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## Violence Risk Assessment: Scientific Validity and Evidentiary Admissibility

John Monahan

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# Violence Risk Assessment: Scientific Validity and Evidentiary Admissibility

John Monahan\*

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## *I. Introduction*

Violence risk assessment is a critical and expanding part of the practice of mental health law in the United States. "Dangerousness to others" first became one of the pivotal criteria for involuntary hospitalization of people with mental disorders in the 1960s.<sup>1</sup> Courts first imposed tort liability on

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1. See PAUL S. APPELBAUM, *ALMOST A REVOLUTION: MENTAL HEALTH LAW AND THE LIMITS OF CHANGE* 26 (1994) (crediting jurisdictions in which commitment depended on dangerousness to others).

clinicians who negligently failed to predict their patients' violence in the 1970s.<sup>2</sup> In the 1980s, many states enacted statutes authorizing involuntary treatment in the community for otherwise "dangerous" patients.<sup>3</sup> During the 1990s, the Americans with Disabilities Act (ADA)<sup>4</sup> explicitly mandated risk assessments of violence.<sup>5</sup>

In Part II of this Article, I review existing research on the validity of clinical risk assessments of violent behavior. In Part III, I consider whether, in light of this research, clinical risk assessments of violence are admissible as scientific evidence.

## II. Violence Risk Assessment: The State of the Science<sup>6</sup>

Since the publication by Paul Meehl of *Clinical Versus Statistical Prediction* in 1954,<sup>7</sup> it generally is accepted that there are two fundamental approaches to risk assessment. In Meehl's most recent account, he contrasted

two ways of forecasting behavior. One, a formal method, uses an equation, a formula, a graph, or an actuarial table to arrive at a probability, or expected value, of some outcome; the other method relies on an informal, "in the head," impressionistic, subjective conclusion, reached . . . by a human clinical judge.<sup>8</sup>

2. See *Tarasoff v. Regents of the Univ. of California*, 551 P.2d 334, 340 (1976) (imposing duty of reasonable care upon therapist to protect intended victim); see also John Monahan, *Limiting Therapist Exposure to Tarasoff Liability: Guidelines for Risk Containment*, 48 AM. PSYCHOLOGIST 242 (1993) (discussing duty to protect).

3. See Marvin S. Swartz et al., *New Directions in Research on Involuntary Outpatient Commitment*, 46 PSYCHIATRIC SERVICES 381, 381 (1995) (evaluating involuntary outpatient commitment programs).

4. Pub. L. No. 101-336, 104 Stat. 327 (codified as amended in scattered sections of 29, 42 and 47 U.S.C.).

5. Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 327 (codified as amended in scattered sections of 29, 42, and 47 U.S.C.). The ADA protects the employment rights of people with disabilities, unless those disabilities result in an employee becoming a "direct threat" of violence to co-workers or customers. See Christopher G. Bell, *The Americans with Disabilities Act, Mental Disability, and Work*, in MENTAL DISORDER, WORK DISABILITY, AND THE LAW 203, 210 (Richard J. Bonnie & John Monahan eds., 1997) (discussing "direct threat to health and safety" standard).

6. Sections of Part II are adapted, with permission, from 1 DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY 287, 287-318 (1997 & Supp. 2000).

7. PAUL E. MEEHL, CLINICAL VERSUS STATISTICAL PREDICTION (1954).

8. William M. Grove & Paul E. Meehl, *Comparative Efficiency of Informal (Subjective, Impressionistic) and Formal (Mechanical, Algorithmic) Prediction Procedures: The Clinical-Statistical Controversy*, 2 PSYCHOL., PUB. POL'Y, & L. 293, 294 (1996).

The latter is called the clinical approach and the former the actuarial approach. I will consider each in turn.

### A. Clinical Approaches to Risk Assessment

I reviewed research on the accuracy of clinical judgments at predicting the criterion of "violent behavior toward others" in 1981.<sup>9</sup> The research concluded that "psychiatrists and psychologists are accurate in no more than one out of three predictions of violent behavior over a several-year period among institutionalized populations that had both committed violence in the past (and thus had high base rates for it) and who were diagnosed as mentally ill."<sup>10</sup> Remarkably, only one study of the validity of clinicians at predicting "violence in the community" was published between 1979 and 1993.<sup>11</sup> This was a study of court-ordered pretrial mental health assessments conducted in 1978.<sup>12</sup> Consistent with the previous literature, 39% of the defendants rated by clinicians as having a "high" likelihood for being violent to others were reported to have committed dangerous acts during a two-year follow-up, compared to 26% of defendants considered as having a "low" likelihood, a statistically significant difference.<sup>13</sup>

In the last decade, researchers have shown a renewed interest in the topic of clinical risk assessment.<sup>14</sup> For example, Lidz, Mulvey, and Gardner, in what

9. JOHN MONAHAN, *THE CLINICAL PREDICTION OF VIOLENT BEHAVIOR* (1981).

10. *Id.* at 47-49. In *THE CLINICAL PREDICTION OF VIOLENT BEHAVIOR*, I reviewed five studies: HENRY J. STEADMAN & JOSEPH J. COCOZZA, *CAREERS OF THE CRIMINALLY INSANE: EXCESSIVE SERIAL CONTROL OF DEVIANCE* (1974); TERENCE P. THORNBERRY & JOSEPH E. JACOBY, *THE CRIMINALLY INSANE: A COMMUNITY FOLLOW-UP OF MENTALLY ILL OFFENDERS* (1979); Joseph J. Cocozza & Henry J. Steadman, *The Failure of Psychiatric Predictions of Dangerousness: Clear and Convincing Evidence*, 29 RUTGERS L. REV. 1084 (1976); Harry L. Kozol et al., *The Diagnosis and Treatment of Dangerousness*, 18 CRIME & DELINQ. 371 (1972); Henry J. Steadman, *A New Look at Recidivism Among Patuxent Inmates*, 5 BULL. AM. ACAD. PSYCHIATRY & L. 200 (1977). *Id.* at 45-50.

