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Christopher Slobogin

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Introduction

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,[1] the Supreme Court sensibly held that testimony purporting to be scientific is admissible only if it possesses sufficient indicia of scientific validity.[2] In *Kumho Tire Co. v. Carmichael*,[3] the Court more questionably held that opinion evidence based on "technical" and "specialized" knowledge must meet the same admissibility threshold as scientific testimony.[4] This Article addresses the implications of these two decisions for opinion evidence presented by mental health professionals in criminal trials.

At first glance, those implications appear to be significant. *Daubert* interpreted Rule 702's requirement that opinion testimony "assist" the factfinder[5] to mean that testimony offered by experts must be based on "reliable" methodology and theory.[6] Whether reliability is defined in its scientific sense to mean consistency of result or, in the sense the Court appeared to use it, to mean a measure of accuracy or validity,[7] much behavioral science testimony does not fare well under this standard.

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* Stephen C. O'Connell Professor of Law, University of Florida Levin College of Law; Visiting Professor, University of Southern California Law School. I would like to thank Tom Lyon, Mark Fondacaro, and Joëlle Moreno for their useful feedback on this paper.

1. 509 U.S. 579 (1993).

2. *See* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 594-95 (1993) (setting out requirements for admissibility of scientific evidence).

3. 526 U.S. 137 (1999).

4. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150-51 (1999).

5. Federal Rule of Evidence 702 reads as follows: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." FED. R. EVID. 702.

6. *See Daubert*, 509 U.S. at 589 (stating that "the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable").

7. Social scientists use the term "validity" to refer to accuracy and reserve the term "reliability" to refer to consistency of result. JOHN MONAHAN & LAURENS WALKER, SOCIAL

Consider first studies of inter-rater reliability using the relatively refined criteria found in recent editions of the official Diagnostic and Statistical Manual (DSM), published by the American Psychiatric Association.[8] Although initial research, conducted in the "laboratory," provided encouraging results,[9] field research indicates that mental health professionals involved in everyday practice may disagree more than half the time even on major diagnostic categories such as schizophrenia and organic brain syndrome.[10] Diagnostic opinions concerning people who are not psychotic are even less reliable in the scientific sense.[11] The reliability of determinations about symptoms, such as whether a person is engaging in bizarre thought processes, may be low as well.[12] Agreement among professionals also is very poor when they try to explain behavior, both because there are so many competing theories – Freudian, behavioral, social, and so on[13] – and because even within a given

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SCIENCE IN LAW 54-55 (4th ed. 1998) (citing David H. Kaye & David A. Freeman, *Reference Guide on Statistics*, *in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (1994)). In *Daubert*, the Court used the term "reliable" most frequently, but its emphasis on falsifiability and error rates made clear that it meant that term to refer to accuracy. *Daubert*, 509 U.S. at 593-94; *see also id.* at 592-93 (noting "helpfulness [is to be determined by] whether the reasoning or methodology underlying the testimony is scientifically valid").

8. AMERICAN PSYCHIATRIC ASSOCIATION, DIAGNOSTIC AND STATISTICAL MANUAL (4th ed. 1994) [hereinafter DSM-IV].

9. Research using the diagnostic criteria found in the third edition of the DSM reported reliability rates between 69% and 85% for the major diagnostic categories. AMERICAN PSYCHIATRIC ASSOCIATION, DIAGNOSTIC AND STATISTICAL MANUAL 470-71 (3d ed. 1980).

10. *See* Samuel Fennig et al., *Comparison of Facility and Research Diagnoses in First-Admission Psychotic Patients*, 151 AM. J. PSYCHIATRY 1423, 1426 (1994) (showing 57.1% agreement on schizophrenia); Paul B. Lieberman & Frances M. Baker, *The Reliability of Psychiatric Diagnosis in the Emergency Room*, 36 HOSP. & COMMUNITY PSYCHIATRY 291, 292 (1985) (showing 41% agreement on schizophrenia, 50% agreement on mood disorders, and 37% agreement on organic brain syndromes).

11. *See* Lieberman & Baker, *supra* note 10, at 292 (describing reliability of diagnostic opinions); Graham Mellsop, *The Reliability of Axis II of DSM-III*, 139 AM. J. PSYCHIATRY 1360, 1361 (1982) (finding that reliability of personality disorder diagnoses in everyday clinical settings ranged from 49% for antisocial personality to 1% for schizoid personality). *See generally* David Faust & Jay Ziskin, *The Expert Witness in Psychology and Psychiatry*, 241 SCIENCE 31 (1988) ("A number of subsequent studies showed that rate of disagreement of specific diagnostic categories often equals or exceeds rate of agreement.").

12. *See* Michael Flaum et al., *The Reliability of "Bizarre" Delusions*, 32 COMPREHENSIVE PSYCHIATRY 59, 62 (1991) ("In this study, the interrater reliability of distinguishing bizarre versus non-bizarre delusions was poor, using an unstructured definition, as well as DSM-III and DSM-III-R definitions."); Thomas F. Oltmanns, *Approaches to the Definition and Study of Delusions*, *in* DELUSIONAL BELIEFS 3-11 (Thomas F. Oltmanns & Brendan A. Maher eds., 1988) (discussing low reliability of judgments regarding bizarreness of beliefs).

13. Bruce Ennis & Thomas Litwack, *Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom*, 62 CAL. L. REV. 693, 719 (1974) (stating that "each school of

theoretical framework there is considerable dispute.[14] If the question is simply whether a person is grossly impaired (without reference to a specific diagnosis), agreement is much better,[15] but for reasons to be discussed below[16] that type of assessment may not be particularly helpful to the law.

If reliability is low, validity is suspect as well, because a lack of agreement between two raters means that at least one of them is wrong. Even if reliability is high,[17] however, validity may be poor; unanimity of opinion may hide the fact that *all* raters are wrong. Unfortunately, the validity of psychiatric opinion is hard to gauge. A diagnosis is merely a hypothetical construct; it lacks clear objective referents.[18] Even many symptoms – such as whether a person is "depressed," "anxious," or suffering from "low self-esteem" – are unverifiable in the same way a physical fact is because the terms themselves are so amorphous and subjective.[19] Attempts to explain the causes of behavior (e.g., unconscious conflicts, chemical imbalances, abuse as a child, relation-

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psychiatry has a different view of what mental illness is, how it is caused, and how it should be treated"). *See generally* Paul Lazare, *Hidden Conceptual Models in Clinical Psychiatry*, 288 NEW ENG. J. MED. 345 (1973) (identifying, at most basic level, four models of behavioral science: medical – in which mental state is caused by biological conditions; psychologic – in which personality is result of patterns established in youth; behavioral – which sees behavior and accompanying thoughts as result of specific aversive or reinforcing events; and social – which focuses on relationships with family, peers and institutions as major influence on mental condition).

14. The best example of this phenomenon is the extent to which adherents to Freudian theory have broken into different camps. *See generally* PHILIP HOLZMAN, PSYCHOANALYSIS AND PSYCHOPATHOLOGY (1970) (describing various schools of psychoanalytic theory).

15. For instance, inter-rater reliability on the issue of whether a person is "insane" can be relatively high. Kenneth K. Fukunaga et al., *Insanity Plea: Inter-Examiner Agreement and Concordance of Psychiatric Opinion and Court Verdict*, 5 LAW & HUM. BEHAV. 325 (1981) (finding 92% reliability); Michael R. Phillips et al., *Psychiatry and the Criminal Justice System: Testing the Myths*, 145 AM. J. PSYCHIATRY 605 (1988) (finding 76% agreement); *see also infra* note 125 (describing reliability of clinicians using structured interview format).

16. For instance, such assessments may trench on the ultimate legal issue, *see infra* note 77, and in any event can generally be made by laypeople without expert assistance. *See infra* text accompanying notes 115-19 (discussing incremental validity).

17. Clinical reliability can be improved significantly through use of structured interview formats. *See, e.g.*, PAMELA TAYLOR ET AL., *Delusion and Violence*, *in* VIOLENCE AND MENTAL DISORDER: DEVELOPMENTS IN RISK ASSESSMENT 161 (John Monahan & Henry Steadman eds., 1994) (finding roughly 82% agreement using Maudsley Assessment of Delusions Schedule).

18. Stephen Morse, *Crazy Behavior, Morals and Science: An Analysis of Mental Health Law*, 51 S. CAL. L. REV. 527, 607 (1978) ("Unlike much physical disorder that often can be verified by various tests that measure pathology (whether or not cause of symptom, syndrome, or condition is known), there is no objective, empirical referent of *mental* disorder other than crazy behavior itself.").

19. For instance, over 14 different modifiers of the term "depression" have appeared in the psychiatric literature. Max Hamilton, *Mood Disorders: Clinical Features*, *in* 1 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY-V 894 (Harold I. Kaplan & Benjamin Sadock eds., 1989).

ship with parents) are even more speculative. Most opinion testimony of this type is based on untested theories, or theories that have been subjected only to the most preliminary scientific inquiry.[20] Paul Meehl's highly critical comment twenty years ago is still true today: "[M]ost so-called 'theories' in the soft areas of psychology . . . are scientifically unimpressive and technologically worthless."[21] In many of these situations, forensic clinicians can at best offer only "anecdata": information obtained through experience in dealing with psychological problems, reading about case studies, and extrapolation from the theoretical speculations of others.

Given these deficiencies in the behavioral sciences, much opinion testimony from psychologists and psychiatrists might be considered "unreliable."[22] In any event, this Article will assume that such testimony is frequently of questionable validity. Yet, it also argues that, in at least one important setting, that fact should not be a bar to admissibility. My thesis is that when such testimony concerns past mental state and is proffered by a criminal defendant, it should be admissible even under the *Daubert-Kumho* regime that exists in the federal courts and many state jurisdictions.

In previous scholarship I have offered two reasons for this conclusion: necessity and voice.[23] The necessity rationale is well-recognized in evidence law. For instance, some types of hearsay evidence, although less trustworthy than other evidence, are admissible nonetheless when the declarant is unavail-

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20. As Professor Bonnie and I put it:

> [T]he central etiological theories and conceptual categories of the clinical behavioral disciplines have not been scientifically validated . . . . At best, opinions about psychological processes – beyond merely descriptive observations – are clinical probability judgments rooted in theoretical constructs that are more or less widely shared among mental health professionals.

Richard J. Bonnie & Christopher Slobogin, *The Role of Mental Health Professionals in the Criminal Process: The Case for Informed Speculation*, 66 VA. L. REV. 427, 461 (1980).

