper: The Theory and History of Custom in the Law of Tort*, 21 J. LEGAL STUD. 3 (1992); Joseph H. King, *In Search of a Standard of Care for the Medical Profession: The ‘Accepted Practice’ Formula*, 28 VAND. L. REV. 1213, 1250 (1975). See also Laura Hermer, *Paradigms Revised: Intersex Children, Bioethics, and the Law*, 11 ANNALS HEALTH L. 195, 215–16 (2002) (discussing the influence of *The T.J. Hooper* in *Helling v. Carey*, 519 P.2d 981, 983 (Wash. 1974)). See *Osborn v. Irwin Mem’l Blood Bank*, 7 Cal. Rptr. 2d 101, 126–27 (Cal. Ct. App. 1992) (noting that most of the commentary on *Helling* has been “unfavorable,” and that only one California case has followed it, notwithstanding established California law holding that “the professional standard of care is a function of custom and practice”).

34. See generally *United States v. Carroll Towing Co.*, 159 F.2d 169 (2d. Cir. 1947) (proposing Judge Learned Hand’s calculus of negligence balancing test).

The Neurosurgeon: And that approach has its advantages—exempting the professional from second-guessing under the vague community notions that lie behind the usual “reasonable person standard”—yet also its disadvantages. Often, the medical issues in a malpractice case are not as cut and dry as the testimony of two opposing experts can make it seem.³⁵

The Professor: That is a very astute observation—one that leads us to a big problem with the current approach to standard of care. That problem is that the process of performing a medical procedure specifically, and of caring for a patient more generally, is often a classic example of polycentric decision making.³⁶ As Professor Peters has observed, “polycentric disputes are those that require the simultaneous ‘weighing and balancing of interrelated . . . considerations.’ They raise issues that cannot be resolved in a linear, step-by-step fashion and, instead, require simultaneous assessment of many choices.”³⁷ In such a process, there may be multiple appropriate decisions at various juncture points. At each multi-solution juncture point, the range of options in future decisions in the process is determined by the decisions made earlier.³⁸ If there is no clear right or wrong, judgment of the decisions made must be viewed with great attention to the entire process.

The Neurosurgeon: Yes, there are examples in performing the ACD&F procedure, as there are with any surgical procedure.

The Professor: And that creates a complicated picture—one too complicated for proper consideration in the typical, “two-party” adversarial system through which we try malpractice cases. It creates a wide range of indeterminacy that runs throughout the details of each expert’s testimony and

35. See *supra* note 20.

36. James A. Henderson, Jr., *Process Constraints in Tort*, 67 CORNELL L. REV. 901, 923–24 (1982). See also Martin A. Kotler, *Social Norms and Judicial Rulemaking: Commitment to Political Process and the Basics of Tort Law*, 49 U. KAN. L. REV. 65, 103–04 (2000) (analyzing Professor Henderson’s views on the medical decision-making process, and stating that, “there is an enormous difference between second-guessing a polycentric decision and making one,” asserting that the “ultimate issue for the advocate, and the key question for the jury, is whether the one actually made falls within the subset of reasonable choices or that of unreasonable choices”). See, e.g., R. George Wright, *The Illusion of Simplicity: An Explanation of Why The Law Can’t Just Be Less Complex*, 27 FLA. ST. U. L. REV. 715, 716 (2000) (discussing how complexity in the law is inevitable but not necessarily undesirable).

37. Philip G. Peters, Jr., *The Role of the Jury in Modern Malpractice Law*, 87 IOWA L. REV. 909, 944 (2002).

38. See, e.g., Lon L. Fuller, *Adjudication and the Rule of Law*, 54 PROC. AM. SOC’Y INT’L L. 1 (1960); Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 382–91, 394–405 (1978) (describing the key attributes of adjudication and distinguishing them from solving “polycentric” problems, which are more amenable to a mediated or negotiated resolution). See also James Henderson, *Judicial Review of Manufacturer’s Conscious Design Choices: The Limits of Adjudication*, 73 COLUM. L. REV. 1531 (1973).

the unique experiences of the expert that shape that testimony. Instead, jurors are forced to reduce, to the point of distortion, the polycentrality of the medical decision-making process and the indeterminacy—both because of the very limitations of their own experience and because of the all-or-nothing approach to evidence required for adversarial litigation.³⁹ In this sense, malpractice litigation, by its very nature, seeks to reduce complex, polycentric decision processes to almost cartoon-like polarities, much as our two-party system seems to have done to Presidential campaigns.⁴⁰ In a recent symposium on developments in proving the standard of care, Professor Peters described the result quite effectively:

The jury must then evaluate this flawed testimony. Because the jury has no independent basis for determining which of the two very different pictures of clinical reality painted by the opposing experts is correct, critics fear that the jury will make this choice based on the speaking ability of the experts or based on the jury's sympathy for the plaintiff.⁴¹

The Neurosurgeon: Yes, that is how I often react to the way expert testimony is being prepared in malpractice cases on which I've been consulted! How, then, can critics fault the product of medical malpractice litigation when the adversarial system itself, coupled with the standard approach to proving standard of care and breach, create a forum for reviewing doctor conduct that provides little meaningful opportunity for an informed review?

39. See, e.g., Peters, *supra* note 37, at 946 (“The polycentricity argument in favor of a custom-based standard of care turns on two fundamental assumptions. One is that medical customs will be readily ascertainable, thus curing the problem of polycentricity without producing equivalent problems of indeterminacy. In reality, however, medical practices rarely provide the stable, ascertainable benchmark . . . desired.”).

40. See, e.g., Frank B. Cross, *The Folly of Federalism*, 24 CARDOZO L. REV. 1, 56 (2002) (“Courts are inferior institutions when dealing with polycentric policy problems”); Cass R. Sunstein, *Factions, Self-Interest, and the APA: Four Lessons Since 1946*, 72 VA. L. REV. 271, 293 (1986) (noting that courts are often unfamiliar with technically complex issues and this has resulted in their failure to impose either a coordinated or hierarchical structure over administrative processes).

41. Philip G. Peters, Jr., *Empirical Evidence and Malpractice Litigation*, 37 WAKE FOREST L. REV. 757, 759–60 (2002).

III. A DIALOGUE ABOUT SOLUTIONS TO THE PROBLEM OF A STANDARD OF CARE FOR TECHNICAL ERRORS IN THE ACD&F PROCEDURE

A. Looking for Solutions to the One-Size-Fits-All Approach of Categorizing “Errors” in the ACD&F Procedure

The Professor: You’ve made an excellent point about the disharmony between medical reality and the framework that the legal system has created for reviewing it. Let’s consider what we might propose to bring the two spheres into alignment.

The Neurosurgeon: As I’ve thought about this problem, my concern has been the “one-size-fits-all” errors approach that is the typical standard-of-care analysis. I think we must probe deeper and look more closely at the kinds of errors that are encountered in complex neurosurgery. Once we’ve inventoried what those may be, we can then consider whether the standard-of-care analysis should be modified when dealing with distinct kinds of errors.

The Professor: Your “from-the-trenches” observation sounds intriguing. Taking the ACD&F procedure we’ve discussed, what can you tell us about surgeon error?

The Neurosurgeon: It is inevitable during the performance of a surgical procedure that error will occur. Most errors are easily identifiable and correctable and are not of any consequence to the patient or the outcome. On the other end of the spectrum are those mistakes that are unacceptable or inexcusable. These errors may occur because of a gross error in technique, other unforeseeable circumstances present in the operating room, alterations of mentation of the surgeon or others due to intoxicants, negligence in decision-making or any other cause pertinent to the circumstances. In between these two ends of the spectrum is a wide range of categories of problems. Some of these problems are known complications that occur in a certain number of cases to all surgeons, whereas others are complications that are more unusual and can occur both in the absence of negligence or, conversely, as the result of negligence; still others, and this is an area of considerable debate, are just not acceptable complications because of the severity of the result of the complications even though they may or may not have been the result of negligence.

The Professor: Now that’s a very interesting observation—the idea that gravity of injury in some cases is so severe that the patient’s loss should be imposed on the surgeon. Sounds as if you are analogizing some errors to the

strict liability imposed on ultrahazardous activities⁴² that cause injury, even when the actor has acted with reasonable care!

The Neurosurgeon: Yes, my last statement may be somewhat unnerving to the physician reader as it presents a dichotomy of intellectual reasoning and real-world problems that are viewed by different parties as either actions that are below the standard of care in the profession by some or as known complications of the procedures by others. Deciding between the two is sometimes very difficult and always controversial.

The Professor: Is there a specific scenario involving the ACD&F procedure that we might use as our paradigm example for identifying and analyzing different kinds of error that produce a serious injury to the patient?

The Neurosurgeon: Yes, I have one in mind. I asked some neurosurgical colleagues what they thought of the following situation: During the performance of a routine anterior cervical discectomy, the surgeon loses control of his instrument, a Kerrison rongeur,⁴³ while reducing an osteophyte on the posterior aspect of the vertebral body which then impacts the dura over the spinal cord. The patient develops a permanent and irreversible quadriplegic injury that can be seen on a post-operative MRI scan as a parenchymal cervical spinal cord injury.

The Professor: What did your colleagues have to say about the surgeon's performance in that scenario?

The Neurosurgeon: The response of some of those neurosurgeons was that the mentioned occurrence would be an unexpected and unfortunate known complication of the procedure.⁴⁴ Each of them said that they could remember the uncomfortable feeling of doing exactly the same thing and not knowing whether the patient had been injured. Some surgeons said that the patients are informed of the risks and that they know that problems causing paralysis can occur. The implication of this comment is that complications occur in the best of hands and such mistakes are part and parcel of the risks taken when a

42. See RESTATEMENT (FIRST) OF TORTS § 520 (1938) (imposing strict liability for harms caused by "ultrahazardous activities"); RESTATEMENT (SECOND) OF TORTS §§ 519–520 (1965) (imposing strict liability for harms caused by "abnormally dangerous activities"); GEORGE C. CHRISTIE, THE NOTION OF AN IDEAL AUDIENCE IN LEGAL ARGUMENT 175–77 (Kluwer Academic Publishers) (2000). See, e.g., *Exner v. Sherman Power Const. Co.*, 54 F.2d 510 (2d Cir. 1931) (imposing absolute liability for storage of large quantities of dynamite near dwellings, factories, and a hotel that exploded, causing deaths and substantial damage).

43. Steve Fishman, *Rebuilding Bodies*, N.Y. TIMES MAGAZINE PART 2, Apr. 16, 1989 (describing a rongeur as a "surgical instrument that looks like a scissor but bites instead of snips").

44. See, e.g., American Academy of Neurological Surgeons, Health Resources, Neurosurgery, <http://www.neurosurgery.org/> (last visited June 9, 2009).

patient agrees to undergo this procedure. These neurosurgeons have opined that errors in technique are inevitable and should be excused.

The Professor: Were there other views expressed among your colleagues?

The Neurosurgeon: Yes, there were. Other surgeons said that such a complication should never occur and when it does, there is no excuse. When I asked a general surgeon friend of mine who had just undergone an anterior cervical discectomy and fusion operation what he thought about the hypothetical, his answer was quick and to the point. “It’s malpractice if I’m the patient!” He felt that quadriplegia was not an acceptable outcome if he were the patient.

The Professor: I know you consult with experienced attorneys in medical malpractice cases—did you share this hypothetical with them?

The Neurosurgeon: Yes, I did. When I asked experienced attorneys what they thought, the majority felt that such a bad outcome, not expected by the patient, should be compensable. Others asked this important question: “Is the spinal cord within the surgical field of the operation or is it considered to be outside the surgical field?” The question implies that injuries to anatomical structures outside of a surgical field are negligence per se. It does not however mean that injuries within the surgical field are always excusable. This brief overview and snapshot-type commentary is only a brief and superficial look at the issues involved in the analysis.

The Professor: We certainly have seen some differences in how knowledgeable professionals view that scenario!

The Neurosurgeon: Yes, and that now brings us to a crucial question: When does a maloccurrence, such as the surgeon’s momentary loss of control over a rongeur, fall below the standard of care during complex surgery, such as the ACD&F procedure?

B. Factors Relevant to Characterizing the Error

The Professor: Let’s approach this difficult question in four stages. First, we consider whether we can identify categories of factors relevant to errors in the ACD&F procedure that will help us place the specific rongeur error in a more complete factual context. Second, we’ll then examine the relevant principles of tort law to establish an analytic framework for developing the rules. Third, we’ll use the factual categories we identified in step one as the bridge from the principles to rules. Fourth, we’ll use those rules to develop a more finely tuned analytical approach to the standard of care and related issues in medical malpractice litigation.

1. The Possibilities

The Neurosurgeon: The analysis of the different types of problems that can occur during the anterior cervical discectomy and fusion requires that a number of questions be asked. They include:

1. Is this a complication that occurs regularly in the best of hands based on our knowledge and analysis of prior experience? (Is it a known complication?)
2. When is a known complication not in keeping with the standard of care? (Just because complications are known to occur, that does not necessarily imply that they are within the standard of care.)
3. Does the complication result in damages that are transitory or permanent, incidental or serious, “foreseeable” or “unforeseeable”? (Is the extent or level of damages important, or is it a collateral question of less importance than the one of whether the standard of care was breached?)
4. Did the surgeon exercise the level of care required to minimize the risk of problems arising during the course of the procedure—i.e., did the surgeon exercise skill appropriate to avoid creating unknown complications? (Did the surgeon do those things that he should have done to minimize the risk to the patient?)
5. Did adverse unforeseen circumstances alter the situation so as to redefine what the standard of care was under the circumstances? (Under the traditional legal analysis, the action required of the physician to conform her conduct to the standard of care may change with specific circumstances, but the courts have insisted that the definition of the standard of care itself does not change. In the typical, traditional legal approach to defining legal analysis, there is no “re-defining” of the standard of care, once established in a case. The standard of care is the standard of care under the circumstances at the time even though not only the reasonable actions may change because the circumstances change but also the standard itself could either be heightened or lowered, depending on the kinds and gravity of the circumstances that are changing.)
6. Is this complication the eventuation of a risk inherent in either (a) the technique employed, or (b) the “human-factors” impact of the equipment, devices, or medications employed in the technique?

The Professor: That is fascinating and insightful refinement, one that obviously emanates from your unique perspective as an experienced neurosurgeon who then became a law student! This is a useful taxonomy for

sharpening the standard-of-care analysis to make it a finely honed analytic tool, not a blunt instrument of rough justice. Rather like the progress of surgery itself from hacksaw amputations to microscopic robotic surgery.

The Neurosurgeon: Yes, indeed! Every surgeon knows that the performance of a surgical procedure requires the surgeon to perform with a high degree of skill. Even the slightest deviation in perception, recognition of circumstances, or in the performance of motor skills can result in major complications and problems that can either occur immediately or in a delayed fashion. What we are talking about here is a human-factors analysis of a highly trained individual expected to perform at the highest level of efficiency all of the time. In real life, it just does not happen that way. In spite of a surgeon's best efforts, there are mistakes in technique that occur. A reasonable surgeon is fallible and as such may fall within the standard of care. We are not speaking of mistakes in judgment but rather in technique. A discussion of how the surgical profession is regulated, tested, and monitored is beyond the scope of our dialogue here today, but clearly plays a very important role in the subject matter if we assume that among the population of surgeons there is a group of surgeons who are more likely than others to make errors. A group that gets itself into trouble more often than its colleagues or a group whose native abilities is just not quite as good as some of the others exists. As a surgeon, I know that a great deal of introspective analysis and radical changes in the regulation and monitoring of surgeons needs to be done if we are to maintain the trust of the public.

The Professor: Weighty and important questions, I must admit. Perhaps the starting point of a future conversation. For now, how might we use the taxonomy you propose to evaluate the spectrum of standard-of-care issues that have, in your experience, arisen in the ACD&F procedure?

The Neurosurgeon: In most of the situations where a technical mistake occurs, the plaintiff alleges negligence, as the act involved did not conform to the standard of care whereas the defense characterizes the act involved as a known risk of the procedure. The court in *Patton v. Amblo*⁴⁵ held that the

45. *Patton v. Amblo*, 713 A.2d 1051, 1055 (N.J. Super. App. Div. 1998) ("Defendant contends that the charge applied here [sic] because she chose 'from among several accepted and recognized options in the method she employed at surgery.' That is not so. Defendant's error dealt with the skill in which she performed the surgery. Accepting plaintiff's contention that defendant directly inserted the trocar spike into plaintiff's abdomen prior to insufflation, thereby puncturing plaintiff's stomach, we fail to see where defendant exercised any judgment."). See *Velazquez v. Portadin*, 751 A.2d 102, 108–09 (N.J. 2000) (noting the Court's acceptance of the *Patton* approach to distinguishing choice-of-technique errors from performance-of-technique errors in medical malpractice cases). See also J. Scott Kramer & Helena Ciechanowski, *Mistake of Judgment: Calling Out for Clarity*, 21, No. 9 MED. MALPRACTICE L. & STRATEGY

“exercise-of-judgment” charge is not to be given when the question is about the manner in which the procedure was done rather than choices made during the procedure. In other words, the question is whether the surgeon exercised reasonable professional care while doing the procedure. If he/she makes a mistake that is negligent, the mistake is not excusable. Evaluating those complications of the ACD&F experience gives us a rough sense of the likely categorizations—i.e., as those that fall within the standard of care and those that do not.

