Toward a Critical Forensic Psychiatry

Rodney J. S. Deaton, MD, JD

J Am Acad Psychiatry Law 31:232-8, 2003

About 20 years ago, Dr. Alan Stone stunned forensic psychiatrists when he delivered the text of "The Ethics of Forensic Psychiatry: A View from the Ivory Tower" to an annual meeting of the American Academy of Psychiatry and the Law. In his remarks, he first questioned the coherence of the intellectual underpinnings of the ethics of forensic psychiatry. He then expressed grave misgivings about the wisdom and by implication, the desirability—of standard forensic psychiatric practice. Furthermore, he did so not as an outsider, but rather as (by all appearances) a quintessential insider, being both a former president of the American Psychiatric Association and the Touroff-Glueck Professor of Law and Psychiatry at Harvard. He took law seriously, he took psychiatry seriously—and he took them both to task. To this day, forensic psychiatrists find themselves grappling with, and distancing themselves from, his remarks.^{2,3}

In the ensuing years, few other insiders have put forward arguments similar in critical spirit to Dr. Stone's. On the other hand, there are many forensic psychiatrists who may not consider Dr. Stone an insider at all. To many he appears to represent someone on the margin—someone who, because of his credentials, must be given a forum to be heard, yet someone who remains enigmatic and at times unhelpful.

It is precisely this spot on the margin that I want to analyze in this article. I want to examine not only how one may define and then arrive at this position, but also what one might be able to do from there. By doing so, I hope to move toward making a place for a critical forensic psychiatry: a practice that takes seri-

Dr. Deaton is Volunteer Clinical Assistant Professor of Psychiatry, Indiana University School of Medicine, Indianapolis IN. Address correspondence to Rodney J. S. Deaton, MD, JD, 333 N. Pennsylvania Street, Suite 612, Indianapolis, IN 46204. E-mail: rdeaton@iquest.net

ously both law and psychiatry, yet a practice that allows for a profound questioning of the most basic assumptions of both fields. I will argue that one can only engage in critical forensic psychiatry on the margin as an insider who must forever act like—and eventually be treated as—an outsider. Yet, I will also argue that from that spot one can provide insights that, while radical, may help to invigorate forensic psychiatry, or at least keep the field fresh and reflective, in much the way that Dr. Stone's thoughts have influenced the field for almost a quarter of a century.

The Road to the Margin

To understand the necessarily marginal position of critical forensic psychiatry, consider Law and Psychiatry as two professional partners who share two groups of clients. The first clients are People with Mental Illness, all of whom eventually interact with the legal system in some way, whether in terms of their rights or of their responsibilities. The other client is Society. Society and People with Mental Illness must find a way to live together, and Law and Psychiatry must aid them in that task. Roughly speaking, Law considers its primary loyalty to be to Society, while Psychiatry considers its primary loyalty to be to People with Mental Illness; but both Law and Psychiatry maintain significant loyalties to each client, given that, in reality, Society is composed of both People with Mental Illness and all those who interact (sometimes distressingly) with them.

Both Law and Psychiatry want to do right by both of their clients, and in their best moments, both want to work together, respecting their differing spheres of competence. If they work together, both clients benefit (even though it may be unclear to what extent). If they do not work together, both clients will eventually suffer.

Both Law and Psychiatry acknowledge, however, that Law has an additional task, one completely independent of the partnership: Law wants to look good to Society. Society must have the sort of faith in Law that it does not have to have in Psychiatry. And Psychiatry accepts that. Society can go on when it lacks much faith in Psychiatry, even if it (and People with Mental Illness) may pay a price for doing so. Society cannot go on for long when it is too lacking in its faith in Law, and everyone agrees that Law, Psychiatry, and People with Mental Illness all depend on the stability of Society.

Therefore, in law journals and in classrooms, Law (and to a more limited extent, Psychiatry) may question Law's shortcomings, yet in the courtroom and in the public eye, Law must have legitimacy. To maintain that legitimacy, both Law and Psychiatry implicitly agree that Law is the dominant partner. Granted, rarely must the two partners confront this issue directly. In almost all cases, Law agrees with—and enforces, if necessary—the consensus opinions of Psychiatry's best practitioners. Nevertheless, if a serious, nonnegotiable disagreement were to arise between the two partners, then what Law says would prevail. Law's principles must sometimes supersede some psychiatrists' ideals.⁵

For Law to have legitimacy, it must appear consistent and reliable, for that is how Society (at least in the West) wants Law to be. For Society, the worst thing Law can be is capricious and arbitrary. Consequently, Law believes it must be rigorous and never unduly emotional. As probably every Anglo-American law student has heard ever since Sir Edward Coke wrote the words almost 400 years ago, "Reason is the life of the Law."