21. Paul E. Meehl, *Theoretical Risks and Tabular Asterisks: Sir Karl, Sir Ronald, and the Slow Progress of Soft Psychology*, 46 J. CONSULTING & CLINICAL PSYCHOL. 806, 806 (1978).

22. At least two commentators, interpreting *Daubert* to require scientific testing of the basis of the expert's testimony, have concluded that behavioral science testimony will rarely be reliable enough to meet that test. *See* Michael J. Gottesman, *Admissibility of Expert Testimony After Daubert: The "Prestige" Factor*, 43 EMORY L.J. 867, 875-76 (1996) ("The Court's opinion read literally would dictate the end of the receipt of psychiatric and psychological testimony in federal courts."); Michael H. Graham, Daubert v. Merrell Dow Pharmaceuticals, Inc.: *No* Frye, *Now What?*, 30 CRIM. L. BULL. 153, 162 (1994) ("[T]he testability or falsifiability and potential error rate factors for appraising [social science evidence] will rarely be sufficiently present to meet the *Daubert* standard.").

23. *See generally* Christopher Slobogin, *Psychiatric Evidence in Criminal Trials: To Junk or Not to Junk?*, 40 WM. & MARY L. REV. 1 (1998) [hereinafter Slobogin, *Psychiatric Evidence*]; Christopher Slobogin, *The Admissibility of Behavioral Science Information in Criminal Trials: From Primitivism to* Daubert *to Voice*, 5 PSYCHOL. PUB. POL'Y & L. 100 (1999).

able.[24] The necessity argument in this context is analogous. For legal, psychological, and practical reasons, the defendant himself will often be a poor source of information about his mental state at the time of the offense. Expert explications of that mental state therefore should be permitted. Science-based expert testimony would be the best method of obtaining this explication, but scientific inquiry into the type of mental state issues the law allows criminal defendants to raise is usually quite difficult, if not futile. Thus, I argue that speculations about the defendant's past mental state that are based on the specialized knowledge of mental health professionals should be admissible. The voice argument complements this necessity rationale. Building on constitutional precedent, it contends that criminal defendants should have a special entitlement to tell their stories using mental health professionals, even when those witnesses cannot scientifically prove their assertions. Together, the necessity and voice rationales suggest that "clinical" opinion testimony should be admissible in this context even if it is not "research-based."

Whether this position can survive in a post-*Kumho* world is not clear. Despite its refusal to exempt specialized and technical knowledge from the reliability inquiry required of scientific knowledge, the majority opinion in *Kumho* emphasizes the flexibility of the *Daubert* test.[25] It also clearly contemplates that "personal experience" as well as "professional studies" could form the basis for expert testimony under some circumstances.[26] Thus, *Kumho* can be read to permit expert testimony that is based on anecdata rather than research. At the same time, *Kumho* firmly requires that experts demonstrate the validity of their opinions,[27] which is usually difficult to do without using some sort of scientific methodology.

Accordingly, this Article pursues a third line of argument for admitting clinical opinion about past mental state in criminal cases, one that accepts the *Daubert-Kumho* holding requiring proof of validity, but that nonetheless tends

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24. CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE 1008 (1999) (explaining that hearsay exceptions which are based on declarant unavailability allow admission of statements which "are considered trustworthy, but less so than those that fit the exceptions in FRE 803 [which do not require declarant unavailability] . . . . [U]navailability represents a kind of necessity . . . .").

25. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150 (1999) (stating "we can neither rule out, nor rule in, for all cases and for all time the applicability of [*Daubert*'s factors], nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence").

26. *See id.* at 152 (stating that *Daubert* gatekeeping requirement "make[s] certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field").

27. *Id.* at 149 (noting that *Daubert* "'requires a valid . . . connection to the pertinent inquiry as a precondition to admissibility'" (quoting Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 592 (1993)).

to produce the same result as the necessity and voice arguments. Drawing on the concept of "incremental validity," I contend that when judging the accuracy of a finding is impossible, as is likely to be the case with determinations of insanity and other past mental state defenses, *Daubert-Kumho* can and should be construed to permit any psychiatric testimony that "assists" the trier of fact in considering legally material psychological factors that might otherwise not be considered. Although research needs to be conducted to bear me out, I believe that much of the testimony that mental health professionals present in criminal cases does provide such incremental knowledge and therefore should be admissible in the absence of scientifically-based opinion, so long as it has a plausible basis in psychological theory.

Parts I and II of the Article summarize the necessity and voice arguments and explore their strengths and weaknesses. These two parts of the Article are an extension of my previous writing in this area. Part III considers the various ways *Daubert-Kumho* might be interpreted, with an emphasis on the incremental validity contention. In the course of developing these arguments, this Article will examine the admissibility of many other types of behavioral science testimony, including testimony concerning eyewitness credibility, dangerousness predictions, and psychological correlates of particular events, such as abuse and rape. The focus of this Article will remain, however, the admissibility of behavioral science testimony offered to prove that the defendant is not culpable or less culpable due to his mental state at the time of the offense. Other contexts in which expert psychological testimony is used raise a host of other scientific and evidentiary issues that are well beyond the scope of this Article.

I. Necessity

The law is interested in a criminal defendant's subjective mental state in a variety of contexts. The insanity defense[28] and the diminished capacity (or lack of mens rea) defense[29] are the most obvious examples. Additionally, in many jurisdictions the self-defense, duress, and provocation doctrines, once

28. The American Law Institute's formulation of the insanity defense is as follows: "A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality [wrongfulness] of his conduct or to conform his conduct to the requirements of the law." MODEL PENAL CODE § 404(1) (1962). Approximately 20 states use this test, while the rest of the states and the federal government permit an insanity defense only when the mental disease or defect causes a "substantial incapacity to appreciate the wrongfulness of the conduct" or words to that effect. GARY B. MELTON ET AL., PSYCHOLOGICAL EVALUATIONS FOR THE COURTS: A HANDBOOK FOR MENTAL HEALTH PROFESSIONALS AND LAWYERS 193 (2d ed. 1997).

29. Perhaps 25 states permit clinical testimony about whether the defendant had the mens rea for the crime, although many of these limit such testimony to specific intent crimes or murder cases. MELTON ET AL., *supra* note 28, at 207.

objectively defined in terms of whether a reasonable person in the defendant's position would have so acted, now make relevant the particular defendant's desires and beliefs at the time of the crime.[30] For instance, many states now recognize that the test for self-defense in a case in which a woman kills a man who has repeatedly beaten her focuses on what a "battered woman," rather than what a "reasonable person," would have done.[31] As a normative matter, many of these developments can be debated.[32] The fact remains, however, that the criminal law has decided to make subjective and quasi-subjective mental states relevant to the blameworthiness inquiry at trial. At least as important, diminished responsibility due to mental and developmental problems has become a very significant mitigating factor at sentencing, particularly at capital sentencing.[33]

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30. According to LaFave & Scott: (1) a "substantial minority" of states have adopted a version of the American Law Institute's provocation formulation, which reduces murder to manslaughter if the defendant was "under the influence of extreme mental or emotional stress for which there is a reasonable explanation or excuse[,] . . . the reasonableness of such explanation or excuse [to] be determined from the viewpoint of a person in the actor's situation under the circumstances as he believes them to be," MODEL PENAL CODE § 210.3 (1962); (2) a "few" states have adopted a version of Model Penal Code § 3.04, which recognizes a defense for use of force when the actor believes such force is immediately necessary to prevent use of force against him; and (3) "a very distinct majority" of states have adopted Model Penal Code § 2.09, which recognizes a defense for a crime committed as a result of coercion "which a person of reasonable firmness in the actor's situation would have been unable to resist." WAYNE R. LAFAVE & AUSTIN W. SCOTT JR., CRIMINAL LAW § 7.10, at 660; § 5.7, at 457-58; § 5.3, at 436 (2d ed. 1986).

31. *See* Robert P. Mosteller, *Syndromes and Politics in Criminal Trials and Evidence Law*, 46 DUKE L.J. 461, 484 & n.77 (1996) (describing statutes addressing battered woman syndrome).

32. One debate is the traditional one as to whether subjective culpability is a fundamental requirement of criminal liability. *Compare* OLIVER WENDELL HOLMES, THE COMMON LAW 43 (1881) (arguing that criminal law should "take no account of incapacities, unless the weakness is so marked as to fall into well-known exceptions, such as infancy or madness") *with* Jerome Hall, *Negligent Behavior Should Be Excluded from Penal Liability*, 63 COLUM. L. REV. 632 (1963) (taking opposing view). Another debate is how far subjective liability should be carried (e.g., should self-defense in battered woman situations be defined in terms of the reasonable battered woman, the reasonable battered woman with job prospects and self-esteem of defendant, or the honest beliefs and feelings of the woman in question?). *See* Naomi R. Cahn, *The Looseness of Legal Language: The Reasonable Woman Standard in Theory and in Practice*, 77 CORNELL L. REV. 1398, 1415-20 (1992) (discussing several drawbacks to "reasonable woman" standard). A third debate is whether a particular type of subjective mental state, although logically relevant to culpability, should nonetheless be declared irrelevant for policy reasons, such as the negative impact evidence explaining the mental state might have on views about particular groups in society (e.g., evidence that fear of blacks or gays explains defendant's actions). *See* Peter Marguilies, *Identity on Trial: Subordination, Social Science Evidence, and Criminal Defense*, 51 RUTGERS L. REV. 45, 62-73 (1998) (describing effects of "identity impact").

33. Modern capital sentencing statutes routinely include, as mitigating factors to be considered by the sentencing body, whether the defendant acted under duress, was under the

Defendants often rely on mental health professionals to bolster their claims that they were insane, did not have the requisite intent, felt their criminal acts were necessitated by the circumstances, or were provoked by the victim. Typical testimony in an insanity case might assert that, because of manic-depressive psychosis (or kleptomania or unconscious conflicts), the defendant felt "compelled" to commit the crime or found it difficult to appreciate its wrongfulness.[34] In diminished capacity cases, behavioral science testimony might consist of statements that, because of mental retardation (or explosive personality or schizophrenia), the defendant was incapable of premeditation at the time of the crime.[35] When self-defense or provocation is asserted, clinical expert opinion might support claims that the defendant's environment (or biological makeup or childhood) made him abnormally sensitive to the abusive (racist, taunting) actions of the victim.[36] And at sentencing, the gates are opened wide to all sorts of theorizing about why the defendant committed the crime.[37]

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influence of extreme mental or emotional stress, or had difficulty appreciating the criminality of his conduct. *See* Ellen Fellis Berkman, Note, *Mental Illness as an Aggravating Circumstance in Capital Sentencing*, 89 COLUM. L. REV. 291, 296-98 (1989) (describing wide range of mitigating circumstances based on mental disorder that are listed in capital sentencing statutes).