The Professor: What are the basic kinds of complications that you have in mind?

The Neurosurgeon: Minor injuries to the carotid artery and jugular vein are within the standard of care whereas major injuries to those vessels are usually not. If one has to ligate a carotid artery or a jugular vein and there are no sequelae, neurological or otherwise, there may not be immediate damages. However, the restricted blood flow to the brain may result in future difficulties that are challenging to predict and quantify in the present. I would think that losing a carotid artery or jugular vein is a compensable injury with damages being imputed based on increased risk for stroke.

The Professor: What about injuries to other structures in the area?

The Neurosurgeon: Injuries to the trachea and esophagus are for the most part injuries that occur within the standard of care. This is because these injuries are usually related to dissection or retraction and unless the injury is caused by bad technique, such an injury is a known risk of dissecting and mobilizing a tubular body structure. It is critical that problems involving the trachea and esophagus be quickly recognized and appropriately treated for the doctor’s treatment to remain within the standard of care. The extent of the damages that result from esophageal complications does not influence a change from being within the standard of care unless the complications are not treated appropriately as they occur. In order for an injury to these structures to be outside the standard of care, the cause of the injury has to be negligent handling of sharp instruments outside of the normal use of such instruments.

The Professor: You spoke of injuries to the carotid artery and jugular vein. Are there other blood vessels that the ACD&F procedure might implicate?

The Neurosurgeon: Injuries to the vertebral arteries can occur if the surgeon is too far lateral in the disc space. Whether the surgeon is outside the operative field is debatable in this situation. The surgeon is usually trying to

get oriented and is using judgment to clean out disc material and open up the disc space. If the injury occurs by being lateral to the vertebral body, the surgeon is anatomically misguided and has not identified any midline structures. This injury should not occur and is hard to excuse. If a neurological deficit results in this type of injury, the surgeon would most likely be liable for the damages.

The Professor: I like that phrase “anatomically misguided.” Are there other errors that may come from the surgeon straying outside of the operative field?

The Neurosurgeon: An opening into the subarachnoid space is outside the standard of care if it occurs with a knife blade before the posterior longitudinal ligament has been opened because the knife has gone beyond the limits of the surgical field present at that given time. If there are damages that result from this complication such as cord injury, infection due to cerebrospinal fluid fistula or otherwise, the surgeon is negligent. If the dura is opened while opening the posterior longitudinal ligament or while reducing the osteophytes, the complication is a known and acceptable risk of using a sharp instrument on or next to the dura. This will occur in the best of hands and is not a deviation from the standard of care. It is of course critical that the complication be treated appropriately to remain within the standard of care. Even if complications such as cerebrospinal fluid fistula develop, there is no negligence to consider.

The Professor: What about the issue of an injury to the spinal cord?

The Neurosurgeon: This is the most difficult to analyze. Is there ever an excuse for causing such a complication? Is a slip of the hand while working in a small opening through a microscope excusable or is it one of those things that is known to happen and will happen to all surgeons? It is not that simple. Surgeons who are thinking about the possibility of this complication occurring are always prepared for it by not pushing down on their instrument but rather by pulling up so that if they slip the instrument will not be pushed down into the dura. If a surgeon has a good assistant, he/she can use two hands during this critical part of the operation so as to stabilize the operative hand. In surgery, good assistants are provided either by the surgeon or the hospital and the question should be asked who is responsible if one is not available? Some complications occur because inexperienced assistants are provided or the insurance carrier won't reimburse for an assistant. In general, every surgeon knows that the worst thing that could happen during this operation is a spinal cord injury that results in a neurological deficit. If such an injury occurs during the surgery as a result of a technical error, the surgeon could argue that the technical mistake that caused the injury is a known complication of the fallible

reasonable surgeon. The plaintiff would argue that the occurrence of such an error falls below the standard of care and the plaintiff's expert would need support for the allegation. The jury is then faced with analyzing the facts and deciding whether the plaintiff's case satisfies the elements required to prove negligence. In those cases that I have evaluated, I have noted a disturbing occurrence. In at least two cases where the patient suffered an irreversible quadriplegia following an anterior cervical discectomy and fusion and the post-operative MRI showed an intrinsic cervical spinal cord injury at the level of the operated disc space, there is absolutely no mention of an injury to the spinal cord by the operating surgeon. Surgeons who do this operation know that there are no other plausible explanations for this type of picture other than iatrogenically induced spinal cord injury. To not dictate the occurrence of such a complication is to intentionally conceal the error and to cast the complication as one not usually experienced or as one not able to be explained by known events. Surgeons might do such a thing because they feel that the patient takes risks and sometimes risks become realities. Surgeons know that fallibilities are part of surgery and believe they should not be held liable for such fallibilities. If they can avoid the trauma of the legal process and the potential effects that being held liable might have on their professional lives, they may take the risk of being discovered and they may succumb to the temptation to cover up an error. They feel that treating disease is like a war where not everything needs to come to the public's attention. If surgeons feel that obscuring the source of the patient's injury is justifiable, or at least pragmatic, and if they for the most part are good and caring people who have worked long and hard to get where they are, is there something wrong with the system? Does there need to be a major change so that when errors occur, they can be openly reported and evaluated? Why should a quadriplegic plaintiff have to prove that the type of spinal cord injury he suffered occurs only if the spinal cord is injured by the surgeon and then have to prove that the causation of the injury fell below the standard of care? I submit that I wish there were a better way to track such complications; if there were, physicians could more readily monitor performance and engage in steps that would lead to safer, more reliable surgeries.

C. The Basis in Intersecting Principles

The Professor: Well, Doctor, it seems to me that we have reached a point where, under the traditional approach to standard of care, we cannot draw lines in advance between your examples of injuries to major blood vessels; injuries

to the esophagus and trachea; injuries to the laryngeal nerve; and injuries to the spinal cord.

The Neurosurgeon: That's right; we would end up having a "swearing contest" between opposing expert witnesses—some calling it "negligence," others calling it a mere "maloccurrence or misadventure."

The Professor: I would propose that the problem in this area is the instrumentalism that has infected the development of the law.

The Neurosurgeon: Can we talk a bit more about instrumentalism?

The Professor: Instrumentalism is an approach to the law in which the lawmaker has decided on the appropriate result ahead of time and then crafts the rule to bring it about. Thus, in the case of physicians, the guild of medical practitioners successfully lobbied in courts and legislatures to win adoption of the standard of care that the profession itself would define. This allows the profession to define its own standard of care, and in doing that, to define the range of "reasonable" professional actions as broadly as the profession chooses to tolerate. For many years, that was quite broadly, as physicians were extremely reluctant to testify against each other; it was quite difficult for an injured patient to find a medical practitioner willing to testify that another physician was negligent. Thus, an effective code of silence acted as a severe suppressant to successful medical malpractice litigation.⁴⁶ That is the instrumentalist objective of the so-called professional standard-of-care rule.

The Neurosurgeon: Of course, a physician's reluctance to testify against his brother or sister physician has largely evaporated as the profession has grown larger and less collegial (in the in-bred sense). Also, it cannot be denied that the lucrateness of testifying against other physicians has grown.

The Professor: Yes, but the instrumentalist objective of the medical malpractice standard of care is still well-served by a rule that allows doctors to define the standard of care for doctors—even if now that more often involves two doctors taking opposite points of view on the conduct of a defendant doctor in a medical malpractice trial.⁴⁷ Instrumentalism is

46. See, e.g., *Ybarra v. Spangard*, 154 P.2d 687 (1944) (recognizing the code of silence and using the *res ipsa loquitur* doctrine to hold all involved in a patient's care potentially liable for likely negligence in an effort to "smoke out" the responsible party).

47. See, e.g., *Zacharias*, *supra* note 32 (discussing historical lobbying efforts by physicians and their associations); see Pollel, *supra* note 32; Theodore Silver, *One Hundred Years of Harmful Error: The Historical Jurisprudence of Medical Malpractice*, 1992 WIS. L. REV. 1193; Melvin Belli, *An Ancient Therapy Still Applied: The Silent Medical Treatment*, 1 VILL. L. REV. 250, 259 (1956) (describing the reluctance of physicians to testify against one another); Note, *Malpractice And Medical Testimony*, 77 HARV. L. REV. 333, 337 (1963). See also WILLIAM L. PROSSER, *HANDBOOK OF THE LAW OF TORTS* § 32, at 164 (4th ed. 1971) (acknowledging the "well-known reluctance of doctors to testify against one another");

undesirable when it allows a profession to regulate itself not in a forthright and publicly transparent way, but in indirect and deceiving ways.⁴⁸ Doctors are encouraged not to call out the negligence of other doctors,⁴⁹ and even where doctors are willing to do that, you have ad hoc, unpredictable standards-setting that takes place in the less-than-thoughtful milieu of an adversarial tort trial. You don't get any clarity in the jury's verdict, since they find the defendant either liable or not.⁵⁰ The jury doesn't—and is not equipped to—make detailed findings about the standard of care or how the defendant physician's conduct specifically deviated from that standard of care. Jury verdicts based on conflicting expert testimony in medical malpractice cases obscure the issue of standard of care by confining it to the specific facts of a specific case—which only the parties who presented the evidence at trial really fully understand. The generality and vagueness of a jury verdict to anyone else who encounters the case means that it has little to teach and much to obscure. That, I believe, is exactly why those who disfavor medical malpractice litigation have promoted the so-called professional standard of care.⁵¹ It effectively shields many physicians from malpractice lawsuits precisely because it is so case-dependent and thus so limited in the significance of the result it produces through medical malpractice trial verdicts.

Joseph Kelner, *The Silent Doctors—The Conspiracy of Silence*, 5 U. RICH. L. REV. 119, 120 (1970); Richard M. Marshkus, *Conspiracy of Silence*, 14 CLEV.-MARSHALL L. REV. 520, 523 (1965); David E. Seidelson, *Medical Malpractice Cases and the Reluctant Expert*, 16 CATH. U. L. REV. 158 (1966). *See also* Huffmann v. Lindquist, 234 P.2d 34, 46 (1951) (Carter, J., dissenting) (“Anyone familiar with cases of this character knows that the so-called ethical practitioner will not testify on behalf of a plaintiff regardless of the merits of his case But regardless of the merits of the plaintiff's case, physicians who are members of medical societies flock to the defense of their fellow members charged with malpractice and the plaintiff is relegated, for his expert testimony, to the occasional lone wolf or heroic soul, who for the sake of truth and justice has the courage to run the risk of ostracism by his fellow practitioners and the cancellation of his public liability insurance policy.”).

48. *See, e.g.*, Jascha Hoffman, *Bernard Ackerman, 72, Dies; Expert at Skin Diagnosis*, N.Y. TIMES, Dec. 11, 2008, at B12 (noting that Dr. Ackerman, a significant instructor in the dermatologic field opposed medical expert witnesses, settled a malpractice suit brought against him because of fraudulent medical testimony).

49. *See supra* note 46 (discussing reasons why physicians may not want to testify against one another). *See, e.g.*, Stephanie Mencimer, *The White Wall—A New Code of Conduct Is Taking Hold of the Medical Profession: First Do No Harm-to Your Colleagues*, 2004-APR LEGAL AFF. 65 (2004) (demonstrating the little change that ensued in the prior half century).

50. *Cf.* Marc S. Brodin, *Accuracy, Efficiency, and Accountability in the Litigation Process—The Case for the Fact Verdict*, 59 U. CIN. L. REV. 15, 88–89 (1990) (discussing how interrogatories submitted to the jury on a verdict form can be conclusory).

51. *See, e.g.*, Zacharias, *supra* note 32, at 720–22 (discussing historical lobbying efforts by physicians and their associations); Pollel, *supra* note 32; Belli, *supra* note 47. *See generally* Silver, *supra* note 32.

The Neurosurgeon: Well, if the instrumentalism has led to undesirable results in medical malpractice litigation, what would you propose should be the basis for constructing a standard of care that is more transparent and increases the accountability of physicians for negligence without increasing their burden of defending against frivolous claims?

The Professor: What I have advocated in other work is the concept of the corrective justice principle—which from my perspective is the unifying principle of our tort law—and its interplay with a principle that I have called the enterprise regulation principle.⁵²

The Neurosurgeon: Where do these principles come from?

The Professor: The Dworkinian concept of law posits “a proposition of law is true only if in conjunction with other premises it follows from principles which both best fit the legal system’s institutional history and also provide the best moral justification for it.”⁵³ Principles are, in essence, the glue that holds together the “collection . . . of rules” that most people think of as “the law.”⁵⁴ Dworkin “distinguish[es] principles in the generic sense from rules” because “[r]ules are applicable in an all-or-nothing fashion” such that “if the facts the rule stipulates are given, either the rule is valid, in which case the answer it supplies must be accepted, or it is not, in which case it contributes nothing to the decision.”⁵⁵ By contrast, principle (such as “no man may profit from his own wrong”) “states a reason that argues in one direction, but does not necessitate a particular decision.”⁵⁶ Unlike rules, “principles . . . conflict and interact with one another, so that each principle that is relevant to a particular legal problem provides a reason arguing in favor for, but does not stipulate, a particular solution.”⁵⁷ In Dworkin’s concept of the law, as Professor Terrell effectively describes it in metaphor, “principles are the mortar between the bricks of specific rules, but the whole wall must be considered the ‘law.’”⁵⁸ Indeed, Professor Dworkin noted in his early writings that “[p]rinciples have

52. Van Detta, *The Irony of Instrumentalism*, *supra* note 1, at 425; Jeffrey A. Van Detta, *Justice Restored: Using a Preservation-of-Court Access Approach to Replace Forum Non Conveniens in Five International Product-Injury Cases*, 24 NW. J. INT’L L. & BUS. 53 (2003) [hereinafter Van Detta, *Justice Restored*].

53. The description is the late Professor Hart’s, who, despite his disagreement with Dworkinian principles as the basis for law, summarized Dworkin’s approach well. H.L.A. Hart, *Postscript*, in *THE CONCEPT OF LAW* 253 (2d ed. 1994).

54. Ronald Dworkin, *The Model of Rules*, 35 U. CHI. L. REV. 14, 22–28 (1968).

55. RONALD DWORKIN, *TAKING RIGHTS SERIOUSLY* 23–25 (1977).

56. *Id.* at 26.

57. *Id.* at 72.

58. Terrell, *supra* note 25, at 298 n.37.

a dimension that rules do not—the dimension of weight or importance.”⁵⁹ Principles have this higher value because they provide the *ratio et auctoritates* for the rules, although, unlike rules, principles, “need not have been enunciated by an official source”⁶⁰ as the principles themselves establish the context in which “official sources” (e.g., a legislative or judicial source) are bound to operate.⁶¹

The Neurosurgeon: Well, principles are well and good—but using this model you’ve proposed, what are the principles that are relevant here?

The Professor: Scholars typically view corrective justice as a principle underlying the substantive aims of tort law.⁶² That principle intersects with the

59. DWORKIN, *supra* note 55, at 26.

60. Lon L. Fuller, *A Reply to Critics*, in *THE MORALITY OF LAW* 217 (2d ed. 1969) (using the term “intendment” to explain how law is embraced by individuals: “Our institutions and our formalized interactions with one another are accompanied by certain interlocking expectations that may be called intendments, even though there is seldom occasion to bring these underlying expectations across the threshold of consciousness.”).

61. The distinction was well known to German nineteenth-century jurists between principles and rules as they “stud[ied] the German legal system in its historical context . . . [and] dr[e]w from it a set of historically verified and essential principles.” JOHN HENRY MERRYMAN, *THE CIVIL LAW TRADITION* 31, 32, 61–64 (2d ed. 1985). Yet not all scholars are persuaded by Dworkin’s principle-rule distinction to defining law. *See, e.g.*, HART, *supra* note 53. Richard Posner has been particularly unsparing in his criticism of Dworkin’s approach:

Yet defining law as broadly as Dworkin does provides no escape. When law is defined to include, under the rubric of “principle,” the ethical and political norms that judges use to decide the most difficult cases, decision according to law and decision according to political preference become difficult, sometimes impossible, to distinguish in a society as morally heterogeneous as ours. Dworkin does distinguish between policy and principle, and he argues that only the latter is a fit foundation for and limitation on judicially declared rights. The argument is unconvincing, the distinction arbitrary, the principles merely the policies that commend themselves to Dworkin’s brand of political liberalism.