As long as Psychiatry defers to Law in all of this, their partnership works well enough. Yet even though Psychiatry may agree that Law must always appear before Society to be in control, some psychiatrists may be less convinced that rigor and minimal emotionality are always the best ways to maintain that control, especially when Law deals with People with Mental Illness. Psychiatry prides itself in knowing what is best for People with Mental Illness, whether or not it is best for Society as a whole. Sometimes, in some psychiatrists' opinion, emotion is exactly what People with Mental Illness need. At such times, flexibility and not rigor is what the doctor orders.

Therefore, at such times these psychiatrists look for ways in which they can convince Law to accept their suggestions for a more flexible legal approach for People with Mental Illness. Yet when these psychiatrists claim that, in a particular case or particular class of cases, a mental illness should be more relevant to the legal outcome than Law might otherwise allow, they are claiming in some form that at that point Psychiatry knows how to balance the needs of People with Mental Illness and Society better than Law does. When Law may otherwise have required more stringent criteria (for responsibility or competence, for example), psychiatrists may argue for more flexible, nuanced criteria. Consequently, they are saying to Law (and to Society) that, in such instances, Psychiatry's (or at least their) views of the proper balance should prevail in the disagreement. In short, for that particular moment, Psychiatry is no longer deferring to Law.

These can be tense moments between Law and Psychiatry. In theory, psychiatrists should always be able to challenge Law's conclusions and offer better ones, yet, in practice, psychiatrists must advance their arguments gently. They must remember to preserve Law's position before Society as the ultimate arbiter of all things social. For if psychiatrists question Law too vigorously before Society, lawyers tend to react in one of two ways, neither of which ends up benefitting People with Mental Illness or Psychiatry (and thus ultimately benefitting Society).

In the first type of reaction, Psychiatry is denigrated, whether covertly or overtly. Psychiatrists do not (once again) adequately understand Law's grave responsibilities to Society, say these lawyers. Perhaps they do understand the needs of People with Mental Illness. Nevertheless, should they then claim that they should prevail in their views of how best to meet those needs and thereby claim greater social authority than Law in these matters? That, say such lawyers, goes too far. If Law is questioned too vigorously by psychiatrists, these lawyers may even try to maintain that Law can get along without Psychiatry—that Psychiatry is so much more emotional, so much less rigorous in its junk science that it actually impedes Law's duties and thus should be reduced in its influence, even to the point of dissolution of the partnership.8 Flexibility can go only so far.

Psychiatrists always try to defend themselves by extolling their true science and their well-examined ethics. Nevertheless, they always know that, in the

end, in response to this reaction they will have to be the ones to modify their position more. Again, Law's principles must sometimes supersede some psychiatrists' ideals. Psychiatrists modify their position not only because they recognize that Law must have legitimacy, but also because, just as important, they distrust how certain lawyers would manage People with Mental Illness if they were left themselves to deal with them. Psychiatry simply cannot abandon People with Mental Illness to the potentially heartless consequences of having such lawyers run matters, rigorously, on their own.

Still, behind all this lies a secret. Both psychiatrist and lawyer know that Law will never dissolve its partnership with Psychiatry, no matter how much Law's self-perceived legitimacy has been attacked and wounded and no matter what, in their angrier moments, some lawyers might say. The reason is a simple one. Law knows that it cannot balance the needs of People with Mental Illness and Society on its own.¹⁰ If it tries, it will fail and, even worse, it will feel guilty (or in Law's language, unjust). No matter how much some lawyers may try, Law can never completely make the mental disorders of People with Mental Illness irrelevant to Law's task of helping People with Mental Illness and Society live together. If the illnesses are relevant, then psychiatrists, with their understanding of those illnesses, are relevant. Moreover, even if Society does not expect Law to take care of People with Mental Illness, Society does expect that Law should at least not hinder, and should at best help, psychiatrists in their duties toward both People with Mental Illness and Society. End of story. Psychiatry stays.