34. *See generally* United States v. Lewellyn, 723 F.2d 615 (8th Cir. 1983) (involving defendant charged with embezzlement asserting insanity based on diagnosis of pathological gambling); United States v. Pollard, 171 F. Supp. 474 (E.D. Mich. 1959) (involving defendant charged with multiple robberies who claimed insanity based on unconscious guilt feelings); MELTON ET AL., *supra* note 28, at 563-66 (presenting and discussing report on Seth Hedges, defendant charged with attempted rape who claimed insanity based on manic-depressive psychosis diagnosis); *id.* at 558-62 (presenting and discussing report on Ed Wertz, defendant charged with armed robbery who claimed insanity based on post-traumatic stress syndrome induced by Vietnam War).

35. *See generally, e.g.*, Commonwealth v. Terry, 521 A.2d 398 (Pa. 1987) (involving defendant charged with murder who claimed he did not premeditate based on "dyssocial personality with paranoid hysterical and explosive features"); Johnson v. State, 439 A.2d 542 (Md. 1982) (involving defendant charged with murder who claimed he lacked capacity to premeditate crime because of mental retardation); People v. Wetmore, 583 P.2d 1308 (Cal. 1978) (involving defendant charged with burglary who claimed that because of mental illness he believed home he entered was his).

36. *See generally, e.g.*, United States v. Alexander, 471 F.2d 923 (D.C. Cir. 1973) (involving black defendant charged with killing two whites and wounding two others who claimed their calling him "nigger," combined with his "rotten social background," provoked shooting); Jahnke v. State, 682 P.2d 991 (Wyo. 1984) (involving juvenile charged with murder of his father who claimed father's battering of him and his family precipitated event).

37. *See generally, e.g.*, People v. Crews, 522 N.E.2d 1167 (Ill. 1988) (involving testimony that defendant's crime was result of intermittent explosive disorder); North Carolina v. Boyd, 319 S.E.2d 189 (N.C. 1984) (involving capital sentencing testimony that defendant had suffered repeated deep personal losses, which can often lead to strong feelings of self-destructiveness as well as desire to harm loved ones as way of destroying part of oneself).

In an ideal world, this testimony from mental health professionals would be based entirely on good science. In the real world, we are more likely to get unscientific, clinical anecdata. This section first demonstrates why anecdata is so frequently used. It then shows why that fact should lead to a relaxed admissibility standard for clinical opinion testimony rather than to its exclusion.

A. The Difficulty of Investigating Past Mental State Scientifically

Claims about past mental state often seem plausible. They also may be based on hypotheses that, in theory, are testable (or "falsifiable," to use the term *Daubert* made legally famous). In practice, however, Dr. Meehl's pessimistic assessment of the science underlying behavioral science is particularly apposite in this setting: Claims about past mental states relevant to exculpatory criminal law doctrines are very difficult to confirm or disprove scientifically.

I previously have advanced two reasons for this conclusion.[38] First, an assessment of past mental state is more akin to an interpretation than to a description of an objective fact. This is not a claim that mental states do not "exist," but rather an assertion that our ability to know what was going on in someone's mind at the time of a criminal act is severely limited. In contrast to conduct, mental states are not observable. Even assuming we could somehow arrange to observe an antisocial act and do so without violating legal and ethical precepts,[39] ascertaining the offender's motivations would be difficult enough. When we try to *reconstruct* a mental state, the task is much more daunting because now we must rely on memory – of either the subject or of his observers – which will be heavily influenced by assumptions, attitudes, and beliefs that distort description.[40] Science is not well-equipped to evaluate the "truth" of such stories because the objective referent is so elusive.

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38. *See* Slobogin, *Psychiatric Evidence*, *supra* note 23, at 35-41 (arguing that psychiatric evidence offered to prove past mental state need only meet general acceptance test).

39. *See* 1 DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 1-3.4., at 36-37 (1997) ("[R]esearchers studying the battered woman syndrome cannot simply record the psychological manifestations of violence between family members without proffering assistance from mental health professionals or reporting the situation to the appropriate authorities.").

40. As Andrew Taslitz, who adopted a similar position to the one taken here, wrote:

> Memory itself is an assertion, a self-report, which we play an active role in constructing. Our memories never involve solely historical truths, for we seek to create an account of the past consistent with a preconceived cognitive or moral scheme. Memory is thus at least partly a created narrative.

Andrew E. Taslitz, *A Feminist Approach to Social Scientific Evidence: Foundations*, 5 MICH. J. GENDER & L. 1, 19-20 (1998).

Even if this problem can be overcome, the scientist is confronted by a serious measurement problem. The insanity defense, mens rea doctrines such as premeditation and depraved indifference, and inquiries into whether someone felt justified in committing crime all require an assessment of the strength of beliefs or urges.[41] Without some gauge of the degree of cognitive and volitional impairment present at the time of the offense, a *scientific* differentiation between offenders cannot be made on blameworthiness grounds. Unfortunately, there is currently no way to measure the intensity of an "urge," the difficulty of accessing the right reasons for action, or the degree to which a person felt a given action was necessary.[42] Although scientists may eventually develop such measures,[43] the conceptual obstacles are formidable.[44]

Other experimental designs avoid the difficulties associated with pinning down a person's precise past mental state, but suffer significantly in terms of "fit," a problem that *Daubert* itself recognized.[45] For example, scientists might examine whether people with certain types of conditions are more likely to commit crime than matched control groups, or whether battered women who kill their spouses are different in objectively measurable ways than battered women who leave, rather than kill, their spouses. Neither of these correlational studies necessarily requires assessment of past mental state. For that very reason, however, confirmatory findings are unlikely to be useful on past mental state issues. A finding that people with persecutory delusions, an

41. The insanity doctrine, for instance, requires an assessment of "substantial inability" to "appreciate" or "control." *See supra* note 28 (discussing Model Penal Code's formulation of insanity defense). Provocation doctrine under the Model Penal Code examines whether a person was under "extreme" mental or emotional "stress." *See supra* note 30 (noting Model Penal Code's formulation of provocation doctrine). Self-defense doctrine under the Model Penal Code asks whether the person believed the crime was "necessary," which requires an assessment of how strong the belief was. *See supra* note 30 (describing Model Penal Code's formulation). If, for instance, the actor was aware of a substantial probability that the crime was not necessary to prevent harm to the actor, then a defense would not lie for crimes which only require recklessness as a mens rea. PAUL R. ROBINSON, CRIMINAL LAW DEFENSES § 184(e)(3), at 410-14 (1984).

42. *See* Morse, *supra* note 18, at 584 (stating "there is no scientific measure of the strength of urges"); Alexander Rosenberg, *The Explanation of Human Action*, *in* PHILOSOPHY OF SOCIAL SCIENCE 47-49 (1988) (describing why measuring "what a person believes by some distinct effect of the belief, in the way that a thermometer measures heat by its quite distinct effect . . . is impossible").

43. *See* Richard Rogers, *APA's Position on the Insanity Defense*, 42 AM. PSYCHOL. 840, 842 (1987) ("[V]olitional capacity can be conceptualized in terms of testable criteria.").

44. *See* Christopher Slobogin, *An End to Insanity: Recasting the Role of Mental Disability in Criminal Cases*, 86 VA. L. REV. 1199 (2000) (exploring difficulties inherent in inquiries involving past mental state). See *infra* note 125 for an example of how "unscientific" the state of the art is today.

45. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 591 (1993) ("[S]cientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes.").

extra Y chromosome, or a diagnosis of psychopathy commit more crime than a control group tells us very little about whether the former groups experience stronger urges or more cognitive impairment at the time of their offense; at best such results tell us that their condition was a predisposing factor for crime, just like being a male or being poor is.[46] A finding that battered women with fewer job options are more likely to kill their spouse says nothing about the extent to which the former group killed out of fear – which might form the basis for a self-defense claim – or instead out of anger or frustration.[47]

Analogue research is probably the most fruitful line of scientific inquiry into past mental state, but it too has significant problems. Such research might investigate, for instance, the extent to which people with psychosis feel "compelled" or are confused about right and wrong in non-criminal situations, compared to a matched control group.[48] In theory, this type of research could provide valuable insights into how people with certain traits or experiences – mental illness, battering by one's spouse, abuse as a child – perceive and react to events, from which we might be willing to infer perceptions, beliefs, and feelings during a crime. Moreover, because researchers can collect information about mental states at the time they occur (something which is impossible in the typical crime situation), the memory problem is minimized. However, the measurement problem still exists. At least as importantly, as with the correlational research described above, the usefulness of these studies may be compromised by the lack of fit. How people feel and behave in relatively

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46. As Michael Moore pointed out:

> Everyone is undoubtedly caused to act as they do by a myriad of environmental, physiological, or psychological factors. Yet to say that any actions are caused, for example, by an unhappy childhood, a chemical imbalance or a belief that it is raining, is not to say the actions are compelled.

Michael Moore, *Responsibility and the Unconscious*, 53 S. CAL. L. REV. 1563, 1665 (1980).

47. Research suggesting that battered women are economically dependent can help rebut prosecutorial statements that the woman could have left the battering relationship. *See, e.g.*, Debra S. Kalmuss & Murray A. Straus, *Wife's Marital Dependency and Wife Abuse*, 44 J. MARRIAGE & FAM. 277, 284-85 (1982) (reporting study results that suggest that "wives who are highly dependent on marriage are less able to discourage, avoid, or put an end to abuse than are women in marriages where the balance of resources between husbands and wives is more nearly equal"). But such research is still ambiguous about the relevant mental state. For instance, from a "rational" point of view, women with no independent economic means would seem to be the least likely to believe that killing the one person who provides for them is "necessary."

