

Punishing Medical Experts for Unethical Testimony: A Step in the Right Direction or a Step too Far?

David B. Resnik, J.D., Ph.D.*

* Department of Medical Humanities, The Brody School of Medicine, East Carolina University

1. Introduction: The Lustgarten Case

On July 19, 2002, the North Carolina Medical Board (NCMB) revoked the license of Gary James Lustgarten, M.D. for allegedly unethical conduct in expert testimony he provided in a medical malpractice case in North Carolina. The Board found that Lustgarten, who is a Floridaneurosurgeon, was either dishonest or incompetent when he testified in a medical malpractice case against two Fayetteville, North Carolina neurosurgeons.[1] In this case, *Hardin, et al v. Carolina Neurological Services, P.C. et al*, the mother and father of 20-year-old Michael Hardin sued Drs. Victor Keranen and Bruce Jaufmann and the Cape Fear Valley Medical Center for wrongful death of their son.[2] The Hardins claimed that the doctors failed to follow the standard of care for surgery to reopen their son's shunt, a device that had been placed inside his head when he was three months old to drain brain fluid. In January 1995, Karenan performed the surgery, and Jaufmann took responsibility for the post-operative care of Hardin. A few hours after the surgery, Hardin developed a headache and became agitated. His heart stopped beating. The medical team resuscitated Hardin, and Jaufmann initiated emergency brain surgery. Unfortunately, Hardin never regained consciousness and died eighteen days later.[3]

The Hardins claimed that the doctors acted negligently by not responding to their son's medical problems quickly enough. Lustgarten supported their claims by testifying that the doctors failed to meet the standard of care for Hardin because a) Keranen did not provide Jaufmann with the sufficient details of the surgery when Jaufmann took over the post-operative care Hardin; b) Hardin should have been placed in an intensive care unit; c) the nurses did not watch Hardin closely enough; and d) Jaufmann should have phoned the hospital to check on Hardin's condition. Lustgarten also speculated that Jaufman had falsified medical records to cover up his mistakes. Other experts also supported Lustgarten's testimony that the doctors had violated the standard of care. Before the jury began deliberating, Karenan's insurance company settled with the Hardins for \$2.4 million.[4]

Although Jaufmann had been dropped from the lawsuit, he filed a complaint with the NCMB, alleging that Lustgarten slandered his reputation and had given dishonest or

incompetent testimony. According to Jaufmann, “This is not a difference of opinion. There are certain acceptable standards and certain truths in neurosurgery.”[5] The NCMB requested that Lustgarten attend a hearing on this allegation. Lustgarten was unable to attend the hearing and requested that NCMB reschedule a hearing or allow him to testify by conference call. The NCMB denied Lustgarten’s requests and held a hearing without him or his attorney. In his defense, Lustgarten wrote a 5-page letter to the NCMB stating that he had merely given his opinion and that board certified neurology and neuroradiology experts gave testimony similar to his own at the trial. He also said that the NCMB was biased and that it was simply trying to protect North Carolina neurosurgeons.[6]

The State of North Carolina has granted the NCMB the authority to sanction doctors for unprofessional behavior. It can deny, suspend or revoke a physician’s license to practice medicine for alcohol or substance abuse, illegal conduct, incompetence, as well as conduct that violates standards of honesty, justice, professional ethics or good morals, irrespective of whether the physician’s conduct has actually harmed a patient.[7] Although medical boards frequently punish doctors for unethical conduct, the NCMB does not know of any cases in the United States where a board has acted against a physician for unethical conduct related to expert testimony. Lustgarten’s NC license has been inactive since June 1998. On August 22, 2002, the Board denied Lustgarten’s motion to reopen the case.[8] The state in which Lustgarten practices, Florida, may also consider revoking his license, if Lustgarten loses his license in North Carolina. Additionally, if Lustgarten loses his license in North Carolina and in Florida, his medical career would be in great jeopardy, since other states may also deny him a license, based on his record in states where he has lost his license.

Lustgarten appealed the NCMB’s decision to the Superior Court of Wake County.[9] In challenging the NCMB’s decision, Lustgarten argued that NCMB’s decision should be reversed because 1) the NCMB did not have authority to revoke a license on the basis of testimony in a civil case; 2) Lustgarten’s testimony was privileged; 3) revoking Lustgarten’s license violated his rights to free speech; 4) revoking Lustgarten’s license undermines access to the courts; 5) revoking Lustgarten’s license violated separation of powers; and 6) the NCMB’s actions violated Lustgarten’s due process rights.[10]

The Superior Court affirmed the NCMB’s conclusions of fact, but reversed several of its conclusions of law. The Court found that the statute granting the NCMB the authority to discipline physicians was unconstitutionally vague as applied to Lustgarten’s testimony concerning the standard of care in a medical malpractice case because the statute does “place a reasonably intelligent member of the profession on notice he or she could be disciplined for such conduct”.[11] However, the Court also concluded that the statute was not unconstitutionally vague as applied to Lustgarten’s testimony that Jaufman had falsified medical records.[12]

The Superior Court remanded the case the NCMB for disciplinary action pursuant to Lustgarten’s testimony that Jaufman had falsified records. On November 21, 2003,

NCMB reduced Lustgarten's punishment to a one-year suspension of his license. Lustgarten has appealed the NCMB's most recent decision.[13]

Prior to the action taken by the NCMB, the Professional Conduct Committee of the American Association of Neurological Surgeons (AANS) had found that Lustgarten had acted unprofessionally in his expert testimony in a wrongful death case involving the death of a 21-year-old patient. The AANS suspended his membership for six months.[14] The AANS also suspended Lustgarten's membership for unethical conduct related to his testimony in the same case that the NCMB acted upon.[15]

The AANS also suspended another member, Donald Austin, for unethical expert testimony. Austin sued the AANS for contractual damages, but the 7th U.S. Circuit Court of Appeals upheld the AANS' authority to suspend members who provide unethical expert testimony.[16]

Several professional associations, including the AANS, American Medical Association (AMA), the American Association for Psychiatry and Law (AAPL), the American College of Obstetrics and Gynecology (ACOG), and the American Statistical Association (ASA) have developed rules of professional conduct pertaining to expert testimony.[17]

2. Statement of the Issues

Few people would disagree with the importance of ensuring that expert witnesses provide testimony that is ethical and competent. Since many legal cases depend heavily on the testimony of experts, unethical or incompetent testimony can dramatically affect the outcome of such cases. But how should society respond to this potential problem of unethical or incompetent expert testimony? Dealing with unethical or incompetent expert testimony raises some fundamental issues of law, ethics, and public policy:

1. What are the current legal procedures or strategies for dealing with incompetent or unethical expert testimony?
2. Is expert testimony legally privileged? Aside from liability for perjury, do witnesses have immunity from civil or criminal liability resulting from their testimony in court?
3. Is expert testimony constitutionally protected free speech? Under what conditions could the state proscribe, restrict, or control expert testimony?
4. Are existing ethical rules and policies pertaining to expert testimony so vague that using them to sanction an individual would violate that individual's rights to due process? How should rules be formulated so that they avoid this problem?
5. Is it unfair to take away a physician's license to practice medicine for unethical or incompetent expert testimony? Is this form of punishment excessive?

6. Does sanctioning expert witnesses undermine access to the courts for plaintiffs?

7. Does sanctioning expert witnesses undermine scientific freedom?

This paper will address these issues and formulate a proposal for dealing with unethical or incompetent expert testimony. It will argue that rules for expert witness conduct must be unambiguous and fair. The rules should help deter unethical and incompetent testimony without undermining important values, such as free speech, due process, and access to the courts. To accomplish these goals, this paper will (1) provide an overview of expert testimony in the U.S. legal system; (2) consider the problem of unethical and incompetent testimony, and how the U.S. legal system responds to this problem, and (3) consider some of the legal, ethical and policy issues raised when organizations sanction experts for their testimony.