RICHARD A. POSNER, *THE PROBLEMS OF JURISPRUDENCE* 21–23 (1990). But it must be observed that such a perspective, which has appeared under the labels of “realism” or more currently “pragmatism,” is rooted in stripping the law of values and the principles which embody them that began in earnest with Oliver Wendell Holmes, Jr.’s assertions that we should “wash [the notion of duty] with cynical acid and expel everything except the object of our study, the operations of the law.” ALBERT W. ALSCHULER, *LAW WITHOUT VALUES: THE LIFE, WORK, AND LEGACY OF JUSTICE HOLMES* 172 (2000) (quoting Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 462 (1897)). Thus, the pragmatist approach ultimately focuses on “know[ing] the law” through the “bad man, who cares only for the material consequences which such knowledge enables him to predict.” *Id.* at 12 (quoting Holmes, *supra*, at 459). Yet, such pragmatism has ultimately proven to be a sterile jurisprudence that “puts second things”—i.e., instrumentalist or “consequentialist payoffs”—“first.” ALSCHULER, *supra*, at 191. Thus, “[f]iring a demand for a hogchoker proof at every belief”—in the style of Posner’s attack on the principle-rule distinction quoted above—“may leave one without beliefs,” perhaps only “a hopeless jumble of ill-considered prescriptive and descriptive ideas,” and an accompanying “sense of emptiness and despair.” *Id.* at 176, 194.

62. DAN B. DOBBS, *THE LAW OF TORTS*, ch. 1, § 9, at 13–16 (2000). *See, e.g.*, Gregory C. Keating, *Distributive and Corrective Justice in the Tort Law of Accidents*, 74 S. CAL. L. REV. 193 (2000) (“Tort

broader principle of what I call enterprise regulation (which I'll explain momentarily).⁶³ What we typically describe as tort law are substantive rules that emanate from one or both of those principles. In the context of an individual tort claim, the rules of law we choose to apply—including both the substance of the law as well as the procedure of decision-making—should reify the corrective justice and enterprise regulation principles in a Dworkinian model.⁶⁴ Conversely, those principles justify the rules for framing and pursuing a tort cause of action.

The Neurosurgeon: And how is the process integrated with procedure in medical malpractice tort law?

The Professor: Viewed from the perspective of the corrective justice principle, substantive rules and procedural rules cannot be separated into neat, artificial compartments—a habit of intellectual sloth to which most lawyers at times succumb.⁶⁵ Both “sets” of rules serve the same animating corrective justice principle that requires compensating individuals for injury caused to themselves and their property when other individuals, partnerships, or corporations engage in commercial activity that creates a non-reciprocal risk

scholarship on the law of negligence has long been torn between two competing conceptions. One of these conceptions—the [corrective] justice conception—holds that negligence law is (and should be) an articulation of our ordinary moral conceptions of agency and responsibility, carelessness and wrongdoing, harm and reparation.”); Gary T. Schwartz, *Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice*, 75 TEX. L. REV. 1801 (1997); Catharine Pierce Wells, *Corrective Justice and Corporate Tort Liability*, 69 S. CAL. L. REV. 1769 (1996) (Corporate Tort Liability Symposium); Jules L. Coleman, *The Practice of Corrective Justice*, in PHILOSOPHICAL FOUNDATIONS IN TORT LAW 53 (David G. Owen ed., 1995); ERNEST J. WEINRIB, *THE IDEA OF PRIVATE LAW* 84–113 (1995); Susan Randall, *Corrective Justice and the Torts Process*, 27 IND. L. REV. 1, 2 (1993) (“Corrective justice stands in direct opposition to instrumental views of tort law, positing a moral foundation of and rationale for the present system of tort law.”); Catharine Pierce Wells, *Tort Law as Corrective Justice: A Pragmatic Justification for Jury Adjudication*, 88 MICH. L. REV. 2348 (1990); JULES L. COLEMAN, *RISKS AND WRONGS* 361–89 (1992); Alan Schwartz, *Responsibility and Tort Liability*, 97 ETHICS 270 (1986); Richard A. Posner, *The Concept of Corrective Justice in Recent Theories of Tort Law*, 10 J. LEGAL STUD. 187, 188 (1981); George P. Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537, 538 (1972).

63. See text and notes at nn.54–55 & Diagram No. 1, *infra*.

64. “Within Dworkin’s jurisprudence, principles have a descriptive and a normative function. Principles simultaneously explain (descriptive) and justify (normative) the legal practice within a particular community.” Eric Dorkin, *Debunking Integrity’s “Equality Advantage”*: *The Absence of Coordination in Ronald Dworkin’s Law’s Empire*, 83 IOWA L. REV. 1071, 1080 (1997–1998); DWORKIN, *supra* note 55, at 22; RONALD DWORKIN, *A MATTER OF PRINCIPLE* 147 (1985); see Kenneth J. Kress, *Legal Reasoning and Coherence Theories: Dworkin’s Rights Thesis, Retroactivity, and the Linear Order of Decisions*, 72 CAL. L. REV. 369, 373 (1984) (“Dworkin’s objections” to an entirely rule-bound view of law “are motivated by the need to provide principled justification for the State’s use of coercion and force in enforcing judgments”).

65. See Van Detta, *The Irony of Instrumentalism*, *supra* note 1.

to those individuals and that causes that risk to eventuate in personal injury.⁶⁶ The non-reciprocal risk articulation of the corrective justice principle provides a substantive objective that the substantive and procedural court-access rules are designed to achieve.

The Neurosurgeon: I see; the corrective justice principle is fairly clear from the make-up of American tort law. But what about this enterprise regulation principle that you speak of?

The Professor: The enterprise regulation principle makes it legitimate for a sovereign to act to effect the corrective justice principle.⁶⁷ To use Dworkin's lexicon, the enterprise regulation principle delineates those situations in which it is appropriate for the state to apply its coercive rules to shape corporate activity and to provide remedies for the effects of non-conforming corporate activity.⁶⁸ The enterprise regulation principle defines the categories of cases in which a state may legitimately impose its positive rules of law (typically, when an alleged tortfeasor is a professional licensed by the state).⁶⁹

The Neurosurgeon: The relationship you've described above between the corrective justice and enterprise regulation principles can be a challenging one to process through words alone. Let's work them out in a diagram to make them clearer:

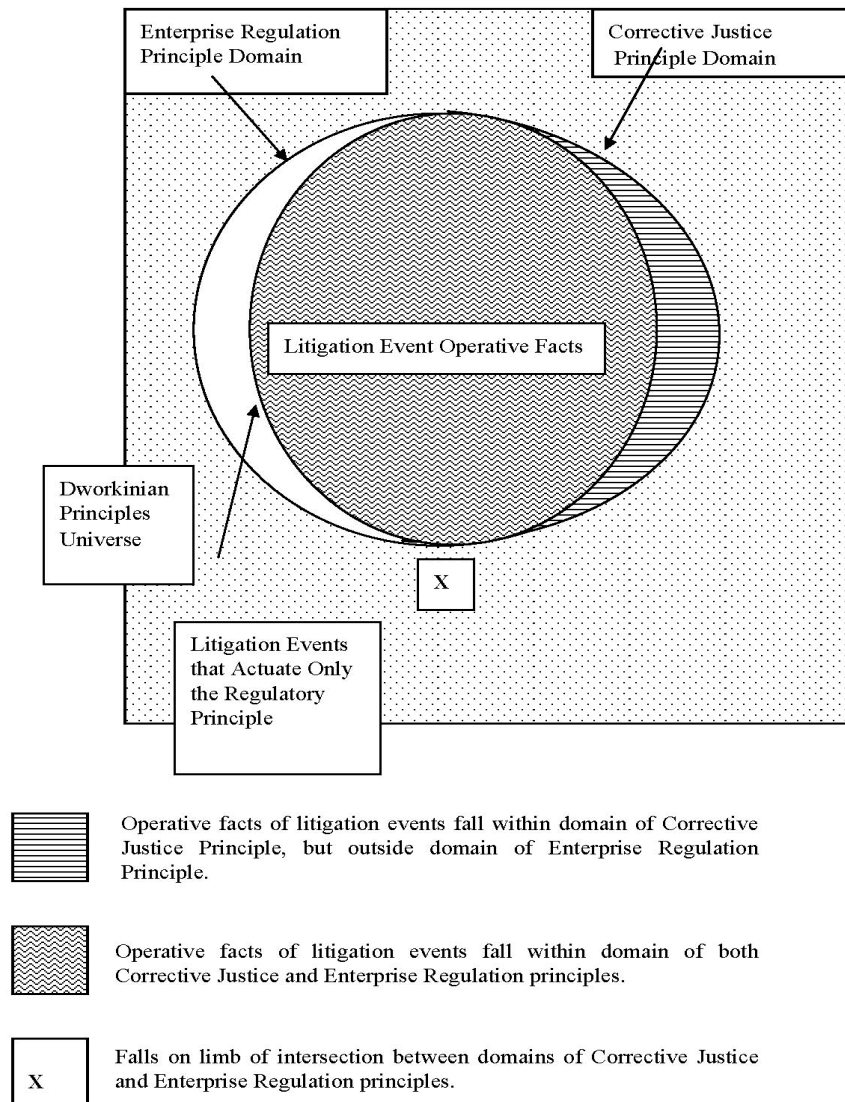
66. The author arrives at this conclusion by considering his previous scholarship cited in note 1, *supra*, in light of the implications of Professor Fletcher's iconic article on non-reciprocal risks. See Fletcher, *supra* note 62.

67. See Van Detta, *Justice Restored*, *supra* note 52; Van Detta, *The Irony of Instrumentalism*, *supra* note 1.

68. See Dworkin, *supra* note 54.

69. See Van Detta, *Justice Restored*, *supra* note 52; Van Detta, *The Irony of Instrumentalism*, *supra* note 1.

DIAGRAM NO. 1: DWORKINIAN PRINCIPLES—A METAPHORIC
VENN DIAGRAM



The Neurosurgeon: So now that we can visualize their relationship, is what you're suggesting that we must view the process of adjudicating the standard of care as a question that is equally important with the question of the standard's legal content?

The Professor: Yes, well said! I think the intersection between these two principles tells me that we need to consider three variables in setting the standard of care: (1) who sets it; (2) for what kind of injuries; and (3) how those injuries should be compensated.

The Neurosurgeon: That raises three interesting, and interlocking, questions. But how should we use those variables in deriving rules from the principles we've identified?

The Professor: I think two considerations are paramount. First, since the state licenses medical practitioners, it has a strong interest—the interest of the people—in seeing that those standards are set nonpartisanly, consistently, and in a way that promotes better medical practice and protection of the public who, at least implicitly, rely on the state to set standards at a level sufficient to protect them from negligence. Second, the corrective justice principle demands that individuals be compensated for their exposures to risks created by others that are non-reciprocal—i.e., substantially greater than the risks those individuals present. This is the essence of George Fletcher's non-reciprocal risk theory of corrective justice.⁷⁰

The Neurosurgeon: What is Fletcher's theory? How does it add to our efforts to reach appropriate rules for the medical malpractice standard of care?

The Professor: First, let's start with the basics of Fletcher's theory, as I have interpreted it elsewhere. The concept of non-reciprocal risks is a particular expression of the broader tort-law rationale commonly referred to as "corrective justice."⁷¹ The non-reciprocal risk model fills in the "voids"

70. See Fletcher, *supra* note 62. See also Joanna B. Apolinsky & Jeffrey A. Van Detta, *Rethinking Liability for Vaccine Injury*, 19 CORNELL J.L. & PUB. POL'Y ____ (Spring 2010).

71. David G. Owen, *The Moral Foundations of Products Liability Law: Towards First Principles*, 68 NOTRE DAME L. REV. 427, 434 (1993) ("[m]ost valuable moral theorizing on tort law in recent years has examined the problems of accident law from the perspective of some form of 'corrective justice'"); Andrew R. Klein, *Fear of Disease and the Puzzle of Futures Cases in Tort*, 35 U.C. DAVIS L. REV. 965, 986 n.103 (2002). Professor Klein quotes Professor Simons's "succinct" survey of the diversity of theory encompassed within the "corrective justice" concept:

Jules Coleman thinks that corrective justice involves undoing wrongful gains and wrongful losses, though he gives a non-obvious, technical meaning to "wrongful." Ernest Weinrib defines corrective justice as the obligation of a negligent "doer" to respect the equality of the victimized "sufferer." Richard Epstein, prior to becoming a born-again utilitarian, defined corrective justice as one of several paradigmatic forms of causal liability. George Fletcher defines corrective justice as liability for imposing non-reciprocal risks. Catherine [sic] Wells argues that corrective

created by “empty abstractions of corrective justice”⁷² to provide a coherent, principled basis for imposing accountability. Professor Fletcher explained the doctrine of non-reciprocal risks as a “paradig[m] for analyzing tort liability” on the basis of “the nature of the victim’s activity when he was injured and on the risk created by the defendant.”⁷³ A non-reciprocal risk arises when a tortfeasor’s activities impose risks on the victim that are of greater magnitude and contain more serious consequences than any risk that the victim can impose on the tortfeasor.⁷⁴

Articulating the corrective justice principle in terms of imposing tort liability upon those who harm others by creating non-reciprocal risks has its most distinct effects in those cases “in which a socially useful activity imposes non-reciprocal risks on those around it.”⁷⁵

The Neurosurgeon: How do you argue that there are non-reciprocal risks in a physician-patient relationship? It doesn’t seem the same to me as the kind of things that some writers have talked about—such as being the unfortunate neighbor of a nuclear power plant!⁷⁶

justice entails providing a fair adjudicative process to determine whether the defendant is responsible for the plaintiff’s loss. And Richard Posner, bless his heart, reaches the felicitous conclusion that “corrective injustice” is just another way of saying “maximize social wealth.”

Id. at 986 n.103 (quoting Kenneth W. Simons, *Corrective Justice and Liability for Risk-Creation: A Comment*, 38 UCLA L. REV. 113, 126 & nn.47–53 (1990)). For one of the more illuminating critiques of Fletcher’s theory, see Nancy A. Weston, *The Metaphysics of Modern Tort Theory*, 28 VAL. U. L. REV. 919, 958–65 (1994).

72. These are the terms in which Professor Owen has criticized much of the corrective justice scholarship. See Owen, *supra* note 71, at 435.

73. Fletcher, *supra* note 62, at 540.

74. *Id.* at 537; George P. Fletcher, *Corrective Justice for Moderns*, 106 HARV. L. REV. 1658 (1993) (reviewing JULES COLEMAN, *RISKS AND WRONGS* (1992)). As Fletcher elaborated:

[The non-reciprocal standard risk approach] is part of a larger rationale of liability that cuts across negligence, intentional torts, and numerous pockets of strict liability. The general principle expressed in all of these situations governed by diverse doctrinal standards is that a victim has a right to recover for injuries caused by a risk greater in degree and different in order from those created by the victim and imposed on the defendant—in short, for injuries resulting from non-reciprocal risks. Cases of liability are those in which the defendant generates a disproportionate, excessive risk of harm, relative to the victim’s risk creating activity. . . . Conversely, cases of non-liability are those of reciprocal risks, namely those in which the victim and the defendant subject each other to roughly the same degree of risk.

Fletcher, *supra* note 62, at 569.

