Risk Assessment for Future Offending:
The Value and Limits of Expert Evidence at Sentencing

Kirk Heilbrun, Jaymes Fairfax-Columbo, Suraji Wagage & Leah Brogan

The question of a criminal defendant's risk for future offending may be of interest to courts in a variety of contexts. Courts may request or consider information from forensic mental health professionals regarding risk assessment, which is the formal appraisal of the probability that an offender will reoffend or commit particular acts of violence in the future.[1] Risk assessment is relevant in criminal contexts such as capital sentencing, criminal responsibility, and commitment of sexually violent predators; it also arises in civil contexts including civil commitment, workplace disability, child custody, and child protection.[2] In some instances, risk assessment also may be done in cases involving risk of harm to identifiable third parties.[3] Despite its growing use in the United States legal system in recent years, violence risk assessment has historically come under critical scrutiny in U.S. courts. Such concern about the practice of risk assessment and its evidentiary value is appropriate, considering the consequences that can be associated with a conclusion that an individual is high risk. Such consequences might include, *inter alia*, longer sentences or lost custody of a child.[4]

However, it is important that concerns about risk assessment be accurate and current with respect to the supporting science. As evidentiary gatekeepers, whether acting in accordance with *Daubert* or *Frye* admissibility standards, the court must be aware of the foundational scientific base of risk assessment, and whether the practice is generally accepted in the field. Other criticisms, however, may no longer be accurate, if they ever were. The predictive accuracy of violence risk assessment has been improved considerably through theoretical advances, empirical research, and the development of specialized, structured risk-assessment measures over the last 25 years. This Article provides a primer for judges regarding these advances. First, we review some of the historical criticisms of risk assessment, including a recent criticism in a capital context. Second, we discuss an important theoretical advance (the risk-need-responsivity framework) through which forensic mental health professionals currently conceptualize risk. Third, we review the four most frequently observed approaches to risk assessment: (1) clinical judgment, (2) anamnestic assessment, (3) actuarial prediction, and (4) structured professional judgment (SPJ). Finally, we provide a critical analysis of each of these approaches and offer recommendations for their application in legal contexts.

HISTORICAL CRITICISM OF RISK ASSESSMENT

Historically, risk assessment provided by mental health professionals has been criticized as little better than chance in its accuracy.[5] Before the mid-1970s, forensic mental health professionals were largely forced to rely on their own judgment, without the assistance of specialized risk-assessment measures, when appraising an individual's level of risk.[6] A series of studies in the 1970s revealed that mental health professionals who used their own judgment in this way were mistaken in about two-thirds of their predictions identifying those who would commit future violence.[7] More recent studies showed some modest improvement in accuracy, but still identified errors in nearly half (47%) of the cases in which mental health professionals used their judgment to identify those who would be violent in the future.[8] The majority of the errors were "false positives"—individuals wrongly predicted to be violent in the future. Mental health professionals were somewhat more accurate in identifying those who would *not* be violent.

This very limited ability of psychiatrists and psychologists to accurately appraise risk of future violence was part of the defendant's argument in the 1983 Supreme Court case *Barefoot v. Estelle*.[9] Defendant Thomas Barefoot challenged his conviction for capital murder on several grounds, including the argument that testimony by mental health professionals regarding an individual's future dangerousness should be inadmissible at trial.[10] Barefoot argued specifically that psychiatrists "individually, and as a class [were] not competent to predict future dangerousness" and that any sentence predicated on such predictions was so likely to be erroneous that it constituted cruel and unusual punishment in violation of the Eighth Amendment.[11]

Footnotes
1. Jerrod Brown & Jay P. Singh, *Forensic Risk Assessment: A Beginner's Guide*, 1 ARCHIVES OF FORENSIC PSYCHOL. 49, 49 (2014).
2. KIRK HEILBRUN, EVALUATION FOR RISK OF VIOLENCE IN ADULTS 12 (2009).
3. *Id.*
4. GARY B. MELTON ET AL., PSYCHOLOGICAL EVALUATIONS FOR THE COURTS: A HANDBOOK FOR MENTAL HEALTH PROFESSIONALS AND LAWYERS 299 (6th ed. 2007).
5. JOHN MONAHAN, PREDICTING VIOLENT BEHAVIOR: AN ASSESSMENT OF CLINICAL TECHNIQUES (1981).
6. Mairead Dolan & Michael Doyle, *Violence Risk Prediction: Clinical and Actuarial Measures and the Role of the Psychopathy Checklist*, 177 BRITISH J. PSYCH. 303, 303 (2000).
7. MELTON ET AL., *supra* note 4.
8. *Id.*
9. Barefoot v. Estelle, 463 U.S. 880 (1983).
10. *Id.* at 884-85.
11. *Id.* at 885.

The defense was supported in this case by an *amicus* brief from the American Psychiatric Association, which observed that psychiatrists had no professional expertise in the prediction of future dangerous behavior, and that such predictions were likely to be inaccurate in a large majority of cases.[12] The Supreme Court, faced with considerable evidence that mental health professionals could not provide consistently accurate testimony regarding defendants' future dangerousness, nevertheless held that barring such testimony would be like "disinventing the wheel," and it should be evaluated for reliability by the jury, not the court.[13]

The Supreme Court's subsequent holding in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* provided a different perspective on the use of the clinical judgment of mental health professionals in providing expert evidence regarding a defendant's risk of future violent behavior.[14] In *Daubert*, the Court outlined five factors to consider in determining the reliability and subsequent admissibility of scientific evidence: (1) whether the scientific theory at issue had been tested, (2) whether the theory had been subject to peer review and publication, (3) what the error rate for the theory was, (4) whether scientific standards controlling the technique exist, and (5) how much the theory in question has been accepted by the scientific community.[15] Applying these five factors provides a much stronger argument that risk-assessment testimony based only on clinical judgment should be inadmissi-

ble. For example, in *Flores v. Johnson*, though the United States Court of Appeals for the Fifth Circuit decided the case on other grounds, Judge Emilio Garza condemned risk assessment based solely on clinical judgment in his concurrence, opining that the practice failed to satisfy any of the five *Daubert* factors.[16]

As will be discussed later in this Article, risk assessment has advanced considerably since the time it was based solely on clinical judgment. It is now possible to identify four distinct approaches to risk assessment in legal contexts: unstructured clinical judgment,[17] actuarial,[18] structured professional judgment,[19] and anamnestic.[20]

