No. 10-1271

IN THE
Supreme Court of the United States

BILLIE WAYNE COBLE,
Petitioner,

v.

STATE OF TEXAS,
Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE TEXAS COURT OF CRIMINAL APPEALS

BRIEF FOR AMICI CURIAE AMERICAN PSYCHOLOGICAL ASSOCIATION AND TEXAS PSYCHOLOGICAL ASSOCIATION IN SUPPORT OF PETITION FOR A WRIT OF CERTIORARI

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

TABLE OF AUTHORITIES—Continued

STATUTES AND RULES

OTHER AUTHORITIES

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

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INTEREST OF AMICI CURIAE[1]

The American Psychological Association ("APA"), a voluntary nonprofit scientific and professional organization with approximately 155,000 members and affili-

[1] Counsel of record for both parties received timely notice of the intent to file this brief and letters consenting to the filing have been filed with the Clerk of the Court. No counsel for a party authored this brief in whole or in part, and no person, other than amici, their members, or their counsel, made a monetary contribution to the preparation or submission of this brief.

ates, is the leading association of psychologists in the United States. Among APA's major purposes are to increase and disseminate knowledge regarding human behavior and to foster the application of psychological learning to important human concerns.

The Texas Psychological Association ("TPA"), a state affiliate of APA, has 1,500 members. Among TPA's major purposes are to advance psychology as a science, profession, and a means of promoting human welfare by, among other things, the diffusion of psychological knowledge.

The issue at the heart of this case—the reliability of mental-health expert testimony on an individual's risk of "future dangerousness"—has been the subject of significant research. Amici submit this brief to present scientific knowledge that provides a context for this Court's consideration of whether admitting unreliable expert testimony in a particular capital sentencing proceeding can constitute constitutional error. Amici support the grant of a writ of certiorari because the integrity of the legal system and the mental health profession are undermined if unscientific, unreliable, but purportedly expert testimony about future dangerousness is deemed constitutionally admissible in capital sentencing.

INTRODUCTION AND SUMMARY OF ARGUMENT[2]

This Court has repeatedly held that the "Eighth Amendment insists upon 'reliability in the determination that death is the appropriate punishment in a specific case.'" *Oregon* v. *Guzek*, 546 U.S. 517, 525 (2006). Here, the Texas Court of Criminal Appeals ("TCCA") held that Dr. Richard Coons's expert testimony about petitioner Billie Wayne Coble's future dangerousness was "insufficiently reliable" under Texas evidentiary rules. Pet. App. 21a-22a; *id.* 38a-44a (applying reliability principles similar to those set forth in *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589 (1993)). Despite that conclusion and this Court's other Eighth Amendment guidance, the TCCA relied on *Barefoot* v. *Estelle*, 463 U.S. 880 (1983), for the proposition that admitting purported expert testimony that is patently unscientific, not expert, and not reliable—even if a capital sentencing jury considered and was persuaded by it—can never be constitutional error. Even where (as here) state evidentiary rules would exclude such testimony, the Texas court's understanding of the federal Constitution would permit a defendant to be executed where there has been no showing beyond a reasonable doubt that the erroneous admission of such testimony did not contribute to the verdict of death.

The Eighth Amendment, however, mandates heightened reliability in the determination that death is the appropriate punishment. *Guzek*, 546 U.S. at 525;

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[2] Amici acknowledge and thank the following scientists and APA members for their assistance: Mary Alice Conroy, Ph.D., David DeMatteo, J.D., Ph.D., Joel A. Dvoskin, Ph.D., Laura S. Guy, Ph.D., Kirk Heilbrun, Ph.D., and Daniel A. Krauss, J.D., Ph.D.

see also Woodson v. *North Carolina*, 428 U.S. 280, 305 (1976) (plurality op.). "To insure that the death penalty is indeed imposed on the basis of 'reason rather than caprice or emotion,'" this Court has repeatedly "invalidated procedural rules that tended to diminish the reliability of the sentencing determination." *Beck* v. *Alabama*, 447 U.S. 625, 638 (1980). In particular, this Court has recognized that "accurate sentencing information is an indispensible prerequisite" to ensuring such constitutionally mandated reliability. *Gregg* v. *Georgia*, 428 U.S. 153, 190 (1976).

This Court should grant certiorari to decide whether the Eighth Amendment requires that purportedly expert testimony on a capital defendant's future dangerousness demonstrates some degree of reliability.