11. Diana Sepejak et al., *Clinical Predictions of Dangerousness: Two-Year Follow-up of 408 Pre-trial Forensic Cases*, 11 BULL. AM. ACAD. PSYCHIATRY & L. 171 (1983).

12. *Id.* at 172.

13. *Id.* at 181 n.12.

14. Existing risk assessment research is done in one of two settings. One type of study attempts to identify factors that predict violence in the hospital, but the other attempts to identify factors that predict violence in the community. One obvious difficulty with trying to predict violence in the hospital is that the structured milieu of the institution and the therapeutic (or at least sedative) effects of medication seriously suppress the base rate of violence. The National Institute of Mental Health's National Plan of Research to Improve Services endorsed research on inpatient violence, but with an important annotation:

It is much easier and cheaper to do research on inpatient violence than on violence by mental patients in the community. It should, however, be undertaken with

is surely the most sophisticated study published on the clinical prediction of violence, took as their subjects male and female patients being examined in the acute psychiatric emergency room of a large civil hospital.<sup>15</sup> Psychiatrists and nurses were asked to assess potential patient violence toward others over the next six-month period.<sup>16</sup> Violence was measured by official records, by patient self-report, and by the report of a collateral informant in the community (e.g., a family member).<sup>17</sup> Patients who elicited professional concern regarding future violence were found to be significantly more likely to be violent after release (53%) than were patients who had not elicited such concern (36%).<sup>18</sup>

The accuracy of clinical prediction did not vary as a function of the patient's age or race.<sup>19</sup> However, patient gender may have affected accuracy of judgment.<sup>20</sup> The accuracy of clinicians' predictions of male violence substan-

certain goals in mind. Its highest priority should be on discerning types of interaction that are likely to be present in patient violence in the community as well.

NATIONAL INSTITUTE OF MENTAL HEALTH, CARING FOR PEOPLE WITH SEVERE MENTAL DISORDERS: A NATIONAL PLAN OF RESEARCH TO IMPROVE SERVICES 44 (1991).

Validating risk assessments in the community presents different issues than validating risk assessments in the hospital. In order to obtain a sufficient level of violence during the follow-up, researchers often limit themselves to enrolling only subjects assumed to have a high base-rate of violence (e.g., males with a prior history of violence). While assuring a base-rate of follow-up violence sufficient to permit statistical validation of the predictor variables is indeed a necessity, restricting the sample to only one gender obviously eliminates any chance of uncovering associations between risk factors and violence in the other. Such a restriction also eliminates the possibility of discovering interactions between gender and the risk factors being studied. Given that several recent studies have reported that, among acutely disordered populations, the level of violence committed by women is as high as that committed by men, the restriction of actuarial risk research to male samples seems ill advised. And given that the predictors of violence among persons who have already committed a violent act – that is, the predictors of repeat violence – may be different than the predictors of initial violence, making prior violence a criterion for inclusion in actuarial risk assessment research may yield findings inapplicable to persons who have not yet been violent. See Edward P. Mulvey et al., *Reframing the Research Question of Mental Patient Criminality*, 9 INT'L J.L. & PSYCHOL. 57, 58-60 (1986) (reviewing problems with past studies). The use of large sample sizes would allow fewer constraints to be placed on subject recruitment while providing a sufficient amount of follow-up violence to permit the statistical validation of risk factors. By obtaining basic descriptive data on subjects not selected for the research, one could extrapolate results from the study sample back to the entire population from which the sample was drawn.

15. See Charles W. Lidz et al., *The Accuracy of Predictions of Violence to Others*, 269 JAMA 1007, 1007 (1993) (describing group).

16. See *id.* at 1008 (detailing method of study).

17. See *id.* (indicating how patient was judged to be involved in violent incident).

18. *Id.* at 1009.

19. *Id.* at 1009-10.

20. *Id.* at 1010.

tially exceeded chance levels, both for patients with and without a prior history of violent behavior.<sup>21</sup> In contrast, the accuracy of clinicians' predictions of female violence did not differ from chance.<sup>22</sup> Although the actual rate of violent incidents among released female patients (49%) was higher than the rate among released male patients (42%), the clinicians had predicted that only 22% of the women would be violent, compared with predicting that 45% of the men would commit a violent act.<sup>23</sup> The inaccuracy of clinicians at predicting violence among women appeared to be a function of the clinicians' serious underestimation of the base-rate of violence among mentally disordered women. The underestimation was due, perhaps, to an inappropriate extrapolation from the great gender differences in rates of violence among people without mental disorders.<sup>24</sup>

McNiell and Binder illustrated research predicting inpatient violence (rather than violence in the community). They studied clinical predictions that patients would be violent during the first week of hospitalization.<sup>25</sup> Of the patients whom nurses had estimated had a 0% to 33% probability of being violent on the ward, 10% were later rated by the nurses as having committed a violent act; of the patients whom nurses had estimated had a 34% to 66% chance of being violent, 24% were later rated as having committed a violent act; and of the patients whom nurses had estimated had a 67% to 100% chance of being violent, 40% were later rated as having acted violently.<sup>26</sup>

### B. Actuarial Approaches to Risk Assessment

In the past several years, the field of "violence risk assessment" has seen a dramatic shift away from studies attempting to validate the accuracy of clinical predictions, and toward studies attempting to isolate specific risk factors<sup>27</sup>

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21. *Id.*

22. *Id.*

23. *Id.*

24. Close to 90% of all persons arrested for violent crime in the United States are men, and "there is no place in the world where men make up less than 80 percent of the people arrested for violence, now or at any time in history." John Monahan, *Causes of Violence, in DRUGS AND VIOLENCE IN AMERICA* 79 (U.S. Sentencing Commission ed., 1995); see also Dale E. McNiel & Renée L. Binder, *Correlates of Accuracy in the Assessment of Psychiatric Inpatients' Risk of Violence*, 152 *AM. J. PSYCHIATRY* 901, 901 (1995) ("Clinical judgments emphasizing gender and race/ethnicity were associated with predictive errors: nonwhite and male patients tended to be false positives.")