75. Fletcher, *supra* note 62, at 569.

76. See, e.g., Jon M. Van Dyke, *Liability and Compensation for Harm Caused by Nuclear Activities*, 35 DENV. J. INT’L L. & POL’Y 13, 24–25 (2006); A.E. Boyle, *Globalising Environmental Liability: The Interplay of National and International Law*, 17 J. ENVTL. L. & LITIG. 3, 7 (2005); Rodney A. Smolla, *Let the Author Beware: The Rejuvenation of the American Law of Libel*, 132 U. PA. L. REV. 1, 27 (1983). Professor Smolla explains the “nuclear plant” illustration especially well:

The Professor: Such activities actually cover a wide range of injuries from products and industrial activities.⁷⁷ The key is choice versus domination, even if the domination is *de facto*. In this way, patients are passive victims for having been relatively powerless in the face of exposure to risk that they have no reasonable alternative but to face.⁷⁸ The victims are effectively dominated by the physician,⁷⁹ and it is this dominance that facilitates their injury from exposure to non-reciprocal risks.⁸⁰ In fact, let me read to you a description that is, to me, striking in its analogy to our patient-physician problem—for example, as to product manufacturer and consumer:

Manufacturers have control over product quality and, therefore, have specific knowledge of product conditions. Moreover, manufacturers may be presumed to know of defective product conditions because of their control over the production process and the availability of detailed technical information. Consumers have no such knowledge and are incapable of acquiring it. A consumer may use a product for years and never have more than general knowledge about the product's condition and its capabilities. Consumers are inherently at a disadvantage in gaining the knowledge necessary to enable them to make real choices. Even if the use of a product indicates a possible problematic condition, such use does not equate to

When, however, a particular form of activity creates risks against others that are not matched by corresponding risks imposed by others against those undertaking that activity itself, the lack of reciprocal risk justifies imposing strict liability rules against the enterprise. Thus, those who engage in abnormally dangerous activities, such as the operation of a nuclear power plant, should be strictly liable for harm caused by that which makes the activities abnormally dangerous, such as radiation leaks. The nuclear reactor at Three Mile Island imposes risks on the surrounding populace of a magnitude that the populace does not impose on the owners and operators of the reactor.

Id. at 27 (citing Fletcher, *supra* note 62, at 542, 545–48).

77. Fletcher, *supra* note 62, at 569–70. See also, e.g., Alfred Avins, *Absolute Liability for Oil Spillage*, 36 BROOK. L. REV. 359 (1970); William F. Baxter, *The SST: From Watts to Harlem in Two Hours*, 21 STAN. L. REV. 1, 50–53 (1968).

78. See, e.g., Mary J. Davis, *Individual and Institutional Responsibility: A Vision for Comparative Fault in Products Liability*, 39 VILL. L. REV. 281, 288 (1994) (proposing an approach of “evaluating the failure of both individual and institutional responsibility in light of the relationships to which they belong”).

79. See, e.g., Neela Banerjee, *Lawsuit Says Exxon Aided Human Rights Abuses*, N.Y. TIMES, June 21, 2001, at C1 (“[International Labor Rights Fund] sued Exxon Mobil in . . . [US District Court], accusing the company of complicity in human rights abuses committed by state security forces that protect its large natural gas field in Indonesia.”); Larry Rohter, *Ford Motor Is Linked To Argentina's “Dirty War,”* N.Y. TIMES, Nov. 27, 2002, at A3 (discussing Argentina's federal prosecutor's criminal complaint that Ford's Argentinean subsidiaries senior executives “‘managed, participated in, or covered up the illegal detention’” of labor leaders and other Argentinean political dissidents by agents of the military junta government (1976–83) who used Ford factories as detention centers).

80. See, e.g., George P. Fletcher, *Domination in Wrongdoing*, 76 B.U.L. REV. 347, 355–59 (1996) (“Tort law also embodies the wrong of domination so far as some of its strains recognize the right of the victim to remain passive in the face of danger. Therefore, when an aggressor injures a plaintiff, the aggressor achieves a dominance over the victim that the law may correct as both a crime and a tort.”).

knowledge of a possibly defective condition. In fact, any knowledge gained would be based on pure speculation.⁸¹

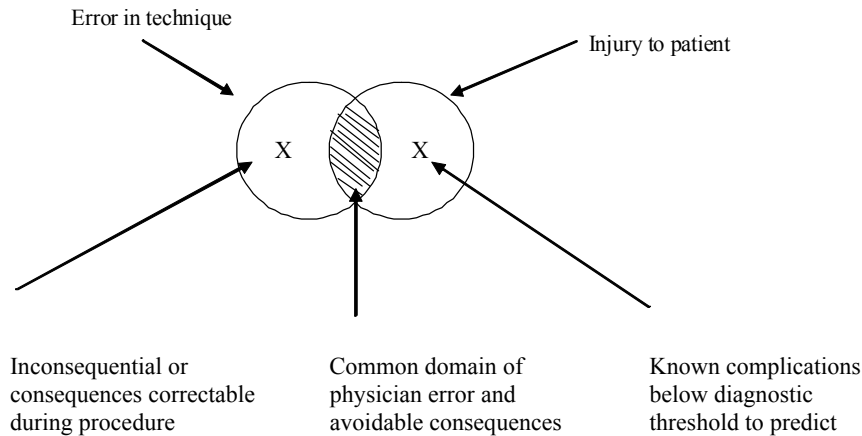
Doesn't that sound an awfully lot like the typical patient-physician relationship?

The Neurosurgeon: The analogy to products liability is intriguing, but I don't know if I fully agree with it.

The Professor: Well, let me push the envelope a bit and take the argument one step further. We could look to our corrective justice and enterprise regulation principles to derive a set of rules that distinguish among those injuries inflicted by a physician during care—say the neurosurgeon during the ACD&F procedure—that are due to his or her failure to execute the procedure according to specifications. In that sense, such an error is like a manufacturing defect in products liability. However, there is another class of errors—errors due to flaws in the procedure itself. The manifestations of such an error will be manifold. For example, they may occur because the procedure wasn't adequately tested before it was adopted, because the procedure causes other complications that weren't adequately considered, or because the procedure has "human factor" implications that were not studied or perhaps not properly recognized because the practitioners had other reasons not to bring them to light. I would analogize this other class of errors to design defect cases in products liability. If we were to take my earlier visual metaphor one step further, it might look something like this:

81. Davis, *supra* note 78, at 347. Similarly, the non-reciprocal risk theory demands regulation of MNCs whose products or activities pollute the environment of international plaintiffs. See, e.g., Walter M. Rogers, Note, "[I]t's All Right to Kill People, but Not Trees": Landowners of Environmentally Unsafe Properties Must Be Held Strictly Liable for Personal Injuries Caused by their Contaminated Land, 66 NOTRE DAME L. REV. 893 (1991) (using Fletcher's non-reciprocal risk theory to impose liability for land pollution).

DIAGRAM NO. 2



The Professor: This diagram paints a portrait of the real problem with using a one-size-fits-all litigation approach to medical malpractice issues. If we consider the ways in which injuries eventuate from technical errors, some errors lie in the domain of inconsequential consequences. They result in no real injury to the patient, or, what is more prevalent and, therefore, important, the consequences of the injuries are correctable during the procedure and, if so corrected, do not result in patient injury. In the other domain, we have injury to the patient—but these consist of known complications that are below the diagnostic threshold to predict and avoid. However, where these two domains intersect is the common domain of physician error that produces avoidable consequences. This is the area where the enterprise regulation and corrective justice principles should operate both to compensate patient injury and to encourage the prevention of injury-causing error. Of course, what this visual metaphor also illustrates is the polycentric nature of medical decision-making. Decisions made in one domain may have effects that produce results in another. For example, an error in technique may result in inconsequential, correctable, or uncorrectable-but-avoidable injuries. Because the cause-and-effect relationship between error and injury is not necessarily linear, but may produce differing but overlapping results, the great flaw in one-size-fits-all medical malpractice litigation is that it tends to obscure the polycentric nature of these decisions,⁸² which in reality can produce incoherent and dissonant

82. See, e.g., Philip G. Peters, Jr., *The Role of the Jury in Modern Malpractice Law*, 87 IOWA L. REV. 909, 944–45 (2002); James A. Henderson, Jr., *Process Constraints in Tort*, 67 CORNELL L. REV. 901,

litigation results that tend to be the stereotype painted by many who bear the appellation of “tort reformist.”⁸³ However, the blunt instrument of tort reformists (such as damages caps, mandatory pre-trial arbitration of all claims, or disallowance of the use of *res ipsa loquitur*) does not address the fundamental problems posed by polycentrism. To the contrary, the polycentrism represented in our diagrams can only be addressed by a taxonomy of errors and injuries that operates as a mechanism that (a) classifies categories of claims, and (b) associates them with a specific technique for resolution that is best suited to the specific issues raised by the particular

923–24 (1982); Richard N. Pearson, *The Role of Custom in Medical Malpractice Cases*, 51 IND. L.J. 528, 534 n.40 (1976). Some writers have asserted, however, that “there is an enormous difference between second-guessing a polycentric decision and making one”—i.e., that a jury can competently second-guess a treatment decision originally made through a series of overlapping, often complex, polycentric decisions:

Say, for example, a medical malpractice case arises out of the treatment of a malignant tumor. Professor Henderson would presumably (and correctly) characterize the treatment decision to be polycentric. Perhaps surgery, radiation, chemotherapy or some combination is appropriate. Perhaps the patient’s age, the presence of other physical or psychological conditions, or the patient’s personal decision regarding quality of life issues must be taken into account in the medical decision-making process.

Nevertheless . . . [a] whole range of decisions that the product designer or physician might have made would all be considered reasonable. The ultimate issue for the advocate, and the key question for the jury, is whether the one actually made falls within the subset of reasonable choices or that of unreasonable choices. In some cases the categorization may be easy or even self-evident. In other cases, the correct categorization may present a close question—possibly raising burden of proof issues. In neither event, however, are the issues impossible (nor, in most cases, even difficult) to adjudicate, and neither case calls for the jury to engage in an exercise of managerial decision making. While assessing reasonableness after the fact has its own set of problems, polycentrism is not among them.

Kotler, *supra* note 36. However, Kotler’s point misses the mark. Juries tend to look at outcomes, not at the niceties of the mini-decisions that must be made by a trained professional, taking into account and balancing many factors, on the road to the ultimate treatment or technique choices. See, e.g., James Henderson, *Expanding the Negligence Concept: Retreat from the Rule of Law*, 51 IND. L.J. 467, 480 (1976). See also Henderson, *supra* note 38, at 1542 (observing that medical malpractice problems are both “highly polycentric” and technologically complex). As Kotler concedes, “[e]mpirical research has tended to demonstrate that people are inclined to find fault after consequences of an accident have been revealed.” *Id.* at 104 n.167. It is precisely that “analytic shortcut” that makes the polycentric, deliberative nature of many medical decisions inappropriate for assessment by jury trial.

83. See Valerie B. Hedrick, *The Medical Malpractice Crisis: Bandaging Oregon’s Wounded System and Protecting Physicians*, 43 WILLAMETTE L. REV. 363, 366–75 (2007); Jordyn K. McAfee, *Medical Malpractice Crisis Factional or Fictional?: An Overview of the GAP Report as Interpreted by the Proponents and Opponents of Tort Reform*, 9 J. MED. & L. 161 (2005); Michelle M. Mello, *Managing Malpractice Crises*, 33 J.L. MED. & ETHICS 414 (2005). For an example of crisis-mongering as the excuse for heavy-handed tort reform, see, e.g., Lindsay, J. Stamm, Comment, *The Current Medical Malpractice Crisis: The Need for Reform to Ensure a Tomorrow for Oregon’s Obstetricians*, 84 OR. L. REV. 283 (2005); Lauren Elizabeth Rallo, Comment, *The Medical Malpractice Crisis—Who Will Deliver the Babies of Today, the Leaders of Tomorrow?*, 20 J. CONTEMP. HEALTH L. & POL’Y 509 (2004).

combination of error and injury that emanate from the relationships depicted in Diagram 2.⁸⁴

The Neurosurgeon: Again, I'm not necessarily buying this entirely, but the distinction you're trying to draw is helpful and one that actually has some appeal when considering the ACD&F procedure. We'll have to consider those implications much further another day.⁸⁵ I've enjoyed the energy of our discussion today. Now, I'm off to prepare for a presentation that I'm giving at the American College of Legal Medicine on the topic of quality of medical care.

IV. DÉPEÇAGE: EXAMINING MEDICAL MALPRACTICE FROM THE CORRECTIVE JUSTICE-ENTERPRISE REGULATION PERSPECTIVE

The preceding dialogue between The Professor and The Neurosurgeon illustrates a problem inherent in medical malpractice litigation involving a complex surgical procedure—a problem that the current crop of tort reform measures does not adequately address. The problem is accentuated by the severe logical and policy limitations unnecessarily created by our common-law legal system's treatment of all malpractice issues under the aegis of the law of

84. See, e.g., Fuller, *Adjudication and the Rule of Law*, *supra* note 38; Fuller, *The Forms and Limits of Adjudication*, *supra* note 38, at 382–91, 394–405.

85. In fact, in reviewing Section IV of this article, Dr. Schlachter observed that his own ideas differ from those proposed by the Professor:

I finished reading the paper and as you might expect, I have some ideas that are different from the proposed solutions My thoughts about reforming the system are outlined well in a 2007 book by Tom Baker of Yale Law School, *The Medical Malpractice Myth*. . . . He contends that the problem with medical negligence is that simply too much of it goes unrecognized and unchallenged. He is in favor of mandatory reporting of errors and mistakes to the patient. He describes how there is an economic threshold that has to be reached for an attorney to take an interest. He suggests that there be a no-fault-like system that eliminates causation proof requirements for lawsuits that are valued at a lesser amount of money, so that all [those claims may be heard in] . . . an administrative-type process where well-trained judges or panels rule on standard-of-care deviations. For cases where the amounts are above a certain level, say \$300,000, the present jury system would be used. In your proposals, you suggest the use of panels that include physicians. I am sorry to say that in almost every state where screening panels are used, they fail miserably because the physician-members are not committed to fairness and objectivity. Every time I try to synthesize a solution, I come back to the jury system as being the best way (even though it is imperfect in many ways). The question that seems eternally unanswered is how to avoid rough justice with a jury system, if that is possible.

E-mail from Dr. Schlachter to Professor Van Detta, Professor of Law, John Marshall Law School (Feb. 22, 2009). See TOM BAKER, *THE MEDICAL MALPRACTICE MYTH* (2007). Consequentially, the Professor and the Neurosurgeon plan to revisit these subjects in a future dialogue wherein the Neurosurgeon will critique, from his unique perspective, the proposals the Professor has advanced in Section IV, *infra*.

negligence as administered in civil jury trials. The Neurosurgeon exposes their flaw. By distinguishing between and classifying the common errors that occur in a single neurological procedure (errors that the law of negligence would crudely lump together as “malpractice”), we have seen the great failing of the medical malpractice regime—one that lies neither in the caution of elected judges nor in the hands of the mythical runaway juries.⁸⁶ The problem lies in a system crying out for intellectual refinement, to ameliorate the crude “one-size-fits-all” brand of justice that leads to analytic dissonance—and thus common misunderstanding of the cause of seemingly abusive outcomes, whose flaw in fact resides in the inherent analytical penury of a system that predated modern malpractice claims and was never modified to meet the needs of such adjudication.

A. The Dépeçage Approach to Classification of Errors for Malpractice Liability in Complex Neurosurgery

As counterpoint to the unitary litigation system is a more meaningful approach that has two prominent features: (1) it categorizes and distinguishes among malpractice issues, and (2) it provides an array of dispute resolution techniques that are specifically selected for particular classes of issues based on their suitability for resolving the critical questions of competence and performance presented. I call this a *dépeçage*⁸⁷ approach to medical malpractice “reform.” *Dépeçage* is a term familiar to scholars and students of conflict of laws. *Dépeçage* refers to interstate or international cases in which

86. See, e.g., Thomas A. Eaton, *Of Frivolous Litigation and Runaway Juries: A View from the Bench*, 41 GA. L. REV. 431 (2007). As Professor Eaton observes: “[T]he political case for tort reform is based in large measure on the perception that there are too many frivolous law suits and too many excessive jury awards. While there is considerable empirical evidence casting doubt on both these propositions, they remain the linchpins of the tort reform movement.” *Id.* at 432 (introducing an empirical study of trial-judge perceptions of pre-plaintiff jury verdict incidence and size of plaintiffs’ damages awards). After examining the data gathered in his survey of Superior Court judges, Professor Eaton commented:

[I]t is clear that Georgia trial judges observe few signs of runaway juries. Judges report that damages awards in general and awards for noneconomic loss in particular are supported by the evidence. Indeed, several judges commented that damage awards are frequently lower than the evidence would support. [Also] . . . consistent with other state and national studies, punitive damage awards are few and far between.

Id. at 446.