48. *See, e.g.*, ROBERT F. SCHOPP, AUTOMATISM, INSANITY, AND THE PSYCHOLOGY OF CRIMINAL RESPONSIBILITY 185-87 (1991) (reporting research indicating that people with schizophrenia have trouble with cognitive focus (e.g., distraction by irrelevant stimuli, thought blocking); reasoning (e.g., attribution of elaborate meanings to ordinary events); and concept formation (e.g., tendency to include information in categories to which they bear no relationship)).

mundane circumstances is unlikely to generalize well to the usually dramatic and often unique circumstances associated with criminal actions.[49]

The fit problem exposes the unusual challenges confronted by those trying to conduct scientific inquiry into legally relevant past mental states. Generally, actuarial decision making based on studies of groups (nomothetic decision making) is more accurate than clinical decision making based on individualized assessment (idiographic decision making).[50] But that well-documented finding does not have ready applicability in this context. Research that tells us that certain types of people (battered women with no job prospects, people with paranoid delusions) are likely to commit violent crime will probably never tell us very much about cognitive or volitional problems at the time of an offense.[51] Research that tells us about the nature of certain conditions in noncriminal situations (how people with schizophrenia normally function) comes closer to the mark, but still only permits speculation about mental states during criminal acts.[52] Given its unique flaws, testimony about

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49. Consider, for instance, these observations from Stephen Morse:

> [E]ven the craziest persons seem to behave quite normally or rationally a great deal of the time, especially if there is good reason to do so. On at least some occasions, including some instances when they are behaving crazily, crazy persons are clearly capable of playing by the usual rules. Nor do they always act on the basis of their crazy reasons.

Morse, *supra* note 18, at 587-88.

50. *See* Robyn M. Dawes et al., *Clinical Versus Statistical Prediction of Human Outcomes*, 243 SCIENCE 1668, 1673 (1989) (reviewing over 100 studies indicating "that a properly developed and applied actuarial method is likely to help in diagnosing and predicting human behavior as well or better than the clinical method, even when the clinical judge has access to equal or greater amounts of information").

51. Some correlational studies do address past mental state directly, but the results still are a weak fit. For instance, Steury and Choinski found that 22% of patient-defendants and 14% of non-patient defendants used "gratuitous" violence. Ellen Hochstedler Steury & Michelle Choinski, *"Normal" Crimes and Mental Disorder: A Two-Group Comparison of Deadly and Dangerous Felonies*, 18 INT'L J.L. & PSYCHIATRY 183, 197 (1995). Similarly, Taylor found that 10% of psychotic individuals who committed crime were "motiveless" compared to 6% of non-psychotics. Pamela J. Taylor, *Motives for Offending Among Violent and Psychotic Men*, 147 BRIT. J. PSYCHIATRY 491, 493 (1985). Leaving aside the difficulty of deciding when violence is gratuitous or motiveless, these types of findings are almost useless as a way of determining mental state in an individual case, both because the percentage of patients who committed crime gratuitously or without motive is so small and because of the small differences found between the experimental and control groups. An expert in a case involving an ex-patient could say, based on the Steury and Choinski study, that patients are twice as likely as non-patients to engage in gratuitous violence, but that and similar conclusions that could be drawn from the study are probably more misleading than helpful on issues like insanity or intent.

52. *Cf.* Owen D. Jones, *Law, Emotions, and Behavioral Biology*, 39 JURIMETRICS J. 283, 285 (1999) ("With rare exceptions . . . predispositions . . . do not enable confident predictions about how any single person will in fact behave in the future, or inferences as to why an individual behaved as she did in the past.").

past mental state based on analogue and other types of "scientific" studies may turn out to be much less useful than idiographic testimony based on anecdata and speculative theory, not just in terms of fit but also in terms of accuracy.[53]

None of this is meant to suggest that scientific research about past mental state is impossible, should not be attempted, or should be automatically excluded from the courtroom on lack of reliability or lack of fit grounds. It does suggest that "hard" scientific evidence that directly addresses the issues raised by criminal defense doctrines is unlikely to be produced in the near future. As Dr. Meehl concludes:

> It may be that the nature of the subject matter in most of personology and social psychology is inherently incapable of permitting theories with sufficient conceptual power (especially mathematical development) to yield the kinds of strong refuters expected by Popperians, Bayesians, and unphilosophical scientists in developed fields like chemistry.[54]

More specific to the issues addressed in this Article are the comments of Thomas Grisso, who has examined the scientific basis of forensic psychology in a number of areas.[55] Singling out criminal responsibility assessments as a particularly primitive research domain, he concluded four years ago that "[t]here is little reason to believe that past meager advances in performing evaluations for criminal responsibility will be augmented in the near future," both because the relevant "theoretical and operational definitions are difficult to identify" and because "we have not yet demonstrated our ability even to make . . . basic retrospective inferences [such as whether the defendant was under the influence of a mental disorder at the time of the offense] reliably and validly."[56] My own conclusion in earlier work was that "research relevant to past mental state . . . is so likely to be tainted by methodological problems that, in effect, it is no different from interpretation and story-telling."[57]

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53. Dr. Meehl states that when trying to explain behavior, "I would take Freud's clinical observations over most people's t tests [tests of statistical significance] any time." Meehl, *supra* note 21, at 817. Given the fact that Dr. Meehl is a long-time advocate of scientific investigation and that Freudian psychodynamics has been called one of the "best examples" of unfalsifiable theory, Ralph Underwager & Hollida Wakefield, *A Paradigm Shift for Expert Witnesses*, 5 ISSUES IN CHILD SEX ABUSE ACCUSATIONS 156, 158-59 (1993), this is a remarkable statement, to say the least.

54. Meehl, *supra* note 21, at 829. Meehl describes 20 "difficulties in scientizing the human mind" that have only been alluded to here. *Id.* at 808-17.

55. *See generally* THOMAS GRISSO, EVALUATING COMPETENCIES: FORENSIC ASSESSMENTS AND INSTRUMENTS (1986) (discussing processes for evaluating competency in such areas as parenting, need for guardianship, insanity, and competency to stand trial).

56. Thomas Grisso, *Pretrial Clinical Evaluations in Criminal Cases: Past Trends and Future Directions*, 23 CRIM. JUST. & BEHAV. 90, 97-98 (1996).

57. Slobogin, *Psychiatric Evidence*, *supra* note 23, at 40.

B. The Case Against Exclusion

Useful scientific research on the types of past mental state issues that are raised by the criminal law is scanty, and that situation is unlikely to improve substantially in the foreseeable future.[58] Acceptance of that assertion does not require the admission of *non*scientific opinion evidence on past mental state, of course. Jurisdictions which apply *Daubert-Kumho* have two choices with respect to such evidence. They can either make accommodations for it (through an exception to *Daubert-Kumho* or a flexible interpretation of it), or they can prohibit it. There are at least four possible reasons for taking the latter approach, but none of them withstand analysis.

The first argument is that, without such a prohibition, there is no incentive even to *attempt* truly scientific investigation of past mental state.[59] Why go to the trouble of grappling with the methodological obstacles described above if judges are willing to admit more speculative opinion? This argument assumes, of course, that true scientific research relevant to past mental state is feasible and that its results will be superior to clinical anecdata. This Article questions both assumptions. Even granting both assumptions, however, the argument exaggerates the power of the courts and the gullibility of legal factfinders. The courts are seldom the only market for scientific research relevant to past mental state. For instance, vigorous study of battered women and of mentally ill people who are violent has occurred independently of any demands by the criminal defense bar and despite judicial acceptance of opinion evidence on those topics.[60] And in those few instances where evidence of past mental state is custom-made for the courtroom, the skepticism of judges and juries provides a powerful inducement to base it on solid grounds. Rarely noted by those who bemoan "junk" testimony in criminal cases is the fact that legal decisionmakers are virtually never impressed by novel syndromes that have little basis in logic or the literature.[61] To the extent

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58. One group of commentators notes that every field poses formidable research tasks. They point out that "[o]ur inability to 'see' an electron, for example, does not foreclose a rigorous examination of its existence, nature, and form," and that "[d]ifficult and complex theories require more imaginative research designs." 1 FAIGMAN ET AL., *supra* note 39, § 1-3.5, at 37. Accepting the notion that we may eventually be able to research past mental state effectively, the question addressed in this Article is what to do in the meantime.

59. David L. Faigman, *The Evidentiary Status of Social Science Under* Daubert: *Is It "Scientific," "Technical," or "Other" Knowledge*, 1 PSYCHOL. PUB. POL'Y & L. 960, 971-77 (1995).

60. *See supra* notes 47 and 51 (noting some studies relevant to assessing mental state). *See generally* Mary Ann Dutton, *Understanding Women's Responses to Domestic Violence: A Redefinition of Battered Woman Syndrome*, 21 HOFSTRA L. REV. 1191 (1993) (canvassing recent research on social context of battering and diverse responses to battering).

61. *See* Peter Arenella, *Demystifying the Abuse Excuse: Is There One?*, 19 HARV. J.L. & PUB. POL'Y 703, 703-05 (1996) (noting that successful "abuse excuses" are very rare and that

it is possible, scientific inquiry into past mental state will and should be carried out independently of the courts' rulings on its admissibility.

A second possible argument for prohibiting opinion evidence about past mental state involves assuring adversarial equipoise. Given the fact that insanity, diminished capacity, and other past mental state doctrines are defenses, only the defendant is likely to present expert evidence of past mental state in his case-in-chief. In contrast, the type of behavioral science testimony the prosecution is most likely to offer in its case-in-chief consists of assertions that the defendant meets a criminal "profile" (e.g., a constellation of traits characteristic of a battering parent or rapist).[62] Because the latter evidence aims at proving the act element rather than the mental state element of the crime, its admissibility would *not* be analyzed under the relaxed evidentiary standard proposed here. Yet that result might strike some as unfair, because it seems to favor the defense over the prosecution.

If one agrees with the previous assertions about the unique difficulties of researching past mental state, however, an imbalance in the admissibility thresholds for past mental state and profile evidence makes sense. The research necessary to construct a criminal profile does not rely on ascertaining amorphous mental states at the time of a crime, but rather links observable acts (e.g., rape) with other observable events or current mental states (e.g., abuse as a child; previous rapes by the offender; lack of remorse). In other words, it conforms to the typical scientific research model attempting to predict a given type of behavior. Thus, this type of behavioral information is eminently more scientifically testable and should not be evaluated under a relaxed admissibility standard, at least on necessity grounds. It also should be noted that, in those rare instances when prosecutors rely on opinion evidence about past mental state, as they do when proffering expert testimony about rape trauma syndrome,[63] the necessity rationale advanced here would apply to the prosecution as well. By the same token, when the defense relies on expert testimony to

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typically only those claiming insanity are eligible to be excused under abuse excuse theories); Richard J. Bonnie, *Excusing and Punishing in Criminal Adjudication: A Reality Check*, 5 CORNELL J.L. & PUB. POL'Y 1, 3-4, 15 (1995) (describing lack of success of novel psychiatric defenses in several cases); Stephanie B. Goldberg, *Fault Lines: Has a Talk-Show Mentality Softened Jurors to Accept Any Excuse?*, A.B.A. J., June 1994, at 40, 42 (indicating such defenses are usually unsuccessful).