Actuarial risk assessment has been criticized in legal contexts for its failure to account for changing individual circumstances. It also represents the ultimate form of "statistical" evidence—not only individual items, but the scoring and combination of items to yield a conclusion by the measure, not the user—and has been criticized on that basis as well. A recent example of this criticism can be seen in the 2013 Virginia Supreme Court case *Lawlor v. Commonwealth*.[21] In *Lawlor*, the defendant appealed his conviction for capital murder and subsequent death sentence on multiple grounds, one of which was the trial court's exclusion of certain portions of the testimony of psychologist Dr. Mark Cunningham. The defense proffered Dr. Cunningham's testimony to rebut the Commonwealth's evidence of future dangerousness as an aggravating factor and

---

12. *Id.* at 889-91.
13. *Id.* at 896-902.
14. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).
15. *Id.* at 593-94.
16. Flores v. Johnson, 210 F.3d 456, 464-65 (5th Cir. 2000) (Garza, J., concurring). Judge Garza stated:

> On the basis of any evidence thus far presented to a court, it appears that the use of psychiatric evidence to predict a murderer's "future dangerousness" fails all five *Daubert* factors. First, "testing" of these theories has never truly been done, as "such predictions often rest . . . on psychiatric categories and intuitive clinical judgments not susceptible to cross-examination and rebuttal." Second, as is clear from a review of the literature in the field, peer review of individual predictions is rare, and peer review of making such predictions in general has been uniformly negative. Third, the rate of error, at a minimum, is fifty percent, meaning such predictions are wrong at least half of the time. Fourth, standards controlling the operation of the technique are nonexistent. Overall, the theory that scientific reliability underlies predictions of future dangerousness has been uniformly rejected by the scientific community absent those individuals who routinely testify to, and profit from, predictions of dangerousness.

> *Id.* (citations omitted).

17. Unstructured clinical judgment is the use of clinical judgment by a mental health professional, without the assistance of specialized risk-assessment measures or specific focus on violence history, to reach an opinion about the likelihood that a defendant will threaten or harm others in the future.

18. A formal method that "uses an equation, a formula, a graph, or an actuarial table to arrive at a probability, or expected value, of some outcome." 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 & LAW 293, 294 (1996). It uses predictor variables that can be quantified or rated reliably. *Id.* The predictor variables are empirically validated against the outcome that is being predicted. Thus it involves an objective, mechanical, reproducible combination of predictive factors, selected and validated through empirical research against known outcomes. *Id.*

19. Structured professional judgment uses specified variables usually developed from a review of the relevant research instead of collected specifically for the development of an SPJ measure. These variables are defined so they can be rated reliably. After completing the rating of variables, the SPJ evaluator considers the needs for management, treatment, or supervision as part of the final "structured professional judgment." SPJ typically uses some risk factors that are dynamic (potentially changeable through planned intervention) rather than mostly static (unchanging through planned intervention), as is more usual in actuarial assessment.

20. Anamnestic assessment is used to obtain detailed information about a person's history of violence. The individual is asked about details associated with each prior violent act, such as thoughts, feelings, those involved, the use of drugs or alcohol, the use of weapons, the targeting of victim(s), and other details. MELTON ET AL., *supra* note 4, at 307-08. The goal is to identify recurring risk factors and protective factors rather than to appraise the risk of future violence.

21. Lawlor v. Commonwealth, 738 S.E.2d 847 (2013).

as mitigating evidence,[22] and the Supreme Court of Virginia held that the trial court did not abuse its discretion in excluding his testimony. The Virginia Supreme Court's rationale was that actuarial or statistical information of the type offered by Dr. Cunningham is not satisfactorily individualized to the defendant's "character, history, and background." In the court's words:

> [C]haracteristics alone are not character. Merely extracting a set of objective attributes about the defendant and inserting them into a statistical model created by compiling comparable attributes from others, to attempt to predict the probability of the defendant's future behavior based on others' past behavior does not fulfill the requirement that evidence be "peculiar to the defendant's character, history, and background…" To the contrary, it is mere "statistical speculation."[23]

The Court elaborated that "the mere fact that an attribute is shared by others from whom a statistical model has been compiled, and that the statistical model predicts certain behavior, is neither relevant to the defendant's character nor a foundation for expert opinion."[24]

Whether based on clinical judgment or specialized actuarial measures, expert testimony on risk assessment has been criticized by legal commentators. But much of this criticism stems from a misunderstanding of the strengths and limitations of various approaches to risk assessment. The next two sections of this Article will address these points.

RISK-NEED-RESPONSIVITY AS A CONCEPTUAL FRAMEWORK FOR RISK ASSESSMENT

The development of the risk-need-responsivity (RNR) framework represents a major conceptual advance in the field of risk assessment. The RNR approach holds that risk-reducing rehabilitation should vary in focus, intensity, and duration depending on an offender's risk and criminogenic needs (deficits that increase the risk of offending).[25] It is based on three principles: *risk*, *need*, and *responsivity*.[26] The risk principle indicates that the intensity of treatment should vary depending upon the individual's risk level, with high-risk offenders receiving more intensive treatment than lower-risk offenders.[27] The need principle directs the focus of interven-

---

22. The excluded testimony by Dr. Cunningham that the defense hoped to proffer was as follows:

1. Q: What is your expert opinion as to how Mark Lawlor's behavior pattern while [previously] in custody/incarceration, impacts his future prison adaptability?
A: Because of Mark Lawlor's prior adaption in prison and jail, and particularly because of his lack of violent activity in these settings, Mr. Lawlor represents a low likelihood of committing acts of violence while in prison.
2. Q: What is your expert opinion as to how Mark Lawlor's age impacts his future prison adaptability? Does that opinion take into account the fact that Mr. Lawlor committed his current crime at age 43?
A: Because of Mark Lawlor's age of 45 years old, Mr. Lawlor represents a low likelihood of committing acts of violence while in prison. The fact that Mr. Lawlor committed his current offense at age 43 has been taken into account in forming this opinion, but it does not change my opinion about his future prison adaptability.
3. Q: What is your expert opinion as to how Mark Lawlor's education impacts his future prison adaptability? Is this risk factor predictive of violence in the free community as well?
A: The fact that Mr. Lawlor has earned his G.E.D. is predictive of a low likelihood of committing acts of violence while in prison. This risk factor is far more predictive of violent conduct in the prison context than it is in the free community context.
4. Q: What is your expert opinion as to how Mark Lawlor's employment history impacts his future prison adaptability?
A: Mark Lawlor's employment history in the community is predictive that Mr. Lawlor represents a low likelihood of committing acts of violence while in prison.
5. Q: What is your expert opinion as to how Mark Lawlor's continued contact with his family and friends in the community impacts his future prison adaptability?
A: Mark Lawlor's continued contact with these individuals while in prison, is predictive that Mr. Lawlor represents a low likelihood of committing acts of violence while in prison.
6. Q: What is your expert opinion as to how Mark Lawlor's past correctional appraisal impacts his future prison adaptability?
A: Mark Lawlor's past correctional appraisal is predictive that Mr. Lawlor represents a low likelihood of committing acts of violence while in prison.
7. Q: What is your expert opinion as to how Mark Lawlor's lack of gang affiliation impacts his future prison adaptability?
A: Mark Lawlor's lack of gang affiliation is predictive that Mr. Lawlor represents a low likelihood of committing acts of violence while in prison.
8. Q: Have you reached an opinion, to a reasonable degree of psychological certainty, based on all of the factors relevant to your studies of prison risk assessment, as to what Mark Lawlor's risk level is for committing acts of violence while incarcerated? And if so, what is your opinion?
A: Yes. It is my opinion based on my analysis of all of the relevant risk factors which are specific to Mr. Lawlor's prior history and background, that Mr. Lawlor represents a very low risk for committing acts of violence while incarcerated.
9. Q: Are all of your opinions concerning the above questions and answers about Mr. Lawlor, grounded in scientific research and peer-reviewed scientific literature?
A: Yes.