Significant scientific evidence exists regarding mental-health professionals' ability to assess whether an individual will commit future acts of violence. Studies have long established that unstructured clinical assessments like Dr. Coons's are not grounded in scientific principles and are less reliable than structured risk-assessment approaches. These more reliable methods, such as actuarial approaches, structured professional judgment, and anamnestic approaches, have sound scientific footing and have been used to assess future dangerousness in other contexts. Studies demonstrate that these structured scientific methods have reasonable predictive validity in appropriate cases, and similar instruments designed to assess the risk of violence in prison are in development.

The admission of unreliable, unstructured clinical expert testimony on future dangerousness may adversely affect many states' capital-sentencing schemes.

Two states require juries to find "there is a probability that the defendant would commit criminal acts of violence that would constitute a continuing threat to society" before imposing the death sentence. Tex. Code Crim. Proc. Ann. art. 37.071, § 2(b)(1); Or. Rev. Stat. §163.150(1)(b)(B). Future dangerousness is a statutory aggravating factor in capital cases in four states[3] and a non-statutory aggravating factor in twelve states and the federal system.[4] Three states in which future dangerousness plays a role in capital sentencing account for over half of all executions since 1976.[5]

Holding that the Eighth Amendment bars admission of *unreliable* expert testimony (as opposed to *any* expert testimony) would not require this Court to revisit *Barefoot*'s rule against the categorical exclusion of

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[3] Idaho Code Ann. § 19-2515(9)(i); Okla. Stat. tit. 21, § 701.12(7); Va. Code Ann. § 19.2-264.2(1); Wyo. Stat. Ann. § 6-2-102(h)(xi).

[4] *See* 18 U.S.C. § 3592(b) ("The jury … may consider whether any other aggravating factor for which notice has been given exists."); *Arthur* v. *State*, 575 So. 2d 1165, 1185 (Ala. Crim. App. 1990); *People* v. *Smithey*, 978 P.2d 1171, 1217 (Cal. 1999); *Walker* v. *State*, 327 S.E.2d 475, 484 (Ga. 1985); *State* v. *Welcome*, 458 So. 2d 1235, 1256 (La. 1983); *State* v. *Deck*, 303 S.W.3d 527, 543-544 (Mo. 2010); *State* v. *Smith*, 705 P.2d 1087, 1103-1105 (Mont. 1985); *Redmen* v. *State*, 828 P.2d 395, 400 (Nev. 1992), *overruled on other grounds by Alford* v. *State*, 906 P.2d 714 (Nev. 1995); *State* v. *Steen*, 536 S.E.2d 1, 30-31 (N.C. 2000); *State* v. *Beuke*, 526 N.E.2d 274, 280 (Ohio 1988); *Commonwealth* v. *Trivigno*, 750 A.2d 243, 253-254 (Pa. 2000); *State* v. *Young*, 459 S.E.2d 84, 87 (S.C. 1995); *State* v. *Arguelles*, 63 P.3d 731, 759 (Utah 2003).

[5] The States are Texas, Virginia, and Oklahoma. *See* Death Penalty Information Center, *Facts About the Death Penalty*, http://www.deathpenaltyinfo.org/documents/FactSheet.pdf (updated May 9, 2011).

expert testimony on future dangerousness. Moreover, two significant developments since *Barefoot* support a grant of certiorari. First, scientific methods have evolved, alleviating this Court's concern in *Barefoot*, 463 U.S. at 898, about the availability of expert testimony regarding future behavior in other contexts. As noted above, structured risk-assessment methods are used to assess future dangerousness in other contexts, including civil commitments and parole determinations. These methods are grounded in science and are more reliable than the unstructured approach used here.

Second, this Court in *Barefoot* stated that it was "unconvinced, … at least as of now, that the adversary process cannot be trusted to sort out the reliable from the unreliable evidence and opinion about future dangerousness, particularly when the convicted felon has the opportunity to present his own side of the case." 463 U.S. at 901. But scientific research now reveals that unstructured "expert" testimony on future dangerousness like Dr. Coons's, despite its lack of scientific basis, influences jurors more than opinions based on structured risk-assessment methods. Moreover, jurors' reliance on clinical expert testimony persists even after exposure to adversary procedures like cross-examination and the presentation of competing experts, and even after deliberations. These empirically demonstrated realities render the admission of testimony like Dr. Coons's in capital cases especially problematic because they suggest a real risk of prejudice that cannot effectively be combated through traditional adversarial measures.