Therefore, Psychiatry (and Law) know that Psychiatry is necessary to the partnership, but both act as if Psychiatry is in Law's world only by Law's good graces, ultimately toeing Law's line to avoid humiliating expulsion. Psychiatry knows that it will make Law miserable if it leaves, but Psychiatry also knows that such a move will hurt People with Mental Illness, whom Psychiatry cares about. At the times when some lawyers choose to denigrate Psychiatry in public, Psychiatry knows that they will not be afraid to hurt a few People with Mental Illness to make their point, if necessary. Psychiatry must therefore be very careful. Even if some lawyers hurt a few People with Mental Illness, however, Law will not hurt all People with Mental Illness—and everyone knows that as well. What never gets acknowledged is Psychiatry's secret power: that in this game of chicken, Psychiatry will never play its ultimate card ("I'm out of here"), and Law will never ask it to.

Yet Psychiatry takes another significant risk if some psychiatrists question Law too vigorously before Society. The second possible reaction can be ultimately just as harmful as the first one, but it comes packaged as a blessing. Because Law wants to appear to both People with Mental Illness and Society to be just, when questioned vigorously by these psychiatrists, other lawyers may seek to make things better for People with Mental Illness by way of mental health law reforms. Such well-meaning reforms rarely end up being that helpful to People with Mental Illness in the long run, however, precisely because such reforms are always on Law's terms, whether or not, in the opinion of Psychiatry and People with Mental Illness, those terms are in fact the best ones for People with Mental Illness. Such reforms may extol increased autonomy (e.g., civil commitment laws) or responsibility (e.g., insanity defenses or coerced treatment in the criminal context) for People with Mental Illness, concepts deeply valued by Law and Society. Yet often these concepts place burdens on People with Mental Illness that they may or not be biologically prepared to bear.

No matter the rhetoric, three results always arise out of mental health law reforms. First, these reforms always assure a better image for Law (at least in the short run). The lawyers work to convince Society of Law's legitimacy by demonstrating Law's commitment to Society's overarching values while also trying to meet some of the needs of People with Mental Illness. Law comes out looking like the hard-headed, yet still thoughtful reformer. Second, these reforms always subtly remind psychiatrists that their values and ideas must, and will, always be subordinated to Law's understanding of Society. Usually by referring to a need to balance the interests of all the members of Society (i.e., both People with Mental Illness and those who interact with them), these lawyers remind everyone that Law cannot just consider the needs of People with Mental Illness alone, thereby rhetorically placing psychiatrists (sometimes unfairly, sometimes fairly) in the role of the interested advocates who must be made to see the big picture. Third, and worst, these reforms never clearly benefit either People with Mental Illness or Society. Despite lofty talk of rights and duties, People with Mental Illness often lack the neurophysiology to embrace those rights and

duties, as streets and jails filled with persons with psychotic disorders clearly attest. Rhetoric, even statutory or judicial rhetoric, simply cannot erase the harsh realities of dysfunctional neurons. The problems are often too local, too physical, too personal for such big-picture solutions.

Yet even if mental health law reforms in general are a mixed blessing, one can argue that some mental health laws might still benefit from periodic reform. If psychiatrists do not help People with Mental Illness by being too vocal, neither do they help them by being too silent. Thus, Psychiatry must be very judicious about using its disruptive power to question Law before Society. That power has to remain hidden enough so that no one knows about it or talks about it, but not so hidden that psychiatrists forget how to use it at the proper time and place.

Because this is a high-stakes game and because it must be played *sotto voce*, Psychiatry has encouraged (and wisely so) the development of a group of its own to manage this delicate task: the forensic psychiatrists. Forensic psychiatrists have learned Law's language and in doing so have mastered the fine art of pushing Law in Law's language—without pushing Law too far. Forensic psychiatrists pride themselves on their mastery of a morally justified brinkmanship: for the sake of People with Mental Illness, they push Law continuously, but never too much.

In contrast, I propose that one define critical forensic psychiatrists (as opposed to regular forensic psychiatrists) as those of Psychiatry, who, like regular forensic psychiatrists, have learned Law's language, but who, for whatever reason, cannot bring themselves to play the Law-and-Psychiatry game. That very phrase implies that critical forensic psychiatry would, at its foundation, be willing to question Law's legitimacy itself, believing it not to be as fragile as one might otherwise believe, as well as to question Psychiatry's response to that legitimacy.