Id. at 884-85.
23. *Id.* at 884 (citations omitted).
24. *Id.*
25. Leigh Harkins & Anthony R. Beech, *A Review of the Factors that Can Influence the Effectiveness of Sexual Offender Treatment: Risk, Need, Responsivity, and Process Issues*, 12 AGGRESSION & VIOLENT BEHAV. 615, 616 (2007).
26. *Id.*
27. *Id.*

tions toward specific criminogenic deficits, which have also been termed dynamic (modifiable through planned intervention) risk factors.[28] The responsivity principle indicates that rehabilitative interventions should be tailored to the learning style and ability level of the offender (specific responsivity) and delivered using empirically supported methods (general responsivity); these combine to make intervention more accessible and effective, and promote treatment adherence.[29] RNR was originally developed for use in correctional contexts, but it has clear application as well to questions before the court at trial and sentencing.

There are eight key domains associated with risk of future violent offending: (1) history of antisocial behavior, (2) antisocial personality pattern, (3) antisocial cognition, (4) antisocial associates, (5) family and/or marital trust, (6) school and/or work, (7) leisure and/or recreation, and (8) substance abuse.[30] Of these, seven are dynamic and thus potentially changeable. When they are modified through a reduction in severity, this tends to reduce that individual's risk. These needs and their indicated interventions are summarized in Table 1. The individual may also experience influences that either reduce the risk from other influences (e.g., a young man with family dysfunction, education problems, and antisocial peers is employed working in a car-parts store by a responsible older man who is also a role model) or increases the likelihood of responsible behavior by itself (e.g., a young man is very gifted musically, and spends most of his time practicing and performing despite substantial family problems and a history of substance abuse). Such "protective factors" make violence less likely to occur.[31] Protective factors may be static—for example, high intelligence or having had a secure bond with caretakers as a child.[32] They may also be dynamic; examples include coping and problem-solving skills; self-control; strong motivation, and a responsible, supportive social network.[33]

By identifying modifiable risk factors for violence, this approach has promoted the development of risk assessment measures that are both empirically testable and possess action implications for risk reduction. Through the provision of substantial structure in risk assessment, moreover, these changes have reduced bias and other sources of inaccuracy in risk assessment by guiding judgments of risk using empirically supported domains. The next section of this Article will describe these newer approaches to risk assessment, as well as review the unstructured clinical judgment and anamnestic approaches to risk assessment, discussing the benefits and detriments to each approach and their effectiveness in accurately predicting an individual's risk of future violence.

CURRENT APPROACHES TO RISK ASSESSMENT: STRENGTHS AND LIMITATIONS

We now turn to a more in-depth description of three approaches to risk assessment: actuarial, structured profes-

TABLE 1: MODIFIABLE RISK FACTORS (CRIMINOGENIC NEEDS)		
Criminogenic Need	**Description**	**Intervention**
Antisocial personality pattern	Pleasure focused, poor self-control, aggressive	Teach/model problem-solving, anger-management, and coping skills
Antisocial cognition	Holding antisocial attitudes, values, and beliefs, such as being supportive of crime	Promote alternative, prosocial thinking; weaken criminal identity; strengthen responsible identity
Antisocial associates	Association with antisocial others or non-association with prosocial others	Reduce antisocial associations and increase prosocial associations
Family and/or marital problems	Problems with nurturance, caring/monitoring, and supervision	Conflict reduction, relationship building, improvement monitoring
School and/or work	Poor performance, lack of opportunity, or dissatisfaction with education and work	Education, vocational training
Leisure and/or recreation	Excessive leisure time, few antisocial hobbies/pursuits, few organized activities	Increase involvement in prosocial pursuits and organized activities to reduce leisure time
Substance abuse	Problematic use of drugs or alcohol	Substance-abuse treatment and education

28. *Id.*
29. *Id.*
30. D. A. Andrews et al., *The Recent Past and Near Future of Risk and/or Need Assessment*, 52 CRIME & DELINQ. 7, 11 (2006).
31. *See* Brown & Singh, *supra* note 1, at 50.
32. Michiel de Vries Robbe & Vivienne de Vogel, *Protective Factors for Violence Risk: Bringing Balance to Risk Assessment and Management*, *in* MANAGING CLINICAL RISK: A GUIDE TO EFFECTIVE PRACTICE 293, 294–95 (Caroline Logan & Lorraine Johnstone eds., 2012).
33. *Id.*

sional judgment, and anamnestic. We do not discuss unstructured clinical judgment in detail for several reasons. First, more than 50 years of research indicate that there is a consistent advantage in accuracy in using structured approaches, generally, in conducting risk assessment.[34] Unstructured clinical judgment is significantly less accurate than more-structured approaches.[35] Second, it is this increased structure—using predetermined questions, risk factors, and protective factors—that has promoted the substantial progress of the last 25 years in risk assessment, so unstructured clinical judgment is no longer necessary or even appropriate as part of risk assessment.[36] There does remain a role for clinical judgment as part of psychological evaluations for the courts more broadly, of course, in such tasks as interviewing the evaluee and collateral observers, interpreting data, and drawing conclusions.[37] When risk assessment is conducted as part of such an evaluation, then professional judgment will continue to make an essential contribution to the risk opinion. But there is a great deal of structure guiding the judgment exercised under these circumstances, as it is informed by material that is directly related to the probability of future violence (e.g., risk factors, protective factors). This is similar to "structured professional judgment" or "anamnestic assessment" as they are discussed throughout this article.