3. The Role of Experts in the U.S. Legal System

In the U.S. legal system, judges decide whether to allow any particular witness--expert or non-expert--to testify in any particular case. A minimum threshold for admitting testimony is that it must be relevant to the outcome of the case.[18] The testimony must present evidence that has some probative value, i.e. the evidence will make a factual and material statement in the case more or less probable.[19] Although it is usually not very difficult to show that evidence has some probative value, a judge may refuse to admit testimony if its prejudicial effect substantially outweighs its probative value.[20] For example, courts will often refuse to allow the trier of fact, either a judge or a jury, to consider testimony relating to a criminal defendant's moral character because the testimony, while probative, may be highly prejudicial.[21] Judges make all decisions pertaining to admitting or excluding evidence in court, and a judge's rulings on evidence can only be challenged if they are so unreasonable that they amount to an abuse of discretion.[22]

Under the 18th century English common law, laymen who testified (or lay witnesses) were supposed to provide factual testimony based on their first-hand observations; lay witnesses were not supposed to state their opinions in their testimony. If a lay witness offered an opinion in his testimony, that part of his testimony could be excluded. However, U.S. law has evolved since the 18th century and now accepts lay opinions. The courts allow lay witnesses to offer opinions, and will reject lay opinions only when they have no value to the jury.[23] The courts have shifted their evidence rules, in part, because they now recognize how difficult it is to draw a clear distinction between "fact" and "opinion": the difference between fact and opinion is a matter of degree.[24] For example, in rendering "factual" testimony about a simple event like a car accident, a witness may make many inferences and assumptions about how fast the car was going, whether the driver had good visibility, the road conditions, etc.

Expert witnesses, unlike lay witnesses, are expected to offer their opinions relating to the facts in the case.[25] Experts draw inferences from facts based on their particular area of expertise, be it medicine, science, engineering, auto mechanics, or cosmetology. The use of expert witnesses has increased during the last few decades and continues to rise. Expert witnesses play a prominent role in many types of litigation, including products liability cases, medical malpractice lawsuits, bankruptcy proceedings, intellectual property disputes, and criminal trials.

Since judges decide all matters relating to the admission of evidence, they also decide whether to allow a particular expert to testify. In deciding whether an expert may testify, a judge will consider two factors: 1) the witness' qualifications; 2) the reliability of the knowledge or principles the witness uses to draw inferences from facts (i.e. his or her theories, assumptions, and methodology).[26] To determine whether a witness qualifies as an expert, the court considers whether the witness has sufficient skill or knowledge to aid the jury in determining the truth. The witness need not be the best expert in his or her field in order to perform this function; he or she need only have more expertise in that particular field than the jury or the judge.[27]

The problem of how to assess the reliability of the expert witness's knowledge or principles has been the subject of a great deal of debate ever since the Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals*. [28] *Daubert* articulated a new test for admitting scientific testimony in federal courts, and rejected a common law test articulated in *Frye v. United States*. [29] According to the *Frye* test, the federal courts can admit scientific testimony only if the principles that the witness uses to draw inferences have gained general acceptance in the witness' field. [30] *Daubert* held that the Federal Rules of Evidence, which were enacted after *Frye*, superseded *Frye*. [31] Rule 702 requires that the judge must ensure that the scientific evidence admitted in court is relevant and reliable. [32] The Court articulated a number of factors that a judge may consider in determining whether scientific testimony is reliable, including whether the knowledge has been or could be tested, whether it has been published or reviewed by peers, its error rate, and its general acceptance. [33] Under *Daubert*, the judge acts as a "gatekeeper" for scientific testimony, since his evaluation of the testimony, not the evaluation of members of the particular discipline or profession, determines whether evidence can be admitted.

Daubert answered many questions, but it left other important ones unanswered. Would the *Daubert* test apply to all experts or only scientific experts? What's the difference between a scientific expert and a non-scientific expert? The Supreme Court answered some of these questions in *Kumho Tire Co. v. Carmichael*, ruling that the *Daubert* factors do not apply to all types of expert testimony. [34] In *Kumho*, the plaintiff sued a tire manufacturer for injuries resulting from defective tires. To support his case, the plaintiff proffered testimony from an engineer. The district court excluded this testimony on the grounds that the engineer's knowledge did not meet any of the *Daubert* factors. [35] The plaintiff appealed the case, and the Supreme Court reversed the ruling of the district court. The Supreme Court held that the specific factors articulated in *Daubert* applied only to scientific knowledge or principles. To determine whether to

admit other types of expert testimony, the judge must determine whether the testimony is reliable and relevant. The *Daubert* factors simply articulate a special definition of reliability for scientific testimony.[36] The Court also held that judges need not distinguish between “scientific” and “non-scientific” knowledge in applying the Federal Rules of Evidence, since the rules only require that the testimony be reliable and relevant.[37] The Court held that judges may consider the *Daubert* factors in deciding whether to admit expert testimony, and it also stated that judges should have a great deal of latitude in making these decisions.[38] *Kumho* followed *Daubert* in affirming the judge's role as a “gatekeeper.”

While all federal courts and many state courts accept the *Daubert* test, many states still accept the *Frye* test.[39] If a court follows the *Daubert* test, it must determine whether the medical expert's knowledge or principles are reliable and relevant; if it follows the *Frye* test, it must determine whether the expert's knowledge and principles are generally accepted. If a court follows the *Daubert* test, it may need to answer the interesting philosophical question of whether a particular medical specialty is a science or a practical art, since the *Daubert* factors subject scientific testimony to special scrutiny. If a court determines that medicine is not a science, it can admit testimony based on some assessment of its relevance and reliability.[40] Under the *Frye* test, the question “is medicine a science?” will not arise, since *Frye* does not single-out scientific testimony for special scrutiny.

Medical malpractice laws in most states require that the plaintiff proffer an expert witness, unless the negligence would be so obvious that a lay person would be able to determine that the defendant had been negligent.[41] In an action for medical negligence, an expert may provide testimony pertaining to the standard of care for the defendant's specialty, which is one of the key elements in this cause of action.[42] A plaintiff may also prove malpractice if the defendant admits his or her negligence, or if the defendant's conduct can be considered “negligence per se.”[43] While it is usually the case that the plaintiff's expert witness is in the same field or profession as the defendant, this is not a mandatory rule. To qualify as an expert, a witness need only possess the requisite knowledge and skill of the defendant's standard of care. Thus, a general surgeon could testify against a plastic surgeon on matters of general surgery[44], or a psychiatrist could testify on post-operative care for breast implants.[45]

In general, the standard of care in any negligence case is what the reasonably prudent person would do in the same or similar circumstances. In medical negligence, the standard is what a reasonably prudent physician would do in the same or similar circumstances. Since it would not be prudent to practice medicine if one is not competent to practice medicine, courts also hold that the standard of care is what a reasonably prudent and competent physician would do.[46] If the physician is a neurosurgeon, then the standard of care is what competent and reasonably prudent neurosurgeon would do in the same or similar circumstances; if the physician is a psychiatrist, then the standard of care is what a competent and reasonably prudent psychiatrist would do, and so on.