25. Dale E. McNiel & Renée L. Binder, *Clinical Assessment of the Risk of Violence Among Psychiatric Inpatients*, 148 *AM. J. PSYCHIATRY* 1317, 1317 (1991).

26. *Id.* at 1320 tbl.1.

27. See Helena Chmura Kraemer et al., *Coming to Terms With the Terms of Risk*, 54 *ARCHIVES OF GEN. PSYCHIATRY* 337 (1997) (discussing terminology). To say that a variable

that are actuarially (meaning statistically) associated with violence.<sup>28</sup> Borum has noted that a wide range of procedures can be subsumed under the rubric of "actuarial" prediction:

At a minimum, these devices can serve as a checklist for clinicians to ensure that essential areas of inquiry are recalled and evaluated. At best, they may be able to provide hard actuarial data on the probability of violence among people (and environments) with a given set of characteristics, circumstances, or both.<sup>29</sup>

There is a long tradition in criminology of using actuarial techniques in predicting recidivism by released prisoners. For example, actuarial predictions are used by statutes to determine parole eligibility in a number of states.<sup>30</sup> Actuarial techniques, however, only recently have been applied to predicting violence among people with mental disorders.

The best example of the use of actuarial data to predict violence on a hospital ward is a study by McNiel and Binder.<sup>31</sup> They constructed an actuarial scale consisting of five variables, each scored "yes" or "no;" each "yes" answer earned one point.<sup>32</sup> Patients who scored three or above on this five-point actuarial scale were called "high risk," and patients who scored two or

is a "risk factor" for violence means only two things: (1) the variable correlates with the outcome (in this case, violence), and (2) the variable precedes the outcome. To call a variable a "risk factor" does not imply that its relationship to the outcome is in any sense "causal."

28. Clinical and actuarial approaches are considered in depth in VERNON L. QUINSEY ET AL., *VIOLENT OFFENDERS: APPRAISING AND MANAGING RISK* 55-72, 141-90 (1998).

29. Randy Borum, *Improving the Clinical Practice of Violence Risk Assessment: Technology, Guidelines, and Training*, 51 AM. PSYCHOLOGIST 945, 948 (1996); see Grove & Meehl, *supra* note 8, at 299-318 (stating strong argument for superiority of actuarial over clinical prediction by answering common criticisms of actuarial prediction).

30. See JOHN MONAHAN & LAURENS WALKER, *SOCIAL SCIENCE IN LAW: CASES AND MATERIALS* (4th ed. 1998) (reviewing parole prediction devices).

31. Dale E. McNiel & Renée L. Binder, *Screening for Risk of Inpatient Violence: Validation of an Actuarial Tool*, 18 LAW & HUM. BEHAV. 579 (1994). See generally Dale E. McNiel et al., *The Relationship Between Confidence and Accuracy in Clinical Assessment of Psychiatric Patients' Potential for Violence*, 22 LAW & HUM. BEHAV. 655 (1998) [hereinafter McNiel et al., *The Relationship Between Confidence and Accuracy*]; Dale E. McNiel et al., *Predictors of Violence in Civilly Committed Acute Psychiatric Patients*, 145 AM. J. PSYCHOL. 965 (1988).

32. The variables were:

- (1) History of physical attacks and/or fear-inducing behavior within two weeks before admission?
- (2) Absence of suicidal behavior (attempts, gestures, or threats within two weeks before admission)? (This item is checked if patient has *not* shown recent suicidal behavior)
- (3) Schizophrenic or manic diagnosis?
- (4) Male gender?
- (5) Currently married or living together?

McNiel & Binder, *supra* note 31, at 581.

less were called "low risk."<sup>33</sup> If "fear-inducing behavior" (i.e., "attacks on objects, threats to attack persons, or verbal attacks on persons") is included along with actual physical assault as "violence," 57% of the "high risk" group were violent early in their hospitalization, compared with 29% of the "low risk" group (if one restricts the criterion to actual physical assault, the figures become 32% and 18%, respectively).<sup>34</sup>

Actuarial research on the prediction of violence in the community is well illustrated by the research program of Klassen and O'Connor.<sup>35</sup> For example, Klassen and O'Connor found that, among males released from a mental hospital, a diagnosis of substance abuse, prior arrests for violent crime, and age (young) were significantly associated with arrests for violent crime after release into the community.<sup>36</sup>

Three actuarial tools, in particular, have been studied in the past several years.<sup>37</sup> One comprehensive research program is continuing to validate the Violence Risk Appraisal Guide (VRAG),<sup>38</sup> an actuarial device that incorporates the Hare Psychopathy Checklist – Revised as one of its predictor variables.<sup>39</sup> In one study, a sample of 618 men who were either treated or administered a pre-trial assessment at a maximum security forensic hospital in Can-

33. *Id.* at 582.

34. *Id.* at 583.

35. Deidre Klassen & William A. O'Connor, *A Prospective Study of Predictors of Violence in Adult Male Mental Health Admissions*, 12 LAW & HUM. BEHAV. 143 (1988).

36. *Id.* at 151 tbl.1.

37. See generally STEPHEN BLUMENTHAL & TONY LAVENDER, *VIOLENCE AND MENTAL DISORDER: A CRITICAL AID TO THE ASSESSMENT AND MANAGEMENT OF RISK* (2000) (reviewing literature on violence and mental disorder).