Critical forensic psychiatrists would therefore not do well at brinkmanship: they would tend to be those who threaten to push Law a bit too far by questioning Law's legitimacy and Psychiatry's proper response, both in courtroom testimony and in journal articles. Unlike the rank and file of general Psychiatry, who may also threaten to push Law too far but in an often naive way (and thus are easily dismissed by Law), critical forensic psychiatrists would know how to push the Law-and-Psychiatry partnership in fluent Law language, risking the great displeasure of Law's

elite (its judges, its attorneys, its academics), and even perhaps of Psychiatry's regular forensic psychiatrists. Critical forensic psychiatrists would be people who do not fit in easily with a recognized group. For unlike radical critics of Psychiatry, they would take Psychiatry quite seriously, recognizing the profound help the field can offer People with Mental Illness. Yet unlike regular forensic psychiatrists, they might find themselves questioning such privileged notions as objectivity or the meaningfulness of concepts such as insanity, competence, and the standard psychiatric assessments of those concepts. ¹¹ Thus, being neither inside nor outside, they would find themselves always on the margin, observing, yet never fully joining in.

Yet critical forensic psychiatrists could still agree that wounding Law's legitimacy—and thus inciting some lawyers' outrage or (even worse) provoking mental health law reforms—usually gets no one anywhere. People with Mental Illness, Society, Psychiatry, and even Law usually emerge from such encounters scarred and broken. Critical forensic psychiatrists would recognize that what they think a person's attitude toward Law and Psychiatry should be and what it actually is are, almost always, entirely different. Therefore, they might accept Psychiatry's role in the partnership, accept regular forensic psychiatrists' participation in that partnership, and simultaneously accept their own marginalization from it. If critical forensic psychiatrists want to exercise the right to doubt Law's legitimacy and Psychiatry's response to it, they must be equally willing to be exiled to the edges of the field, not only rhetorically, but even literally. If they actually care about People with Mental Illness, it would appear that they have, practically speaking, no other choice.

Critical forensic psychiatrists might therefore find the Law-and-Psychiatry partnership baffling, yet still perfectly understandable. They could find it baffling because, as in any relationship in which power is shared surreptitiously, a tremendous amount of negative emotion gets batted back and forth. Yet they could find it understandable, because something of at least a partially helpful nature is often accomplished for People with Mental Illness. Despite the negative emotion, the partnership is amazingly stable: everyone appears to be used to the negative emotion, and any attempt to bring the underlying conflicts to the surface only heightens the nonnegotiables (the importance of appearance for Law, the

importance of maintaining control over the discourse of mental illness for Psychiatry), all to no one's advantage.

Critical forensic psychiatrists might therefore have difficulty understanding why psychiatrists would voluntarily subject themselves to this (in their opinion) shell game—one which, in some way, is repeated over and over in every evaluation and in every discussion. Yet they would be glad enough that there are psychiatrists willing to endure, and even praise, these situations. If critical forensic psychiatrists could not understand their colleagues' motivations, they could at least understand their goals. People with Mental Illness at least end up with some help. Psychiatry seems always willing to endure some humiliation for People with Mental Illness, and Law gets some needed assistance while maintaining its appearance of primacy before Society. In a way, even if the Law-and-Psychiatry partnership is not win-win, it is apparently win-enough/win-enough.

The View from the Margin

The margin need not be just a place of relative isolation for critical forensic psychiatrists. From that spot they may develop an interesting perspective on an emerging situation. For it turns out that Psychiatry knows another secret, or at least a secret of sorts, one that Law truly does not want to know: Law (and for that matter, everyone) is not as much in control of its thoughts, of its reasoning, of its motivation, as Law wants to believe. In a way, this claim is new neither to Psychiatry nor to Law. It is a claim long put forward by Psychiatry's psychoanalysts, but both Law and Psychiatry have managed to marginalize the psychoanalysts adequately to neutralize any potential danger from this attack on Law's (and even in some ways, Society's) legitimacy.

The situation is now different, though. It is not just Psychiatry's psychoanalysts who are putting forth this claim now. It is Psychiatry's neuroscientists, using the discourse of science, of objectivity, of experiments with repeatable results, using technical instruments. Neuroscience is now beginning to claim, in scientific language, that all knowledge (and certainly all applied knowledge) may be subjective as well as objective; that there may be no reason without emotion; that we may always be creating our perceptions of the present in terms of our personal past; and that all knowledge is shaded by physical forces that may well lie outside full linguistic description. ^{12,13}

These ideas, if allowed fully to enter the discourse of Law, could seriously undermine many of Law's most basic claims. Not only could they cast doubt on perception, the foundation of evidence law, but they could even cast doubt on such fundamental notions of jurisprudence as autonomy, agency, and responsibility. They could strike at the heart of Law's current rhetorical structure of legitimacy.