87. This discussion of *dépeçage*—which translates literally from the French meaning “dismemberment”—was adapted from SYMEONIDES ET AL., *supra* note 16. The term “*dépeçage*” was derived from the French “*depecer*,” meaning “to dissect” or to take to pieces. Christian L. Wilde, *Dépeçage in the Choice of Tort Law*, 41 S. CAL. L. REV. 329 n.3 (1968).

choice-of-law questions have arisen with respect to more than one issue.⁸⁸ Rather than simply apply one state or nation's law as a one-size-fits-all answer, *dépeçage* indicates more subtlety and concern for competing state interests by separately analyzing, under the relevant choice-of-law rules, the appropriate choice of law on an issue-by-issue basis.⁸⁹

As one commentator recently put it, "when dealing with complicated choice-of-law issues, courts should actively embrace complexity by applying" *dépeçage* because it "allows courts to isolate and limit true conflicts between differing bodies of law, which facilitates more adequate analysis of underlying interests and policies."⁹⁰ Within the same case, substantively different issues may be decided under the laws of different states or nations. Thus, the court selects the specific positive laws appropriate to each issue, and it may therefore apply several different sovereigns' laws in the same case. In this sense, *dépeçage* "dismembers" the one-size-fits-all approach into a more focused, and searching, set of inquiries.⁹¹

As Professor Willis Reese described it, *dépeçage* provides a fine-tuned analytic approach, rather than the intellectual short-circuit of a dull axe:

[T]here is at least one point on which there seems to be general agreement in the United States. This is that choice of the applicable law should frequently depend upon the issue involved. The search in these instances is not for the state whose law will be applied to govern all issues in a case; whether it is for the rule of law that can most appropriately be applied to govern the particular issue.⁹²

The appropriateness of *dépeçage* in tort cases for choice-of-law issues is documented,⁹³ and the policies served by applying *dépeçage* have been described as varied and substantial:

Dépeçage is clearly appropriate when application of the rules of different states to determine different issues in the same case (a) would result in the application to each issue of the rule of the state with the greatest concern in the determination of that issue, (b) would serve to effectuate the purpose of each of the rules applied, and (c) would not disappoint the expectations of the parties. *Dépeçage* may also be

88. Reese, *supra* note 16.

89. SYMEONIDES ET AL., *supra* note 16, at 134.

90. Christopher G. Stevenson, Note, *Dépeçage: Embracing Complexity to Solve Choice-of-Law Issues*, 37 IND. L. REV. 303, 304 (2003).

91. See, e.g., SYMEONIDES ET AL., *supra* note 16, at 134 & n.1; Reese, *supra* note 16, at 48; Stevenson, *supra* note 90, at 304–05; Wilde, *supra* note 87, at 329–30.

92. Reese, *supra* note 16, at 58.

93. See Stevenson, *supra* note 90, at 304–05; see, e.g., SYMEONIDES ET AL., *supra* note 16, at 134 & n.1; Reese, *supra* note 16, at 48; Wilde, *supra* note 87, at 329.

appropriate when its use would serve other choice-of-law values, such as protection of the justified expectations of the parties, even though this might distort or threaten to distort the purpose of one or more of the rules applied.⁹⁴

Much the same can be argued for transporting *dépeçage* into the substantive realm of adjudicating malpractice claims. A finer-tuned approach will scrutinize the *kind* of error alleged to have occurred; the *base* of knowledge required to adjudicate whether the error is within or without the professional standard of care; and, considering the *kind* of error and the knowledge *base* required, the most appropriate *resolution technique* to effect that adjudication. I call this the *dépeçage model* for classifying errors and associating specific classes of error with optimal resolution techniques. Association with optimal resolution techniques requires evaluation of the two competing principles underlying professional malpractice claims: the enterprise regulation principle and the corrective justice principle.

The operating assumption of the *dépeçage* model is elegant in its simplicity. Resolution techniques chosen to adjudicate (a) liability, and (b) damages, where appropriate, should be those that are most reasonably calculated to vindicate both the enterprise regulation and the corrective justice principles. With respect to some classes of error, the optimal resolution technique will vindicate both principles; as to other classes of error, a *comparative impairment* approach⁹⁵ must be employed to determine which combination of resolution techniques most advances the corrective justice principle while least impairing the principle of enterprise regulation. This comparative impairment approach is founded on the assumption that the corrective justice principle holds the highest position in what may be called a hierarchy of values that are reified through tort principles and rules of law.⁹⁶

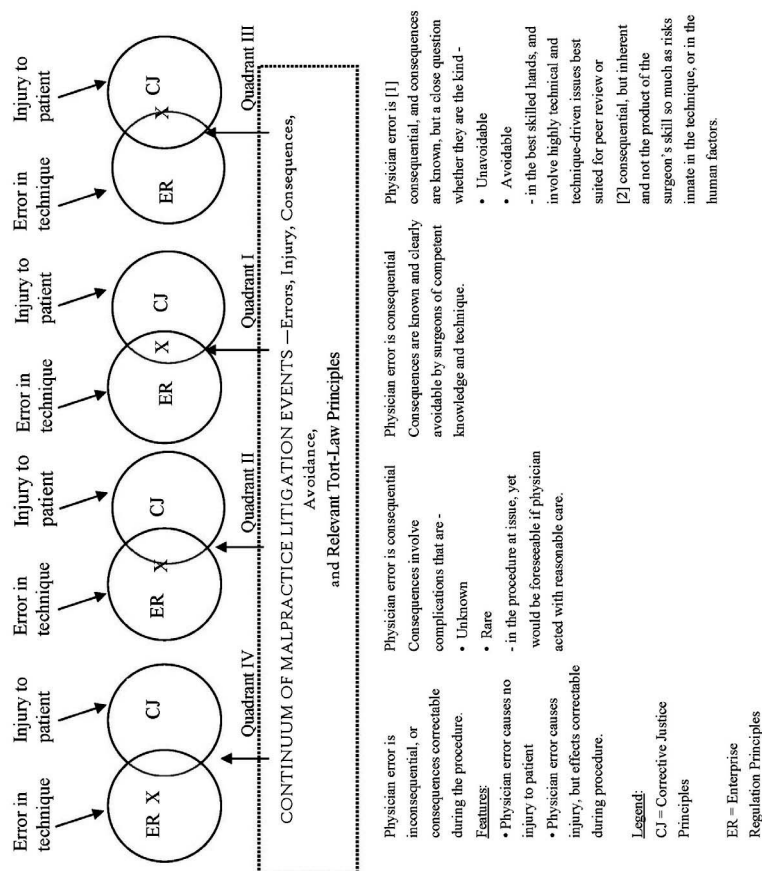
94. Wilde, *supra* note 87, at 332 (noting that “[c]ourts and writers seem to agree that there is no reason why all issues arising out of the tort claim must be resolved by reference to the law of the same jurisdiction.”).

95. Comparative impairment is, like *dépeçage*, a concept borrowed from Conflict of Laws. See, e.g., *Bernhard v. Harrah’s Club*, 128 Cal. Rptr. 215, *cert. denied*, 429 U.S. 859 (1976) (exploring the basis of the comparative-impairment approach and applying that approach to a conflict-of-laws problem involving a conflict between dram-shop liability laws in Nevada and California); William F. Baxter, *Choice of Law and the Federal System*, 16 STAN. L. REV. 1, 18–22 (1963); Harold W. Horowitz, *The Law of Choice of Law in California—A Restatement*, 21 UCLA L. REV. 719, 748–58 (1974); Leo Kanowitz, *Comparative Impairment and Better Law: Grand Illusions in the Conflict of Laws*, 30 HASTINGS L.J. 255 (1978).

96. See Richard W. Wright, *Right, Justice, and Tort Law*, in PHILOSOPHICAL FOUNDATIONS OF TORT LAW 176–82 (David G. Owen ed., 1995); George C. Christie, *The Uneasy Place of Principle in Tort Law*, 49 SMU L. REV. 525 (1996).

Theoretically, the relationship between the principles we have identified and the various outcomes could be expressed in a multi-level visual metaphor, showing the intersection between the principles, and the outcomes at the dépeçage level for adjudicatory techniques:

DIAGRAM NO. 3: CONTINUUM OF MALPRACTICE EVENTS AS CONSEQUENCES, AVOIDABILITY, AND PHYSICIAN SKILL VARY IN COMBINATIONS



We can then reduce this theoretical construct to a Cartesian kind of chart, except that rather than using quadrants, we use sextants that are based on six classifications of errors in neurosurgery (derived from the dialogue with the Neurosurgeon):

DIAGRAM NO. 4
DÉPÊÇAGE MODEL FOR CLASSIFICATION OF ERRORS AND RESOLUTION TECHNIQUES FOR THE MEDICAL MALPRACTICE CLAIM
ARISING FROM THAT ERROR
PRINCIPLES AND RESOLUTION TECHNIQUES

CLASSIFICATION OF ERROR TYPES IN ACD&F PROCEDURE				
	ENTERPRISE REGULATION	CORRECTIVE JUSTICE	DÉPÊÇAGE: OPTIMAL RESOLUTION TECHNIQUE FOR [a] Liability	DÉPÊÇAGE: OPTIMAL RESOLUTION TECHNIQUE FOR [b] Damages
CLASS 1 – Known Complications Unavoidable In The Best-Skilled Hands (known complications that may and do occur even when the surgeon is exercising a high degree of care)	Most efficiently and effectively accomplished through a self-regulating profession because the benefit of medical care is greater than the risk, and profession best situated to distinguish Class 1 cases (not actionable) from Class 2 cases, that implicate basic levels of medical competence. ⁹⁷	Highly technical and technique driven issues – issues suited for peer determination through non-judicial process. ⁹⁸	Class 1: None	Class 1: None
CLASS 2 – Known Complications Avoidable By Competent Hands (known complications outside standard of care because surgeon of competency would foresee and prevent)			Class 1: None ----- Class 2: As determined by ADR panel. Licensure discipline, continuing professional education, ⁹⁹ quality control required.	----- Class 2: Compensatory damages for provable losses; pain and suffering damages limited by legislatively created Injury Compensation Panel; no punitive damages.

97. See, e.g., MARILYNN M. ROSENTHAL, DEALING WITH MALPRACTICE: THE BRITISH AND SWEDISH EXPERIENCE 236–53 (1988), available at <http://books.google.com/books?id=VxdeVMf8p0C&printsec=frontcover&dq=Marilynn+M.+Rosenthal#PPR7.M1> (last visited Mar. 12, 2009).

98. See Jeffrey A. Van Dett, “Typhoid Mary” Meets the ADA: A Case Study of the “Direct Threat” Standard under the Americans with Disabilities Act, 22 HARV. J. LAW & PUB. POL’Y 849 (1999).

99. See, e.g., Albert Yoon, *Mandatory Arbitration and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the West*, 6 AM. L. & ECON. REV. 95 (1996).

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	ENTERPRISE REGULATION	CORRECTIVE JUSTICE	DÉPÊÇAGE: OPTIMAL RESOLUTION TECHNIQUE FOR <i>[a] Liability</i>	[b] Damages
CLASS 3 – Extension Of Injury From Known Complication Of Class 1 Or 2 (injuries consequent to complication): (a) transitory/permanent (b) incidental/serious (c) foreseeable/unforeseeable	Complications that are either unknown or rare are more varied and difficult to predict; the physician has > cognitive challenge to (1) recognize and (2) minimize the risk of those complications. However, to the > extent that complications are (a) permanent (b) serious, and (c) foreseeable, the state has an interest in securing compensation for victim. Don't wish to regulate the procedure out of existence, however. ¹⁰⁰	Victims receive palpable injuries, which they themselves can't avoid or protect against. Having been injured through non- reciprocal risk imposed, they should have compensatory recovery. ¹⁰¹	Statutory liability for permanent, serious and foreseeable complications based on Fletcher's theory of non-reciprocal risks and the model of the National Childhood Vaccine Injury Act ("NCVIA"). ¹⁰²	Injury fund to compensate victims modeled after NCVIA. Contributions to fund from a variety of stakeholders (HMOs, Ins. Cos., MDs, States) and sufficient experience with medical malpractice awards to create comprehensive injury table. Offers less costly, more coherent, and more consistent results nationally than localized medical malpractice insurance premium fluctuations.

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100. See, e.g., Michelle M. Mello, *Malpractice Liability and Medical Error Prevention: Strange Bedfellows?*, at 11–12, 14 (paper presented at Council on Health Economics and Policy Conference on Medical Malpractice Practice in Crisis: Health Policy Options, Mar. 2003), available at <http://council.brandeis.edu/pubs/MalpracticeAndErrors-Mello.pdf> (last visited Mar. 13, 2009).

101. See, e.g., Fletcher, *supra* note 62; see also Fletcher, *supra* note 74. Fletcher's approach, however, is not without its critics. See, e.g., Heidi M. Hurd, *Non-reciprocal Risk Imposition, Unjust Enrichment, and the Foundations of Tort Law: A Critical Celebration of George Fletcher's Theory of Tort Law*, 78 NOTRE DAME L. REV. 711, 721–24 (2003). However, the critics tend to argue from a *reductio ad absurdum* position, and do not apply non-reciprocal risk doctrine with much finesse. See, e.g., *id.* at 724.

102. 42 U.S.C. § 300aa–1; see also Schafer v. Am. Cyanamid Co., 20 F.3d 1 (1st Cir. 1994); DAN B. DOBBS & PAUL T. HAYDEN, TORTS AND COMPENSATION 870–72 (4th ed. 2001).

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	ENTERPRISE REGULATION	CORRECTIVE JUSTICE	DÉPÊÇAGE: OPTIMAL RESOLUTION TECHNIQUE FOR <i>[a] Liability</i>	<i>[b] Damages</i>
CLASS 4 – Complications Arising From New, Foreseeable Complications That Develop During the Procedure (injuries caused where surgeon fails to exercise level of care require to minimize to patient new risks developing during the course of the procedure – i.e., the potential of sui generis complications)	Physicians must be encouraged to not only perform with competent knowledge and technique, but also to take reasonable care to minimize as much as possible known or foreseeable risks to the patient. ¹⁰³	Victims merit compensation for injuries eventuating from avoidable risk of known or foreseeable complications. ¹⁰⁴	Reasonableness ¹⁰⁵ – not “custom” – as determined by ADR panel. - No need to “educate” lay jury - No need to leave technical page]	Based upon ADR panel’s findings, trial on compensatory damages held before jury in state’s trial court of general jurisdiction. Punitive damages awarded only upon ADR panel finding of egregiousness.

CLASSIFICATION OF ERROR TYPES IN ACD&F PROCEDURE

103. See *id.* at 8–13, 15–16, 18–19.104. This view of the application of the corrective justice principle is derived by Professor Van Dettia from synthesizing his own thought and that of previously cited authorities on the corrective justice principle with the previously cited authorities on non-reciprocal risk theory. See Van Dettia, *The Irony of Instrumentalism*, *supra* note 1, at 456.105. Peters, *supra* note 32, at 165, 172–87 (discussing specific jurisdictions that have abandoned the customary-care standards in medical malpractice cases in favor of a reasonable-physician or prudent-physician standard of care); see, e.g., Philip G. Peters, Jr., *The Role of the Jury in Modern Malpractice Law*, 87 IOWA L. REV. 909, 911 (2002) (discussing the trend towards a standard of “reasonable,” rather than “customary” care in medical malpractice cases); Cramm et al., *supra* note 20, at 699, 707–10 nn.35–45 (discussing the shift towards a reasonable-care standard for medical malpractice in 19 states and exploring the wording of jury instructions in those states); Amy Jurevic Sokol & Christopher J. Molzen, *The Changing Standard of Care in Medicine*, 23 J. LEGAL MED. 449, 485–86, 488–89 (2002) (citing the “growing pool of new technology-related documents,” “computer software decision-making programs, electronic medical record guidelines, strongly-worded professional policy papers and alerts on using new technology to reduce errors,

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CLASSIFICATION OF ERROR TYPES IN ACD&F PROCEDURE				
	ENTERPRISE REGULATION	CORRECTIVE JUSTICE	DÉPÊÇAGE: OPTIMAL RESOLUTION TECHNIQUE FOR <i>la/ Liability</i>	<i>la/ Damages</i>
			details in lap of lay jury's comprehension and emotions. ¹⁰⁶ - Less need for extensive expert testimony. ¹⁰⁷	
Class 5 – Complications That Arise From New Unforeseeable Risks That Develop During The Course Of The Procedure (adverse unforeseeable consequences occur; redefine standard of care) – i.e., how did the surgeon properly respond to the unforeseeable complication?	Key policy questions: should the profession or the patient bear the risk of loss caused by adverse, unforeseeable consequences? And if shared, then how should those losses be allocated? ¹⁰⁸	Fletcher's theory of corrective justice for non-reciprocal risks demands compensation when the tortfeasor's activities impose risks on the victim that are of greater magnitude and have more serious consequences than any risk the victim can impose on the tortfeasor. ¹⁰⁹	Administrative complaint initiated by a physician, injured patient, or patient's relatives before a medical license review board, created by legislation (e.g., from a Model Act) in each state and dovetailed to administrative structure and process already in place for medical licensure.	Promoting a self-regulating profession: refer such cases to a medical licensing review board to determine "unforeseeability" in light of empirical information; developed through database collection and analysis at a national level (e.g., via a Model Act) ¹¹⁰ ; foreseeable injuries referred to Class 1–4 resolutions, <i>supra</i> .

evidence-based outcome studies adopted by governing specialty boards, and a variety of hospital policies, procedures and bylaws generated to encourage physician acceptance of newly implemented technology" as leading to "[b]oth plaintiffs and defendants . . . propel[ling] the utilization of such evidence and the custom component of the standard of care increasingly . . . becoming[ing] a battle of competing and contradictory guidelines and documents," therefore implying that a reasonableness standard needs to emerge to permit doctors to actually practice medicine lest they "forget that every patient is unique and medications, diagnosis, tests, and procedures affect every patient differently").