38. See QUINSEY ET AL., *supra* note 28, at 141-69 (assessing Violence Risk Appraisal Guide (VRAG)); see also Grant T. Harris & Marnie E. Rice, *Risk Appraisal and Management of Violent Behavior*, 48 PSYCHIATRIC SERVICES 1168, 1168 (1997) (reviewing past decade of research, including use of VRAG); Marnie E. Rice & Grant T. Harris, *Cross-Validation and Extension of the Violence Risk Appraisal Guide for Child Molesters and Rapists*, 21 LAW & HUM. BEHAV. 231, 232 (1997) (using VRAG in study); Marnie E. Rice & Grant T. Harris, *The Treatment of Mentally Disordered Offenders*, 3 PSYCHOL., PUB. POL'Y, & L. 126, 133-34 (1997) (evaluating VRAG as research tool); Marnie E. Rice, *Violent Offender Research and Implications for the Criminal Justice System*, 52 AM. PSYCHOLOGIST 414, 414 (1997) (discussing research regarding predictions of violent reoffending).

39. A well-established instrument that has been associated with violence in many studies is the Hare Psychopathy Checklist – Revised (the "Hare PCL-R"). Hare has argued that "psychopathy is the single most important clinical construct in the criminal justice system, with particularly strong implications for the assessment of risk for recidivism and violence." Robert D. Hare, *The Hare PCL-R: Some Issues Concerning Its Use and Misuse*, 3 LEGAL & CRIMINOLOGICAL PSYCHOL. 99, 99 (1998). For a review of the extensive research on psychopathy and violence, see Robert D. Hare, *Psychopathy: A Clinical Construct Whose Time Has Come*, 23 CRIM. JUST. & BEHAV. 25 (1996).



ada served as subjects.<sup>40</sup> All were charged with a serious criminal offense.<sup>41</sup> A wide variety of predictive variables were coded from institutional files.<sup>42</sup> The criterion variable was any new criminal charge for a violent offense or return to the institution for an act that would otherwise have resulted in such a charge.<sup>43</sup> The average time at risk after release was almost seven years.<sup>44</sup> Twelve variables were identified for inclusion in the final statistical prediction instrument.<sup>45</sup> If the scores on this instrument were dichotomized into "high" and "low" risk groups, the results indicated that 55% of the "high scoring" subjects committed violent recidivism, compared with 19% of the "low scoring" group.<sup>46</sup>

Douglas and Webster<sup>47</sup> reviewed research on a second, recently developed actuarial instrument to assess risk of violence, the "HCR-20," which consists of twenty ratings addressing Historical, Clinical, or Risk management variables.<sup>48</sup> They also reported data from a retrospective study with prisoners,

40. CHRISTOPHER D. WEBSTER ET AL., *THE VIOLENCE PREDICTION SCHEME: ASSESSING DANGEROUSNESS IN HIGH RISK MEN* 29 (1994).

41. *Id.* at 30.

42. *Id.* at 31.

43. *Id.* at 30.

44. *Id.*

45. The variables were: (1) score on the Psychopathy Checklist, (2) separation from parents before age 16, (3) victim injury in index offence, (4) DSM-III schizophrenia, (5) never married, (6) elementary school maladjustment, (7) female victim in index offence, (8) failure on prior conditional release, (9) nonviolent offence history, (10) age at index offence, (11) alcohol abuse history, and (12) DSM-III personality disorder. For all variables except numbers three, four, seven, and ten, the nature of the relationship to subsequent violence was positive. That is to say, subjects who injured a victim in the index offence, who were diagnosed as schizophrenic, who chose a female victim for the index offence, or who were older, were significantly *less* likely to be violent recidivists than other subjects. WEBSTER ET AL., *supra* note 40, at 31 tbl.4.1.

46. *See id.* at 33 (computing estimates of dangerousness).

47. *See* Kevin S. Douglas & Christopher D. Webster, *The HCR-20 Violence Risk Assessment Scheme: Concurrent Validity in a Sample of Incarcerated Offenders*, 26 CRIM. JUST. & BEHAV. 3 (1999) (assessing concurrent validity of HCR-20); *see also* Kevin S. Douglas et al., *Assessing Risk for Violence Among Psychiatric Patients: The HCR-20 Violence Risk Assessment Scheme and the Psychopathy Checklist: Screening Version*, 67 J. CONSULTING & CLINICAL PSYCHOL. 917 (1999); Martin Grann et al., *Actuarial Assessment of Risk for Violence: Predictive Validity of the VRAG and the Historical Part of the HCR-20*, 27 CRIM. JUST. & BEHAV. 97 (2000). Information on the HCR-20 is available from the Mental Health, Law and Policy Institute on the web at <http://www.lawpsych.org>.

48. CHRISTOPHER D. WEBSTER ET AL., *HCR-20: ASSESSING RISK FOR VIOLENCE* (version 2) (1997). The 10 Historical items are: (H1) previous violence, (H2) young age at first violent incident, (H3) relationship instability, (H4) employment problems, (H5) substance use problems, (H6) major mental illness, (H7) psychopathy, (H8) early maladjustment, (H9) personality disorder, and (H10) prior supervision failure. *Id.* at 27-47. The five Clinical items are: (C1) lack

finding that "scores above the median on the HCR-20 increased the odds of the presence of various measures of past violence and antisocial behavior by an average of four times."<sup>49</sup>

The most recent development in this area is the publication of the work of the MacArthur Violence Risk Assessment Study.<sup>50</sup> Here, the researchers developed what they called an "Iterative Classification Tree," or ICT.<sup>51</sup> They sought to increase the utility of this actuarial method for real-world clinical decision making by applying the method to a set of violence risk factors commonly available in clinical records or capable of being routinely assessed in clinical practice.<sup>52</sup> Results showed that the ICT partitioned three-quarters of a sample of psychiatric patients into one of two categories with regard to their risk of violence to others during the first twenty weeks after discharge (a period during which 18.7% of all patients committed at least one violent

of insight, (C2) negative attitudes, (C3) active symptoms of major mental illness, (C4) impulsivity, and (C5) unresponsive to treatment. *Id.* at 49-59. The five Risk Management items are: (R1) plans lack feasibility, (R2) exposure to destabilizers, (R3) lack of personal support, (R4) non-compliance with remediation attempts, and (R5) stress. *Id.* at 61-71.