VALIDATION OF ACTUARIAL, STRUCTURED PROFESSIONAL JUDGMENT, AND ANAMNESTIC APPROACHES TO RISK ASSESSMENT

This section summarizes evidence from the behavioral science literature on actuarial and structured professional judgment approaches to risk assessment. Although there are no specific studies on anamnestic assessment to review, we describe its foundation and contribution to the process of risk assessment—and why we believe it can play an important part in such risk assessments for the courts. For the reader's convenience, Table 2 provides an overview of the risk-assessment measures we discuss, along with each measure's commonly used acronym.

ACTUARIAL APPROACHES. Meta-analysis is an analytic technique that allows the investigator to aggregate the results of multiple studies, creating a more stable estimate of the outcome.[38] The scientific literature in the area of risk assessment includes numerous meta-analyses that have been performed since specialized actuarial violence risk-assessment instru-

ments were first developed. One valuable meta-analysis involving research on mentally disordered offenders and outcomes of general offending (any crimes) and violent offending (crimes against persons) found a number of factors that are empirically associated with these outcomes, including historical variables (criminal history, juvenile delinquency, hospital admissions, violence, escape), personality variables (antisocial personality), and substance abuse.[39] But it is noteworthy that the strongest predictor of violent recidivism was risk level yielded by objective risk assessment—underscoring the importance of a risk assessment that is structured and actually includes these positive predictors and does not include factors such as offense

TABLE 2: RISK-ASSESSMENT MEASURES CITED IN THIS ARTICLE

ACRONYM	FULL NAME	STRUCTURED PROFESSIONAL JUDGMENT OR ACTUARIAL
HCR-20	Historical, Clinical, Risk Management-20	SPJ
LSI-R	Level of Service Inventory-Revised	Actuarial
LCSF	Lifestyle Criminality Screening Form	Actuarial
PCL	Psychopathy Checklist	Actuarial
PCL-R	Psychopathy Checklist-Revised	Actuarial
PCL:SV	Psychopathy Checklist-Screening Version	Actuarial
SVR-20	Sexual Violence Risk-20	SPJ
SAVRY	Structured Assessment of Violence Risk in Youth	SPJ
Static-99	Static-99	Actuarial
VRAG	Violence Risk Appraisal Guide	Actuarial
YLS/CMI	Youth Level of Service/Case Management Inventory	Actuarial

34. Stefanía Ægosdóttir et al., *The Meta-Analysis of Clinical Judgment Project: Fifty-Six Years of Accumulated Research on Clinical versus Statistical Prediction*, 34 COUNSEL. PSYCHOLOGIST 341, 341-382 (2006); Seena Fazel et al., *Use of Risk Assessment Instruments to Predict Violence and Antisocial Behavior in 73 Samples Involving 24,827 People: Systematic Review and Meta-Analysis*, 345 BMJ 1 (2012); William M. Grove et al., *Clinical versus Mechanical Prediction: A Meta-Analysis*, 12 PSYCHOL. ASSESSMENT 19, 19-30 (2000).

35. Douglas Mossman, *Assessing Predictions of Violence: Being Accurate about Accuracy*. 62 J. CONSULT. & CLIN. PSYCHOL. 783, 783-792 (1994).

36. There are some cases for which a specialized risk-assessment mea-

sure is not available. In such cases, evaluators can "structure" their risk assessment by using known risk factors for outcome of interest. These risk factors may be derived from the scientific literature, the individual's history, or both.

37. HEILBRUN, *supra* note 2.

38. For an overview of meta-analysis, *see* Nancy K. Steblay, *Meta-Analysis as an Aid for Judicial Decision Making*, 52 CT. REV. 120 (2016).

39. James Bonta et al., *The Prediction of Criminal and Violent Recidivism among Mentally Disordered Offenders: A Meta-Analysis.* 123 PSYCHOL. BULL., 123, 123-142 (1998).

seriousness, which is virtually unrelated to the risk of future offending or even violent offending.[40]

The personality construct of psychopathy, characterized by a cluster of interpersonal, affective, and lifestyle characteristics such as callousness, manipulativeness, impulsivity, superficiality, and violating the rights of others,[41] has been robustly associated with violent offending risk for offenders in the community. Most research on psychopathy has used the Psychopathy Checklist (PCL) or the updated Psychopathy Checklist-Revised (PCL-R) to measure it.[42] However, it is noteworthy that the PCL-R is an "accidental" risk-assessment measure. It was developed to provide a better way of measuring a personality disorder to facilitate research on psychopathy—and turned out to be a strong measure of re-offense risk in the community.

Nevertheless, several meta-analyses provide support for the association between PCL-R score and violence risk in the community. A 1996 meta-analysis of over 50 studies found the PCL-R to perform comparably to an established measure of offense risk and needs (the Level of Service Inventory-Revised, or LSI-R)[43] in predicting violent behavior, with each described as strongly associated with general and violent recidivism in the community.[44] In a subsequent meta-analysis,[45] the predictive capacity of the PCL-R was compared to that of the Lifestyle Criminality Screening Form[46] regarding both general and violent criminal recidivism for individuals who were already justice-involved. Both were effective in predicting criminal recidivism, with neither significantly more accurate than the other.

Another meta-analysis addressed the relationship between antisocial behavior (including crime) and the PCL-R.[47] This meta-analysis included 95 published studies with more than 15,000 participants, creating a broad, stable sample from which to generalize findings.[48] Both PCL-R Factor 1 (aggregating interpersonal characteristics such as callousness, deceptiveness, and superficial charm) and Factor 2 (combining behavioral and historical attributes such as early conduct problems, versatility in offense history, and the like) were significantly associated with recidivism risk, and Factor 2 was the stronger predictor.[49]

Additional meta-analyses show strong results for the ability of other actuarial instruments to accurately provide risk information for both male offenders (for whom it was originally developed) and female offenders.[50] In a 2009 study reviewing 25 published and unpublished sets of data, the researchers found that the effect sizes (a measure of how much a variable influences an outcome) for females were comparable to those for males, indicating that the LSI-R works comparably well with female offenders.[51] It is always possible, of course, that the development of a risk-assessment measure specific to females would perform even better. However, it also indicates that the LSI-R can currently be applied to women without a substantial loss of accuracy—and suggests that many of the risk factors that are applicable to men are also important with women.

These meta-analytic reviews underscore the substantial body of evidence relevant to the actuarial prediction of violent behavior. Another important piece in this puzzle is apparent

40. There are obviously reasons other than future offense risk to consider offense severity in legal decision making. But offense seriousness is a very poor proxy for future risk, so consideration of such seriousness should be for reasons such as retribution, proportional sentencing, and the like.