As a result of differences in medical resources, geography, patient populations, and health care financing and administration, physicians around the country practice in very different settings. For many years, many courts took these differences into account by adopting the locality rule: the standard of care is a local standard, not a national one.[47] This rule had the effect of limiting the pool of experts who were available to testify, since the court could refuse to admit the testimony of a non-local expert on the grounds that the expert would not be familiar with the local standard of care.[48] If the standard of care for neurosurgery in Fayetteville, NC is different from the standard of care for neurosurgery in Miami, FL, then a Miami neurosurgeon would not be able to testify against a Fayetteville neurosurgeon in a negligence case. This severely limited the availability of experts and helped to encourage a “conspiracy of silence,” since doctors, especially doctors within the same locality, are reluctant to testify against each other.[49] In response to this problem, most courts now reject the locality rule and accept a national standard, while making some concessions to local circumstances.[50] For example, while a doctor in a small town may not have access to a Magnetic Resonance Imaging machine or a neurosurgeon, he can take care of the patient with a brain injury while conforming to national standards for brain injury care, when one does not have access to this machine. He should do what a reasonably prudent physician would do, given the resource constraints and working conditions.

4. Unethical and Incompetent Expert Testimony

To understand problems related to unethical or incompetent expert testimony, it will be useful to define the terms “unethical” and “incompetent” as they pertain to expert testimony. Let’s begin with the term “incompetent,” which is a bit easier to define. In general, a person is incompetent if they are not qualified to perform the job they are asked to perform, or, if they are qualified, their performance does not measure up to the appropriate standards. Recall that the whole purpose of allowing experts to testify is to aid the trier of fact in deciding the case. An expert could be regarded as incompetent if he or she is not qualified to offer an opinion that is helpful to the trier of fact, or, if he or she is qualified but her testimony does not measure up to the appropriate standards. There are many ways that an expert might give incompetent testimony: his/her opinion might be based on unreliable principles or knowledge; his/her opinion might be biased or dishonest; he/she might lack sufficient training or experience; or he/she might make a mistake of judgment.

In the U.S. legal system, judges play a key role in preventing experts from giving incompetent testimony in court. Part of the gate keeping function of the judge is to distinguish between competent and incompetent experts and admit only competent experts. If a judge admits an incompetent witness, or a competent witness acts incompetently in court, the opposing side has the ability to compensate for this problem by challenging the testimony and offering its own experts (we will discuss this again later).

The term “unethical testimony” is a bit more difficult to define, since it is not obvious which ethical standards should govern the conduct of expert witnesses. Thinking about the role of experts in the legal system may provide some insight into defining “unethical testimony.” A lay witness has an ethical duty to tell the truth, the whole truth, and nothing but the truth, since untruthful testimony is not helpful to the trier of fact. A lay witness is asked to testify about the facts, rather than to offer opinions. An expert witness, however, may convey facts and opinions. When an expert is testifying about factual matters, he or she has an ethical obligation to tell the truth. When an expert is offering an opinion, he or she has an ethical obligation to render an opinion that is helpful to the trier of fact, which would be an opinion that is based on reasonable inferences. This obligation can be justified in virtue of the expert’s role in the legal system as an aid to the trier of fact, as well as by his or her role in society as an epistemological authority.[51]

What does it mean to give testimony that is untruthful (or dishonest)? There are many different ways of lying.[52] Lying may involve acts of commission, such as making false statements, or acts of omission, such as making statements that deceive the audience by omitting important details. All forms of lying, however, involve the intent to deceive one’s audience. Erroneous testimony is not the same as dishonest testimony, since one may make an honest mistake. The liar is someone who takes deliberate measures to make his audience believe a statement that he knows to be false. So, we can define “dishonest testimony” as making a statement that one knows to be false or deceptive.

It is important to observe that one cannot lie when asserting an opinion. For an expert witness to tell a lie, he must be making an assertion of fact rather than an assertion of opinion. If we are examining a dead body, and I say that the victim had a bullet in his heart, when, in fact, he did not, then I have told a lie. But suppose I say that I think (believe or opine) that the victim’s death was a suicide, based on the facts of the case. My opinion might be highly improbable (or unreasonable), given that the victim had a bullet in his heart, but it would not be a lie. When someone makes a factual assertion, they are claiming that the assertion is true. When someone asserts an opinion, on the other hand, they are only claiming that the assertion is reasonable. Although experts frequently offer opinions, they also assert facts. For example, an expert might make factual assertions about his credentials, his data (published or unpublished), and articles he has read. An expert who asserted a false factual claim about his credentials would be lying.

What does it mean to make reasonable inferences? An inference is reasonable if it is a conclusion that is well supported by one’s evidence or assumptions.[53] The evidence could be evidence produced in court or evidence from one’s own research or experience; the assumptions could be one’s principles or theories. Since experts may appeal to different evidence or assumptions, or they may draw different inferences from the same evidence and assumptions, two experts could draw contradictory inferences that are both reasonable. For instance, one expert could testify that a victim was struck with a blunt instrument, while a different expert might testify that the victim was not struck with a blunt instrument. The mere fact that the two experts disagree is no

indication that one of the experts is drawing an unreasonable inference. Experts can disagree. The mere fact that an expert adopts a minority view is also no indication that the expert is drawing an unreasonable inference, since minority viewpoints can still be reasonable. An expert makes an unreasonable inference only when he/she draws an inference that no expert would draw, given the evidence and assumptions.

When experts testify about the standard of care, are they testifying about facts or offering opinions? To see why testimony about the standard of care should be regarded as opinion, consider the legal implications of interpreting testimony about the standard of care as factual. If two experts offer contradictory statements about the standard of care, then one of the experts must be lying or making a mistake, since they cannot both be telling the truth. Thus, in every case where experts disagree about the standard of care, at least one expert will be acting illegally, unethically, or incompetently, which would be absurd and unworkable. No expert would testify in court if he/she thought that he/she could be convicted of perjury or disciplined by a professional body on the basis of contradictory testimony by another expert.

At a deeper level, one might argue that expert testimony is opinion testimony because statements about the standard of care do not describe facts. Statements about the standard of care are normative (or prescriptive) statements about how physicians ought to behave, not descriptive statements about how physicians tend to behave. Normative statements do not describe facts about the world; instead, they reflect our commitments, goals, and ideals. To explore this question in adequate depth, one must examine the relationship between facts and values, which would take us far beyond the scope of this paper.[54] For now, this paper will assume that statements about the standard of care are opinions, not statements of fact.

Thus, we can define unethical expert testimony as: (1) false or deceptive testimony; (2) unreasonable testimony.

Many critics of the U.S. legal system have charged that expert witnesses often give biased testimony as a result of their financial interests in the case.[55] Expert witnesses often have financial relationships to the parties in the case, who may reimburse witnesses for their expenses and pay them a fee for their services, which may include time for preparation, travel, and testimony.[56] Although it is not illegal to pay a witness a huge sum of money, the American Bar Association's (ABA) Model Rules require that lawyers pay expert witnesses a reasonable payment for services, and the Rules also forbid contingency fees, i.e. a fee based on the outcome of the case.[57] A lawyer who violates the ABA rules could be sanctioned by the ABA or by his state licensing board. In addition, if a lawyer pays a witness for specific testimony in a quid-pro-quo fashion, this conduct could be construed as bribery.[58]

Despite these limitations on payment, critics charge that many witnesses are no more than "hired guns" who go from case to case offering testimony. Even though legal rules forbid bribery and ethical standards forbid contingency fees, witnesses can earn a supplemental income or a decent living by testifying repeatedly in certain types of

cases. If a witness provides valuable testimony that helps a party to win a case, then he may secure an offer to testify in another case. The sum of money that an expert can earn in a case depends on his “reasonable” fee and the number of hours that he works. It is not at all unusual for an expert to earn more than \$200 an hour, and some earn as much as \$500 an hour.[59] If the expert spends 40 hours on a case, he could earn from \$8,000 to \$20,000. Fees paid to experts in some case range from \$25,000 to a veterinarian to \$177,888 for an accountant.[60]

Scholars have proposed a variety of different methods for dealing with problems relating to financial biases in expert testimony, such as developing organizations that certify and credential expert witnesses[61], and increasing the use of court-appointed witnesses or neutral witness panels.[62] One might argue that the actions by the NCMB (and the AANS) also could help to curb problems relating to biased expert testimony, although neither organization has alleged that Lustgarten had any financial bias in the case in which he testified.