49. Douglas & Webster, *supra* note 47, at 3.

50. See John Monahan et al., *Developing a Clinically Useful Actuarial Tool for Assessing Violence Risk*, 176 *BRIT. J. PSYCHIATRY* 312, 312 (2000) (assessing usefulness of ICT method); Eric Silver et al., *Assessing Violence Risk Among Discharged Psychiatric Patients: Toward an Ecological Approach*, 23 *LAW & HUM. BEHAV.* 237, 237 (1999) (using data "to examine the effect of the neighborhood context on risk of violence"); Henry J. Steadman et al., *A Classification Tree Approach to the Development of Actuarial Violence Risk Assessment Tools*, 24 *LAW & HUM. BEHAV.* 83, 83 (2000) (arguing that actuarial tools do not accurately reflect contingent nature of clinical assessment process).

51. See Steadman et al., *supra* note 50, at 92 (labeling resulting classification tree model). Gardner, Lidz, Mulvey, and Shaw made an important methodological contribution to the use of actuarial information in predicting violence by civil patients in the community – a contribution on which the MacArthur study built. See William Gardner et al., *A Comparison of Actuarial Methods for Identifying Repetitively Violent Patients with Mental Illness*, 20 *LAW & HUM. BEHAV.* 35, 35 (1996) (reporting on progress in developing practical methods for actuarial prediction of violence). They contrasted the usual "regression equation" model – in which points for various risk factors are summed to yield a prediction score, to which cut-offs are applied – with newer "regression tree" methods. A regression tree is "a structured sequence of yes/no questions that lead to the classification of a case." *Id.* at 36. The four "yes" or "no" questions contained in the authors' regression tree were: "Is BSI Hostility greater than 2?" [i.e., is the patient's score on the Hostility subscale of the Brief Symptom Inventory greater than 2?]; "Is age less than 18?"; "Is the patient a heavy drug user?"; and "Are there more than 3 prior violent acts?" *Id.* at 40 fig.2. This regression tree identified a small group of patients (3% of the patient population) who committed violent acts at the high rate of 2.75 incidents per month. *Id.* at 41-42; see also William Gardner et al., *Clinical Versus Actuarial Predictions of Violence in Patients with Mental Illnesses*, 64 *J. CONSULTING & CLINICAL PSYCHOL.* 602, 602 (1996) (comparing accuracy of each method).

52. See Steadman et al., *supra* note 50, at 85 (describing study sample).

act).<sup>53</sup> One category consisted of groups whose rates of violence were no more than half the baserate of the total patient sample (i.e., equal to or less than 9% violent).<sup>54</sup> The other category consisted of groups whose rates of violence were *at least twice* the baserate of the total patient sample (i.e., equal to or greater than 37% violent).<sup>55</sup> The prevalence of violence within individual risk groups varied from 3% to 53%, considerably more accurate than clinical prediction.<sup>56</sup>

As the field has moved in a more actuarial direction, professional consensus has shifted from the question of "how accurate are clinicians in general at predicting violence" to "how valid are specific risk factors, or specific combinations of risk factors, for assessing violence risk?"<sup>57</sup> Violence risk assessment is likely to continue to move in a more actuarial direction. Increased attention is likely to be given to how estimates of risk are best communicated to those who have to make decisions based on them.<sup>58</sup>

### III. Admissibility as Scientific Evidence

In this Part, I address the admissibility at trial of expert psychological testimony on violence risk assessment under the test for scientific evidence articulated by the United States Supreme Court in *Daubert v. Merrell Dow*

53. See *id.* at 89 (discussing results of study).

54. *Id.*

55. *Id.*

56. *Id.*

57. In a recent major meta-analysis of actuarial risk factors for crime and violence among mentally disordered offenders, Bonta, Law, and Hanson found those risk factors to be remarkably similar to well-known risk factors among the general offender population:

Criminal history, antisocial personality, substance abuse, and family dysfunction are important for mentally disordered offenders as they are for general offenders. In fact, the results support the theoretical perspective that the major correlates of crime are the same, regardless of race, gender, class, and the presence or absence of mental illness. Clinical or psychopathological variables were either unrelated to recidivism or negatively related.

See James Bonta et al., *The Prediction of Criminal and Violent Recidivism Among Mentally Disordered Offenders: A Meta-Analysis*, 123 PSYCHOL. BULL. 123, 139 (1998) (concluding that major predictors for violent recidivism were same for mentally disordered offenders as for nondisordered offenders).

58. See John Monahan & Henry J. Steadman, *Violent Storms and Violent People: How Meteorology Can Inform Risk Communication in Mental Health Law*, 51 AM. PSYCHOLOGIST 931, 931-38 (1996) (exploring analogy between two forms of risk assessment "forecasts"); Paul Slovic et al., *Violence Risk Assessment and Risk Communication: The Effects of Using Actual Cases, Providing Instruction, and Employing Probability Versus Frequency Formats*, 24 LAW & HUM. BEHAV. 271, 271 (2000) (describing studies designed to inform policy makers and practitioners).

*Pharmaceuticals, Inc.*<sup>59</sup> Many American state courts – where the vast majority of psychological and psychiatric testimony is offered – have adopted the *Daubert* test.<sup>60</sup> For illustrative purposes, I will rely on one representative state case, *E.I. du Pont de Nemours & Co. v. Robinson*,<sup>61</sup> to frame the discussion.<sup>62</sup>

In *Robinson*, the Supreme Court of Texas specified six factors "that a trial court may consider in making the threshold determination of admissibility."<sup>63</sup> Those factors include, but are not limited to:

- (1) the extent to which the theory has been or can be tested;
- (2) the extent to which the technique relies upon the subjective interpretation of the expert;
- (3) whether the theory has been subjected to peer review and/or publication;
- (4) the technique's potential rate of error;
- (5) whether the underlying theory or technique has been generally accepted as valid by the relevant scientific community; and
- (6) the non-judicial uses which have been made of the theory or technique.<sup>64</sup>

My evaluation of the points at issue will follow these six *Robinson* factors. I note at the outset that the leading American legal treatise in this field, *Modern Scientific Evidence: The Law and Science of Expert Testimony*, states:

To date, no court has evaluated the admissibility of expert testimony regarding future violence under the Court's recent *Daubert* decision. In light of the very few cases preceding *Daubert* which engaged in any evidentiary analysis whatsoever, this state of affairs is unlikely to change soon.<sup>65</sup>

The year after Faigman and others wrote, however, the Texas Court of Criminal Appeals, in *Nenno v. State*,<sup>66</sup> evaluated the admissibility of expert clinical testimony on the prediction of future violence in the context of a death

59. 509 U.S. 579 (1993).