Indeed, to be admissible in *non-capital* federal trials under this Court's precedent, expert testimony must be sufficiently reliable to assist factfinders in understanding a factual issue. *Daubert*, 509 U.S. at 589-

590; *see* Fed. R. Evid. 702.[6] Such a requirement ensures that unfounded claims of expertise not mislead finders of fact. *See Daubert*, 509 U.S. at 594-595; *see also, e.g.*, *United States* v. *Bahena*, 223 F.3d 797, 809 (8th Cir. 2000) ("*Daubert* serves the important purpose of allowing the judge to … screen out evidence that is unreliable and would have a tendency to confuse or mislead the jury."). Left undisturbed, the TCCA's decision means that, in *capital* cases, the Constitution provides no baseline of protection against precisely that danger—a danger that empirical evidence shows to be significant in cases like this one.[7]

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[6] Texas courts have adopted a similar test to that in *Daubert*, 509 U.S. at 593-594, to consider the admissibility of expert testimony under state law, *see Kelly* v. *State*, 824 S.W.2d 568, 573 (Tex. Crim. App. 1992) (en banc), including in capital cases (*see* Pet. App. 27a-44a).

[7] The question is not whether *Daubert* or any particular formulation is constitutionally mandated, but whether the Eighth Amendment requires *some* minimum level of reliability when government witnesses claim special expertise. Whether *Daubert* applies directly or by analogy in the federal capital sentencing context is an open question. *Compare United States* v. *Fields*, 483 F.3d 313, 341-343 (5th Cir. 2007) (holding that *Daubert* does not apply), *with United States* v. *Barnette*, 211 F.3d 803, 815 (4th Cir. 2000) (assuming without deciding that *Daubert* applies). Nonetheless, as a statutory matter, federal law at a minimum requires that the probative value of evidence offered in the penalty phase of a capital trial outweigh its prejudicial effect. 18 U.S.C. § 3593(c).

ARGUMENT

I. UNSTRUCTURED CLINICAL TESTIMONY LIKE THAT AT ISSUE IS NOT BASED ON SCIENCE AND SHOULD NOT BE RELIED UPON TO ESTABLISH FUTURE DANGEROUSNESS

The TCCA recognized that Dr. Coons's assessment of Mr. Coble's future dangerousness—which did not follow any scientifically established methodology and was not based upon any empirical study—was insufficiently reliable to satisfy normal evidentiary standards. Pet. App. 43a-44a. Studies have long established that unstructured clinical approaches, like the one Dr. Coons employed, cannot assess future dangerousness with reliability comparable to structured approaches. It is now widely accepted that "[u]nstructured clinical judgment by itself is no longer a useful or necessary approach to appraising violence risk." Heilbrun et al., *Violence Risk Assessment Tools*, in *Handbook of Violence Risk Assessment* 1, 5 (Otto & Douglas eds., 2010).

The unstructured clinical approach is "basically a 'free-form' approach to risk assessment" based solely on "the evaluator's judgment about risk unaided by additional materials." Heilbrun, *Evaluation for Risk of Violence in Adults* 52 (2009). This approach imposes no structure on any of the four key decisions in the assessment process: (1) determining which risk factors to consider; (2) determining how to measure them; (3) combining the factors into "a single overarching estimate of violence risk"; and (4) "generating a final risk estimate." Monahan, *Structured Risk Assessment of Violence*, in *Textbook of Violence Assessment and Management* 17, 20-21 (Simon & Tardiff eds., 2008).

Instead, "[w]hat these risk factors are, or how they are measured, might vary from case to case depending

on which seem most relevant to the professional doing the assessment." Monahan, *Structured Risk Assessment* 19. The evaluator then combines the risk factors in an "intuitive" manner to generate an opinion about an individual's level of violence risk. *Id.*

This lack of structure allows cognitive biases to skew the future-dangerousness analysis. These biases include:

> (a) ignoring base-rate information (not knowing or not using the rate at which the predicted event occurs in the population of interest); (b) assigning nonoptimal weights to factors (combining and weighing factors based on intuitive judgments …); and (c) employing the representativeness heuristic (the tendency to make decisions or judge information in a manner that fits preconceived categories or stereotypes of a situation …)[.]

Krauss & Lieberman, *Expert Testimony on Risk and Future Dangerousness*, in *Expert Psychological Testimony for the Courts* 227, 229 (Costanzo et al. eds., 2006); *see also* Krauss & Sales, *The Effects of Clinical and Scientific Expert Testimony on Juror Decision-Making in Capital Sentencing*, 7 Psychol. Pub. Pol'y & Law 267, 280 (2001) (confirmation bias can result in overestimating dangerousness due to evaluators' propensity "to ignore evidence that disconfirms their initial opinion" while continuing "to select information that supports it"). Additionally, those employing unstructured clinical approaches often make the "fundamental attribution error," which causes individuals to incorrectly perceive that another's behavior is based on stable dispositions (*i.e.*, traits) rather than situational

contexts. Melton et al., *Psychological Evaluations for the Courts* 300 (3d ed. 2007).