This essay will not explore the issue of financial bias in any significant depth, since this inquiry would take us too far astray. However, it is important to introduce this problem in order to provide the reader with some additional context for the NCMB's actions against Lustgarten, and to distinguish between biased testimony and incompetent or unethical testimony.

We can define “biased testimony” as testimony that is skewed, slanted, or interpreted toward a particular conclusion or viewpoint. For example, a medical expert receiving a substantial fee from a plaintiff might offer testimony that is biased in favor of the plaintiff's case. Since bias involves an interpretation of the facts, testimony can be biased without being incompetent or unethical. Biased testimony can be competent because a competent expert may have his or her own biases, and biased testimony may still aid the trier of fact. The trier of fact may benefit from hearing two opposing, but biased, viewpoints. Since biases often occur subconsciously, one could offer biased testimony without deliberately lying or misleading the trier of fact. Moreover, a biased inference might still be a reasonable one. Of course, expert testimony could be biased and also incompetent or unethical, but it is important not to draw the conclusion that biased testimony must be incompetent or unethical. (As we shall see later, the legal system has a means of dealing with biased testimony.)

5. How the Legal System Deals with Incompetent or Unethical Expert Testimony

The U.S. legal system already has a variety of procedures and strategies for dealing with incompetent or unethical expert testimony. As mentioned earlier, judges have the authority to bar incompetent expert testimony from the courtroom. If a judge makes a mistake and allows an incompetent witness to testify, or a competent witness makes a mistake and gives incompetent testimony, then the opposing party has the opportunity to overcome this problem.

First, the opposing party may cross-examine the witness. Both sides in any trial have the right to cross-examine all witnesses, including expert witnesses. During cross-examination, the opposing counsel can require the expert to disclose facts and data that support his testimony; the opposing counsel can use passages in published treatises and articles to attack the expert's testimony; and the opposing counsel can also ask questions about the financial interests and potential bias of the expert.[63] An opposing party may also impeach the testimony of an expert witness by showing that he has made prior statements that are inconsistent with his testimony. For example, an opposing counsel could impeach the testimony of an expert by showing that statements provided in a deposition are inconsistent with statements made in court. An opposing party could also impeach a witness by questioning his character or even his mental capacity.[64] Second, the opposing party can call its own witnesses to provide testimony that contradicts or undermines the testimony of the other party.[65] If the experts disagree on a particular factual claim or opinion, then the trier of fact will have to determine who has the correct view. Third, if the opposing side loses the case, it can challenge the judge's decision to admit the incompetent testimony in an appeal to a higher court. Fourth, the court has the authority to remedy potential problems with expert testimony by appointing its own experts, such as a special witness or an expert panel.[66]

The criminal law also has ways of responding to problems with expert testimony. If an expert witness gives unethical testimony during a deposition or in court, then he or she may be liable for perjury. A witness may also be subject to criminal charges if a judge finds the witness in contempt of court. *Black's Law Dictionary* defines perjury as "the act or instance of a person's deliberately making material false or misleading statements while under oath." [67] Federal law defines perjury as willfully testifying under oath to any material matter that one does not believe to be true.[68] Most state statutes follow the common law definition of perjury as intentionally giving testimony under oath that one believes to be false.[69] These definitions all include three key elements: 1) perjury is deliberate or intentional; 2) perjury involves making false statements; 3) the statements are material, i.e. they have some connection to the consequential facts of the legal proceeding. These definitions provide different interpretations of the mental state required for perjury: under federal law, perjury is asserting a statement that one does not believe to be true; under state laws, it is asserting a statement that one believes to be false. There is an important epistemological difference between not believing that something is true and believing that it is false, since one may be indifferent to the truth or falsity of the statement. In some ways the federal definition creates a more exacting standard, since it punishes people for asserting statements as true when they simply do not know whether those statements are true.

The definition of "perjury" is similar to the definition of "dishonest testimony," discussed earlier. First, perjury involves some element of intent: perjury is more than a mere honest mistake. Second, perjury does not apply to mere differences of opinion. If a person asserts that a statement is only his belief or opinion, then he could not be charged with perjury because he would not be asserting that his statement was true. To commit perjury, one must assert that a statement is true, when one either believes that

it is false or does not believe that it is true. If a witness adds that qualifier “this is only my belief or opinion,” he should be protected from perjury.[70] Thus, the definition of perjury maintains the crucial distinctions between dishonesty and honest mistakes, and between dishonesty and differences of opinion. However, one difference between dishonesty and perjury is that perjured testimony must be material to the case, whereas dishonest testimony need not be material.

6. Should Licensing Boards or Professional Associations Address the Problem of Incompetent or Unethical Expert Testimony?

As we have just seen, the U.S. legal system already has a variety of procedures and strategies for dealing with incompetent or unethical expert testimony. This naturally raises the question: is there even a need for licensing boards or professional societies to address this problem? Aren't the currently existing legal remedies enough?

One might argue that the currently existing legal remedies are not sufficient to handle the problem of incompetent or unethical expert testimony. This appears to be the position adopted by several organizations, including the NCMB, the AANS, and the AMA. What kinds of arguments can these associations mount in favor of their decision to adopt policies that attempt to respond to this problem? First, the organizations could argue that the legal system fails to weed out incompetent and unethical testimony because judges sometimes make mistakes, witnesses do not always perform as expected, and juries are very poor at weighing and evaluating expert testimony: an unethical or incompetent expert could easily persuade the jury, even if the opposing side cross-examines and impeaches the witness. Second, prosecutors may be too busy to take their time to bring up witnesses on perjury charges, especially since perjury would be very difficult to prove in expert witnessing. An expert witness will not be liable for perjury when he renders an opinion, but only when he makes a statement of fact. Thus, the threat of perjury does not constitute a significant deterrent for most experts. Finally, the organizations could also claim that it is their social responsibility to set ethical standards for expert witnessing, given the role of professions in society. The public expects that expert witnesses will testify competently, ethically, and objectively. To protect this public trust, it is necessary to adopt rules for expert witnessing and impose sanctions on rule-breakers.

The following are some guidelines adopted by the AANS:

“Expert” testimony should reflect not only the opinions of the individual but also honestly describe where such opinions vary from common practice. The expert should not present his or her own views as the only correct ones if they differ from what might be done by other neurosurgeons. An expert should be a surgeon who is still engaged in the active practice of surgery or can demonstrate enough familiarity with present practices to warrant designation as an expert. The neurosurgeon should champion what he/she

believes to be the truth, not the cause of one party or another. The neurosurgeon should not accept a contingency fee as an expert witness.[71]

The AMA has adopted the following standards:

As a citizen and as a professional with special training and experience, the physician has an ethical obligation to assist in the administration of justice. If a patient who has a legal claim requests a physician's assistance, the physician should furnish medical evidence, with the patient's consent, in order to secure the patient's legal rights. Medical experts should have recent and substantive experience in the area in which they testify and should limit testimony to their sphere of medical expertise. Medical witnesses should be adequately prepared and should testify honestly and truthfully to the best of their medical knowledge. The medical witness must not become an advocate or a partisan in the legal proceeding. The medical witness should be adequately prepared and should testify honestly and truthfully. The attorney for the party who calls the physician as a witness should be informed of all favorable and unfavorable information developed by the physician's evaluation of the case. It is unethical for a physician to accept compensation that is contingent upon the outcome of litigation.[72]

The AAPL has adopted the following statement about expert testimony:

Forensic psychiatrists function as experts within the legal process. Although he may be retained by one party to a dispute in a civil matter or the prosecution or defense in a criminal matter, they adhere to the principle of honesty and they strive for objectivity.[73]

The ACOG has adopted six guidelines, including:

1. The physician must have experience and knowledge in the areas of clinical medicine that enable him or her to testify about the standards of care that applied at the time of the occurrence that it is the subject of legal action. 2. The physician's review of the medical facts must be thorough, fair, and impartial, and must not exclude any relevant information. It must not be biased to create a view favoring the plaintiff, the government, or the defendant. The goal of physician testifying in any judicial proceeding should be to provide testimony that is complete, objective, and helpful to a just resolution of the proceeding.[74]

As noted earlier, a North Carolina court reversed all but one on the NCMB's sanctions that it imposed on a physician for expert testimony. The court upheld a sanction for the conduct—claiming that a physician had falsified a medical record—that most closely resembled lying. The 7th Circuit Court upheld the actions the AANS took against Austin for unethical expert testimony.[75] Since the AANS is a private organization, it could terminate Austin's membership under contract law. The court held that the AANS was not liable to Austin for damages because 1) he did not have an important economic interest in his continued association with the organization, 2) the AANS did not act in bad faith, and 3) the AANS did not damage his reputation.[76] In making its ruling, the court noted the important public policy interest served by sanctioning unethical experts:

We note finally that there is a strong national interest, which we do not doubt that Illinois would embrace, in identifying and sanctioning poor-quality physicians and thereby improving the quality of health care. Although Dr. Austin did not treat the malpractice plaintiff for whom he testified, his testimony at her trial was a type of medical service and if the quality of his testimony reflected the quality of his medical judgment, he is probably a poor physician. His discipline by the Association therefore served an important public policy.[77]

The court was not convinced by Austin's policy argument that the "threat of such sanctions is a deterrent to the giving of expert evidence and so a disservice to, indeed an interference with, the cause of civil justice." [78]

Why did courts uphold the actions of the AANS against Austin but not the actions of the NCMB against Lustgarten? One legally important difference between the AANS and the NCMB is that the AANS is a voluntary organization, while the NCMB is a state actor under the authority of the State of North Carolina. As a state actor, the NCMB is subject to due process requirements arising from the 14th Amendment to the Constitution. Although a licensing board is a private organization, it can be treated as an agent of the state because the state delegates its power to grant, deny, suspend, or revoke licenses to the board.[79]

Another important legal difference between a licensing board and a professional association is that loss of membership in a professional association usually does not deprive a person of his or her economic livelihood. A physician can practice medicine without belonging to the AMA. However, a physician cannot practice medicine in a particular state if he or she has lost his or her license in that state. The NCMB's actions against Lustgarten could have prevented him from practicing medicine, since other states would probably have denied him a license.

While there are some significant differences between licensing boards and professional associations, one might argue that there are also important similarities. Licensing boards and professional associations both adopt rules for the conduct of their members and administer sanctions for conduct in violation of those rules. Although losing a license to practice a particular discipline is worse than losing membership in an organization, loss of a membership can result in personal and economic harms. In some fields, membership in a professional association is very important in employment, education, or publishing. A person who loses membership in an organization may also experience psychological distress and anxiety. Since boards and associations both adopt rules and administer sanctions, they both have the ability to control, regulate and govern behavior. They can affect the behavior of members, for better or worse.

Although the Wake County Superior Court reversed all but one of the NCMB's sanctions, several states have upheld the authority of medical boards to take actions against physicians for ethical violations. For example, in *Gladieux v. Ohio State Medical Board* the court held that the Ohio State Medical Board did not violate Gladieux's rights to due process for taking an action against for violation of ethics standards.[80] In this

case, neither party contested the issue of whether the Ohio State Medical Board is a state actor; the main issue here was whether the board violated Gladieux's rights to due process in revoking his license.[81] The Board revoked his license because it concluded that Gladieux had violated the AMA's Principles of Medical Ethics when he had sexual relations with seven mothers of his pediatric patients.[82] Other cases have also affirmed the authority of a medical board to sanction members for ethics violations.[83]

While there are some good arguments for licensing boards and professional associations to promote ethical and competent expert testimony, the actions that these organizations take against individuals raise some significant legal, ethical, and policy issues. This essay will now consider these issues in more depth.

7. Expert Testimony as Legally Privileged

All courts grants all witnesses, including expert witnesses, immunity from torts related to their testimony. The policy rationale for witness immunity is that subjecting witnesses to tort litigation, such as negligence or defamation, could deter witnesses from testifying or could encourage them to bias their testimony in order to avoid a lawsuit.[84] One might argue that actions by licensing boards or professional associations, based on the defendant's testimony in court, are like lawsuits for defamation or negligence because they constitute legal liability for testimony. The rationale for witness immunity for torts is virtually the same as the argument for protecting witnesses from actions from professional associations or boards. Concerns about a lawsuit for defamation or losing one's membership or license can both having a chilling effect on testimony. An expert who fears a sanction from a licensing board or professional association will be less willing to express an opinion that might contradict the values, beliefs, or policies of that board or association. Indeed, an expert might be afraid to question the professional competence of a defendant or disagree with another expert witness, because the expert would fear that the aggrieved party would take their concerns to the board or association. Indeed, this is precisely what happened in Lustgarten's case. The Second Restatement of Torts expresses this point clearly:

The function of witnesses is of fundamental importance in the administration of justice. The final judgment of the tribunal must be based upon the facts as shown in their testimony, and it is necessary therefore that a full disclosure not be hampered by fear of private suits for defamation...[85]

Sanctioning experts for their testimony could also have a detrimental impact on the progress of science in the courtroom. Experts frequently discuss controversial ideas (and theories and methods) when they give testimony, and it is important for the progress of science, as well as the judicial process, for these views to be aired, where appropriate. Although this paper focuses on the use of experts in medical malpractice cases, it is important to remember that many different types of litigation often rely on expert witnesses, ranging from rape and homicide cases, to products liability and

intellectual property cases. Thus, sanctioning expert witnesses for unethical testimony has implications that extend way beyond medical malpractice.

Indeed, one way of reading the development of jurisprudence before and after *Daubert* is that the courts were struggling with the basic policy issue of admitting expert testimony that uses controversial ideas. The *Frye* test tended to be a very conservative test because it required that the ideas used by experts to draw their inferences should be generally accepted. The *Daubert* test, on the other hand, was a more liberal test because it allowed judges to consider a variety of factors in deciding whether to admit expert testimony. Although the actions taken by the AANS and the NCMB were not designed to keep controversial science out of the courtroom, they certainly could have this effect if other organizations follow their example. A competent and ethical scientist might be concerned that the controversial ideas he plans to discuss in his expert testimony could be branded as incompetent or unethical. It is ironic that while the courts have taken steps to allow controversial science into the courtroom, professional associations and boards may be taking steps that will have the effect of keeping it out.

Additionally, sanctioning experts for the testimony could also have an adverse impact on access to the courts, since it will deter qualified experts from testifying in medical malpractice cases. As noted earlier, a plaintiff usually needs to have an expert testify on his behalf in a medical malpractice case, since expert opinion will be required to establish the standard of care or resolve issues of causation. Indeed, North Carolina has adopted a statute which requires the plaintiff in a medical malpractice case to demonstrate that the case has been reviewed by a person who would qualify as an expert would and is prepared to testify in favor of the plaintiff.[86]

If a plaintiff cannot proffer an expert to testify on his behalf in a medical malpractice case, then he will find it difficult (or impossible) to bring his case to court, and this will interfere with the plaintiff's access to the courts. The U.S. Supreme Court has ruled that the access to the courts doctrine prohibits the state from taking actions that deny a potential class of plaintiffs the opportunity to litigate potential cases.[87] The U.S. Supreme Court has also ruled that fundamental fairness requires that indigent, criminal defendants have access to the "basic tools of an adequate defense or appeal," which may include access to an expert witness to assist in an insanity defense.[88] On the basis of these two rulings, one might argue that the state has an obligation to not interfere with the plaintiff's access to expert witnesses. If the state takes steps that would have a detrimental impact on medical experts' willingness to testify for plaintiffs in malpractice cases, then this would deny a potential class of plaintiffs the opportunity to litigate these cases and would prevent individual plaintiffs from having access to the basic tools they need to litigate.