60. See *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589-92 (1993) (listing several factors trial judge may consider when deciding whether to admit expert testimony).

61. 923 S.W.2d 549 (Tex. 1995).

62. See *E.I. du Pont de Nemours & Co. v. Robinson*, 923 S.W.2d 549, 550 (Tex. 1995) (affirming trial court's conclusion that expert's testimony was not based on reliable foundation).

63. *Id.* at 557 (citation omitted).

64. *Id.* at 557 n.2 ("That an expert testifies based on research he has conducted independent of the litigation provides important, objective proof that the research comports with the dictates of good science." (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (citing HUBER, GALILEO'S REVENGE 206-09 (1991)))).

65. FAIGMAN ET AL., *supra* note 6, § 7-1.5, at 298.

66. 970 S.W.2d 549 (Tex. Crim. App. 1998).

penalty case.<sup>67</sup> The court of criminal appeals stated that "[w]hen addressing fields of study aside from the hard sciences, such as the social sciences or fields that are based primarily upon experience and training as opposed to the scientific method, [the law's] requirement of reliability applies but with less rigor than to the hard sciences."<sup>68</sup> The court concluded that a defect in the scientific reliability of research on violence prediction "affects the weight of the evidence rather than its admissibility. We find the reliability of [the expert's] testimony to be sufficiently established . . . ."<sup>69</sup>

#### A. *The Extent to Which the Theory Has Been Tested*

As described in Part II, at least seven empirical studies conducted since the 1970s have tested the proposition that psychologists and psychiatrists have greater-than-chance accuracy at predicting violent behavior to others in the open community.<sup>70</sup> Many additional studies have tested the proposition that psychologists and psychiatrists have greater-than-chance accuracy at predicting violence to others within closed institutions.<sup>71</sup>

#### B. *Reliance on the Subjective Interpretation of the Expert*

The American Bar Association recently published the *National Benchbook on Psychiatric and Psychological Evidence and Testimony (Benchbook)*.<sup>72</sup> The *Benchbook* is directed to state and federal judges and is explicitly "designed to aid decision-making . . . regarding admissibility of evidence . . . ."<sup>73</sup> Although it acknowledges that subjective clinical interpretations often play a role in psychiatric predictions of dangerousness, the *Benchbook* concludes:

Despite recent commentary indicating that clinicians are better at addressing possible risk factors and probabilities than providing definitive predictions of dangerousness, courts have remained reluctant to totally exclude such [clinical] evidence, in part, perhaps, because courts are ultimately responsible for making these decisions and though the information may remain open to challenge, it is the best information available. The alterna-

67. *Nenno v. State*, 970 S.W.2d 549 (Tex. Crim. App. 1998).

68. *See id.* at 561 (listing appropriate questions for areas outside of hard sciences).

69. *Id.* at 562.

70. STEADMAN & COCOZZA, *supra* note 10; Cocozza & Steadman, *supra* note 10; Kozol et al., *supra* note 10; Lidz et al., *supra* note 15; Sepejak et al., *supra* note 11; Steadman, *supra* note 10.

71. *See* McNeil et al., *The Relationship Between Confidence and Accuracy*, *supra* note 31, at 655 (concluding that clinician's confidence in evaluation affects validity of assessment).

72. AMERICAN BAR ASSOCIATION, NATIONAL BENCHBOOK ON PSYCHIATRIC AND PSYCHOLOGICAL EVIDENCE AND TESTIMONY (1998) [hereinafter BENCHBOOK].

73. *Id.* at iii.

tive is to deprive fact finders, judges and jurors of the guidance and understanding that psychiatrists and psychologists can provide . . .<sup>74</sup>

### C. Subject to Peer Review and Publication

All seven empirical tests of the ability of psychologists and psychiatrists to clinically assess risk of violence in the community have been published. Five of the seven tests have been published in peer-reviewed scientific journals, rather than in books or student-edited law reviews; this includes the most methodologically sophisticated study,<sup>75</sup> which was published in JAMA – the Journal of the American Medical Association – among the most prestigious and selective scientific journals in the world.

In addition to the initial peer review to which these studies were subjected in the process of being approved for publication, all of the studies have been subjected to extensive critique in literature reviews published by many other researchers.<sup>76</sup> The most recent international scientific review of violence risk assessment, published in England in March, 2000, concludes:

Risk assessment has steadily increased in importance since [the 1960s], and this has been accompanied by methodological improvements, particularly in the last decade. . . . It is relatively recently that the science of risk assessment has developed sufficiently to claim a level of accuracy which makes it useful.<sup>77</sup>

74. *Id.* at 49.