Such biases can render the future-dangerousness assessment unreliable. For example, evaluators using unstructured clinical approaches often fail to take into account the "base rate"[8] of violence in the subject's particular population. Heilbrun, *Evaluation for Risk of Violence* 45-46. "[I]gnorance of base rates ... [is] one of the most serious shortcomings associated with violence risk assessment" because the base rate of violence in the relevant population (*e.g.*, prison, hospital, or community) directly affects the accuracy of the assessment of an individual's future dangerousness. *Id.* at 46. Where base rates are not considered, any assessment would necessarily be "skewed" because "there is no basis for comparison of a given individual to 'average' propensities" for the trait being examined.[9] Sandys et al., *Aggravation and Mitigation*, 37 J. Psychiatry & L. 189, 213 (2009); *see also* DeMatteo et al., *Forensic Mental Health Assessments in Death Penalty Cases* 270 (2011) ("Base rates allow us to tether risk estimates to known facts—in the form of group data—rather than to intuition or assumptions."). Failure to account for low base rates often causes evaluators to over-predict the likeli-

[8] The base rate is the frequency that a particular behavior occurs within a specified population over a specified time period. *See* Sandys et al., *Aggravation and Mitigation*, 37 J. Psychiatry & L. 189, 213 (2009) (base rates measure the "statistical prevalence of a particular behavior over a set period of time" (internal quotation marks omitted)).

[9] For example, if an individual is at "twice" the risk of having a particular disease, it matters whether that person belongs to a population with a base rate of one-in-ten chance or one-in-one-thousand chance of having that disease.

hood of violence. Additionally, an evaluator using unstructured clinical analysis might intuitively—but incorrectly—"place excessive weight on the heinousness of the defendant's most recent act (a factor not commonly associated with future violence) in arriving at a conclusion that the defendant will be dangerous in the future." Krauss & Lieberman, *Expert Testimony* 229.

Early studies indicated that unstructured clinical assessments of future dangerousness were "accurate in no more than one out of three predictions of violent behavior over a several-year period." Monahan, *The Clinical Prediction of Violent Behavior* 47 (1981). Since those early studies, "[l]ittle has transpired … to increase confidence in the ability of mental health professionals, using their unstructured clinical judgment, to accurately assess risk of violence in the community." Monahan, *Structured Risk Assessment* 19. The unstructured clinical mode of analysis has been consistently found only slightly more reliable than chance in assessing future dangerousness. *See, e.g.*, Mossman, *Assessing Predictions of Violence*, 62 J. Consulting & Clinical Psychol. 783, 790 (1994).

Dr. Coons's analysis in this case reflects the flaws typical of unstructured clinical assessments. For instance, there is no indication that Dr. Coons accounted for any base rates (in the community or in prison), an error that, as discussed *supra* p. 10, can severely skew any risk analysis. Moreover, even if he had considered the base rate of violence in prison where Mr. Coble would most likely spend the rest of his life if spared the death penalty,[10] that low rate would have rendered his

[10] Although not the exclusive focus of the future-dangerousness issue, the TCCA acknowledged that, under Texas

unstructured assessment of Mr. Coble's future dangerousness flawed. Low base rates of prison violence, if not properly accounted for, result in an unacceptably high number of false predictions that subjects are likely to commit future violent acts. Monahan, *Clinical Prediction* 33 ("[I]t is virtually impossible to predict any 'low base rate' event without at the same time erroneously pointing the finger at many false positives."). Although structured risk-assessment approaches, discussed *infra* Part II, can account for such difficulties, the low base rate of prison violence makes the *unstructured* prediction of future dangerousness of individuals in prison exceedingly difficult. *See* Cunningham et al., *An Actuarial Model for Assessment of Prison Violence Risk Among Maximum Security Inmates*, 12 Assessment 40, 40 (Mar. 2005).

Dr. Coons's assessment also relied heavily on Mr. Coble's history of violence and past behavior in the community, factors that studies have demonstrated have little correlation with an individual's propensity for violence in prison. *See* Cunningham, 12 Assessment at 42. In other words, Dr. Coons intuitively selected factors he believed were likely to predict future violence (Pet. App. 24a-25a), rather than relying on factors that have been empirically demonstrated to relate to the risk of future violence among individuals in a particular context.