41. Robert D. Hare, *Psychopathy as a Risk Factor for Violence*, 70 PSYCH. Q. 181, 181 (1999). Other distinctive features of psychopathy include quickness to anger, irresponsibility, dominance orientation, grandiosity, an inability to bond with others, an inability to feel guilt or anxiety, irresponsibility, and arrogance. *Id.*

42. ROBERT D. HARE & HANS VERTOMMEN, THE HARE PSYCHOPATHY CHECKLIST-REVISED 1 (1991); ROBERT D. HARE, HARE PCL-R: TECHNICAL MANUAL 1 (2003). Both the PCL and the PCL-R are 20-item measures of psychopathic traits scored on a 0-2 scale. Scores of 0 indicate that the individual does not exhibit the trait; scores of 1 indicate that the individual shows some of the trait across life domains; and scores of 2 indicate that the individual definitely exhibits the trait across life domains. Scores range from 0-40, with higher scores indicating the presence of a greater amount of psychopathic traits.

43. DONALD A. ANDREWS & JAMES BONTA, THE LEVEL OF SERVICE INVENTORY—REVISED 1 (2000). The LSI-R is an actuarial measure of offender risk, need, and responsivity. It measures these areas consistent with RNR theory, providing guidance for reducing risk most effectively in addition to classifying risk level. The LSI-R uses information obtained from interviewing the offender and reviewing collateral information to rate the offender on 54 items encompassing 10 domains: criminal history, education/employment, financial stability, family/marital status and histories, current accommodations/housing, leisure/recreation activities, companions/associates, current and history of alcohol/drug problems,

emotional functioning/adjustment, and criminal attitudes/orientation. MELTON ET AL., *supra* note 4, at 312. Items are rated on a scale from 0 to 3 where 0 and 1 = 1 and 2 and 3 = 0. Clive Hollin & Emma J. Palmer, *Level of Service Inventory-Revised Profiles of Violent and Nonviolent Prisoners*, 18 J. INTERPERSONAL VIOLENCE 1075, 1079 (2003). Higher scores reflect a higher probability of recidivating. The LSI-R demonstrates satisfactory reliability and predictive validity as evidenced in a considerable amount of research. Anthony W. Flores et al., *Predicting Outcome with the Level of Service Inventory-Revised: The Importance of Implementation Integrity*, 34 J. CRIM. JUST. 523, 524 (2006).

44. Paul Gendreau et al., *Is the PCL-R Really the "Unparalleled" Measure of Offender Risk? A Lesson in Knowledge Cumulation*, 29 CRIM. JUST. & BEHAV. 397, 397-426 (2002).

45. Glenn D. Walters, *Predicting Criminal Justice Outcomes with the Psychopathy Checklist and Lifestyle Criminality Screening Form: A Meta-Analytic Comparison*, 21 BEHAV. SCI. & L. 89, 89-102 (2003).

46. Glenn D. Walters et al., *The Lifestyle Criminality Screening Form: Preliminary Data,* 18 CRIM. JUST. & BEHAV. 406, 406-418 (1991). The LCSF uses only information from the file to rate an individual's irresponsibility, self-indulgence, interpersonal intrusiveness, and social rule-breaking.

47. Anne-Marie R. Leistico et al., *A Large-Scale Meta-Analysis Relating the Hare Measures of Psychopathy to Antisocial Conduct*, 32 LAW & HUM. BEHAV. 28, 28-45 (2008).

48. *Id.*

49. *Id.*

50. Paula Smith et al., *Can 14,737 Women Be Wrong? A Meta-Analysis of the LSI-R and Recidivism for Female Offenders*, 8 CRIMINOLOGY & PUB. POL'Y 1601, 1601-1626 (2009).

51. *Id.*

from the results of the MacArthur Risk Assessment Study.[52] This study remains the largest and best-designed single research project addressing violence in the community by those who had been treated in psychiatric hospitals and subsequently discharged to the community. These data, along with additional data from a subsequent study, were combined to develop an actuarial tool (the Classification of Violence Risk, or COVR) that is effective in predicting serious acts of violence in the community (defined as a threat with a weapon in hand, or a physical act resulting in significant harm to another person) committed by individuals with mental disorders.[53]

Although there has been very noteworthy progress in the development of specialized actuarial risk assessment measures since the 1990s, the evidence does not support the superiority of one particular measure over others. Rather, existing research seems to indicate that specialized measures that (a) use predictor variables that are empirically supported and reliably scored; (b) combine these variables to yield a score that is calculated to provide maximally advantageous information about the "cut score" to separate different categories of risk, and (c) are used consistently as intended tend to be comparably good. To illustrate this in a very specific way, we note that one study compared the predictive accuracy of three widely recognized actuarial tools, another approach using "General Statistical Information on Recidivism," and four additional instruments that they developed themselves by randomly selecting items from the total item pool.[54] None of these seven tools was substantially more accurate than the others. This strongly suggests that good actuarial measures, while more accurate than unstructured clinical judgment, apparently owe much of this enhanced accuracy to their structure (using predictive variables that show a statistical association with violence or other offending; requiring that the user follow the rules of the measure by scoring the items and using the score as indicated). If this is indeed accurate, then it will not be surprising that another approach to risk assessment—structured professional judgment—will also benefit from the application of this kind of structure.

STRUCTURED PROFESSIONAL JUDGMENT APPROACHES TO VIOLENCE RISK ASSESSMENT. Structured professional judgment is a more recently developed approach to violence risk assessment, with the earliest SPJ tools appearing in the 1990s. It is similar to actuarial assessment in the use of pre-specified items that can be reliably scored. But how it uses these items differs. Rather than combining scored items into a final score, the SPJ approach calls for an evaluator to consider the results of all information collected and then reach a conclusion about whether the evaluee's risk is low, moderate, or high. Items on an SPJ measure are typically derived from a review of the literature regarding factors associated with violence rather than adopted from a specific study or dataset. SPJ also makes the assumption that the greater the number and severity of the risk factors present, the greater the evaluated person's risk.[55] Since evaluators can consider situational influences, special circumstances, and other factors not specified on the measure—and since they can weigh the different items as they like—one might suspect that SPJ measures are more flexible but somewhat less accurate than actuarial measures in appraising risk. As we will describe in a moment, however, they are indeed more flexible but comparable in accuracy when compared with actuarial measures.

First, there is clear evidence that SPJ approaches provide an accurate way of appraising risk. A total of 20 published studies and one dissertation[56] on the relationship between SPJ risk judgments and violence have been identified.[57] Of these 20, a total of 18 have supported the predictive accuracy of SPJ judgments in relation to violent recidivism.[58] Only two studies did

52. JOHN MONAHAN ET AL., RETHINKING RISK ASSESSMENT: THE MACARTHUR STUDY OF MENTAL DISORDER AND VIOLENCE 1 (2001); Henry J. Steadman et al., *Violence by People Discharged from Acute Psychiatric Facilities and by Others in the Same Neighborhoods*, 55 ARCHIVES GEN. PSYCHIATRY 393, 393-401 (1998).