There are strong arguments for protecting expert witnesses from legal liability (other than perjury or contempt). In our opinion, encouraging qualified experts to give useful testimony in court is so important to the legal system that a very high burden of proof rests on those who want to punish witnesses for their testimony. Punishing witnesses must serve a social goal that is important enough to risk undermining the just resolution

of legal proceedings, the progress of courtroom scientific testimony, and access to the courts.

8. Expert Testimony as Constitutionally Protected Free Speech

Expert testimony is constitutionally protected free speech. The 1st Amendment to U.S. Constitution guarantees freedom of speech under federal law and the 14th Amendment applies free speech protections to the states.[89] Several cases have held that free speech protections apply in the courtroom setting.[90] The right to free speech is a right that citizens have against the government; it is not a right that citizens have against private groups or individuals. Thus, a licensing board, as an agent of the government, would be required to protect free speech, whereas a professional association, as a private entity, would have no such obligation. Thus, if a professional association sanctions a member for comments that he or she makes in court, this would not violate that member's right to free speech.

Different types of restrictions have different impacts on freedom of speech. Courts distinguish between time, place and manner restrictions of speech, such as a rule forbidding demonstrations in front of a courthouse after midnight, and content-based restrictions, such as a rule forbidding civil rights demonstrations in front of a courthouse. Content-based restrictions on speech—restrictions that respond to the message conveyed—are presumptively invalid and can only be permitted under the doctrine of strict scrutiny.[91] A court will not uphold a content-based speech restriction unless the restriction is necessary to serve a compelling government interest and it is the least restrictive means of promoting this interest.

The NCMB's decision to take away Lustgarten's license was a content-based restriction on speech because it was in response to the content of his testimony in court. One might argue that the government interest in Lustgarten's case—the need to deter unethical or incompetent expert testimony in a medical malpractice case—was not a compelling interest, since there are other means of dealing with this problem, such as cross-examination of a witness, presentation of contrary witnesses, or even perjury.[92] One might also argue that the government's method of restricting speech—taking away Lustgarten's license, was not the least restrictive means, since it could have accomplished its goal with a lesser penalty, such as giving him a warning or placing him on probation. Indeed, one could take this argument a step further and argue that the government's punishment was excessive, given Lustgarten's alleged offense. The NCMD took away Lustgarten's license even though his conduct did not have an adverse impact on a patient.

The NCMB has disciplined many doctors for unprofessional conduct more egregious than Lustgarten's without taking away their licenses. In one recent case, a physician admitted to lying to the NCMB about previous convictions for drunk driving and menacing. The board reprimanded the physician but did not take away his license.[93]

In another case, a resident was allowed to practice medicine after the board found that he wrote prescriptions in his wife's name and diverted drugs for his own use.[94] In a third case, a physician failed to come to the emergency room to treat an infant she had seen within 24 hours.[95] In all three of these cases, the physicians posed a greater threat to the health and safety of other people than Lustgarten. One might argue that the revoking a physician's license should be reserved only for conduct that harms patients (or the public) or places people at significant risk of harm.

9. Vagueness

Vague statutes that penalize conduct are unconstitutional. Under the Due Process clause of the 14th amendment, a state may not deny a person of life, liberty, or property if the state's action is based on a vague law.[96] Vague prohibitions on speech are especially problematic.[97] A prohibition on speech is vague if 1) it does not provide a reasonable person a reasonable opportunity to understand what conduct is prohibited; or 2) it authorizes discriminatory or arbitrary enforcement.[98] The statute that allowed the board to take away Lustgarten's license, N.C.G.S. 90-104, refers to violations of acceptable medical practice, the ethics of medicine, honesty, justice, and good morals.[99] The statute does not refer specifically to unethical or unprofessional conduct in courtroom testimony. One might argue that the statute would not give a reasonable physician the opportunity to understand that unethical or unprofessional expert testimony would be prohibited, unless the testimony would be considered to be dishonest. The statute might be precise enough to prohibit conduct that would be considered by a reasonable person to be dishonest, such as perjury or fraud, but it probably would not be precise enough to prohibit providing a disputed opinion on the standard of care. As noted earlier, the Wake County Superior Court found that the statute was vague as applied to Lustgarten's conduct related to the allegation that he misstated the standard of care, but that it was not vague as applied to his testimony that Jaufman had falsified patient records.[100] Specific ethical guidelines or rules that specifically mention unethical or incompetent expert testimony, such as those adopted by the AMA or ACOG, would probably be less vague than the statute that the NCMB relied on to punish Lustgarten.

10. Conclusion

While there are some good reasons for deterring expert witnesses from giving incompetent or unethical testimony, sanctioning witnesses for speech given during legal proceedings raises significant legal, ethical and policy issues. Sanctions imposed by licensing boards or professional associations can 1) have a chilling effect on witnesses, which may compromise the quality of testimony and undermine scientific freedom and access to the courts; 2) violate constitutional rights to free speech; 3) constitute excessive punishments; or 4) violate constitutional rights to due process as a result of

vagueness. Penalizing expert witnesses for their testimony also raises other issues that will not be considered here, such as protection of the integrity of the judicial branch of government.[101]

Given all of these potential hazards with penalizing individuals for expert testimony, one might argue that licensing boards, as well as other organizations that can significantly affect the economic prospects of their members, should refrain from sanctioning individuals for expert testimony. If the legal system already has procedures and strategies for dealing with incompetent or unethical testimony, then why is there a need for licensing boards or professional groups to tackle this issue? Why not leave well enough alone? There are, however, some good reasons for licensing boards and professional groups to take on this issue. First, the legal system is far from perfect. An incompetent or unethical expert witness may make it through the judge's gate and sway the trier of fact. Further, given the heavy burdens on the legal system, perjury may go unpunished. Second, licensing boards, professional associations, and other organizations have a right and a duty to promote standards of conduct for their members. Given the legal and social significance of expert testimony, it is appropriate for organizations to develop rules and policies related to this type of conduct.