62. *See, e.g.*, United States v. Gillespie, 852 F.2d 475, 479-81 (9th Cir. 1988) (involving testimony on "characteristics common to child molesters"); Flanagan v. State, 625 So. 2d 827, 828-29 (Fla. 1993) (involving testimony based on "sex offender profile").

63. Rape trauma syndrome evidence is presented to show – either directly or indirectly – that the alleged victim of a rape did not consent to intercourse with the defendant. *See generally, e.g.*, People v. Taylor, 552 N.E.2d 131 (N.Y. 1990) (involving two cases, one in which syndrome was proffered to show rape actually occurred and other to explain conduct of victim (e.g., failure to report after alleged incident)). Thus, it is introduced to show the victim's mental state – consent or lack thereof – at the time of the alleged crime.

suggest the defendant did not commit the act,[64] it would not be exempted from a strict application of *Daubert-Kumho*. The fulcrum of the necessity rationale is the type of testimony proffered, not the party proffering it.

The final two arguments in favor of excluding clinical opinion testimony directly confront the necessity rationale for its admission. That rationale, it will be remembered,[65] traditionally applies only to evidence that is necessary *and* has some indicia of reliability. The third argument against clinical opinion testimony is simply that it has inadequate guarantees of trustworthiness.[66] The shortest response to this argument (and the only one this Article will advance) is that, for the same reason an opinion about past mental state cannot be scientifically proven correct, it cannot be scientifically proven incorrect.[67] Instead, the law must rely on assessment of the expert's credentials, experience, evaluative process, and theoretical plausibility in determining whether his or her opinion is sufficiently trustworthy. A clinician who has had forensic training, been involved in multiple criminal responsibility assessments, conducted a thorough evaluation of the defendant and relevant third party information, and read the relevant literature should generally be considered to have sufficient specialized knowledge to address criminal responsibility issues.[68]

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64. *See, e.g.*, United States v. MacDonald, 688 F.2d 224, 227-28 (4th Cir. 1982) (upholding trial court's exclusion of expert testimony that defendant's personality was inconsistent with senseless murders of his family).

65. *See supra* text accompanying note 24 (noting necessity as rationale for admitting evidence).

66. *See* Faust & Ziskin, *supra* note 11, at 31 (arguing that most, if not all, testimony offered by psychologists and psychiatrists should be excluded from courtroom because it cannot be offered with "reasonable medical certainty" – which they translate as "pretty likely accurate" – and because it does not improve validity of factfinder's decision).

67. Of course, if science shows that clinical speculation is wrong, then that speculation should be prohibited. Making such a showing is usually difficult, however. Some have claimed, for instance, that the "learned helplessness" theory that underlies some testimony in battered women cases is seriously flawed. *See* David L. Faigman, *The Syndromic Lawyer Syndrome: A Psychological Theory of Evidentiary Munificence*, 67 U. COLO. L. REV. 817, 818-19 (1996) (attacking battered woman's syndrome as "pseudoscientific social science"). There is no doubt it is, as a scientific matter. But the scientific jury may still be out as to whether it is clearly wrong. *See* Robert F. Schopp et al., *Battered Woman Syndrome, Expert Testimony and the Distinction Between Justification and Excuse*, 1994 U. ILL. L. REV. 45, 64 ("Collectively, the data reviewed supports the proposition that battered women do not suffer learned helplessness, at least as well as it supports the claim that they do.").

68. Professor Bonnie and I discussed various safeguards that might be taken with respect to training and evaluation procedures. Bonnie & Slobogin, *supra* note 20, at 496-520; *see also* United States v. Hall, 93 F.3d 1337, 1342-43 (7th Cir. 1996) (laying out minimum requirements for expert opinion based on social science, including testimony concerning literature on topic, methods of peer review, and quantity and quality of observational and other studies); MELTON ET AL., *supra* note 28, at 235-41 (describing procedure for performing criminal responsibility evaluations).

The fourth and most powerful argument in favor of prohibiting qualified opinion testimony about past mental state is that juries and judges do not *need* it.[69] There are at least two other sources of information about past mental state. The first is lay testimony, primarily from the defendant himself. The second is expert testimony that eschews opinion and is devoted solely to providing relevant psychological "facts."

The most obvious source of information about past mental state is the defendant himself. Reliance on this source, however, is problematic for several reasons. First, the Fifth Amendment may prevent compulsion of the defendant's testimony.[70] Second, defendants asserting past mental state defenses often have difficulty communicating; although they must be competent to stand trial,[71] their ability to recount their feelings and beliefs at the time of the offense will often be compromised.[72] Third, and most important, even fully competent defendants may not be aware of, or may be unwilling to admit to, crucial aspects of their past mental state. For instance, defendants may not suspect the effects of biological, childhood, and situational variables on their behavior,[73] or they may deny they have mental or relationship problems that in fact explain their behavior.[74] The best way to obtain all the relevant facts

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69. The most forceful proponent of this position is Morse, *supra* note 18, at 601-24.

70. Most courts hold that the defendant may be compelled to undergo evaluation on past mental state issues once a defense has been raised, usually on the ground that raising a defense waives the Fifth Amendment right to remain silent. Christopher Slobogin, Estelle v. Smith: *Constitutional Contours of the Forensic Evaluation Process*, 31 EMORY L.J. 71, 97-98 (1982). But at least some courts also appear to take the position that asserting the defense does not also waive the defendant's right to refuse to testify. *See* State v. Humphrey, 845 P.2d 592, 599-601 (Kan. 1992) (finding error in court's refusal to allow psychiatrist to testify because defendant had asserted right to refuse to testify). Of course, if expert testimony is banned many defendants might decide to testify despite the drawbacks identified in the text.

71. *See generally* Drope v. Missouri, 420 U.S. 162 (1975) (requiring criminal defendant to be competent to stand trial).

72. The threshold for competency to stand trial is not very high. *See* Note, *Incompetency to Stand Trial*, 81 HARV. L. REV. 454, 459 (1967) (noting that, despite fairness concerns, enlarging class of people found incompetent to include all defendants who "lack the intelligence or the legal sophistication to participate actively in the conduct of their defense . . . would fundamentally alter the administration of the criminal law"). *Cf.* MELTON ET AL., *supra* note 28, at 135 (reporting research finding that only about 10% of those considered mentally disabled enough to be referred for competency evaluation are found incompetent).

73. After all, the central premise of psychotherapy is that patients need the therapist's help in discovering their motivations.

74. For instance, people with schizophrenia are often said to "lack insight" into their condition. DSM-IV, *supra* note 8, at 279 ("Lack of insight is common [among people with schizophrenia]."). Another problem is amnesia. *See generally* John Bradford & Selwyn Smith, *Amnesia and Homicide: The Padola Case and a Study of Thirty Cases*, 7 BULL. AM. ACAD. PSYCHIATRY & L. 219 (1979) (finding 60% of defendants studied claimed amnesia); Pamela J. Taylor & Michael L. Kopelman, *Amnesia for Criminal Offenses*, 14 PSYCHOL. MED. 581 (1984) (finding 23% claimed amnesia).

about past mental state is to rely on mental health professionals, who have special training in and skill at eliciting information from incompetent, reluctant, or oblivious subjects.[75]

This latter ability suggests a second source of information about past mental state other than opinion testimony. Psychiatric testimony, like any expert testimony, can be conceptualized in terms of multiple levels of inference, with each succeeding level incorporating a greater degree of generalization. Imagine, for instance, a case in which a forensic clinician conducts an interview of a defendant charged with assault. The defendant's attorney is asserting an insanity defense, in large part because the victim of the assault swears he does not know the defendant, was not aware of his presence until the assault occurred, and has no idea why he was attacked. During the interview, the defendant appears to think he is talking to people who in fact are not there, makes irrelevant and incomprehensible statements under his breath, and insists that the person he assaulted was an "archfiend" who was trying to hurt him. Based on this information, the clinician might infer: a particular symptomology (the defendant was delusional at the time of the offense); a diagnosis (the defendant was suffering from schizophrenia at the time of the offense); the presence of legally relevant impairments (the defendant thought killing the victim was justified); and an ultimate legal conclusion (the defendant was insane at the time of the offense). Psychiatric testimony today often includes all five levels of testimony (the facts plus the four levels of inference). One might argue, however, that a factfinder trying to determine the defendant's sanity does not need the inferential testimony. The mental health professional's factual information about the defendant's behavior during the interview (together with any third party observations) is probably crucial, but the rest of the expert's testimony – the "opinion" – might be considered surplusage.

Perhaps, as Justice Stewart said about obscenity,[76] laypeople know "craziness" when they see it and do not need expert aid. Even in the simple example given here, however, consider how much more the jury could be offered by a seasoned forensic clinician. First, such an expert could help the jury decide whether to believe the defendant's report about the offense. The expert might be able to relate, based on his or her own experience and any analogue studies that exist, that people with schizophrenia often erroneously believe people want to hurt them and that they have difficulty attending to countervailing facts. The expert also could describe why he or she thinks the defendant is

75. Even Morse, generally skeptical of claims of specialized knowledge by forensic mental health professionals, believes that they may possess relatively greater skill at interviewing and ascertaining mental facts. *See* Morse, *supra* note 18, at 611 ("Because experts interact with all types of crazy persons far more often than laypersons, they may be especially sensitive to or inquire about behavior that would go unnoticed by laypersons.").

76. In *Jacobellis v. Ohio*, 378 U.S. 184 (1964), Justice Stewart stated that, although he couldn't define obscenity, "I know it when I see it." *Id.* at 197 (concurring opinion).

suffering from schizophrenia, a description necessary to make the experience and analogue studies relevant. Finally, the expert can conjecture, based on experience with mentally ill people, about the strength of the defendant's paranoia and the nature of his thought process at the time of the offense.[77] This information – much of it anecdata or idiographic in nature – is speculative, but it is also plausible and not clearly wrong, given the vagaries of pinning down a person's past mental state. A rigid interpretation of *Daubert-Kumho*, however, might bar all of this testimony to the extent it is based on experience, potentially unreliable diagnoses such as schizophrenia, or assertions about degrees of impairment.