53. The COVR is a computer-based actuarial assessment that measures the probability of violence following discharge into the community among adults who are hospitalized for psychiatric treatment. The COVR guides the evaluator through a brief, structured chart review and 5- to 10-minute interview with the examinee. Information obtained through this process is used to rate the examinee on up to 106 items. The COVR generates a statistical estimate of the examinee's violence risk, corresponding confidence intervals for that estimate, and identifies the risk factors considered in deriving that estimate. JOHN MONAHAN ET AL., CLASSIFICATION OF VIOLENCE RISK: PROFESSIONAL MANUAL 1 (2005); Stephanie Wilson et al., *Structured Instruments Commonly Used in Violence Risk Assessments*, *in* INTERNATIONAL PERSPECTIVES ON VIOLENCE RISK ASSESSMENT 353 (Jay Singh et al., eds. 2016); John Monahan et al., *The Classification of Violence Risk*, 24 BEHAV. SCI. & LAW 721, 721-22 (2006).

54. Daryl G. Kroner et al., *A Coffee Can, Factor Analysis, and Prediction of Antisocial Behavior: The Structure of Criminal Risk*, 28 INT'L J. L.

& PSYCHIATRY 360, 360-374 (2005).

55. Kevin S. Douglas & P. Randall Kropp, *A Prevention-Based Paradigm for Violence Risk Assessment: Clinical and Research Applications*, 29 CRIM. JUST. & BEHAV. 617, 617-658 (2002).

56. Mark R. McGowan, *The Predictive Validity of Violence Risk Assessment within Educational Settings*, DISSERTATION ABSTRACTS INT'L: HUMAN. & SOC. SCI. 876 (2007).

57. Kirk Heilbrun et al., *Approaches to Violence Risk Assessment: Overview, Critical Analysis, and Future Directions*, *in* HANDBOOK OF VIOLENCE RISK ASSESSMENT (2d ed., Randy K. Otto & Kevin Douglas, eds. in press).

58. Rosalind E. H. Catchpole & Heather M. Gretton, *The Predictive Validity of Risk Assessment with Violent Young Offenders: A 1-Year Examination of Criminal Outcome*, 30 CRIM. JUST. & BEHAV. 688, 688-708 (2003); Kristina Childs et al., *A Comparison of Empirically Based and Structured Professional Judgment Estimation of Risk using the Structured Assessment of Violence Risk in Youth*, 12 YOUTH VIOLENCE & JUV. JUST. 40, 40-57 (2014); Vivienne de Vogel & Corine de Ruiter, *The HCR-20 in Personality Disordered Female Offenders: A Comparison with a Matched Sample of Males*, 21 CLIN. PSYCHOL. & PSYCHOTHERAPY 226, 226-240 (2005); Vivienne de Vogel & Corine de Ruiter, *Structured Professional Judgment of Violence Risk in Forensic Clinical Practice: A Prospective Study into the*

not support SPJ judgments in their prediction of violent recidivism.[59]

It would also be possible to simply add the item scores on an SPJ measure to obtain a total score, which could then be used to make a prediction. Does the judgment made by the evaluator using an SPJ measure add anything to scores combined in this fashion? Five studies have addressed this question. In all five, the final judgment added significantly to the results that would have been obtained by adding the scores of the individual items.[60]

ACTUARIAL VERSUS STRUCTURED PROFESSIONAL JUDGMENT APPROACHES TO VIOLENCE RISK ASSESSMENT. The scientific evidence described thus far strongly supports the validity of both actuarial and structured professional judgment approaches to risk assessment. But how do these approaches compare to one another? Given that both use pre-selected items that have a statistical association with violent recidivism, they are quite similar in both data selection and data coding. They diverge in their approach to data combination, however, with actuarial approaches yielding a conclusion based on an established formula and SPJ approaches calling for a professional judgment in light of the information obtained. Given these similarities, it should not come as a surprise if the two approaches are comparable in their accuracy in appraising risk.

Indeed, that is what the limited available evidence shows. In the five available studies comparing actuarial with SPJ approaches, three (including one meta-analysis) reflect no significant differences between these approaches and the other two show some advantage to SPJ measures. This is a small number of studies on which to base a conclusion about a question like this, so the conservative interpretation is that these approaches are comparable.

One study compared the predictive accuracy of one SPJ measure (the Historical-Clinical-Risk Management 20, or HCR-20)[61] and two actuarial approaches (the Violence Risk Appraisal Guide, or VRAG[62], and the PCL-R and PCL:SV).[63] All measures performed well, but there was not a particular advantage to a specific approach or measure.[64] A second study again compared two actuarial measures (the LSI-R and PCL-R) with an SPJ measure (the HCR-20).[65] Only minor differ-

Predictive Validity of the Dutch HCR-20, 12 Psychol. Crime & L. 321, 321-336 (2006); Vivienne de Vogel et al., *Predictive Validity of the SVR-20 and Static-99 in a Dutch Sample of Treated Sex Offenders*, 28 Law & Hum. Behav. 235, 235-251 (2004); Michiel de Vries Robbe et al., *Risk Factors and Protective Factors: A Two-Sided Dynamic Approach to Violence Risk Assessment*, 24 J. Forensic Psychiatry & Psychol. 440, 440-457 (2013); Michiel de Vries Robbe et al., *Changes in Dynamic Risk and Protective Factors for Violence During Inpatient Forensic Psychiatric Treatment: Predicting Reductions in Postdischarge Community Recidivism*, 39 Law & Hum. Behav. 53, 53-61 (2015); Kevin S. Douglas, Zachary Yeoman et al., *Comparative Validity Analysis of Multiple Measures of Violence Risk in a Sample of Criminal Offenders*, 32 Crim. Just. & Behav. 479, 479-510 (2005); Kevin S. Douglas, James Ogloff et al., *Evaluation of a Model of Violence Risk Assessment among Forensic Psychiatric Patients*, 54 Psychiatric Services 1372, 1372-1379 (2003); Pia Enebrink et al., *Predicting Aggressive and Disruptive Behavior in Referred 6 to 12-year-old Boys: Prospective Validation of the EARL-20B Risk/Needs Checklist*, 13 Assessment 356, 356-367 (2006); Alexandra Garcia-Mansilla et al., *Violence Risk Assessment and Women: Predictive Accuracy of the HCR-20 in a Civil Psychiatric Sample*, 29 Behav. Sci. & L. 623, 623-633 (2011); Nicola S. Gray et al., *Predicting Violence Using Structured Professional Judgment in Patients with Different Mental and Behavioral Disorders*, 187 Psychiatry Research 248, 248-253 (2011); P. Randall Kropp & Stephen D. Hart, *The Spousal Assault Risk Assessment (SARA) Guide: Reliability and Validity in Adult Male Offenders*, 24 Law & Hum. Behav 101, 101-118 (2000); McGowan, *supra* note 56; Joanna R. Meyers & Fred Schmidt, *Predictive Validity of the Structured Assessment for Violence Risk in Youth (SAVRY) with Juvenile Offenders*, 35 Crim. Just. & Behav 344, 344-355 (2008); Laura E. O'Shea et al., *Predictive Validity of the HCR-20 for Violent and Non-Violent Sexual Behaviour in a Secure Mental Health Service*, Crim. Behav. & Mental Health (2015); Michael J. Vitacco et al., *Can Standardized Measures of Risk Predict Inpatient Violence? Combining Static and Dynamic Variables to Improve Accuracy*, 39 Crim. Just. & Behav. 589, 589-606 (2012); Jennifer Welsh et al., *A Comparative Study of Adolescent Risk Assessment Instruments: Predictive and Incremental Validity*, 15 Assessment 104, 104-115 (2008).