In sum, "a substantial body of research suggests that expert predictions of future dangerousness, when based solely on the testifying expert's clinical experi-

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law, "the likelihood that a defendant does not or will not pose a heightened risk of violence in the structured prison community is a relevant, indeed important, criterion." Pet. App. 19a-20a.

ence, demonstrate an unimpressive ability to accurately forecast the long-term future behavior of criminal defendants." Krauss & Lee, *Deliberating on Dangerousness and Death*, 26 Int'l J. of L. & Psychiatry 113, 113-114 (2003). Accordingly, as the TCCA concluded here, unstructured clinical assessments of future dangerousness like Dr. Coons's are insufficiently reliable to satisfy ordinary *Daubert*-like evidentiary standards. This Court should accept this case to determine whether their admission is consistent with the Eighth Amendment's heightened reliability requirement in capital cases. *See, e.g.*, *Gregg* v. *Georgia*, 428 U.S. 153, 190 (1976).

II. In Contrast To Dr. Coons's Unstructured Approach, Structured Risk-Assessment Methods Are Scientifically Based And Can Reliably Inform Assessments Of Future Dangerousness In A Variety Of Contexts

In *Barefoot*, this Court expressed concern that concluding "that expert testimony about future dangerousness is far too unreliable to be admissible would immediately call into question those other contexts in which predictions of future behavior are constantly made." *Barefoot* v. *Estelle*, 463 U.S. 880, 898 (1983) (referring to civil commitment). Since *Barefoot*, however, researchers have developed better methods of assessing future dangerousness in a number of contexts. *See* Monahan, *Violence Risk Assessment*, in 11 *Handbook of Psychology* §§ 1.1, 4-5 (Goldstein & Weiner eds., 2003). These "structured" approaches, grounded in science and empirical data, have proven more reliable than unstructured clinical approaches and can validly assess future dangerousness in appropriate cases. *See id.* § 4 (describing "general superiority of statistical

over clinical risk assessment"). Progress since *Barefoot* therefore has substantially addressed the Court's concern about "other contexts."

A. Structured Risk-Assessment Methods Are Grounded In Scientific Methods And Are Reliably Used To Assess Future Dangerousness In Many Contexts

In the last two decades, mental health professionals have made much progress in developing three risk-assessment approaches that are based on scientific principles and can be reliable in assessing risk of future dangerousness in appropriate cases. These three methods—(1) actuarial assessment, (2) structured professional judgment, and (3) the anamnestic approach—incorporate varying degrees of structure in one or more of the four steps of the risk-assessment process. *See supra* p. 7. The use of predetermined methodologies or factors empirically proven to relate to future violence provides the structure on which these approaches are based. Monahan, *Structured Risk Assessment* 20-21; Heilbrun et al., *Violence Risk Assessment Tools* 5-6.

The actuarial approach uses statistical information according to clear rules. The "defining feature of actuarial assessment entails using an objective, mechanistic, reproducible combination of predictive factors, selected and verified through empirical research against known outcomes." Heilbrun, *Evaluation for Risk of Violence* 53. The actuarial approach structures and determines in advance all four components of risk assessment. *See* Skeem & Monahan, *Current Directions in Violence Risk Assessment*, 20 Current Directions in Psychol. Sci. 38, 39 (2011). For instance, to assess future dangerousness in the community, evaluators rely on "empirically verified risk factors" that "have demon-

strated the ability to predict the outcome of interest for the population being studied." Krauss & Lieberman, *Expert Testimony* 231. These predetermined risk factors are combined in a predetermined formula (i.e., through an algorithm or equation) to generate an estimate of the probability of risk attributed to an individual with a score in a certain range.

Mental-health professionals currently use a number of actuarial tools to assess future dangerousness in a variety of settings. For example, the Violence Risk Appraisal Guide ("VRAG") assesses the risk of future violence in the community among mentally ill offenders upon their release from prison or forensic hospitalization. Monahan, *Structured Risk Assessment* 26-27. The VRAG measures twelve predetermined factors statistically shown to correlate with a risk of violence in mentally ill persons. *Id.* at 27. Each of these factors "is statistically weighted, and the weighted scores are summed together to yield an overall estimate of violence risk." *Id.* This tool has proven successful in assessing mentally ill offenders' potential for violence. *Id.* (recent study showed 11% of patients who scored in the lowest category of violence risk on the VRAG were found to have committed a new violent act, compared with 42% of patients in the middle category and 100% of patients in the highest category).