In other less typical cases (but precisely the types of cases that go to trial, rather than end up resolved through plea bargaining) an account limited to the bare facts may be even less edifying. My coauthors and I have described elsewhere cases involving a man with no prior history of crime or mental illness who committed a gruesome sexual assault,[78] a man who claimed he killed his employer after he argued with him because "devils" in his head commanded him to do so,[79] and a woman who claimed that she did not realize a check she cashed was forged because she believed her boyfriend's statement that the check was legitimate.[80] In such cases, as suggested earlier, defendants relegated to simply stating their counterintuitive and self-serving claims about their mental state, without supporting expert testimony as to why those claims might make clinical sense, are prevented from providing the most plausible, coherent interpretation of their conduct.[81] Nor does nomothetic information

77. Whether the expert should be allowed to address the ultimate legal issue, despite its normative (nonpositivist) nature, is a complicated subject not addressed here. Generally, such testimony should be avoided because it involves experts in conjecture beyond their areas of expertise. *See generally* Christopher Slobogin, *The "Ultimate Issue" Issue*, 7 BEHAV. SCI. & L. 259 (1989).

78. MELTON ET AL., *supra* note 28, at 245-46. The defendant, among other things, spoke in an unusual voice during the act and referred to himself as a Mexican "stud" even though he was Caucasian. We describe a psychodynamic explanation for the rape, based on the defendant's relationship with his mother. *Id.*

79. Bonnie & Slobogin, *supra* note 20, at 486-88 (describing expert testimony in *People v. Gorshen*, 336 P.2d 492 (Cal. 1959), that defendant would have psychically disintegrated had he not committed crime).

80. *Id.* at 477-79 (describing expert testimony in *United States v. Bright*, 517 F.2d 584 (2d Cir. 1975), that defendant was passive-dependent personality who was likely very gullible about statements made by loved ones).

81. For instance, in *Gorshen*, the trial judge stated that "up till the time that [the defense expert] testified in this case there was no explanation for why this crime was committed. [He is] the first person that has any reasonable explanation. Whether it's correct or not, I don't know." *Gorshen*, 336 P.2d at 497; *see also* Bonnie & Slobogin, *supra* note 20, at 488 n.192. At the same time, mental health professionals and judges should be cautious about such explanations.

(on those rare occasions when it fits the situation) remedy the problem; such testimony ultimately consists of information about *others*, not about the defendant. At bottom, then, the response to the position that non-inferential testimony is all that the factfinder requires is that such a rule deprives defendants of their ability to relate their story. As the next section explains, that result may well violate the Constitution.

II. Voice

Rock v. Arkansas[82] is Exhibit A in support of the argument that the Constitution guarantees defendants the opportunity to explain their mental state at the time of the offense even when they do so using expert testimony that has not been scientifically verified.[83] In *Rock*, the Supreme Court affirmed the criminal defendant's right (under the Fifth, Sixth, and Fourteenth Amendments) to testify. More specifically, it struck down an Arkansas statute that banned defense use of the defendant's hypnotically-induced testimony unless the state could show that such testimony "is always so untrustworthy and so immune to the traditional means of evaluating credibility that it should disable a defendant from presenting her version of the events for which she is on trial."[84] *Rock* is a strong statement that criminal defendants, presumed innocent and facing harsh punishment if the state succeeds in its efforts to convict, must be given license to produce evidence on their behalf. Only completely unreliable evidence, or suspect evidence which cannot be exposed for what it is through the usual adversarial vehicles of cross-examination and rebuttal witnesses, may be excluded when proffered through the defendant. Because qualified opinion evidence about past mental state is not completely untrustworthy and because its weaknesses are neither impervious to challenge or incapable of being understood by laypeople, it should be admissible under the spirit of *Rock*.

> In spite of their intuitive appeal and apparent usefulness, . . . psychodynamic formulations carry considerable risks when applied to criminal behavior. One problem is that psychodynamic explanation can be generated to explain virtually every human behavior . . . . A second problem with such theorizing is that it is usually highly speculative. . . . Given the problems associated with such formulations, we [recommend] that psychodynamic opinions that attempt to explain behavior be advanced only when an analysis of a defendant's conscious reasons and motivations for a criminal act . . . fails to provide a satisfactory understanding of the crime scenario.

MELTON ET AL., *supra* note 28, at 246.

82. 483 U.S. 44 (1987).

83. *See generally* Rock v. Arkansas, 483 U.S. 44 (1987) (holding Arkansas rule excluding all hypnotically refreshed testimony unconstitutional).

84. *Id.* at 61.

The Supreme Court's decision in *United States v. Scheffer*,[85] which twelve years after *Rock* permitted exclusion of defense-proffered polygraph evidence on the grounds of unreliability, is readily distinguishable. There the Court bolstered its holding by emphasizing that polygraph evidence is likely to be seen as infallible by the jury,[86] trenches upon the jury's role as credibility assessor,[87] and merely affirms, rather than comprises, the defendant's story.[88] Opinion testimony about past mental state, in contrast, is viewed with skepticism by laypeople,[89] only indirectly vouches for the defendant's credibility, and is an integral part of the defendant's version of events when a mental state defense is asserted. Squelching such testimony would commit the constitutional sin of precluding the defendant from exercising "his choice to convey his version of the facts," which *Rock* identified and *Scheffer* affirmed.[90]

One might object that this reading of *Rock* is too broad. All *Rock* explicitly established was that the state may not prevent the defendant himself from testifying; preventing his expert mouthpiece from doing so may not be unconstitutional, at least if reliability concerns exist. But that objection is difficult to square with a third Supreme Court decision, this one directly involving use of behavioral science expertise. In *Barefoot v. Estelle*,[91] the Supreme Court rejected the argument that the Constitution prohibits psychiatric testimony that a capital defendant is dangerous, even when it is assumed that such testimony is wrong two out of three times.[92] Presaging its decision in *Rock* four years later (albeit doing so on behalf of the prosecution), the *Barefoot* majority stated, "We are not persuaded that such testimony is almost entirely unreliable and that the factfinder and the adversary system will not be competent to

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85. 523 U.S. 303 (1998).

86. United States v. Scheffer, 523 U.S. 303, 313-14 (1998) (noting that jurors may "give excessive weight to the opinions of the polygrapher, clothed as they are in scientific expertise").

87. *See id.* at 313 ("By its very nature, polygraph evidence may diminish the jury's role in making credibility determinations .... [A] polygraph expert can supply the jury only with another opinion, in addition to its own about whether the witness was telling the truth.").

88. *See id.* at 317 (excluding polygraph evidence does not prevent defendant from introducing "factual evidence" or "exercis[ing] his choice to convey his version of the facts," but rather bars defendant "merely from introducing expert opinion testimony to bolster his own credibility").

89. Neil J. Vidmar & Regina A. Schuller, *Juries and Expert Evidence: Social Framework Testimony*, 1989 LAW & CONTEMP. PROBS. 133, 173 (reporting research that jurors do not treat expert testimony on battered woman syndrome, rape trauma syndrome, and eyewitness reliability with unwarranted aura of accuracy).

90. *Scheffer*, 523 U.S. at 316 (quoting Rock v. Arkansas, 483 U.S. 44, 52 (1987)).

91. 463 U.S. 880 (1983).

92. *See* Barefoot v. Estelle, 463 U.S. 880, 899-901 & n.7 (1983) (allowing expert testimony predicting future dangerousness in spite of testimony about error rate of such predictions).

uncover, recognize, and take due account of its shortcomings."[93] If the prosecution is permitted to offer behavioral science testimony that is probably inaccurate in 65% of the cases, then certainly the defense should be able to present most types of opinion testimony on past mental state.[94]

Perhaps, in light of *Daubert* and *Kumho*, the Court will rethink its approach to dangerousness testimony and explicitly limit *Rock*'s holding to testimony from the defendant's own mouth. If it does so, the voice argument loses its constitutional pedigree.[95] However, neither the voice argument nor the necessity rationale would lose their logical force. If the criminal law makes subjective mental states relevant, the courts should not prevent the criminal defendant from using nonscientific evidence to tell his story when scientific evidence is unavailable. Thus, regardless of the Court's ultimate stance on the constitutional issues, it is worth considering whether *Daubert-Kumho* can be interpreted to recognize the relaxed evidentiary standard that the necessity and voice considerations suggest should apply to past mental state opinion evidence.

III. Daubert *Redux*

Somewhat surprisingly, *Daubert* initially had little impact on the admissibility of behavioral science testimony in criminal cases. Despite the suspect reliability of such testimony, the proportion of cases in *Daubert* jurisdictions admitting expert evidence about such subjects as mental disorders, syndromes, intent, dangerousness, and child sex abuse victims either remained the same or actually increased in the first five years after that decision as compared to the five years prior to *Daubert*.[96] Most courts, perhaps influenced by neces-

93. *Id.* at 899. Although *Barefoot* involved testimony at sentencing, when courts traditionally relax evidentiary rules, the Court has made clear that capital sentencing procedures should mimic trial in most respects. *See, e.g.*, California v. Ramos, 463 U.S. 992, 998-99 (1983) (recognizing that "qualitative difference of death from all other punishments requires a correspondingly greater degree of scrutiny of the capital sentencing determination").

94. Indeed, under the necessity analysis outlined above, if a distinction is to be made between the two types of testimony, dangerousness testimony proffered by the prosecution is more justifiably subjected to strict scrutiny, because it can be based on research correlating risk factors with observable events (reoffending).

95. That pedigree may be further weakened by *United States v. Salerno*, 505 U.S. 317 (1992) (holding that defendants may not avoid hearsay rules with argument that they should be able to present any evidence on their behalf), and the probability that a state could impose stringent limitations on *both* state and defense experts without violating the logic of *Barefoot*, 463 U.S. at 896-903 (which only held that Constitution is not violated by dangerousness testimony proffered by state), or Rock v. Arkansas, 483 U.S. 44, 51-56 (1987) (which, by hypothesis, only applies to testimony from defendant himself).

96. Donald N. Bersoff et al., *The Admissibility of Psychological Evidence Six Years After* Daubert: *Floodgates or Gatekeeping*, presentation at American Psychology-Law Society

sity and voice considerations, avoided taking a hard look at the scientific credentials of psychiatric opinion evidence, either by explicitly classifying it or by implicitly treating it as specialized knowledge, thus exempting it from *Daubert*'s threshold for "scientific" testimony.[97]

After *Kumho* that tactic is no longer available, at least in federal court. *Daubert*'s reliability requirement now clearly applies to all expert testimony. The question remains as to how courts should define reliability in the criminal context.