59. Gabrielle Sjöstedt & Niklas Långström, *Assessment of Risk for Criminal Recidivism among Rapists: A Comparison of Four Different Measures*, 8 Psychol. Crime & L. 25, 25-40 (2002); Jodi L. Viljoen et al., *Assessing Risk for Violence in Adolescents Who Have Sexually Offended: A Comparison of the J-SOAP-II, J-SORRAT-II, and SAVRY*, 35 Crim. Just. & Behav. 5, 5-23 (2008).

60. de Vogel & de Ruiter, *supra* note 58; Douglas, Yeoman et al., *supra* note 58; Douglas, Ogloff et al., *supra* note 58; Enebrink et al., *supra* note 58; Kropp & Hart, *supra* note 58.

61. The HCR-20 (Historic, Clinical, and Risk Management-20) measures risk of future violence across three domains: static historical factors, clinical factors, and risk management factors. The HCR-20 consists of 20 items scored as either 0 (absent), 1 (possibly present), or 2 (present); however, these scores do not yield a statistical recidivism probability. Rather, such scores are meant to structure the clinician's decision regarding the individual's propensity for future violence. The reliability and validity of the HCR-20 has been established with correctional, civil psychiatric, and forensic populations—featuring high rates of interrater agreement and scale consistency. Melton et al., *supra* note 4, at 312-13.

62. The VRAG (Violence Risk Appraisal Guide) assesses violence risk in adult offenders and psychiatric patients using 12 items that are both historical (e.g., academic history and marital history) and dynamic (e.g., attitudes supportive of crime, psychiatric diagnostic criteria met). An examinee is rated on each item to generate a total score that is compared to 7- and 10-year probabilities of violence risk among people with the same total score. The VRAG has well established reliability and validity. *Id.* at 313.

63. Douglas, Yeomans et al., *supra* note 58. The PCL:SV is a shorter version of the PCL-R designed for screening, as opposed to diagnostic, purposes. Adelle Forth et al., The Psychopathy Checklist: Youth Version 1 (2003).

64. *Id.*

65. Klaus-Peter Dahle, *Strengths and Limitations of Actuarial Prediction of Criminal Reoffence in a German Prison Sample: A Comparative Study of the LSI-R, HCR-20, and PCL-R*, 29 Int. J. Law & Psych. 341 (2006).

ences in predictive accuracy were observed among these three measures.

Another two studies reported a modest advantage in predictive accuracy to SPJ measures. Comparing a brief actuarial measure (the Static-99) with an SPJ measure (the SVR-20) led to the conclusion that the latter was significantly better predictively than the former with 122 sexual offenders admitted to a Dutch forensic psychiatric hospital between 1974 and 1996.[66] Focusing on the use of these measures with adolescents involved a comparison of two actuarial approaches—the Youth Level of Service/Case Management Inventory (YLS/CMI)[67] and the Psychopathy Checklist: Youth Version (PCL:YV)[68]—with the Structured Assessment of Violence Risk in Youth (SAVRY).[69] The SPJ measure (the SAVRY) was significantly more accurate predictively than either of the actuarial measures.[70]

Finally, a total of nine risk-assessment tools were evaluated in a meta-analysis that included both a standard SPJ tool (the HCR-20) and an established actuarial measure (the VRAG).[71] All performed with moderate predictive accuracy, and no significant superiority was seen for any particular tool or approach.

The evidence reviewed thus far supports two important points. First, the predictive accuracy of specialized, structured risk assessment tools is superior to unstructured clinical judgment in appraising risk. Second, actuarial and structured professional judgment approaches are substantially equivalent in their predictive accuracy—although SPJ approaches are more flexible, allowing the evaluator to make allowances for different situational influences that might not be readily incorporated into an actuarial measure. For example, an individual with a history of serious violent behavior as an adolescent, major family dysfunction, substance abuse, impulsivity, and a "hot temper" might very well be classified as high risk by either an actuarial or an SPJ measure. But if that same individual had recently been in a car accident and sustained a serious head injury, the actuarial measure (typically composed of largely static, historical variables) would not change in its conclusion that this individual was at high risk for future violence. The SPJ approach, by contrast, allows the incorporation of this kind of change far more easily.

ANAMNESTIC APPROACHES TO VIOLENCE RISK ASSESSMENT. Finally, we turn to the question of whether the use of yet another approach might enhance the accuracy of predictions made using either an actuarial or an SPJ approach. This kind of approach, which uses the person's own history to obtain information about risk factors specifically applicable to that person, is difficult to investigate through research on predictive accuracy. The identification of risk factors, particularly treatment targets that are subject to change through intervention, is much better suited to risk management and risk reduction than it is to prediction.

Three important points should be made. Assuming a relationship between the number (and severity) of risk factors present and the overall risk level is consistent with broad findings from SPJ studies. Second, risk assessments performed in the course of legal proceedings must satisfy the parameters of the larger legal context. When they do not, there is the risk that such evidence will not be admitted—or will be accorded little weight if it is. So the "individualizing" of information collected as part of psychological or psychiatric evaluations for the courts is a high priority; unless the court is convinced that the evidence applies to this individual, at this time, it will not be seen as useful.[72] Third, there can be the kind of drastic changes in circumstance referenced earlier with the example about the individual with a head injury. Obtaining detailed information about a person's history of violent behavior and the circumstances surrounding each event allows a careful look at such changes and their impact.