106. See Peters, *The Role of the Jury in Modern Malpractice Law*, *supra* note 74, at 921–50 (exploring competency of juries to make informed decisions under a reasonableness standard of care in medical malpractice cases).

107. See, e.g., William M. Sage, *Enterprise Liability and the Emerging Managed Health Care System*, 60 LAW & CONTEMP. PROBS. 159, 189–91 & nn.150–61 (1997) (discussing emergency of mandatory ADR in medical malpractice reform).

108. See, e.g., Mello, *supra* note 100, at 8–21.

PRINCIPLES AND RESOLUTION TECHNIQUES

	ENTERPRISE REGULATION	CORRECTIVE JUSTICE	DEPECAGE: OPTIMAL RESOLUTION TECHNIQUE FOR [a] <i>Liability</i> [b] <i>Damages</i>
CLASS 6 – Complications Result From Risks Inherent In The Techniques Used In The Procedure, On Human Factors Implications Of Employing That Technique The injury is the result of an inherent risk in technique used to perform the procedure, or is the result of human factors issues raised by the choice of equipment used in the chosen treatment technique.	Strong state interest in regulating because creators of non-reciprocal risks must be held accountable for the safety of the public to whom they expose to these risks. ¹¹¹	Fletcher's theory of corrective justice for non- reciprocal risks demands compensation when the tortfeasor's activities impose risks on the victim that are of greater magnitude and have more serious consequences than any risk the victim can impose on the tortfeasor. ¹¹²	Compensatory and punitive Damages per Restatement (Second) Torts § 402A

CLASSIFICATION OF ERROR TYPES IN ACD&F PROCEDURE

109. Van Datta, *The Irony of Instrumentalism*, *supra* note 1, at 456; Fletcher, *supra* note 62, at 537; Fletcher, *supra* note 74, at 1658; and Hurd, *supra* note 101.

110. See, e.g., Cramm et al., *supra* note 20, at 726–34, 746, 749–56 (2002) (advocating use of physician surveys to ascertain details of customary standard of care, and explaining the usefulness of such surveys even in jurisdictions that have adopted the reasonableness standard of care in medical malpractice actions).

111. Van Datta, *The Irony of Instrumentalism*, *supra* note 1, at 46; see, e.g., Mello, *supra* note 100, at 8–21.

112. See e.g., Mello, *supra* note 100, at 8–21.

113. Fletcher, *supra* note 62, at 546.

In Part III, we have constructed a framework for a fresh approach to medical malpractice issues. This framework arises from the case study of technical errors in neurosurgery, but obviously has broader applicability. Before applying that framework to reflections upon the various specific errors in technique discussed by Dr. Schlachter, we should synthesize the analytic template formulated in the dialogue.

B. Exploring the Dépeçage Model in Detail and Application

Sorting the technical errors in neurosurgery into six paradigmatic classifications is the key to a dépeçage approach. It permits an examination of each kind of error within a framework of legal principles. The interaction of those principles provides a sound, doctrinal basis for developing approaches to the three critical questions that current law deficiently addresses: (1) who sets the standard of care; (2) for what kind of specific injuries; and (3) how should those injuries be compensated? By contrast, current tort law, including so-called tort reform, addresses these questions in a purely instrumentalist fashion—it simply asks how we can tinker with features of the system in an ad hoc manner to achieve specific outcomes desired by special-interest groups.

At this juncture, it is important to make a preliminary observation about by whom—and how—the dépeçage model might be implemented. The model is intended to be a working approach to a reform methodology. The reform must come from state legislatures. The dépeçage model does not provide a machine such as the one Professor Brainerd Currie once playfully described in trying to explain a notorious California Supreme Court decision:

The judges fed the data into the machine in the usual way, but, when the machine's answer came out, they couldn't swallow it. They rebelled against the machine. They adjudicated the case. Using discretion and intelligence, and having regard to the fact that it was a lawsuit they were trying, they looked for a result they could live with So they went back to the machine and fed the same data into it again, this time using a somewhat different procedure. After pressing the button marked "Procedure is governed by the law of the forum, substance by the law of the place of the wrong," they pressed the button marked "Procedural" instead of the one marked "Substantive." This time the machine came up with the answer that the court had arrived at independently.¹¹⁴

114. Brainerd Currie, *Survival of Actions: Adjudication Versus Automation in the Conflict of Laws*, in *SELECTED ESSAYS ON THE CONFLICT OF LAWS* 128, 138–39 (1963) (discussing *Grant v. McAuliffe*, 264 P.2d 944, 949 (Cal. 1953) (characterizing survival of actions as a procedural issue, thus enabling the court to apply the forum's law and allowing survival)). See Jeffrey L. Rensberger, *Jurisdiction, Choice of Law, and the Multistate Attorney*, 36 S. TEX. L. REV. 799, 831 (1995).

To the contrary, the *dépeçage* model provides a template for legislatures that wish to structure a coherent approach and consistent solution to the problems posed by the current medical malpractice adjudicatory system. The model must be adapted to the policy considerations and medical realities of specific kinds of advanced, technical surgical procedures. In other words, the *dépeçage* model provides a map for legislatures to follow in structuring a statutory scheme to achieve meaningful and lasting tort reform in the medical malpractice area—reform that is fair and rational for all constituencies. The legislation should prescribe the *dépeçage* model, but not apply it. It should defer that to an administrative board. The legislation ought to establish an administrative board composed of representatives of the major constituencies, where the expertise of patient advocates, tort reform scholars, physicians, judges, insurers, and attorneys could be assembled to apply the *dépeçage* model with the benefit of their collective experience and perspectives. The board's principal function would be to investigate the spectrum of errors and injuries arising from specific surgical procedures and to establish, by rule-making, where each specific kind of error and injury is classified within the *dépeçage* model. The legislation would specify where—and by what adjudicatory method—claims based on errors within each specific classification will be resolved.

With that implementation approach in mind, the points made in Diagram No. 4 are further explored below to elucidate their details. Each classification will be discussed in three successive and logically interconnected perspectives. First, we discuss the way in which the principles bear upon the issues that errors of that particular kind in the ACD&F procedure raise. Second, we discuss how that intersection of principles should affect determinations of liability and damages, based on the answer to the trilogy of critical questions posed above that current law deficiently addresses. Third, we note how some of the specific errors in the ACD&F procedure might be classified under the taxonomy of the *dépeçage* model.

1. Class One and Two Errors: Known Complications in the Best-Skilled Hands—Are They Avoidable?

It goes almost without saying that even the most skilled surgeons—those who perform their work with the highest degree of care and the greatest amount of knowledge, skill, and preparation—cannot guarantee an injury-free procedure. Entering into the surgical zone alone carries with it certain risks for

the patient based on the realities that the human body is complex and the interaction of its systems not completely understood; the interaction of surgical techniques and the human body systems is based on a defined, accumulated store of information that is incomplete; and the reaction of a patient's body in a particular procedure depends on unique genetic and physical components that are not sufficiently understood to permit flawless prediction of how the body will respond. Thus, the first two classifications of errors that I have proposed in this dépeçage model encompass the known complication but then require categorization of the consequence as “unavoidable” or “avoidable.” This further refinement is necessary to reflect both the realities of medical treatment as well as the need to tailor liability rules and adjudication techniques to reflect the interplay of the enterprise-regulation and corrective-justice principles.

Typically, those injuries that should be classified as Class One Errors arise from known complications that may, and do, occur even when the surgeon is exercising a high degree of care and no amount of care can eliminate their risk. They are perhaps best understood as analogous to the “unavoidably unsafe drug” spoken of in Comment k to the *Restatement (Second) of Torts* § 402A:

k. Unavoidably unsafe products. There are some products which, in the present state of human knowledge, are quite incapable of being made safe for their intended and ordinary use. These are especially common in the field of drugs. An outstanding example is the vaccine for the Pasteur treatment of rabies, which not uncommonly leads to very serious and damaging consequences when it is injected. Since the disease itself invariably leads to a dreadful death, both the marketing and the use of the vaccine are fully justified, notwithstanding the unavoidable high degree of risk which they involve.¹¹⁵

The tort-reform legislature's role in creating this classification, however, is not to sit in judgment of whether a particular known harm that occurs during a particular complex neurosurgical procedure is “avoidable” or “unavoidable.” Rather, the tort-reform legislature needs to create an adjudicatory body to investigate and determine such matters—and to do so in an informed, coordinated manner, rather than in the helter-skelter chaos of common-law malpractice litigation. I have previously argued in favor of such constituency-representative, expert-driven assessment panels in an allied area of risk determination (whether individuals are direct threats to health and safety in a

115. RESTATEMENT (SECOND) OF TORTS § 402A cmt. k (1965).

workplace).¹¹⁶ What I pointed out in that context about the unsuitability of traditional tort litigation in resolving complex medical issues involving technical information applies just as well to the determinations that Class One and Class Two classification require:

[T]here is no reason to believe that a jury verdict would provide any better resolution of the medical issues and frequently conflicting medical opinions that characterize a “direct threat” case. Indeed, the jury would seem to be a fairly poor means of resolving “direct threat” issues. The anonymous and outcome-oriented decision making that characterizes juries simply will not suffice in the application of the “direct threat” standard. The “direct threat” standard involves the weighing of scientific data, evolving scientific theories, possibly competing methodologies, and often conflicting expert opinions regarding the “direct threat” factors of “risk,” “harm,” “severity,” “likelihood,” and “imminence.” For this analysis to be meaningful, it cannot simply be expressed in a jury verdict that ultimately finds a defendant liable or not liable for alleged discrimination on the basis of a claimed disability. Even special interrogatories to a jury cannot do justice to a legal analysis that recognizes the relevant factors but does not—and cannot—supply the relevant medical or scientific background and context that is crucial to assigning relative importance and perspective to those factors in a specific case. The best that any jury can do is to pick between two simplified, polarized views of a body of scientific or medical evidence that may in reality command a spectrum of subtle interpretation and implication. Such a condensation of complex issues can hardly be expected in the long run to serve the rights of either the disabled or the public interest in safety. The ultimate determination is not merely a question of whether the plaintiff was discriminated against because of a statutorily protected classification as in, for example, Title VII and ADEA cases. The ultimate determination in a “direct threat” case may have life and death consequences for the plaintiff, his or her co-workers, and members of the public at large.¹¹⁷

The problems of known risks and the classification of consequences by their “avoidability” are determinations that share the same kinds of important science-and-professional-judgment data points. The problems with litigation-based adjudications are therefore similar: An all-or-nothing kind of lay determination based on choices between starkly divergent expert testimony fails to grapple with the nuances that abound in such matters, and provides little guidance for improving either physician performance or the medical-care delivery system:

[Each case in which a direct-threat determination must be made should provide] guidance that proves to be essential in defining many parameters of safety-sensitive employment in the future (for example, what constitutes a “significant risk” in a particular safety-sensitive occupation, what kinds of harm must be eliminated to

116. See generally Van Detta, *supra* note 98.

117. *Id.* at 937–39.

reduce the risk to an “acceptable” level, under what circumstances is potential harm “severe” and “imminent,” what functions of the job are both essential and safety-sensitive, and what kinds of measures either do or do not sufficiently reduce a “significant risk” to “acceptable” levels?). A jury verdict is woefully inadequate to provide that crucial element in potentially precedent-setting applications of the “direct threat” test. At best, a jury would be called upon to choose between two sets of competing medical or scientific expert opinions. The jury is not allowed to compromise between, harmonize, or blend such competing opinions. Nor is a jury competent to do so.¹¹⁸

Indeed, the kinds of questions posed by the issues arising under Class One or Two situations are ultimately “not legal questions within the province of courts or juries. The courts do not have the medical or scientific competency to answer such questions in a systematic way.”¹¹⁹

Thus, the analogy of Class One and Two Errors to the Comment k unavoidably-unsafe-drug scenario and the “direct-threat” determinations under disability discrimination laws beckons a legislature engaged in tort reform to create an agency or panel of stakeholders from throughout the health-care system (doctors, patients, professors, consumer advocates, legal counsel) to identify classes of injuries in complex procedures that need to be treated like the unavoidably unsafe drugs described in the *Restatement (Second)*. Placement of an error or complication into that category must be the product of balancing, as Comment k invites, of the interests emanating from the procedure’s utility and singularity in addressing a health condition, and from the intractable risks that it presents even when all humanly feasible, expert care is taken. It is a policy judgment, but one that expertise can make intelligently by considering the principles underlying the choice. The enterprise regulation principle militates that the liability determination made by such a panel should be focused on quality control.¹²⁰ The achievement of quality control in the operation of such a multi-lateral alternative dispute resolution (“ADR”) panel¹²¹ includes dealing with the physician as a valuable, contributing individual who can learn from errors.¹²² This learning may require creating an environment that will compel an individual physician to recognize and confront a problem using means of affecting the physician’s licensure

118. *Id.* at 939.

119. *Id.* at 956.

120. See Van Detta, *The Irony of Instrumentalism*, *supra* note 1, at 460–71.

121. See James R. Holbrook, *Mandatory Binding Arbitration of Medical Malpractice Claims in Utah*, 16 UTAH B.J. 8 (2003) (discussing one state’s experiment with mandatory binding arbitration of future malpractice claims as the *quid pro quo* for insured care coverage).

122. See, e.g., Philip G. Peters, Jr., *Health Courts?*, 88 B.U. L. REV. 227 (2008); Philip G. Peters, Jr., *Doctors and Juries*, 105 MICH. L. REV. 145 (2007).

status and connecting, in appropriate cases, the maintenance of that status on the physician's willingness to complete situationally prescribed continuing professional education.

In its parallel operation, the corrective-justice principle looks to relief for the individual patient, but within the context of a holistic, functional approach to regulating quality control. Consistent with that perspective, a tort-reform legislature should look to the compensation-injury funds used in a variety of injury scenarios that pose special public policy problems, and create such a fund out of a variety of sources, including insurers, public tax funds, and physicians themselves. The funds should be administered by a compensation panel (for which there is precedent in areas including worker's compensation and the 9/11 victims' fund¹²³) in a way that carefully mediates the interplay of the enterprise regulation and corrective justice principles.¹²⁴ For example, the legislation could define the scope of relief for proven cases to panel awards of compensatory damages for provable losses; pain and suffering damages limited by empirically established formulae¹²⁵ through rulemaking hearings

123. See Robert L. Rabin, *September 11 Through the Prism of Victim Compensation*, 106 COLUM. L. REV. 464 (2006) (discussing how bold legislators can be with an administratively-based adjudication and compensation statutory scheme); see Jillian K. Hadfield, *Framing the Choice between Cash and the Courthouse: Experiences with the 9/11 Victim Compensation Fund*, 42 LAW & SOC'Y REV. 645 (2008) (providing nuanced views of why the 9/11 fund may not have fully achieved its litigation-avoidance potential).

124. See Ellen Wertheimer, *Calling It a Leg Doesn't Make It a Leg: Doctors, Lawyers, and Tort Reform*, 13 ROGER WILLIAMS U. L. REV. 154, 155 (2008) (arguing that one of the principal problems that has been identified in tort reform is that little of it focuses on the role and perspective of the medical profession in the process, leaving the medical professional alienated by personalized litigation battles waged by professional lawyer peers and by the uninformed interference of medically unsophisticated state legislatures). Professor Wertheimer observes that:

Lawyers, trained to objectivize their cases, fail to take into account the extent to which being sued is personal to the defendant in all cases, but perhaps most of all in medical malpractice cases where the defendant's professional identity is under attack. Attorneys, whose exercise of professional judgment is much more rarely challenged, cannot share this traumatic experience with doctors.

[Noteworthy is] the contrasting treatment the tort system gives to doctors and lawyers, and the ways in which the tort system has developed to cause doctors the maximum in professional angst. The legal profession judges doctors; doctors get no opportunity to judge lawyers. Indeed, lawyers, through the legal system, judge themselves.