A. Possible Definitions of Reliability

To this point, this Article has assumed that reliability means validity or accuracy, and that accuracy is to be gauged primarily through the scientific method. Even if that is a correct assessment of the *Daubert-Kumho* holding, much ambiguity exists. Both *Daubert* and *Kumho* stressed the "flexibility" of the reliability test and the fact that the four indicia of reliability listed in *Daubert* – falsifiability, error rates, peer review, and general acceptance – are not exclusive.[98] As noted earlier, *Kumho* also clearly contemplates that expert testimony may be based on "experience" as well as on scientific research.[99] A fair reading of the holdings, then, is that some concrete proof of reliability is an absolute prerequisite to admissibility, but that a specific quantum of reliability has yet to be mandated.

The most rigorous definition of reliability would preclude admissibility unless there is strong scientific proof of accuracy. Under this definition, the proponent of the evidence would need to show the expert's theory has been borne out by controlled testing, that the expert's methodology produces low error rates, and so on. This Article has assumed, for discussion purposes, that this version of *Daubert-Kumho*'s reliability test is the correct one. However, there are at least three other possible definitions.

First, reliability requirements could fluctuate with the relevant standards of proof. Under this regime, the prosecution would often have to meet a higher reliability threshold than the defense, because it must prove the actus reus and mens rea elements beyond a reasonable doubt, while the defense need only create a reasonable doubt.[100] This approach, however, violates a

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meeting, New Orleans, March 4, 2000 (study of all appellate cases decided from five and one-half years prior to *Daubert* to five and one-half years after *Daubert*) (data on file with author).

97. *See id.* (noting that out of 428 appellate cases involving psychological testimony, only 17 referred to falsifiability and only 13 referred to error rate).

98. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 593-94 (1993); Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150 (1999).

99. *Kumho*, 526 U.S. at 151.

100. *See generally In re* Winship, 397 U.S. 358 (1970) (requiring as constitutional mandate reasonable-doubt standard of criminal law).

basic tenet of evidence law, most pithily expressed in the phrase "a brick is not a wall."[101] If the prosecution has to certify that each piece of evidence it presents is accurate beyond a reasonable doubt, very little evidence of any type could be introduced by the state. Such a regime could work undue hardship on defendants as well. In many jurisdictions, the burden with respect to the sanity issue is on the defendant,[102] and in a few of these jurisdictions the standard of proof in such cases is clear and convincing evidence.[103] Similarly, the defense may bear the burden in self-defense cases. Although some courts have ruled that the prosecution must bear the burden of disproving justification beyond a reasonable doubt,[104] a self-defense claim based simply on an honest belief of necessity is, in effect, an excuse much closer in nature to an insanity defense than to the justification doctrine;[105] at least in these cases, the Constitution's mandate as to where the burden should lie is not at all clear.

Another construction of the reliability concept, which can be derived from Federal Evidence Rules 401, 702, and 403 (defining relevance, expertise, and factors that allow exclusion of relevant evidence), is that the reliability of evidence should be judged in conjunction with its materiality, helpfulness, and accessibility. As I have argued elsewhere,[106] if evidence bears a strong logical relationship to the proposition to be proved, tends to be counter-intuitive, and is not likely to overawe the jury, then a relatively low reliability threshold may be appropriate (especially if high reliability is impossible for the reasons discussed earlier). Opinion evidence about mental state may be suspect, but it is usually highly material and, as both *Rock* and *Barefoot* noted, weaknesses in such nontechnical testimony usually can be exposed through cross-examination and rebuttal witnesses.[107] Finally, as earlier discussion

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101. CHARLES TILFORD MCCORMICK, HANDBOOK ON THE LAW OF EVIDENCE 316 (1954).

102. *See* MELTON ET AL., *supra* note 28, at 202 (finding approximately two-thirds of states place burden of proving insanity on defendant). Placement of the burden on the defendant was upheld against due process challenges in *Leland v. Oregon*, 343 U.S. 790 (1952), and *Rivera v. Delaware*, 429 U.S. 877 (1976).

103. *See, e.g.*, 18 U.S.C.A. § 17(b) (West, WESTLAW through Aug. 9, 2000); ARIZ. REV. STAT. § 13-502 (West, WESTLAW through 1999 1st Reg. Sess. & 2d Spec. Sess.).

104. LAFAVE & SCOTT, *supra* note 30, § 1.8(c), at 54 (listing cases holding that when homicide is defined as "unlawful killing," state bears burden of disproving self-defense).

105. *See generally* Joshua Dressler, *Justifications and Excuses: A Brief Review of the Concepts and the Literature*, 33 WAYNE L. REV. 1155 (1987).

106. *See generally* Slobogin, *Psychiatric Evidence*, *supra* note 23.

107. Rock v. Arkansas, 483 U.S. 44, 60 (1987); Barefoot v. Estelle, 463 U.S. 880, 898-99 (1983); *see also* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 596 (1993) ("Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.").

pointed out,[108] such evidence is manifestly counterintuitive. This is because both the law and laypeople assume that most people who commit crime are sane and intend their actions[109] and because we tend to believe that objective circumstances are the best measure of what people think, feel, and act. All of these are assumptions which defense-proffered expert testimony tends to contradict.

I suspect that many enamored of the scientific way would not accept either of the latter two definitions of reliability. A final construction of the *Daubert-Kumho* holding, one that better resonates with empiricist precepts but is still entirely consistent with the approach just described, builds on the scientific concept of incremental validity.[110] That concept applied in the expert testimony context would require proof that the proffered expert evidence improves the accuracy of the decisionmaker. Under this approach, the reliability of the evidence, by itself, is not necessarily dispositive of the admissibility issue. For instance, testimony about the factors that detract from eyewitness credibility, among the most valid types of social science testimony,[111] may nonetheless have low incremental validity if it tends to make jurors believe, contrary to fact, that few eyewitnesses are right when they identify the perpetrator of a crime.[112] In contrast, testimony about dangerousness, even if associated with very high error rates,[113] may have good incremental validity if it improves factfinders' ability to differentiate between those who will recidivate and those who will not.[114]

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108. *See supra* text accompanying notes 76-81 (discussing helpfulness of psychiatric testimony).

109. The criminal law presumes sanity, LAFAVE & SCOTT, *supra* note 30, § 4.5(c), at 353, and permits an inference that one intends the natural and probable consequences of one's acts, *id.* § 3.5, at 225-26, and these assumptions "are undoubtedly shared by most people, including the majority of jurors and judges." Slobogin, *Psychiatric Evidence*, *supra* note 23, at 43.

110. *See* David Faust & Barry Nurcombe, *Improving the Accuracy of Clinical Judgment*, 52 PSYCHIATRY 197, 202 (1989) (defining incremental validity as "the advantage gained by adding a sign").

111. *See* Steven D. Penrod et al., *Expert Psychological Testimony on Eyewitness Reliability Before and After* Daubert: *The State of the Law and the Science*, 13 BEHAV. SCI. & L. 229, 256 (1995) (arguing that such testimony meets reliability requirements of *Daubert*).

112. *Cf.* People v. Enis, 564 N.E.2d 1155, 1165 (Ill. 1990) (upholding trial court's exclusion of testimony on eyewitness identification because "[i]t would be inappropriate for a jury to conclude, based on expert testimony, that all eyewitness testimony is unreliable").

113. *See* MELTON ET AL., *supra* note 28, at 281 tbl. 9.2 (showing false positive rates – i.e., rates at which predictions of dangerousness turn out to be wrong – from 44% to 99% in 13 studies).

114. As noted earlier, actuarial prediction tends to be superior to clinical (and therefore lay) prediction. *See supra* note 50. Recent research on actuarial risk assessment permits relatively precise prediction of the likelihood of recidivism (ranging from 0% to 58.5%) based on relatively concrete characteristics (e.g., psychopathy, serious child abuse, substance use, prior

Scientists could easily test each of these assertions through laboratory and field research comparing "expert-informed" and "uninformed" juries. If the informed and uninformed juries routinely agree in their conclusions about the accuracy of eyewitnesses or the dangerousness of offenders, the expert testimony would have no incremental validity. Consistent differences between the two groups, on the other hand, would confirm or disconfirm the hypothesis that experts assist the factfinder.

B. Incremental Validity and Opinion Evidence on Past Mental State

Application of the incremental validity concept to opinion testimony about past mental state is more problematic. Ideally, we could look at the accuracy of past mental state verdicts from expert-informed juries and from non-informed juries. Compared to the eyewitness and dangerousness scenarios, however, clear criteria for determining the validity of a decision about past mental state do not exist, for reasons that the reader by now should be able to conjecture. Experimenters evaluating the incremental validity of information about the foibles of eyewitnesses can, at least in the laboratory, be certain who the actual perpetrator is and thus definitively determine whether the mock jury decisions are "correct."[115] Similarly, the accuracy of predictions of dangerousness can be relatively easily gauged either by monitoring the offender in question or by having mock juries predict the likely recidivism of people whose offense history is already known.[116] Thus, when the expert-informed factfinder and the uninformed factfinder differ in their conclusions in these two situations we can tell which is right. In contrast, we have no easy way of determining which group is correct about whether someone was "insane," lacked "mens rea," or felt "justified," as those terms are now defined. As long as the law talks about the relevant mental states using terms such as "substantial inability to appreciate or conform," "premeditation," "recklessness," and a "belief that force was necessary" (rather than, say, in terms of IQ scores or "psychosis"),

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arrests). *See generally* John Monahan et al., *Developing a Clinically Useful Actuarial Tool for Assessing Violence Risk*, 176 BRIT. J. PSYCHIATRY 99 (2000) (finding clinically useful actuarial method to assist in violence risk assessment); Henry Steadman et al., *A Classification Tree Approach to the Development of Actuarial Violent Risk Assessment Tools*, 24 LAW & HUM. BEHAV. 83 (2000). Provision of such information to the factfinder might permit a dramatic improvement over lay judges' seat-of-the-pants predictions.

115. This is in fact standard methodology in eyewitness research. *See* Gary L. Wells, *The Scientific Status of Research on Eyewitness Identification*, *in* 2 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 32-2.1.2, at 458-60 (David L. Faigman et al. eds., 1997).