To avoid legal, ethical and policy problems with penalizing expert witnesses for their conduct, any rules or guidelines adopted by licensing boards or professional associations should carefully formulated and applied. These rules should be clear and unambiguous and fair, and they should not undermine free speech, open debate in the courtroom, scientific freedom, or access to the courts. To achieve these goals, we make the following recommendations:

1. Rules or guidelines adopted by organizations should not punish members for the content of their opinion testimony; they should only punish members for the content of their factual testimony. Rules should not provide a basis for punishing experts for opinion testimony because experts need sufficient freedom to defend controversial or unpopular opinions in court, which can benefit the trier of fact. Indeed, one of the most important consequences of *Daubert* case is that it breaks the stranglehold of "generally accepted" opinions and allows novel and controversial opinions into the courtroom.[102] Punishing experts for opinion testimony would reverse this important development and would have a chilling effect on testimony.[103]
2. Even if rules or guidelines do not authorize punishments of members for opinion testimony, they may still endorse ethical ideals for opinion testimony, such as objectivity, fairness, reasonableness, rigor, and the like. One can draw a distinction between ethical rules that set a minimum standard for behavior and rules that establish ideal standards for behavior. Only a person who violates a rule that sets a minimum standard can be punished. People fail to live up to ethical ideals all the time, but ideals can still be useful. For example, objectivity is an ideal that scientists should strive toward. Failure to meet this ideal should not be a basis for punishment. However, failing to achieve a minimum level of

objectivity, e.g. fabrication, falsification, or misrepresentation of data, may constitute a punishable offense in science.[104]

3. Rules or guidelines may prohibit dishonest, factual testimony in court, which could be defined as: “making a factual statement in court (or in a deposition) that one knows to be false.” This definition of “dishonest testimony” is very similar to the definition of “perjury,” except it includes testimony that may not be material to the case. It is worth noting that this definition also excludes honest mistakes, since the dishonesty must be intentional. A person who makes an honest error in expert testimony may fall short of the ethical ideals for testimony, but he or she should not be punished for his or her transgression.[105]
4. Organizations should focus their efforts on education and policy development rather than on enforcement. They should develop rules and guidelines for expert testimony, publicize their rules, and educate their members on how to be a fair, effective, useful, and ethical expert witness.

Notes

* We would like to acknowledge Professors Robert Schwartz and Ken De Ville for their helpful comments and discussions, as well as two anonymous reviewers.

[1] Avery, S. Surgeon fights for NC license. *The Raleigh News and Observer* (September 1, 2002): 1A.

[2] *Harden, et al v. Carolina Neurological Services, P.C., et al*, 97 CVS 503 (1998).

[3] Avery, *supra* note 1.

[4] *Id.*

[5] Kaufmann, B. Quoted in Avery, *supra* note 1, 14A.

[6] Adams, D. Physician loses license over expert testimony. *Amednews.com* (August 19, 2002). Available at: <www.ama-assn.org/sci-pubs/amnews>. Accessed: August 31, 2002.

[7] N.C.G.S. 90-14. (2000). 90-14 (6) allows the NCMB to take actions for “Unprofessional conduct, including, but not limited to, departure from, or the failure to conform to, the standards of acceptable and prevailing medical practice, or the ethics of the medical profession, irrespective of whether or not a patient is injured thereby, or the committing of any act contrary to honesty, justice, or good morals, whether the same is

committed in the course of the physician's practice or otherwise, and whether committed within or without North Carolina..."

[8] North Carolina Medical Board Physician Details for Gary James Lustgarten. Available at: <www.ncmedboard.org/>. Accessed: August 31, 2002.

[9] *In Re: Gary James Lustgarten, M.D.*, Wake County Superior Court, April 21, 2003.

[10] Memorandum of Law in Support of Gary J. Lustgarten, M.D., Respondent, Wake County Superior Court, February 13, 2003.

[11] *In Re Lustgarten*, at 7.

[12] *In Re Lustgarten*.

[13] Avery, S. Panel eases surgeon's punishment. *Raleigh News and Observer*, November 22, 2003: B1.

[14] Magnuson, C. Expert witnesses face ethics charges from medical societies. *Trial* 2001; 37, 4: 12-16.

[15] *Austin v. American Association of Neurological Surgeons*, 253 F.3d 967, 7th Cir. 2001.

[16] Murphy, J. Expert witnesses at trial: where are the ethics? *The Georgetown Journal of Legal Ethics* 2000; 14, 1: 217-239.

[17] AMA, Council on Ethical and Judicial Affairs. E-9.07: Medical Testimony. Available at: <www.ama-assn.org/>. Accessed: September 3, 2002. AAPL, Guidelines for the Practice of Forensic Psychiatry. Available at: <www.emory.edu/AAPL/ethics.htm>. Accessed: April 9, 2004; ASA, Ethical Guidelines for Statistical Practice. Available at: <www.amstat.org/profession/ethicalstatistics.html> Accessed: April 9, 2004. AANS, Codes of Ethics. Available at: <www.neurosurgery.org/>. Accessed: September 13, 2002. American College of Obstetrics and Gynecology, Expert Testimony. Available at: <www.acog.org/from_home/publications/ethics/ethics116.pdf> Accessed: April 9, 2004.

[18] Fed. R. Evid. 401 (1975). This essay will discuss Federal Rules of Evidence, since most states have adopted rules that are similar to the Federal Rules. See Rothstein, P.; Raeder, M.; and Crump, D. *Evidence: State and Federal Rules*. St. Paul, MN: West Publishing, 1997, 1.

[19] Rothstein, *supra* note 18, 63-64.

[20] Fed. R. Evid. 403 (1975).

[21] Fed. R. Evid. 404-406 (1975). This rule has many exceptions, however. For example, a defendant may introduce evidence of his good character in his own defense. If the defendant introduces this evidence, the prosecution may introduce evidence of his bad character to rebut the defendant's evidence.

[22] See *General Electric* 522 U.S. 136, *supra* note 14.

[23] Strong, J. et al. *McCormick on Evidence*. St. Paul, MN: West Publishing, 1999, 19-20.

[24] *Beech Aircraft Corp. v. Rainey*, 488 U.S. 153, 168 (1988).

[25] Strong, *supra* note 20, 23.

[26] *Id.*

[27] *Id.*

[28] *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

[29] *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). Although *Daubert* governs the rules of evidence in federal courts, some state courts follow *Frye*, and some follow *Daubert*. Rothstein, *supra*, note 15, 351.

[30] *Id.* at 1129-1130.

[31] *Daubert*, 509 U.S. 589.

[32] *Id.* Rule 702 states that, "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." Fed. R. Evid. 702 (1975).

[33] *Id.* at 593-594.

[34] *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999).

[35] *Id.* at 145-146.

[36] *Id.* at 147-148.

[37] *Id.*

[38] *Id.*

[39] Rothstein, *supra*, note 18, 351.

[40] In *Daubert*, the court applied its factors tests to the eight experts who testified for the plaintiffs, who represented the fields of chemistry, biostatistics, and epidemiology. *Daubert*, 509 U.S. 589, 589. Thus, “epidemiology” would appear to be a scientific branch of medicine. But would pediatrics or family medicine be regarded as scientific disciplines? In *Hall v. Hilbun*, the court said that “medicine is a science, though its practice be an art.” *Hall v. Hilbun*, 466 S. 2d 856, 870 (Miss. 1985). This court suggests we can distinguish between medical research, which is a science, and medical practice, which is an art. For an interesting set of essays discussing the relationship between science and medicine, see Boyle, P. (ed.), *Getting Doctors to Listen: Ethics and Outcomes Data in Context*. Washington: Georgetown University Press, 2000; and Callahan, D. (ed.), *The Role of Complementary and Alternative Medicine: Accommodating Pluralism*. Washington: Georgetown University Press, 2002.

[41] *Gannon v. Elliot*, Cal. 19 App. 4th 1, 23 Cal. Rptr. 2d 86 (1993). The defendant left a plastic cap inside the plaintiff’s hip socket during hip replacement surgery.

[42] To prove negligence, the plaintiff must show by preponderance of evidence that 1) the defendant had a duty to the plaintiff; 2) that an applicable standard of care governed the defendant’s duty; 3) that the defendant breached the standard of care; 4) that the breach was a physical cause of the harm to the plaintiff; 5) that the breach was a proximate (or legal cause) of the harm to the plaintiff; 6) that the plaintiff suffered some harm. See Kionka, E. *Torts*. St. Paul, MN: West Publishing, 1999.

[43] Under the doctrine negligence per se, the plaintiff can prove that the defendant was negligent because the defendant violated a law or regulation designed to protect members of a protected class, of which the plaintiff is a member. See *Coleman v. Deno*, 813 So.2d 303 (La., 2002), where the plaintiff proved medical malpractice based on the defendants’ a violation of the Emergency Medical Treatment and Labor Act (EMTALA).