A second approach, structured (or guided) professional judgment ("SPJ"), "combine[s] the benefits of actuarial instruments with the flexibility of clinical judgments." Krauss & Lieberman, *Expert Testimony* 232. As opposed to the actuarial approach, which structures all four risk assessment components (and the unstructured approach, which structures none of them), this method structures only the first two. Specifically, SPJ uses predetermined risk factors that have been

empirically shown to relate to an increased risk of violence. *Id.* at 233. In addition, the method of measuring those risk factors is predetermined using specified procedures rather than left to the evaluator's discretion. *See* Skeem & Monahan, *Current Directions* 39. Unlike the actuarial approach, however, SPJ allows for evaluator discretion at the final two stages of the risk-assessment inquiry, the combination of factors and the ultimate risk estimate that includes consideration of case-specific facts. *See* Krauss & Lieberman, *Expert Testimony* 233.

Many professionally accepted risk-assessment tools incorporate SPJ and have been successfully used. For instance, the HCR-20 is an SPJ tool used to assess the future dangerousness of mental patients, including those who are involuntarily hospitalized following acquittal of criminal charges by reason of insanity. *See* Monahan, *Structured Risk Assessment* 21-22. The HCR-20 uses twenty ratings consisting of historical, clinical, and risk management factors selected based on dozens of empirical studies of factors likely to indicate a risk of future violence. *Id.* at 22. Each factor is measured on a scale that assesses points based on the extent to which the factor is present. *Id.* The HCR-20 then allows the evaluator to exercise discretion in combining the factors and reaching an overall risk estimate. *Id.* The HCR-20 has been effective: One study that followed formerly committed individuals with mental disorders after their release into the community found that 11% of the patients that scored in the lowest risk category of the HCR-20 committed or threatened a physically violent act, compared with 40% of those in the middle category and 75% of those in the highest-risk category. *Id.* at 21.

Another tool, the Classification of Violence Risk ("COVR"), is a computer program designed to assess the probability that an individual with a mental disorder will behave violently toward others. *See* Monahan, *Structured Risk Assessment* 23-24. The COVR structures the selection and measurement of risk factors and how those factors are combined to yield a risk estimate in one of five categories. *Id.* at 23, 30. Specifically, the COVR program can measure up to forty predetermined risk factors. *Id.* at 23. The program then uses an interactive "classification tree methodology" to combine the risk factors. *Id.* at 23-24. Before making a final risk determination, the evaluator considers the results generated by the program in the context of additional information such as interviews with the subject's family, medical records, and clinical interviews. *Id.* at 24. Although currently less extensively studied than the HCR-20 or the VRAG, the COVR has also proven effective. In one study, 9% of the patients assessed using COVR as being at a low risk for violence committed a violent act, compared to 49% who were assessed as high risk. Monahan et al., *An Actuarial Model of Violence Risk Assessment for Persons with Mental Disorders*, 56 Psychiatric Servs. 810, 814 (2005) ("proportion of patients who were successfully classified was 76 percent").

Finally, the anamnestic approach involves a detailed consideration of an individual's life history to determine which risk factors associated with past acts of violence are now present. This approach requires extensive interviews of the subject, corroborated by collateral information about the specific incidents and circumstances on which the analysis relies. Heilbrun et al., *Violence Risk Assessment Tools* 6. For instance, an individual may be questioned regarding thoughts, feel-

ings, behaviors, and situationally relevant details (*e.g.*, whether alcohol or drugs were involved) associated with each prior violent act. *Id.* The evaluator then detects patterns based on the subject's answers and determines which risk factors apply based on the subject's individual history. Heilbrun, *Evaluation for Risk of Violence* 55. The evaluator can also use information learned during this process to increase the accuracy of the ratings of the individualized risk factors if a formal risk-assessment tool is used. Heilbrun et al., *Violence Risk Assessment Tools* 6. Intended for use in conjunction with other structured risk-assessment approaches, the "strength of [the] anamnestic assessment involves the identification of risk factors and the gauging of patterns that are directly applicable to the individual being served." Heilbrun, *Evaluation for Risk of Violence* 55.

Dr. Coons's methodology should not be mistaken for an anamnestic approach. Dr. Coons failed to rely on factors empirically demonstrated to correlate with risk of future violence and did not identify individualized risk factors based on questioning of Mr. Coble regarding his history over the prior eighteen years. As Dr. Coons testified, his conclusions were based entirely on documents provided by the prosecution, including the report of an interview he performed with Mr. Coble eighteen years earlier. Dr. Coons did not "perform any psychiatric assessment of appellant after his eighteen years of nonviolent behavior on death row." Pet. App. 43a. Rather, Dr. Coons identified risk factors based solely on "his own personal methodology" (*id.* 24a), and whether a factor "'means something to [him] in terms of [his] education or experience or background'" (*id.* 25a).