116. Both approaches (the latter called "cross-validation" research) have been used in violence prediction research. *See* John Monahan, *The Scientific Status of Research on Clinical and Actuarial Predictions of Violence*, *in* 1 MODERN SCIENTIFIC EVIDENCE, *supra* note 115, § 7-2.1.2, at 313-14.

ultimate judgements about insanity, mens rea, and the like are not easily reducible to objectively verifiable components like physical acts are.

Put another way, ultimate judgments about subjectively defined past mental state issues – in contrast to judgments about whether an act occurred – are best described as moral and normative in nature, rather than scientific or positive.[117] They are based on ideas of blameworthiness that come from many different sources, including religion and intuition.[118] Except at the margins, assessing the relative "accuracy" of such normative judgements is an oxymoronic exercise. Perhaps this problem should lead us to abandon the effort at making such judgments.[119] Until we do, those looking for scientific accuracy are bound to be frustrated.

There is another type of incremental validity, however, that is more susceptible to measurement, a type of incremental validity that might be called "factor-based." To determine this type of validity, experimenters would attempt to ascertain the factors or variables that a jury informed by an expert considers in making decisions about mental state and then compare those to the variables considered by a jury left to its own devices. If, compared to the uninformed jury, the informed jury considers more variables that the law considers material to the past mental state issue in question, then factor-based incremental validity of such evidence has been established.

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117. *See* Bonnie & Slobogin, *supra* note 20, at 448-49 ("[T]he ethical foundations of the criminal law are rooted in beliefs about human rationality, deterrability, and free will [that are] articles of moral faith rather than scientific fact."). At least one court has recognized this point. *See* Holloway v. United States, 148 F.2d 665, 666 (D.C. Cir. 1945) ("Legal tests of criminal insanity are not and cannot be the result of scientific analysis or objective judgment. There is no objective standard by which such a judgment of an admittedly abnormal offender can be measured.").

118. *See* Stephen Golding, *Mental Health Professionals and the Courts: The Ethics of Expertise*, 13 INT'L J.L. & PSYCHIATRY 281, 285 (1990) (arguing that notions of criminal accountability "can be shown to be rooted in our Judeo-Christian conceptions of moral responsibility").

119. Richard McFall, who has done interesting work in connection with assessing the incremental validity of clinical judgments, *see generally, e.g.*, Richard M. McFall & Teresa A. Treat, *Quantifying the Information Value of Clinical Assessments with Signal Detection Theory*, 50 ANN. REV. PSYCHOL. 215 (1999), has stated:

> If the legal, medical, or psychological experts cannot even agree about whether something (or someone) is an exemplar of a particular construct or category, then the whole decision-making enterprise that employs such a construct or category cannot be valid. These decision-making exercises are not "beyond science;" on the contrary, they are prime examples of the circumstances under which the application of scientific principles can demonstrate that this specific type of decision-making system lacks any validity. If it lacks validity, then there is every reason to challenge the continuation of that decision-making process.

Electronic communication from Richard M. McFall to Christopher Slobogin (June 23, 2000) (on file with author and Washington and Lee Law Review).

Factor-based incremental validity is in some ways analogous to the idea of moral progress recently described by Michael Shapiro.[120] Conceding that the assertions of moral philosophy cannot be proven, he argues against skeptics who think that moral progress is therefore impossible by pointing to the incremental usefulness of the new ways of thinking about old problems that moral theorists generate. As he puts it, "[E]ven if experts and non-experts are equal at the penultimate decision point, the skills of nonexperts may nevertheless be aided by the experts' moral analyses."[121] Ultimately, he concludes: "The ideas of knowledge, expertise, and progress in moral inquiry do not and cannot rest on a belief in an objective moral reality that always provides firm and certain answers."[122] There are no firm and certain answers about the normative past mental state questions the law asks. But experts may be able to provide laypeople with perspectives they otherwise would not have, and that, in itself, could be said to add to the validity of the decisions they make.

Under this final definition of reliability then, the admissibility of past mental state evidence would depend more on the logical relevance of the expert's anecdata than on its accuracy. Unless that information is demonstrably wrong or so commonplace that it adds nothing to a bare recitation of the facts, courts would admit it. Put in evidentiary language, material opinion evidence usually would be considered probative as well, unless it is clearly unreliable or it is not based on specialized (generally accepted) knowledge that assists the factfinder in viewing the issues from a more-informed or different perspective. If that admissibility threshold seems porous, it at least is bolstered by the necessity rationale and the defendant's right to voice.

Moreover, a requirement of factor-based incremental validity does make a bow to the scientific reading of *Daubert* because it is based on the testable issue of whether expert testimony on past mental state provides the factfinder with more relevant information. To date, scientists have not conducted any research testing this hypothesis. Perhaps *Daubert-Kumho* should be read to require that such research be carried out.[123] A requirement of factor-based incremental validity probably also would accelerate changes in the evaluation and opinion formation process currently used by most forensic clinicians. For instance, structured interview formats, designed to ensure that evaluators focus

120. *See generally* Michael H. Shapiro, *Is Bioethics Broke?: On the Idea of Ethics and Law "Catching Up" with Technology*, 33 IND. L. REV. 17 (1999) (discussing whether law and ethics have lagged behind science).

121. *Id.* at 34.

122. *Id.*

123. My prediction is that such research would find a robust factor-based incremental validity because, as earlier examples demonstrated, mental health professionals do usually attend to a greater range of legally relevant variables than the typical layperson.

on the variables that legal tests make relevant,[124] should become increasingly important.[125] Furthermore, courts might insist that clinical experts address particular factors.[126] To this extent, then, the scientific method is clearly applicable to the evaluation of and testimony about mental state at the time of the offense.

Conclusion

Although this Article has focused on the admissibility of opinion evidence about past mental state, it also has touched on two broad themes that

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124. The best instrument of this type developed to date is the R-CRAS (for Rogers Criminal Responsibility Assessment Scales). The instrument calls for examination of thirty different domains, such as reliability of the patient's self-report; level of intoxication at the time of the offense; observable bizarre behavior at the time of the alleged offense; delusions, hallucinations and thought disorders at the time of the alleged crime; general level of anxiety, depression and verbal coherence at the time of the alleged crime; focus of the alleged crime; behavior during the week prior to the crime and so on. *See* R-CRAS MANUAL (1984) (on file with author). Although the instrument does not (and cannot) produce a quantified assessment of sanity, MELTON ET AL., *supra* note 28, at 233, it does structure an evaluation of mental state at the time of the offense around relevant variables. *See generally* Richard Rogers & Kenneth W. Sewell, *The R-CRAS and Insanity Evaluations: A Re-Examination of Construct Validity*, 17 BEHAV. SCI. & L. 181 (1999) (evaluating validity of R-CRAS).

125. Such instruments might also improve the inter-rater reliability of evaluations on past mental state. Research using the R-CRAS, *see supra* note 124, shows very high reliability with respect to decisions regarding the ultimate conclusion about sanity and gross level of functioning. *See* MELTON ET AL., *supra* note 28, at 229 tbl.8.2 (summarizing three studies by Rogers et al., showing agreement approximating 82%, 93%, and 100% on sanity issue, and R-CRAS MANUAL, *supra* note 124, at 13, showing inter-rater agreement of 87% for "loss of cognitive control" and of 89% for "loss of behavioral control").

There are dangers in relying solely on such instruments, however. For instance, the R-CRAS ignores psychodynamic (i.e., Freudian) variables that might help explain behavior. For this reason, courts might want to require evaluators to use such an instrument, but not limit them to it. Furthermore, courts must also avoid the temptation to treat conclusions reached by a clinician using the R-CRAS as "scientific." The instrument does not provide any scientific way of measuring the variables it identifies, but merely directs the evaluator to rate them on a several point scale. For instance, the item governing assessment of self-control over criminal behavior asks the evaluator to judge whether the patient: "[W]as in complete control of his/her behavior and chose to commit the crime" ("no impairment"); "[W]as generally in control of his/her behavior with only minor incidental losses of control" ("slight impairment"); "[C]hose to commit the crime although it was done in an impulsive manner" ("mild impairment"); "[L]ost control of a significant portion of the criminal act after choosing to initiate criminal behavior" ("moderate impairment"); "[L]ost control over a significant portion of his/her criminal behavior including the initial approach to the crime scene" ("severe impairment"); "[W]as completely out of control of his/her behavior throughout all of the criminal act" ("extreme impairment"). R-CRAS INSTRUMENT, at 10 (on file with author).

126. *Cf.* Livingston v. State, 415 So. 2d 872, 872-73 (Fla. Dist. Ct. App. 1982) (remanding case because expert report did not address six statutory factors relating to competency to stand trial).

can be summarized in terms of two doubts about *Daubert*. The first doubt is about *Daubert-Kumho*'s explicit assertion that a scientific reliability test is coherent in the legal context. As others have noted,[127] law and science have different aims, different methods of proof, and even different definitions of truth. In that vein, it may be that evidentiary reliability should not be defined without reference to factors other than accuracy. The second reservation is that, even if a scientific reliability test is sometimes coherent in the legal context, *Daubert-Kumho*'s implicit assertion that it should be applied to every type of expert testimony may not make sense. One does not have to subscribe to the more radical versions of social constructivism[128] to conclude that some types of testimony – including opinion evidence of past mental state – may never be proven valid in any truly scientific sense. If, however, *Daubert*'s reliability threshold is defined conditionally, depending upon the type of evidence at issue and its likely impact on the factfinder, then both doubts are alleviated, if not resolved.

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127. *See, e.g.*, Rochelle Cooper Dreyfuss, *Is Science a Special Case? The Admissibility of Scientific Evidence After* Daubert v. Merrell Dow, 73 TEX. L. REV. 1779, 1792 (1995) (noting that in science "theories are judged by their usefulness in accommodating new observations, not by their truth or falsity"); Andrew E. Taslitz, *Interpretive Method and the Federal Rules of Evidence, A Call for a Politically Realistic Hermeneutics*, 32 HARV. J. ON LEGIS. 329, 370 (1995) ("[S]cience seeks to be descriptive, positive, and predictive [while] law is normative and its goal is justice, not descriptive accuracy.").

128. *See* David S. Caudill & Richard E. Redding, *Junk* Philosophy *of Science? The Paradox of Expertise and Interdisciplinarity in Federal Courts*, 57 WASH. & LEE L. REV. 685, 752-62 (2000) (discussing social constructivism in law).

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