This is not to say that Psychiatry's secret will necessarily lead to Law's crisis. It certainly has not so far, given that this secret is not really a secret at all, as any perusal of the science shelves of the local bookseller well proves. Furthermore, the secret has not sunk in to the rhetorical depths of our culture, and one can most likely count on several factors to prevent this happening, or at least certainly to prevent it from happening to Law (and therefore Society).

For example, Psychiatry itself will probably always remain somewhat divided as to its interpretations of its neuroscientists' findings. Some in Psychiatry could always rely on explanation and clinical pragmatism to keep the most radical implications of these claims in check. One could label the claims as speculations about data, or one could simply assert that, no matter what the possibilities, we still have real people with real problems that have to be dealt with, thereby allowing theoretical issues perpetually to be postponed and minimized under the guise of practical considerations.

With these divisions of opinion in place, Law could then use time-tested procedures to allow itself a face-saving (i.e., legitimate) way to neutralize the secret as well. Through the conclusions of its judges and scholars, for example, Law could find the more traditional explanations of rationality, memory, and agency simply more compelling; or Law could depend on evidentiary rules of expertise, such as Daubert¹⁷ and its progeny, ^{18,19} to find that the data are just too preliminary or controversial to meet reliability rules (and thus are not admissible into official legal discourse). Alternatively, if absolutely necessary, Law could simply declare particular neuroscientific findings irrelevant, prejudicial, or invasive of the traditional province of the jury.²⁰ It is a time-honored legal technique: when in doubt, assert.

Nevertheless, this so-called secret has the potential to become very disconcerting. If the question is simply "who really wields the power, Psychiatry or Law," one need not worry. Secrets about power and who exercises it are manageable: feedback loops of "I

won't tell if you won't tell" or "I'll do this if you'll do this" are usually sufficient to allow adequate, even if at times difficult, functioning to continue in perpetuity. If the question is "power over what," Law, Psychiatry, and ultimately Society cannot afford to be so cavalier. Secrets about the most convincing way to construct reality strike at the heart of Law's legitimacy and thus at its vulnerability.

Previously, Psychiatry was making a claim about the way the world ought to be (flexibility sometimes before rigor), and, to preserve Law's image and the care of People with Mental Illness, Psychiatry sometimes defers to Law on this matter. Now, Psychiatry is making a claim about the way the world is (memory and reason can be fluid). Psychiatry can no longer just defer. As the evidence mounts, it cannot easily sidestep the facts so that Law's legitimacy can be preserved—and there is no evidence that this viewpoint will become less prominent in Psychiatry. All indications are that with further research this viewpoint will only become an increasingly rhetorical part of the professional literature and of the popular press, as well.²¹

It is here that critical forensic psychiatrists could become quite useful. Unlike their regular forensic psychiatrist colleagues, they do not have a personal stake in maintaining the borders of the Law-and-Psychiatry rhetoric. They know that regular forensic psychiatrists must maintain such borders as honestly as they can so that People with Mental Illness might receive whatever benefit Law might deem to afford them. Critical forensic psychiatrists, on the other hand, do not depend on Law's favor, either to pay their bills or to treat People with Mental Illness.

This allows critical forensic psychiatrists a degree of rhetorical freedom that regular forensic psychiatrists cannot afford (metaphorically or literally). They can play with the consequences of research into neural plasticity and nonlinguistic/nonepisodic memory for Law's precious concepts. They can see if any discourse could be formed that could be acceptable to Law (and Psychiatry). They can make that discourse public. They can face the possible opprobrium of lawyers and psychiatrists who think that such discourse is not practical, is too radical, or is not cognizant of the real needs of Society and People with Mental Illness. Because they are so marginal, they can be free. No attorney will ever read their articles and throw their ideas back into their faces on cross-examination, threatening the welfare of the

People with Mental Illness who would be counting on their testimony to receive some semblance of justice. They do not go into the courtroom. They have nothing to lose, and given that they are so marginal, they need not fear that their ideas will unnecessarily harm those to whom they are committed. Because they are of the ivory tower, they can, when deemed necessary, be easily ignored.