B. Structured Risk-Assessment Tools Are Scientifically Grounded And Modestly But Consistently More Reliable Than The Unstructured Clinical Approach

In appropriate cases, expert testimony based on structured risk-assessment approaches can be scientifically reliable and provide a modest advantage over unstructured approaches. Indeed, "[t]here is a great deal of evidence that validated risk assessment tools provide a way of effectively distinguishing those at different levels of risk for violence, violent offending, and certain other antisocial outcomes." Heilbrun, *Evaluation for Risk of Violence* 74. Moreover, structured techniques have repeatedly "demonstrate[d] superiority to unstructured clinical judgment in forecasting dangerousness." Krauss & Lieberman, *Expert Testimony* 230; *see also* Monahan, *Structured Risk Assessment* 31.

For instance, a number of meta-analyses (which examine and statistically combine the results of several studies) provide "considerable evidence for the utility of the actuarial prediction of violent behavior, including criminal recidivism." Heilbrun et al., *Violence Risk Assessment Tools* 10. In a number of head-to-head comparisons, "[a]ctuarial-based risk predictions of future dangerousness have outperformed unstructured clinical judgments." Krauss & Lieberman, *Expert Testimony* 232. Likewise, multiple studies show that structured professional judgments "are significantly predictive of violent recidivism" and superior to the unstructured clinical approach. Heilbrun et al., *Violence Risk Assessment Tools* 12.

The "enhanced structure associated with" these approaches eliminates many of the problems that render unstructured clinical approaches unreliable. *See*

Heilbrun, *Evaluation for Risk of Violence* 64. For example, structured risk-assessment tools account for base rates. This minimizes the chance that an evaluator will ignore or incorrectly estimate that rate, which often occurs with unstructured approaches. *See id.* at 45-46. As discussed *supra* Part I, absent consideration of base rates, risk assessments are likely to be skewed because there is no basis to compare a particular individual to the average. Moreover, because they are based on established, peer-reviewed methodology with known error rates, structured approaches provide greater transparency, allowing the jury to make a more informed decision when evaluating expert conclusions. *Cf. Daubert* v. *Merrell Dow Pharms., Inc.*, 509 U.S. 579, 595 (1993) (expert testimony "'can be both powerful and quite misleading because of the difficulty of evaluating it'").

To be sure, these more reliable approaches to assessing future dangerousness have largely been developed outside the capital context where populations of sufficient size have afforded the basis for analysis. Reliably assessing future dangerousness of capital offenders is more challenging, at least to the extent the law requires an assessment of future risk outside prison, because capital offenders spared the death penalty typically receive life in prison and consequently there is very little data with which to make the assessment. On the other hand, the fact that release into the community is rare means that the risk of future violence *in prison* is almost always the more relevant inquiry in the death penalty context. *See* Cunningham & Sorenson, *Capital Offenders in Texas Prisons*, 31 L. & Hum. Behav. 553, 554 (2007) (in assessing capital offenders' future dangerousness, "only prison is relevant or measurable" because "[c]urrent capital life inmates

face multi-decade prison confinement or life-without-parole"). And structured risk-assessment tools are currently being developed to increase the reliability of future-dangerousness assessments of capital offenders in prison. *See id.* at 555.[11]

III. UNSTRUCTURED CLINICAL RISK-ASSESSMENT TESTIMONY IS UNDULY PERSUASIVE TO JURIES

Admitting testimony based on unstructured clinical future-dangerousness assessments, like that offered by Dr. Coons, poses a special danger in capital cases. Despite the scientific invalidity of such evidence, research demonstrates that capital juries give it undue weight in their deliberations. The risk that such testimony will lead capital juries to the wrong conclusion is great. Whether the Constitution bars its admission is therefore significant because that question determines whether the constitutional harmless-error standard will apply.