75. Lidz et al., *supra* note 15.

76. See generally FAIGMAN ET AL., *supra* note 6 (discussing clinical and actuarial predictions within context of modern scientific evidence); GARY B. MELTON ET AL., *PSYCHOLOGICAL EVALUATIONS FOR THE COURTS: A HANDBOOK FOR MENTAL HEALTH PROFESSIONALS & LAWYERS* (2d ed. 1997) (providing guidelines for practitioners); MONAHAN, *supra* note 9 (describing clinical prediction); Thomas R. Litwack, *Assessments of Dangerousness: Legal, Research, and Clinical Developments*, 21 ADMIN. & POL'Y IN MENTAL HEALTH 361 (1994) (exploring courts' treatments of assessments of dangerousness); Thomas R. Litwack & Louise B. Schlesinger, *Dangerousness Risk Assessments: Research, Legal, and Clinical Considerations*, in THE HANDBOOK OF FORENSIC PSYCHOLOGY (Allen K. Hess & Irving B. Weiner eds., 2d ed. 1999) (discussing assessments of dangerousness in clinical and legal arenas); Joseph T. McCann, *Risk Assessment and the Prediction of Violent Behavior*, FED. LAW., Oct. 1997, at 18 (summarizing current status of clinical risk assessment and prediction of violent behavior); John Monahan, *Major Mental Disorders and Violence to Others*, in HANDBOOK OF ANTISOCIAL BEHAVIOR (David M. Stoff et al. eds., 1997) (providing general discussion of mental illness and dangerousness to others); Douglas Mossman, *Assessing Predictions of Violence: Being Accurate About Accuracy*, 62 J. CONSULTING & CLINICAL PSYCHOL. 783 (1994) (reanalyzing studies of violence prediction); Douglas Mossman, *Further Comments on Portraying the Accuracy of Violence Predictions*, 18 LAW & HUM. BEHAV. 587 (1994) (suggesting use of receiver operating characteristics).

77. BLUMENTHAL & LAVENDER, *supra* note 37, at 1-2, 14.

#### D. Potential Rate of Error

No one questions that the state of the science is such that the prediction of violence, like the prediction of the weather,<sup>78</sup> is subject to a considerable margin of error. But in acknowledging this error rate, the American Bar Association's *Benchbook* nonetheless states:

While the frustration with psychiatry and psychology from a legal standpoint centers on the certainty or lack thereof with which mental health experts speak to the ultimate issues in a case (for example, dangerousness . . .), this frustration should not lead courts to reject all such input, but rather should encourage courts to recognize the proper role and limitations of expert evidence and testimony in the courtroom.<sup>79</sup>

Commenting on the inevitable margin of error in predicting human behavior, Faigman and others concluded as did the *Benchbook*: "Although courts appear to uniformly accept the inherent difficulty in predicting future behavior, they have, nonetheless, liberally permitted expert testimony on this issue."<sup>80</sup>

Finally, Shuman, in *Psychiatric and Psychological Evidence*, stated:

Although judges have expressed skepticism about the validity of psychiatric and psychological predictions of future violence and have, occasionally, imposed limitations on this sort of testimony, there has been an overall judicial reluctance to exclude this evidence. . . . [J]udges have been unwilling to deprive lay decision makers of whatever guidance psychiatrists and psychologists may provide in this area, and have relegated challenges to the weight rather than the admissibility of the evidence.<sup>81</sup>

#### E. General Acceptance in the Relevant Scientific Community

The American Bar Association's *Benchbook* states that there is "a growing consensus that the ability of clinicians to identify risk factors associated with future violence is improving."<sup>82</sup> For example, the best-known recent study of the validity of clinical predictions of violence concludes: "What this study [shows] is that clinical judgment has been undervalued in previous research. Not only did the clinicians pick out a statistically more violent

78. Monahan & Steadman, *supra* note 58, at 931-38.

79. BENCHBOOK, *supra* note 72, at 47-48.

80. FAIGMAN ET AL., *supra* note 6, at 299.

81. DANIEL W. SHUMAN, *PSYCHIATRIC AND PSYCHOLOGICAL EVIDENCE* 7-13 (2d ed. 1997 & Supp. 1999).

82. BENCHBOOK, *supra* note 72, at 22 (citation omitted).

group, but the violence that the predicted group committed was more serious than the acts of the comparison group."<sup>83</sup>

Likewise, a recent critical analysis of existing risk assessment research reaches this measured judgment: "This article's reevaluation of representative data from the past 2 decades suggests that clinicians are able to distinguish violent from nonviolent patients with a modest, better-than-chance level of accuracy."<sup>84</sup>

#### *F. Non-Judicial Uses of the Theory or Technique*

A concern with violence by people with mental disorder, and with how the risk of that violence might clinically be assessed, is ubiquitous in all societies and occurs throughout written history. References can be found in ancient Greek and Roman writing and in the texts of many non-Western cultures as well.<sup>85</sup> In modern times and in the United States, violence risk assessment not only permeates the legal system, but also is a significant component of general clinical practice in the mental health fields. As has been recently stated in *Emergencies in Mental Health Practice*, "Clinical assessment of violence potential and management of aggressive behavior are routine components of contemporary practice in psychiatric emergency rooms and inpatient units."<sup>86</sup>

#### *IV. Conclusions*

In many cases that preceded *Daubert*, the United States Supreme Court endorsed the admissibility of expert clinical testimony on the prediction of violence. For example, the Court in *Barefoot v. Estelle*,<sup>87</sup> stated:

The suggestion that no psychiatrist's testimony may be presented with respect to a defendant's future dangerousness is somewhat like asking us to disinvent the wheel. In the first place, it is contrary to our cases. If the likelihood of a defendant committing further crimes is a constitutionally acceptable criterion for imposing the death penalty, which it is, *Jurek v.*

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83. Lidz et al., *supra* note 15, at 1010.

84. Mossman, *supra* note 76, at 790.

85. See John Monahan, *Mental Disorder and Violent Behavior: Perceptions and Evidence*, 47 AM. PSYCHOLOGIST 511, 511 (1992) (discussing historical perceptions of connection between mental disorder and violence).

86. Dale E. McNeil, *Empirically Based Clinical Evaluation and Management of the Potentially Violent Patient*, in EMERGENCIES IN MENTAL HEALTH PRACTICE: EVALUATION AND MANAGEMENT 95 (Phillip M. Kleespies ed., 1998).

87. 463 U.S. 880 (1983).