66. de Vogel et al., *supra* note 58. The Static-99 is a 10-item actuarial measure of static risk factors associated sexual recidivism. *See* ANDREW HARRIS ET AL., STATIC-99 CODING RULES REVISED-2003 3 (2003). The Sexual Violence Risk-20 is a 20-item SPJ checklist of risk factors associated with sexual violence. *See* DOUGLAS PETER BOER ET AL., MANUAL FOR THE SEXUAL VIOLENCE RISK-20: PROFESSIONAL GUIDELINES FOR ASSESSING RISK OF SEXUAL VIOLENCE 1 (2003).

67. The YLS/CMI is intended to guide professionals' clinical judgment regarding risk assessment and treatment planning of delinquent youth between the ages of 12 and 17. Professionals using the YLS/CMI, obtain information from multiple collateral sources, including interviews with parents, youth, and knowledgeable third parties, as well as legal, educational, and mental health records, to rate the youth on eight variables associated with delinquency (offense history, family history and situation, education and employment history and adjustment, peer group, quality of peer relationships, substance use/abuse, leisure and recreation activities, psychopathology and personality factors, and antisocial disposition). The goal of the YLS/CMI is to facilitate case management and treatment planning for youth, such that youth with higher risk of reoffending are offered more intensive interventions. The YLS/CMI demonstrates adequate internal consistency and interrater reliability among adolescent male and female offenders and research supports its criterion and predictive validity. ROBERT HOGE & D.A. ANDREWS, THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY MANUAL AND SCORING KEY 1 (2002); MELTON ET AL., *supra* note 4, at 312.

68. FORTH ET AL., *supra* note 63.

69. RANDY BORUM ET AL., MANUAL FOR THE STRUCTURED ASSESSMENT OF VIOLENCE RISK IN YOUTH-CONSULTATION VERSION 1 (2002).

70. The SAVRY is an SPJ assessment meant for use with adolescents between ages 12 and 18. The SAVRY consists of 24 risk factors, classified as Historical (e.g., exposure to violence in the home), Social/Contextual (e.g., peer delinquency), and Individual/Clinical (e.g. risk taking/impulsivity), and six protective factors from reoffending (i.e., strong attachments and bonds). The professional rates the youth on each risk item as high, moderate, or low and protective factors are marked as either present or absent. The SAVRY is intended to define, rather than quantify, the primary risk factors for recidivating in youth. With regards to validity, the SAVRY demonstrates moderate to strong correlations with the YLS/CMI and Hare Psychopathy Checklist: Youth Version. MELTON ET AL., *supra* note 4, at 313;. Catchpole & Gretton, *supra* note 58.

71. Min Yang et al., *The Efficacy of Violence Prediction: A Meta-Analytic Comparison of Nine Risk Assessment Tools*, 136 PSYCHOL. BULL. 740 (2010).

72. HEILBRUN, *supra* note 2.

We cannot assert that anamnestic assessment would be defensible for use in risk assessment in legal contexts when used alone, therefore. It does not have the existing scientific support that has been reviewed in this article for actuarial and SPJ approaches. But it does enjoy one major advantage over both of these approaches: risk factors identified using anamnestic assessment are derived entirely from the individual's own history. There is no need to navigate the complex and thorny problem of "group to individual" inference when applying evidence.[73] In this respect, anamnestic assessment provides relevant and potentially valuable information while simultaneously satisfying any concern about whether that information is insufficiently individualized, inapplicable to the particular individual, or "statistical speculation."

RECOMMENDATIONS FOR BEST PRACTICE IN LEGAL CONTEXTS

We conclude with several recommendations in light of the legal context and relevant scientific evidence we have reviewed regarding risk assessment. First, it is no longer defensible to provide appraisals of an individual's risk of future violent behavior using only unstructured clinical judgment. The empirical support for such appraisals has been consistently described as so limited that this practice would not seem appropriate under either *Daubert* (which requires some showing of scientific foundation) or *Frye* (with the development of specialized measures for risk assessment of a variety of populations, the rendering of an opinion on risk without guidance from a specialized measure or some structuring from the literature would no longer appear to be generally accepted practice within the field). Second, the use of a specialized measure of risk like those reviewed in this article is strongly indicated. They provide empirical scientific support to this kind of expert evidence that is clearly useful and even compelled under *Daubert*. Third, it is appropriate whenever possible to "individualize" appraisals of risk using an anamnestic approach that derives risk factors from the individual's history. The combination of specialized measures with highly individualized evidence should address concerns about evidentiary relevance and "statistical speculation" as part of expert evidence on risk assessment.

Kirk Heilbrun is a professor in the Department of Psychology at Drexel University. His research and practice interests include forensic mental-health assessment, risk assessment and risk reduction, and community-based interventions for justice-involved populations. He can be contacted at kirk.heilbrun@drexel.edu.

Jaymes Fairfax-Columbo is a sixth-year JD/PhD Student at Drexel University, mentored by Dr. David DeMatteo, J.D./Ph.D., ABPP (Forensic). His research and practice interests include forensic mental-health assessment, psychopathy, collateral consequences of criminal records and their impacts on reentry, and the interplay between scientific research and policy. He can be contacted at jvf28@drexel.edu.

Suraji Wagage is a sixth-year J.D./Ph.D. student at Drexel University. Her clinical and research interests include juvenile-justice practices and policy and examining how mental health, trauma, race, and gender impact interactions with the justice system and outcomes. She is also interested in assessing ways in which policy change can address racial and gender disparities within the justice system and society at large. She can be contacted at suraji.wagage@drexel.edu.

Leah Brogan is a clinical psychology postdoctoral fellow in the Violence Prevention Initiative at the Children's Hospital of Philadelphia. Her research and practice interests include evidence-based interventions and prevention programming addressing health-risk behaviors and violence exposure among justice-involved youth as well as trauma-informed policies and practices within the juvenile-justice system. She can be reached at BROGANL1@email.chop.edu.

73. David L. Faigman et al., *Group to Individual (G2i) Inference in Scientific Expert Testimony*, 81 U. CHI. L. REV. 417 (2014).

AJA FUTURE CONFERENCES

2018 MIDYEAR MEETING	2018 ANNUAL CONFERENCE
MEMPHIS, TENNESSEE	LIHUE, HAWAII (ISLAND OF KAUAI)
The Guest House at Graceland	Kauai Marriot Resort
April 19-21	September 22-27
$145 single/double	$219 single/double

For more information, go to http://amjudges.org/conferences

Answers to Crossword
from page 129