Studies show that in determining whether to assess the death penalty, juries spend a significant amount of time deliberating a defendant's propensity for dangerousness. Where a jury must decide whether a defen-

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[11] Empirical evidence suggests that inmates serving life sentences have similar or lower rates of violence than other offenders. Sorensen & Cunningham, *Conviction Offense and Prison Violence*, 56 Crime & Delinquency 103, 105, 122-123 (2010). As discussed *supra* Part I, "[l]ow base rates of serious violent misconduct in prison are a primary barrier to any predictive scheme," Cunningham et al., 12 Assessment at 40, and are a particular barrier to unstructured clinical judgments such as Dr. Coons's. However, structured risk-assessment tools (such as the Risk Assessment Scale for Prison) are being developed to increase the reliability of such assessments by taking account of those low base rates.

dant poses a future danger before it can impose the death penalty, "[v]irtually all [jury] disagreements and prolonged discussions concerned" future dangerousness. Costanzo & Costanzo, *Life or Death Decisions*, 18 L. & Hum. Behav. 151, 168 (1994). Even when a future-dangerousness finding is not a prerequisite to a capital sentence, "topics related to the defendant's dangerousness should he ever return to society … are second only to the crime itself in the attention they receive during the jury's penalty phase deliberations." Blume et al., *Future Dangerousness in Capital Cases*, 86 Cornell L. Rev. 397, 404 (2001). This is true even when the prosecution has made little to no mention of the issue. *See id.* at 406-407.

Moreover, empirical data demonstrate that purportedly expert testimony regarding a defendant's future dangerousness "strongly affects final outcomes when it is presented." Krauss & Sales, 7 Psychol., Pub. Pol'y & L. at 274. Because jurors are already inclined to believe that a capital defendant poses a future danger, they tend to overvalue expert assessments confirming those beliefs. Showalter & Bonnie, *Psychiatrists and Capital Sentencing*, 12 Bull. Am. Acad. Psychiatry L. 159, 165 (1984). In fact, studies indicate that jurors are often less influenced by the content of an expert's testimony than by his mere presence or credentials. *See* Greenberg & Wursten, 19 *The Psychologist and the Psychiatrist as Expert Witnesses*, Prof. Psychol., Res. & Prac. 373, 376-377 (1988).

Strong evidence suggests that jurors weigh unstructured clinical testimony regarding a defendant's future dangerousness more heavily than empirically based risk-assessment approaches across a variety of legal contexts, Krauss & Sales, 7 Psychol., Pub. Pol'y & L. at 305; *see also* Sandys et al., 37 J. Psychiatry & L. at

217 (mock jurors "rate clinical opinion as equally scientific, more persuasive and more influential than actuarial testimony"), even though their relative scientific value is precisely the reverse. Although empirically based instruments "have improved the accuracy of [future-dangerousness] predictions" and "outperform[ed] clinical assessments," jurors continue to place greater weight on unstructured clinical expert testimony. Sandys et al., 37 J. Psychiatry & L. at 217 (citing studies); *see also supra* Part II. Researchers have hypothesized that this is so because unlike anecdotal or individualized data about the defendant, jurors have greater difficulty processing "complex and statistical information." *Id.* at 218; *see also* Cutler & Kovera, *Expert Psychological Testimony*, 20 Current Directions in Psychol. Sci. 53, 55-56 (2011) (jurors may have difficulty distinguishing valid research from "junk science").

Notably, jurors' reliance on clinical expert testimony persists even after exposure to adversary procedures like cross-examination and the presentation of competing experts. Krauss & Sales, 7 Psychol., Pub. Pol'y & L. at 302, 305. These effects have also been found after juries are allowed to deliberate. Krauss & Lee, 26 Int'l J. of L. & Psychiatry at 116-117, 130-131. This research indicating that the presentation of additional evidence cannot undo the prejudicial effect of unreliable unstructured clinical testimony calls into question one of the core premises in *Barefoot*: that the adversary process may be trusted "to sort out the reliable from the unreliable evidence" especially when the defendant "has the opportunity to present his own side of the case." *See* 463 U.S. at 901.

The empirical evidence also strongly suggests that although Dr. Coons's testimony—which the Texas court held was "insufficiently reliable" (Pet. App.

22a)—added nothing probative on the future-dangerousness issue, it likely had a significant prejudicial effect on jury deliberations. *Id.* 42a ("[s]ome of Dr. Coons's factors have great intuitive appeal to jurors and judges"). As one judge has explained, "the problem here … is not the introduction of one man's opinion on future dangerousness, but the fact that the opinion is introduced by one whose title and education (not to mention designation as an 'expert') gives him significant credibility in the eyes of the jury as one whose opinion comes with the imprimatur of scientific fact." *Flores* v. *Johnson*, 210 F.3d 456, 465-466 (5th Cir. 2000) (Garza, J., concurring). Because capital juries tend to give far greater weight to clinical as opposed to statistical expert testimony, the defense's presentation of statistical expert testimony in this case cannot eliminate the taint of Dr. Coons's testimony.

CONCLUSION

For the foregoing reasons and as set forth in Mr. Coble's petition, the Court should grant certiorari.

Respectfully submitted.

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