*Texas*, 428 U.S. 262 (1976), and if it is not impossible for even a lay person sensibly to arrive at that conclusion, it makes little sense, if any, to submit that psychiatrists, out of the entire universe of persons who might have an opinion on the issue, would know so little about the subject that they should not be permitted to testify. . . . In the second place, the rules of evidence generally extant at the federal and state levels anticipate that relevant, unprivileged evidence should be admitted and its weight left to the factfinder, who would have the benefit of cross examination and contrary evidence by the opposing party.<sup>88</sup>

The Court concluded that, although it is not easy to predict future behavior, "[t]he fact that such a determination is difficult . . . does not mean that it cannot be made."<sup>89</sup>

Similarly, in *Schall v. Martin*,<sup>90</sup> the Court upheld the pretrial detention of a juvenile if there was a "serious risk" that the released juvenile would commit a crime before his or her next court appearance.<sup>91</sup> The Court rejected the argument that violence predictions could not be made reliably. Instead, the Court asserted that "from a legal point of view there is nothing inherently unattainable about a prediction of future criminal conduct."<sup>92</sup>

The Court again endorsed psychiatric and psychological predictions in *United States v. Salerno*.<sup>93</sup> In *Salerno*, the Supreme Court upheld the Bail Reform Act of 1984.<sup>94</sup> The Bail Reform Act<sup>95</sup> permitted pretrial detention of persons who presented a danger to others.<sup>96</sup> In approving the Act, the Court thus sanctioned another context in which psychiatric and psychological predictions of violence may be offered as evidence.

Although the three cases above illustrate the Supreme Court's pre-*Daubert* endorsement of psychiatric and psychological predictions, the Court has not yet approved of clinical violence risk assessment in the post-*Daubert* era. Despite the lack of case law, there has been much post-*Daubert* commentary on the issue in legal and scientific literatures. Virtually all of this com-

88. See *Barefoot v. Estelle*, 463 U.S. 880, 896-98 (1983) (permitting psychiatric testimony). Although the Court discussed testimony from a psychiatrist, its reasoning equally applies to testimony from a psychologist.

89. See *id.* at 897 (quoting *Jurek v. Texas*, 428 U.S. 262, 274-75 (1976)).

90. 467 U.S. 253 (1984).

91. See *Schall v. Martin*, 467 U.S. 253, 281 (1984) (concluding that New York statute did not violate Due Process Clause of Fourteenth Amendment).

92. See *id.* at 278 (upholding detention based on finding of "serious risk").

93. 481 U.S. 739 (1987).

94. See *United States v. Salerno*, 481 U.S. 739, 752 (1987) (concluding that Act was not invalid under Due Process Clause of Fifth Amendment).

95. 18 U.S.C. §§ 3141-3151 (1998).

96. The Bail Reform Act, 18 U.S.C. § 3141-3151 (1998).

mentary suggests that testimony by a qualified expert regarding a properly conducted clinical violence risk assessment will remain admissible evidence.<sup>97</sup> For example, the American Bar Association's *Benchbook* concludes:

[E]ven given the underlying uncertainties and discrepancies within the psychiatric and psychological communities, psychiatrists and psychologists—through their education and experiences—acquire special information and skills that are beyond that of the lay community to better understand and interpret human behavior (normal and abnormal). Thus, in many instances the knowledge of psychiatrists and psychologists can assist factfinders in understanding and interpreting human behavior within a legal context.<sup>98</sup>

Likewise, the leading professional work in this area, *Psychological Evaluations for the Courts*, states:

Some critics might argue that much of the empirical and clinical analysis [of violence prediction] relies on "face valid" factors that lay decision-makers, applying common sense, could use to reach the same judgments. We disagree. Although the implications of some factors are evident on their face . . . , laypersons will not be as familiar with or be able to interpret as well other types of factors. . . . Such informed testimony can help prevent the courts from reaching inappropriate conclusions based on stereotypical views of "psychopaths" or "schizophrenics" and may thus facilitate more disciplined and humane dispositions by judges and juries.<sup>99</sup>

Finally and persuasively, the second edition of the *Handbook of Forensic Psychology* arrives at the following conclusion regarding the admissibility of psychological and psychiatric experts on violence risk assessments in American courts:

[I]t could be argued that mental health professionals should not be allowed to testify as experts [on violence prediction] under the *Daubert* standard. However, (a) historically, the Supreme Court has been receptive to professional assessments of dangerousness; (b) in almost any case in which such assessments are made they will be based, at least in part, on validated risk factors (e.g., a history of violence); (c) mental health professionals could

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97. Cf. FAIGMAN ET AL., *supra* note 6, at 299-300. Faigman wrote:

[C]ourts have yet to explain fully the constitutional basis for permitting admittedly unreliable evidence when a person's liberty or life is at risk. Possibly, as judges become more comfortable with the complexity and subtlety of the scientific method as the *Daubert* era progresses, their constitutional analysis in this area will also grow more complex and subtle.

*Id.* at 299-300.

98. BENCHBOOK, *supra* note 72, at 47.

99. MELTON ET AL., *supra* note 76, at 292-93.

well make the point that they cannot validate their expertise in many circumstances without releasing dangerous individuals; (d) throughout our society, mental health professionals are expected by the law to make professional assessments of dangerousness when patients pose a serious risk of harm to others; (e) the Supreme Court also stated in *Daubert* that, still, "[w]idespread acceptance can be an important factor in ruling particular evidence admissible," and clinical assessments of dangerousness are widely accepted by the clinical community and increasingly by the academic community; and (f) if nothing else, it is likely that mental health professionals will be better able than laypersons to articulate, highlight, and analyze the factors that go into a dangerousness risk assessment. Given all this, it is highly unlikely that the *Daubert* decision will affect the admissibility of professional assessments of dangerousness in federal courts or in states that follow the *Daubert* decision.<sup>100</sup>

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100. Litwack & Schlesinger, *supra* note 76, at 192-93.