In that freedom, though, they may come up with ways of talking about Law, Psychiatry, and the radical uncertainties of both that may eventually become acceptable to Law and Society. Perhaps they might even help create some rapprochement between Psychiatry and Law that could lead to more conceptual and rhetorical stability in these times of neuroscientific-discursive instability. In the 21st century, the margin may turn out to be one of the more interesting places to be.

Conclusion

What a difference 20 years can make. In the past, critical forensic psychiatry, if one were to imagine that it existed, was of little use to Law, Psychiatry, People with Mental Illness, and Society. It appears that partners and clients alike believed that they had, and still have, more important matters to grapple with than with ivory tower critiques. Instead, they preferred to grapple with issues that dealt directly with the real life, liberty, and property of real people in real time. Persons like Dr. Stone, few as they have been, may have been interesting, but ultimately were marginal.

Today, however, from that margin, critical forensic psychiatrists (if one were to imagine that they still exist) may find a bit more to do. The ivory tower appears to be rapidly crashing down to earth, courtesy of the unmistakable pull of axons and dendrites. Perhaps over the years critical forensic psychiatrists will be able to provide some ideas about that pull, some ways of talking about the uncertainties of body and life that could be useful to someone in a courtroom or consulting room. Critical forensic psychiatrists, of course, have to be content in realizing that they may never become so useful. Such a risk comes with the territory. Then again, one never knows. If one is not careful, it just might happen.

Acknowledgments

The author thanks Dr. George Parker and Mr. Archie Brodsky for their contributions to the development of this article.

Toward a Critical Forensic Psychiatry

References

- 1. Stone AA: The ethics of forensic psychiatry: a view from the ivory tower, in Law, Psychiatry and Morality. Washington, DC: American Psychiatric Press, 1984, pp 57–73
- Mossman D: Is expert psychiatry testimony fundamentally immoral? Int J Law Psychiatry 17:347–68, 1994
- 3. Appelbaum PS: A theory of ethics for forensic psychiatry. J Am Acad Psychiatry Law 25:233–47, 1997
- Griffith EEH: Ethics in forensic psychiatry: a cultural response to Stone and Appelbaum. J Am Acad Psychiatry Law 26:171–84, 1998
- Dressler J: Understanding Criminal Law (ed 3). New York: Matthew Bender & Co., Inc., 2001, p 336
- Gerhart EC: Quote It! Memorable Legal Quotations, Data, Epigrams, Wit, and Wisdom from Legal and Literary Sources. New York: Clark Boardman Callaghan, 1969, p 541 [quoting Coke E: Coke on Littleton, Book II (ed 3), Section 138, 1633, p 97b]
- 7. Morse SJ: Failed explanations and criminal responsibility: experts and the unconscious. Va Law Rev 68:971–1084, 1982
- Mossman D: "Hired guns," "whores," and "prostitutes": case law references to clinicians of ill repute. J Am Acad Psychiatry Law 27:414–25, 1999
- Candilis PJ, Martinez R, Dording C: Principle and narrative in forensic psychiatry: toward a robust view of professional role. J Am Acad Psychiatry Law 29:167–73, 2001

- Mossman D, Kapp MB: "Courtroom whores"?—or why do attorneys call us?: findings from a survey on attorney's use of mental health experts. J Am Acad Psychiatry Law 26:27–36, 1998
- Deaton RJS: Law and psychiatry, metaphorically speaking. N Engl Law Rev 37:221–47, 2003
- 12. Siegel DJ: The Developing Mind: Toward a Neurobiology of Interpersonal Experience. New York: Guilford Press, 1999
- LeDoux J: Synaptic Self: How Our Brains Become Who We Are. New York: Viking Penguin, 2002
- Denno DW: Crime and consciousness: science and involuntary acts. Minn Law Rev 87:269 – 399, 2002
- Damasio AR: The Feeling of What Happens: Body and Emotion in the Making of Consciousness. New York: Harcourt Brace & Co., 1999
- Edelman GM, Tononi G: A Universe of Consciousness: How Matter Becomes Imagination. New York: Basic Books, 2000
- 17. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)
- 18. General Electric Co. v. Joiner, 522 U.S. 126 (1997)
- 19. Kumho Tire Co. Ltd. v. Carmichael, 526 U.S. 137 (1999)
- 20. Mueller CB, Kirkpatrick LC: Evidence Under the Rules: Text, Cases and Problems (ed 4). Gaithersburg: Aspen Law & Business, 2000, pp 599–600
- 21. Brown C: The man who mistook his wife for a deer. The New York Times Magazine. February 2, 2003, p 34