Id. at 155–56. Of course, legislatures themselves compound the problem, because their members (and lobbyists) are primarily lawyers and “most of the legislators lack medical training.” *Id.* at 184. Thus, a key to the *dépeçage* approach that I propose is the integral involvement of medical doctors—whether they also hold law degrees or not—in a regulatory process, rather than a legislative process, of working the application of the *dépeçage* principles, in order to alleviate “the real problems created by the intersection of medicine and the law” by “mak[ing] the legal approach to medicine more scientifically rational.” *Id.* at 185.

125. See, e.g., Joseph A. Sanders, *Reforming General Damages: A Good Tort Reform*, 13 ROGER

conducted by the panel¹²⁶; and eschewing punitive and exemplary damages in favor of a regime that focuses on quality control and rehabilitation versus punishment and wealth redistribution.

2. Class Three Errors: Injuries Consequent to Complications—Extension of Injury from Class One or Two Known Complications

The initial set of known complications in complex neurosurgery that are addressed in Classes One and Two are of a first-order nature. They arise directly from the procedure itself. However, there is another class of complications, and errors associated with those complications, which involve injuries that occur consequentially to the original complications. These are “extended consequences”—second-order, consequential damages caused as a result of the occurrence of a first-order “known” complication.¹²⁷ The

WILLIAMS U. L. REV. 115, 123–28, 145–51 (2008) (discussing this notion in a commentator’s efforts to construct boundaries around the typical unpredictability of general damages in medical malpractice cases).

126. See Catherine M. Sharkey, *Unintended Consequences of Medical Malpractice Damages Caps*, 80 N.Y.U. L. REV. 391 (2005) (providing a survey and critique of damages caps as tort-reform measures); compare Sanders, *supra* note 125, at 144–47; David Baldus et al., *Improving Judicial Oversight of Jury Damages Assessments: A Proposal for the Comparative Additur/Remittitur Review of Awards for Nonpecuniary Harms and Punitive Damages*, 80 IOWA L. REV. 1109, 1143–53 (1995) (proposing that judges create matrices of comparable awards in other cases, as part of the jury instruction process); Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling “Pain and Suffering,”* 83 NW. U. L. REV. 908, 924, 946 (1989); Oscar G. Chase, *Helping Jurors Determine Pain and Suffering Awards*, 23 HOFSTRA L. REV. 763, 768–69, 775–76 (1995).

127. See William Croft, *The Structure of Events and the Structure of Language*, in *THE NEW PSYCHOLOGY OF LANGUAGE: COGNITIVE AND FUNCTIONAL APPROACHES TO LANGUAGE STRUCTURE* 83 (Michael Tomasello ed., 1998) (using the distinction between “I kicked the ball” and “I pushed the ball” to illustrate the dichotomy between “onset causation” and “extended causation”). See, e.g., Jon D. Hanson, *Taking Behavioralism Seriously: A Response to Market Manipulation*, 6 ROGER WILLIAMS U. L. REV. 259, 317–18 (2000). The dividing line between “direct” and “extended” consequences is often drawn, like the closely allied concept of proximate cause, as much by policy considerations as by logic; and in that sense, extended consequences can be conceptualized as those that are contributory but do not rise to the level of the proverbial but-for cause:

The question then becomes, of course, what exactly should those guiding concepts be? Assuming that efficiency is the goal of the tort system, the answer is simply to hold those parties liable for whom liability makes the most economic sense. . . . [To answer this question, we can use] a series of questions regarding any accident context that can be helpful in determining whether or not the imposition of liability would have beneficial efficiency effects. Pertinent considerations include: whether a particular party appears to have the ability to undertake cost-justifiable investments in care that would prevent or lessen the harm; whether imposing costs would help regulate activity levels; whether a particular party’s responsiveness to legal incentives is blunted by forces like judgment-proofness, insurance, social norms, or, as discussed earlier, an overriding aversion to personal injury due to the inadequate nature of financial compensation; and whether a particular party is in a good position to spread the costs

dépeçage model designates these as Class Three. Class Three Errors are complications that are either unknown as typical risks of the procedure or rare and more varied and difficult to predict. A unifying characteristic of Class Three Errors is that they present a physician with a cognitive challenge to (1) recognize and (2) minimize the risk of those complications. The measure of the profession's expectation that the physician (1) recognize and (2) minimize those risks varies; the expectation of vigilance would seem to increase to the extent that complications are (a) permanent, (b) serious, and (c) foreseeable. Indeed, if these three variables are viewed as a sliding scale, the greater the permanency, seriousness, and foreseeability of the complications, the more heightened will be the state interests in regulating the medical procedure and in securing compensation for victims. Victims receive palpable injuries, which they themselves can't avoid or protect against. Having been injured through non-reciprocal risks imposed during the course of complex neurosurgery, they should have a compensatory recovery.

However, by the same token, we must take special care in this classification to avoid the risk of imposing liability in a manner and to an extent that a valuable procedure is regulated out of existence. Therefore, this still does not present a juncture that is appropriately policed by current tort litigation.

Thus, like the Class One and Class Two Errors, the dépeçage model treats this class as one for regulation and compensation through a statutory scheme and administrative adjudication. The paradigm suggested here is related to, but not exactly the same, as the ADR/compensation panel approach for Classes One and Two. Since second-order complications tend to be of generic kinds

of those accidents that cannot be prevented. To that list, we would add the question of whether a particular party's market position affords them the ability and incentive to manipulate risk perceptions.

Hanson, *supra*, at 319–20; Richard J. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735, 1759, 1766–74, 1788–1803, 1809–21, 1826 (1985) (advancing NESS causation test, i.e., “Necessary Element of a Sufficient Set”); accord H.L.A. HART & TONY HONORE, CAUSATION IN THE LAW 260–76 (1959); Felix S. Cohen, *Field Theory and Judicial Logic*, 59 YALE L. REV. 238, 254–57 (1950); *In re Kinsman Transit Co.* [*Kinsman I*], 338 F.2d 708 (2d Cir. 1964); *Kinsman Transit Co. v. City of Buffalo* [*Kinsman II*], 388 F.2d 821 (2d Cir. 1968) (providing a classic example of an “extended consequences” or “extended causation” scenario in the famous domino-effect disaster involving the force of a winter ice jam upon ships and bridges). See Alexander J. Bolla, *A Brief Prelude: Hadley v. Baxendale, Y2k, and Maritime Trade (Sometimes the Bowsprit Gets Attached to the Rudder)*, 8 CURRENTS: INT’L TRADE L.J. 72, 75 (1999); Neal R. Feigenson, *Merciful Damages: Some Remarks on Forgiveness, Mercy and Tort Law*, 27 FORDHAM URB. L.J. 1633 (2000); Heidi M. Hurd, *Negligence in the Air*, 3 THEORETICAL INQUIRIES L. 333, 382–83 (2000) (describing *Kinsman* as an “asymmetrical over determination case”); see also Victor E. Schwartz, *The Remoteness Doctrine: A Rational Limit on Tort Law*, 8 CORNELL J.L. & PUB. POL’Y 421, 423–27 (1999) (discussing *Kinsman* in context of tort-law doctrines limiting reach of causation).

(infection, nerve damage, paralysis, post-op drug reaction, anesthesia-related side effects) that are not as intimately connected to the nature of the procedure and the skill of the surgeon as injuries that fall within Classes One and Two, they might be more analogous to the second-tier consequential injuries caused by childhood vaccinations. In 1986, Congress enacted the National Childhood Vaccine Injury Act (“NCVIA”), which changes the paradigm from one of blame-allocation to one of victim-compensation.¹²⁸ The NCVIA, through the National Childhood Vaccine Compensation Program (the “Program”), created a no-fault compensation system, allowing claimants to proceed with their claims without having to prove fault on the part of the manufacturer.¹²⁹

Claimants file their petitions with the United States Court of Federal Claims. The Secretary of the Department of Health and Human Services (“HHS Secretary”) is the named respondent in the petition, rather than the manufacturer of the vaccine alleged to have caused the injury. The claims are heard initially by a Special Master, who decides whether compensation should be awarded under the Program and if so, the amount of such compensation. Generally, in order to succeed with their claims, claimants must establish by a preponderance of the evidence the following four elements: (1) that they received a vaccine set forth on a “Vaccine Injury Table” (discussed below); (2) they sustained injury, aggravation of an illness, disability, injury or condition listed on the Vaccine Injury Table, or died as a result of administration of the vaccine; (3) that the first symptoms or onset of injury, aggravation of an injury or condition, or death occurred within the period of time specified in the Table; and (4) that the injury or death was not caused by factors unrelated to the administration of the vaccine. The parties have the right for the Special Master’s decision to be reviewed by the Court of Federal Claims, and then may obtain review of the Claims Court’s judgment by the Federal Circuit Court of Appeals.¹³⁰

Any compensation paid to a claimant is based on the Vaccine Injury Table. This Table includes all routinely recommended childhood vaccines, the potential adverse side effects a particular vaccine might cause, and the time

128. 42 U.S.C.A. § 300aa-1 (1989); see Susan G. Clark, *The National Childhood Vaccine Injury Act—The National Vaccine Injury Compensation Program*, 94 EDUC. L. REP. 94, 671, 674 (1994); Keith E. Abbott, *The National Vaccine Injury Compensation Program*, 20 COLO. LAW. 1825 (1991); Mary Beth Neraas, *The National Childhood Vaccine Injury Act of 1986: A Solution to the Vaccine Liability Crisis?*, 63 WASH. L. REV. 149, 153–56, 159 (1988).

129. See generally Apolinsky & Van Detta, *supra* note 70; see *Schafer v. American Cyanamid Co.*, 20 F.3d 1, 3 (1st Cir. 1994) (providing an excellent description of the NCVIA authored by then-Circuit Judge Stephen Breyer).

130. See *Schafer*, 20 F.3d at 6.

frame within which a side effect might occur. To the extent the claimant can establish these requirements, he is entitled to a presumption of causation. If, however, the claimant's injury is not on the Table, or a manifestation of symptoms did not occur within the period of time specified in the Table, then the claimant must establish by a preponderance of the evidence that the vaccine was a cause-in-fact of his injury. This Table is periodically updated based on the most up-to-date data in an attempt to more justly compensate those with "good" claims, while weeding out the "bad" claims.¹³¹

Compensation awarded to a claimant under the Program includes expenses that have been or will be incurred for diagnosis and medical or other remedial care, rehabilitation, developmental evaluation, special education, vocational training and placement, case management services, counseling, emotional, or behavioral therapy, residential and custodial care and service expenses, special equipment, related travel expenses, and facilities determined to be reasonably necessary. Determining these damages is a complicated process that requires the use of an expert; this expert should be experienced in preparing a comprehensive "life care plan" that details the types of care the claimant will need over the course of his lifetime. However, compensation under the Program is secondary to all other sources of compensation, including state compensation programs or insurance policies. Thus, a claimant must first exhaust those sources of payment before receipt of funds under the Program.¹³²

The NCVIA caps compensation in the event of death at \$250,000 for the estate of the deceased, and pain and suffering and emotional distress is awarded in an amount not to exceed \$250,000. Claimants are entitled to compensation for actual and anticipated loss of earnings; for those who have sustained a vaccine-related injury after age 18, such amount is determined in accordance with recognized actuarial principles and projections. For those who have sustained a vaccine-related injury prior to age 18, loss of earning capacity is based on the average gross weekly earnings of workers in the private, non-farm sector, less appropriate taxes and the average cost of a health insurance policy. Punitive or exemplary damages are not allowed, but reasonable attorney's fees and other costs may be awarded. For vaccine-related injury or death occurring after October 1, 1988, the award has been paid from the Vaccine Injury Compensation Trust Fund, funded by an excise tax charged on all childhood vaccines.¹³³

131. *Id.* at 7.

132. *Id.*

133. *Id.* at 2–3.

The tort-reform legislature should consider this system an excellent paradigm for dealing with Class Three Errors. A tort-reform bill could establish for a state a Complications Injury Table (formulated by an appropriate health-care state official or agency) and a Complications Injury Court along with designating certiorari-style review in the state-trial court of general jurisdiction. One feature of the NCVIA that would be less desirable for importation into a dépeçage tort-reform model is the NCVIA's "two-tiered" approach, whereby a claimant first fully adjudicates her claims under the Program (for injuries arising after the NCVIA's effective date), and only to the extent the claimant is dissatisfied with the result under the Program is she then allowed to file a civil action against the manufacturer.¹³⁴ Rather, the tort-reform legislature should remove civil litigation as an alternative, and employ robust, certiorari-style judicial review, such as that provided in New York's Article 78 proceeding under the Civil Practice Law and Rules (CPLR).¹³⁵

3. Classes Four and Five: Complications Arising from New Risks that Develop During the Procedure—Foreseeable Versus Unforeseeable New Risks

Like Classes One and Two, Classes Four and Five deal with a conceptually similar set of errors—complications caused by new risks that develop during the course of a complex neurosurgical procedure. Also like Classes One and Two, there is a fine, but critical, dividing line that allocates classification of real-world situations into the dépeçage model. Separating Classes One and Two, as we have seen, is the question whether injury from a known complication was "avoidable" or "unavoidable" when the procedure is performed by the most highly skilled of surgeons. Dividing Class Four from Class Five is whether a patient's injury that was caused by a new risk arising during a complex neurosurgical procedure was one that was foreseeable—or

134. *Id.* at 3.

135. An Article 78 proceeding is the judicial review of an administrative decision and has replaced "writs of certiorari to review, mandamus or prohibition." N.Y. C.P.L.R. § 7801 (McKinney 2005). Professor David Siegel, the doyen of New York Practice, describes it vividly:

The administrative agency can be a regulator, investigator, prosecutor, and defender, or any one or any combination of them. It can act as a jury, a judge, or a scourge, by turns or together. It is an important source of employment for political figures who might otherwise turn to crime. Its blessings, in other words, are many, but mixed. It is Article 78 that makes the administrative agency tolerable. By laying a red carpet to the courthouse door to review agency action and by dictating the scope of that review inside, Article 78 is itself a kind of Administrative Law lesson.

DAVID D. SIEGEL, N.Y. PRAC. § 557 (4th ed. 2005). For the specific process applicable to certiorari Article 78 proceedings, see *id.* at § 560.

one that was not. The Classes Four and Five categorization, therefore, involves the same kind of determination as the one we have just examined in Class Three—a determination of foreseeability to a trained medical professional.

As it did with respect to the foreseeability determination in Class Three, the *dépeçage* model recommends that tort-reform legislation transmit these cases to an ADR panel (as in Class One-Two above) for initial screening to determine whether the new complication was foreseeable or not. If foreseeable, the ADR panel itself will handle the case. If unforeseeable, the ADR panel will remit the case to a state medical licensing review board.

The distinction in treatment of Class Four and Class Five injuries is rooted in the differences in the nature of the errors causing such injuries and the interplay of the enterprise-regulation and corrective-justice principles around the variables that define and distinguish each classification.

Class Four injuries are characterized by injuries caused where the surgeon fails to exercise the level of care required to minimize new risks to the patient from developing during the course of the procedure—i.e., the foreseeable potential of *sui generis* complications. Such complications are unknown simply because the course of surgery with this particular patient becomes manifest only during the surgery itself. In such scenarios, the enterprise regulation principle is realized when physicians must be encouraged to not only perform with competent knowledge and technique, but also to take reasonable care to minimize as much as possible known or foreseeable risks to the patient so that they do not ripen into new risks during the course of the complex neurosurgical procedure. Conversely, the corrective justice principle recognizes the merit of compensation for injuries eventuating from avoidable risks of known or foreseeable complications.

The strength of the victim's interests here mandates some role for a jury of his or her peers, but does not justify taking the entire course of procedures in the traditional common-law jury trial mode. Rather, a *via media* between the two principles in tension here is created by bifurcating the procedure into an initial phase for liability determination before the ADR panel, with the subsequent opportunity for a victim whose position is sustained by the ADR panel to establish damages—if they cannot otherwise be agreed upon among the physician, his or her insurer, and the patient—in a state-court jury trial on damages.