[44] *Hauser v. Bhatnager*, 537 A.2d 599 (Me. 1988).

[45] *Miller v. Silver*, 181 Cal. App. 3d, 226 Cal. Rptr 479 (1986).

[46] A classic statement of the standard of care is as follows: “A physician must possess that reasonable degree of learning, skill and experience which is ordinarily possessed by others in his profession...In the care and treatment of each patient, each physician has a non-delegable duty to render professional services consistent with that objectively ascertained minimally acceptable level of competence he may be expected to apply given the qualifications and level of expertise he holds himself out as possessing and given the circumstances of the particular case.” *Hall v. Hilbun*, 466 S. 2d 856, 869, 870 (Miss. 1985).

[47] Furrow, B. et al. *Health Law*. St. Paul: West Publishing, 2001, 171.

[48] *Id.*

[49] *Id.*

[50] *Hall*, 466 S. 2d 856.

[51] Hardwig, J. 1994. Toward an ethics of expertise. In: Wueste, D. (ed.) *Ethics and Social Responsibility*. Lanham, MD: Rowman and Littlefield: 83-120.

[52] Bok, S. *Lying: Moral Choice in Public and Private Life*, 3rd ed. New York: Vintage Books, 1999.

[53] Audi, R. *The Architecture of Reason*. New York: Oxford University Press, 2001.

[54] For further discussion, see Gibbard, A. *Wise Choices, Apt Feelings*. Cambridge, MA: Harvard University Press, 1990; Korsgaard, C. *The Sources of Normativity*. Cambridge: Cambridge University Press, 1996.

[55] Murphy, J. Expert witnesses at trial: where are the ethics? *The Georgetown Journal of Legal Ethics* 2000; 14, 1: 217-239; Huber, P. *Galileo's Revenge: Junk Science in the Courtroom*. New York: Basic Books, 1991; Angell, M. *Science on Trial: The Clash of Medical Evidence and the Law in the Breast Implant Case*. New York: W.W. Norton, 1996.

[56] Murphy, *supra* note 55.

[57] ABA Model R. Prof. Conduct, 3.4 (b) (1998).

[58] See *State v. Ferraro*, 198 P.2d 120 (Ariz. 1948), in which the court affirmed a prosecutor's conviction for offering to pay a witness \$100 for specific testimony in a criminal trial; but also see *E.E.O.C. v. Exxon Corp.* 202 F.3d 755, C.A.5 (Tex. 2000), in which the court held that paying an expert witness for his services is not bribery.

[59] Parker, J. Contingent expert witness fees: access and legitimacy. *Southern California Law Review* 1991; 64: 1363-1389.

[60] *Id.*

[61] *Id.*

[62] Rosenbaum, J. Lessons from litigation over silicone breast implants: a call for activism by scientists. *Science* 1997; 276:1524-1525.

[63] Strong, J. (ed.). *McCormick on Evidence*, 5th ed. St. Paul: West Group, 1999: 24-26.

[64] *Id.* at 49-81.

[65] *Id.* at 23-24.

[66] *Id.* at 30-32.

[67] *Black's Law Dictionary*. St. Paul, MN: West Publishing, 1999.

[68] 18 U.S.C. sec. 1621(1) (1948).

[69] Miller, J. Client perjury: an ever present, multidimensional problem. *Commercial Law Journal* 2001; 106: 349-393.

[70] *People v. Drake*, 380 N.E.2d 522 (Ill.App. 4 Dist., 1978), holding that one cannot be charged with perjury for mere belief, unless one asserts that one accepts a belief that one does not, in fact, accept.

[71] AANS, *supra* note 17.

[72] AMA, *supra* note 17.

[73] AAPL, *supra* note 17.

[74] ACPG, *supra* note 17.

[75] *Austin v. American Association of Neurological Surgeons*, 253 F.3d 967, 967.

[76] *Id.*

[77] *Id.* at 974.

[78] *Id.* at 972.

[79] See *Bates v. State Bar of Arizona*. 433 U.S. 350 (1977), holding that the Arizona Bar Association is a state actor.

[80] *Gladieux v. Ohio State Med. Bd.* 728 N.E.2d 459, 473 (Ohio App. 10 Dist., 1999).

[81] *Id.* at 461.

[82] *Id.*

[83] See *South Carolina State Bd. of Medical Examiners v. Hedgepath*, 480 S.E.2d 724 (S.C., 1997), upholding the medical board's decision to sanction a physician for breaking confidentiality; *Burdge v. State Bd. of Medical Examiners*, 403 S.E.2d 114, (S.C., 1991), upholding a medical board's sanction of a physician for failure to disclose his loss of obstetric privileges to a patient; *Gale v. State Bd. of Medical Examiners of*

South Carolina, 320 S.E.2d 35, (S.C. App., 1984), upholding the medical board's decision to sanction a psychiatrist for a variety of ethics violations.

[84] For further discussion of this point, see Memorandum of Law in Support of Gary J. Lustgarten, M.D., *supra* note 10 at 10-17. See also *Rickenbacker v. Coffey*, 103 N.C. App. 353 (1991) (holding that testimony in court is absolutely privileged and may not support a suit for defamation), and *Williams v. Congdon*, 43 N.C. App. 53 (1979) (holding that testimony in is privileged and cannot serve as the basis for medical malpractice).

[85] The Second Restatement of Torts (1997) § 588.

[86] N.C.G.S. Chap. 1A, Sec. 4, Rule 9 (1998).

[87] *Christopher v. Harbury*, 536 U.S. 403 (2002).

[88] *Ake v. Oklahoma*, 407 U.S. 68, 77 (1985).

[89] U.S. Constitution (1787).

[90] *Craig v. Harney*, 331 U.S. 367; *Holt v. Virginia* 381 U.S. 131 (1965); *Brown v. United States*, 356 U.S. 148.

[91] *Arkansas Writers' Project, Inc. v. Ragland*, 481 U.S. 221 (1987); *United States v. Playboy Entertainment Group, Inc.* 529 U.S. 803 (2000).

[92] Memorandum of Law in Support of Gary J. Lustgarten, M.D., *supra* note 10 at 23.

[93] *Id* at 40.

[94] *Id* at 41.

[95] *Id* at 39.

[96] *Connally v. General Construct. Co.*, 269 U.S. 385 (1926).

[97] *N.A.A.C.P. v. Button*, 371 U.S. 415 (1963).

[98] *Hill v. Colorado*, 530 U.S. 703 (2000).

[99] *In Re Lustgarten*, at 5-7.

[100] *Id*.

[101] See Memorandum of Law in Support of Gary J. Lustgarten, M.D., *supra* note 10 at 30-31.

[102] Miller P and Rein B. Whither Daubert: reliable resolution of scientifically-based causality issues in toxic tort cases. *Rutgers Law Review* 1998; 50: 563-84.

[103] Current definitions of “research misconduct” are careful to distinguish between “misconduct” and a “difference of opinion.” The main reason for drawing this distinction is to avoid having a chilling effect on the progress of science. Scientists disagree all the time. Indeed, one might argue that progress cannot occur without disagreement. For further discussion, see National Academy of Sciences, *Responsible Science: Ensuring the Integrity of the Research Process*. Washington, DC: National Academy Press, 1993.

[104] Shamoo A and Resnik D. *Responsible Conduct of Research*. New York: Oxford University Press, 2003.

[105] “Research misconduct” definitions also distinguish between “misconduct” and “error.” Error occurs all the time in science. It may be irresponsible or unethical to make mistakes in science, but an honest mistake is different from misconduct, which is intentional. See Shamoo and Resnik, *supra* note 104.