The ADR panel will administer a standard of care founded upon reasonableness—not mere “custom”—whose content will be established by the panelists with reference to the latest error reporting data and medical and scientific literature and studies. Because of the composition of such an ADR

panel, there will be no need for copious expenditures of expert witnesses' time and fees merely to educate a lay jury to the point that they might have some glimmer of appreciation of the complexities of applying the standard of care to the facts at hand. There will also be no need to leave technical details in the lap (and vicissitudes) of a lay jury's comprehension—and emotions. The experts can focus on applying their expertise to the issue that really is illuminated by expertise—the foreseeability of the new risk and the doctor's exercise of reasonable care in both anticipating it and dealing with it when it eventuated. Overall, the liability-determination phase of a malpractice claim will be faster, cheaper, and more expert. If the ADR panel finds liability, the parties should mediate a damages settlement. If such a settlement cannot be mediated, either the physician or the patient may request a trial on compensatory damages held before a jury in the state's trial court of general jurisdiction. Damages, contained by the caps described for Class Three cases, will be limited to compensation of the patient; however, if an ADR panel finds that the physician's departure from the "reasonable care" standard is egregious, then the tort-reform legislation should give the patient the option to seek a measure of punitive damages in a reasonable, statutorily set proportion to her proven compensatory damages.

On the other hand, an ADR panel finding that the new risk created during the procedure was unforeseeable should shunt the case into a different resolution mode, one that is, again, to be tailored by a tort-reform legislature to the unique interplay of the enterprise regulation and corrective justice principles in Class Five scenarios. The question posed in such cases is when adverse unforeseeable consequences occur, how should that affect assessment of the standard of the physician's care? This question has both enterprise regulation and corrective justice aspects.

Clearly, the enterprise-regulation inquiry must focus on the known, rather than the unknowable—i.e., did the surgeon properly respond to the unforeseeable complication? In assessing whether the surgeon's response was appropriate, an ADR body duly constituted by tort-reform legislation is faced with two key policy questions: Should the profession or the patient bear the risk of loss caused by adverse, unforeseeable consequences? And, if the risks are to be spread across the spectrum, then how should those losses be allocated?¹³⁶ As discussed in somewhat greater detail in the next section,

136. Other nations have explored creative redistribution of losses between medical care providers and patients. For instance, Australia has adopted tort reform incorporating a minimum loss requirement and damages calculation scheme that apportions non-economic damages awards based on hypothesized "most extreme cases." Steven T. Masada, *Australia's "Most Extreme Case": A New Alternative for U.S. Medical*

Fletcher's theory of corrective justice for non-reciprocal risks demands compensation when the tortfeasor's activities impose risks on the victim that are of greater magnitude and have more serious consequences than any risk the victim can impose on the tortfeasor.¹³⁷ Thus, adjusting the allocation becomes a function that is poorly suited for adjudication either in common-law tort litigation, or even in adversarial ADR proceedings. Rather, the focus here must be on a judicious blend of the most efficient regulation of physician competency with swift, measured amelioration of the patient's losses in a gray area of what ought to be expected when physicians face tense, crisis-laden complications in an already complex neurosurgical event—in other words, a fluke in the midst of an already all-absorbing process. One possibility for tort-reform legislation is to create the optimum conditions for a balancing of the principles and the human factors for which they are a proxy: Create an administrative complaint procedure, which may be initiated by a physician, injured patient, or patient's relatives, before a medical license review board, created by legislation (*e.g.*, from a Model Act) in each state and dovetailed to the administrative structure and process already in place for medical licensure. This Class Five procedure would not carry with it only one, pre-determined process for addressing victim compensation issues. Rather, given the challenge presented by Class Five facts, the tort-reform legislation should create flexibility in the licensure board itself, after hearing the evidence on the physician's performance, to transmit the compensation aspect of the case to an appropriate resolution mechanism. Specifically, after the medical licensing review board determines "unforeseeability" in light of empirical information (developed through database collection and analysis at a national level (*e.g.*, via a Model Act)), the licensure board would direct those cases in which it found inadequate the physician's response to the unforeseeable, new risks to be to one of the Class 1–4 resolutions paradigms for compensation.¹³⁸

Malpractice Liability Reform, 13 PAC. RIM. L. & POL'Y J. 163 (2004).

137. Van Detta, *The Irony of Instrumentalism*, *supra* note 1, at 461; Fletcher, *supra* note 62, at 546. See *infra* Section IV.

138. One of the important subsidiary goals served by the Class Five approach is the promotion of a self-regulating medical profession that effectively advances physician competency while concomitantly protecting patients. In some quarters, this is known as a "systems-based" approach to medical malpractice, focusing on error reduction by "focus[ing] not on bad actors, but rather on 'individuals who are trying to do the right thing, but, because they work in an imperfect system, make errors.'" Kristen P. Salvatore, Comment, *Taking Pennsylvania Off Life Support: A Systems-Based Approach to Resolving Pennsylvania's Medical Malpractice Crisis*, 109 PENN ST. L. REV. 363, 364 (2004).

4. Class Six: Complications Resulting from Risks Inherent in the Technique Used in the Procedure or Human-Factors Implications of Employing that Technique

Typically, those injuries that should be classified as Class Six Errors arise from one of two sources. First, inherent injuries may arise from the technique used to perform the procedure itself, which carries inherent risks. Second, the crafting of the procedure itself around necessary surgical equipment or tools may create demands on a surgeon's skill, stamina, or attention that create the invariable potential for patient injury.

The role of the Kerrison rongeur described by the Neurosurgeon is a classic example in the ACD&F procedure of inherent risk emanating from a critical piece of equipment. As the Neurosurgeon observed:

The rongeur injuries are particularly noteworthy because the common way in which this procedure is performed requires the physician to hold the rongeur in a variety of positions, some awkward, while squeezing the handles of the instrument to exert several pounds of pressure. This can cause fatigue and even neurological injury to the surgeon.¹³⁹

The problem is documented,¹⁴⁰ but in performing the procedure, surgeons cannot eliminate the risks posed by the rongeur within the confines of the ACD&F procedure as it is recognized in the medical community.¹⁴¹

The question then becomes: Should a reformed tort system provide no liability or compensation for Class Six injuries? Or, do Class Six injuries mandate that a reformed tort system treat them neither as immunized due to their latent inherence (as with Class One injuries) nor as ad hoc lapses below the standard of care in one of the other Classes of foreseeable injuries—but rather, treat them holistically and systemically, subjecting the entire technique to re-evaluation of the cost to both patients and the legal and health care

139. See text, *supra*, at 15. (Statement of the Neurosurgeon about rongeur-caused injuries in the ACD&F procedure.)

140. See, e.g., *Mau v. Wisconsin Patients Compensation Fund*, 266 Wis. 2d 1059, 668 N.W.2d 562 (unpublished table decision), 2003 WL 21706407 (Wis. App. 2003); *Jones v. Levy*, 520 So. 2d 457, 460 (La. Ct. App. 1988) (noting medical review panel observation that “a rongeur can go beyond the disc space if one is exercising the utmost diligence while asserting a normal amount of forward pressure and there is an anatomical abnormality in which there is no resistance within the disc space.”).

141. See, e.g., Linda Forst, Lee Friedman & David Shapiro, *Carpal Tunnel Syndrome in Spine Surgeons: A Pilot Study*, in ARCHIVES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH, Dec. 2006, at 259, available at <http://www.ncbi.nlm.nih.gov/pubmed/17967747> (“The goal of this project was to determine risk factors for carpal tunnel syndrome (CTS) in spine surgeons. . . . The authors identified the use of the Kerrison rongeur (a bone-removal tool) as the greatest ergonomic risk for the surgeons.”).

systems for the injuries caused versus the overall benefit to patients and the health care systems for their use?

This problem has recently been brought to the fore in Professor Nicholas P. Terry's work.¹⁴² Professor Terry considers the problem that in modern medical treatment, physicians and the devices they choose to use in developing and delivering medical techniques have traditionally been treated as separate (professional negligence versus products liability). He argues, however, that this is based on an outdated notion of stark separation between the medical treatment and the marketing-implementation of technology used in that treatment. The synergies between technology and medical care—to which Professor Terry aptly applies the term “technologically-mediated medical care”¹⁴³—have pros and cons. Among the cons, he notes, “the likely adverse event scenarios that will result from technologically-mediated diagnosis, treatment and care will severely test our current torts operational rules, particularly those that lie at the intersection of malpractice and products liability.”¹⁴⁴ Commenting on an early New Jersey case involving a medical injury that occurred while the doctor was using a relative of the kind of device—a rongeur—that is also at issue in the ACD&F procedure, Professor Terry notes:

[t]his type of malpractice-strict liability intersection case essentially seeks to apply strict liability to product-related adverse events. This was essentially the position of the New Jersey Supreme Court in *Anderson v. Somberg*, [338 A.2d 1 (N.J. 1975)] where the plaintiff alleged negligence against health care providers and strict product liability against suppliers of an angulated pituitary rongeur. The court took the view that in such a mixed fact-pattern the burden was on the defendants to disprove culpability and “since at least one of the defendants could not sustain his burden of proof, at least one would be liable.” While somewhat flawed because of the court’s misunderstanding of the concept of product “defectiveness,” *Anderson* nevertheless points to one method of dealing with system or administrative costs-shifting them to the defendants.¹⁴⁵

Professor Terry’s observations are completely in line with the theory for imposing strict liability in tort articulated by Professor Fletcher in *Fairness*

142. Nicholas P. Terry, *When the “Machine That Goes ‘Ping’” Causes Harm: Default Torts Rules and Technologically-Mediated Health Care Injuries*, 46 ST. LOUIS. U. L.J. 37 (2002).

143. *Id.* at 38–39.

144. *Id.* at 39.

145. *Id.* at 55. For an earlier, more stark consideration of the question of intersectionality in terms of looking at product versus service, see William C. Powers, Jr., *Distinguishing between Products and Services in Strict Liability*, 62 N.C. L. REV. 415 (1984).

and Utility in Tort Law.¹⁴⁶ The risks imposed by the technologically mediated medical care are distinct from those that patients can understand, whether intuitively or by the layperson's education through the risk disclosure process. A like approach has been suggested for another area of treatment where the patient's inability to assess risk or to take action to minimize or avoid risk is similar: psychiatric treatment, and more specifically, therapy-induced psychiatric deterioration.¹⁴⁷ As Professor Furrow suggested 30 years ago:

Psychiatry, as a service, exposes the patient to, as a consumer, to distinctive and significant risk of harm. Due to its doctrinal and practical limitations, negligence doctrine has unquestionably failed to offer the psychiatric patient a viable means of recovery. Nor has self-regulation by the profession provided adequate control over the quality of psychiatric care.

. . . [Focusing] on which party to the transaction is in the better position to take action to avoid or reduce future risks[,] . . . courts can find that psychiatric services are defective and strict liability can be imposed upon psychiatrists for therapy-induced deterioration.¹⁴⁸

The goal of such strict liability is to force the profession to reassess the selection of treatment, method, and the viability of a treatment method at all, in light of the non-reciprocal nature of the risk to the patient, and the magnitude of the destructiveness to the patient should the risk eventuate at all. Similarly, strict liability can be a tool to assess neurosurgical techniques and equipment—forcing doctors who may be basing a lucrative practice on techniques that impose non-reciprocal risks to patients to continue to search for and develop newer, less risky procedures and equipment to achieve the same therapeutic results.

A legislature taking a principled, rather than an instrumentalist, approach to the reform of medical malpractice law would have ample grounds for reaching this viewpoint. Both of the relevant principles implicated here would support the imposition of strict liability in the form of traditional tort litigation in the state's courts of general jurisdiction. The enterprise regulation principle takes preeminence here. There is a strong state interest in regulating creators of non-reciprocal risks, who must be held accountable for the safety of the public whom they expose to these risks.¹⁴⁹ The operation of that principle is mirrored here by the corrective justice principle: Fletcher's theory of

146. See Fletcher, *supra* note 62.

147. Barry Furrow, *Defective Mental Treatment: A Proposal for the Application of Strict Liability to Psychiatric Services*, 58 B.U. L. REV. 391, 393 (1978).

148. *Id.* at 434.

149. Van Detta, *The Irony of Instrumentalism*, *supra* note 1, at 462.

corrective justice for non-reciprocal risks demands compensation when the tortfeasor's activities impose risks on the victim that are of greater magnitude and have more serious consequences than any risk the victim can impose on the tortfeasor.¹⁵⁰ That is certainly the case here, as Professor Robinette has explained:

On the other hand, medical malpractice is a clear example of a non-reciprocal risk. The risk a doctor imposes on her patients far exceeds the risk those patients impose on her. Of course, in this context, the quintessential example of a non-reciprocal medical malpractice risk is surgery. In that case, the patient is usually anesthetized and the doctor is cutting on her body.¹⁵¹

V. CONCLUSION

In examining the reality of standard-of-care problems in the context of the neurosurgical ACD&F procedure the dialogue between the Neurosurgeon and the Professor reveals many shortcomings both in current tort law and in the “tort-reform” movement. Such a “one-size-fits-all” approach is a crude, and often results-oriented, mechanism by which to balance societal interests in competently regulating competency to practice medicine with societal interests in determining when and how much injured patients should be compensated, and by whom.

Sorting the technical errors in neurosurgery into six paradigmatic classifications is the key to a *dépeçage* approach. It permits an examination of each kind of error within a framework of legal principles. The interaction of those principles provides a sound, doctrinal basis for developing approaches to the three critical questions that current law deficiently addresses: (1) who sets the standard of care; (2) for what kind of specific injuries; and (3) how should those injuries be compensated? By contrast, current tort law, including so-called tort reform, addresses these questions in a largely instrumentalist

150. *Id.* at 456; Fletcher, *supra* note 62, at 546.

151. Christopher J. Robinette, *Can There be a Unified Theory of Torts? A Pluralist Suggestion from History and Doctrine*, 43 BRANDEIS L.J. 369, 400 (2005). Quoting Professor Payne, Professor Robinette observes:

Risks in medical malpractice cases are non-reciprocal; the risk of harm runs only to the patient and not to the health care provider. A recent Florida case provides illustration. In the clearest case of negligence, the healthy kidney was removed from the patient during surgery rather than the cancerous kidney. There was no risk to the tortfeasors, while the innocent plaintiff had a loss of the quality of life.

Id. at 401 (quoting Kathleen E. Payne, *Linking Tort Reform to Fairness and Moral Values*, 1995 DET. C.L. REV. 1207, 1228).

fashion—it simply asks the question of how we can tinker with features of the system in an ad hoc manner to achieve specific outcomes desired by special-interest groups.

As elaborated above, the *dépeçage* model is intended to be a working approach to a reform methodology. The reform must come from state legislatures. The *dépeçage* model provides a template for legislatures who wish to structure a coherent approach and consistent solution to the problems posed by the current medical malpractice adjudicatory system. The model must be adapted to the policy considerations and medical realities of specific kinds of advanced, technical surgical procedures. In other words, the *dépeçage* model provides a map for legislatures to follow in structuring a statutory scheme to achieve meaningful and lasting tort reform in the medical malpractice area—reform that is fair and rational for all constituencies. The legislation should prescribe the *dépeçage* model, but not apply it. It should defer that to an administrative board. The legislation ought to establish an administrative board composed of representatives of the major constituencies, where the expertise of patient advocates, tort-reform scholars, physicians, judges, insurers, and attorneys could be assembled to apply the *dépeçage* model with the benefit of their collective experience and perspectives. The board's principal function would be to investigate the spectrum of errors and injuries arising from specific surgical procedures and to establish, by rulemaking, where each specific kind of error and injury is classified within the *dépeçage* model. The legislation would specify where—and by what adjudicatory method—claims based on errors within each specific classification will be resolved.

The *dépeçage* model is a work in progress—a proposal for limning the boundaries of the debate in a new framework, one that is less tied to the circular cycle of tort “reform” and tort “expansion” and more rooted in the principles animating the regulation of learned professions and the development of tort law. It would be well-suited for study by a permanent body—such as the National Conference of Commissioners on Uniform State Laws (NCCUSL), which “provides states with non-partisan, well-conceived and well-drafted legislation that brings clarity and stability to critical areas of the law,”¹⁵² or the American Law Institute (ALI), “which engages in intensive examination and analysis of legal areas thought to need reform . . . culminat[ing] in a work product containing extensive recommendations or

152. Uniform Law Commission website, <http://www.nccusl.org>.

proposals for change in the law,” such as “the development of model statutory formulations.”¹⁵³

Thus, the dépeçage model is intended to open a new paradigm of discussion within the tort-reform conversation and debate. To use Churchill’s iconic terminology, “[n]ow this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.”¹⁵⁴

153. American Law Institute, *Overview: Institute Projects*, <http://www.ali.org/index/cfm?fuseaction=about.instituteprojects>.

154. Winston S. Churchill, Speech at Lord Mayor’s Luncheon, Mansion House (Nov. 10, 1942), available at http://winstonchurchill.org/i4a/pages/index.cfm?pageid=388#Shape_our_Buildings.