ARTICLES

IS IT SCIENCE OR STORYTIME? EXPERT TESTIMONY EVALUATING CHILD WITNESS CREDIBILITY IN SEXUAL ASSAULT CASES

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While jurors struggle with determining any witnesses' credibility, an even more arduous task is determining the credibility of a child victim in a sexual assault case. Due to developmental immaturity, children lack important recall and communication skills, and the well-established procedures of direct and cross examination are ineffective at producing accurate and complete trial testimony. Despite the adversarial system being proven ineffective in these contexts, American courts remain hesitant to admit expert testimony based on established psychology tools. Specifically, courts have questioned the application of Statement Validity Assessments ("SVAs"), to assist jurors in evaluating witness credibility, as they believe such testimony is unreliable and invades the province of the jury. However, using SVAs to assist jurors in evaluating witness credibility is not a radical or new concept, with inquisitorial and some adversarial criminal justice systems outside the United States using them for decades. These expert witnesses conduct SVAs on child witnesses' pretrial allegations to form an opinion as to the veracity of the witnesses' truthfulness in those statements and testify to the results in court.

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This Article discusses the admissibility of expert testimony using SVAs as an aid to jurors in their assessment of child witness credibility in sexual assault cases in the United States. First, the Article addresses the difficulties jurors have in determining the credibility of witnesses, highlighting the inadequacies of the current adversarial system in producing accurate testimony because of the unique challenges child witnesses present. Second, the Article demystifies the three-step SVA process, detailing the SVA foundational research and routine across the globe. Third, the Article addresses the reliability of the SVA under Federal Rule of Evidence 702 and the Daubert standard. Specifically, this Article advocates that SVA evidence does not deprive the jury of its ultimate determination of credibility but serves as a reliable tool that the jury can use to decipher such challenging types of evidence.

IS IT SCIENCE OR STORYTIME?

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INTRODUCTION

All eyes are on the witness stand in courtrooms across the United States. Trials require witnesses to lay the foundation for evidence and tell the story of the case. Jurors sit captive in the jury box, tasked with the critical function of evaluating the credibility of those trial witnesses—hanging on their every word and watching their body language for some tell-tale sign of lying. Particularly in child sexual assault cases, the prosecution's key witness is usually the alleged victim. That child victim's version of events is delivered to the jury through an often awkward and stilted direct examination, and the defense challenges the child's credibility through leading questions on cross examination.¹ Unfortunately, this well-established adversarial process is ineffectual in providing jurors with the tools to make an accurate assessment of the credibility of child witnesses.² These child witnesses struggle to convey information given their developmental immaturity³ and often respond to questioning inaccurately because of improper suggestion, complex question structure, or a natural inclination to agree with questions they do not understand.⁴ Despite those demonstrated shortcomings and studies replayed finding that juries, when left to their own devices, are generally poor evaluators of witness credibility,⁵ U.S. courts are resistant to expert testimony regarding a

4. Rebecca Nathanson, *Child Testimonial Competence and Reliability, in* CHILDREN'S LAW MANUAL 45, 46 (Nat'l Ass'n Couns. for Child. 2005); *see* Robert H. Pantell, *The Child Witness in the Courtroom,* 139 AM. ACAD. PEDIATRICS 1, 4 (2017) (noting that while a child's development is the most likely factor impacting the quality of testimony, external factors, such as postponements, contribute to levels of fear and anxiety affecting a child's ability to answer questions); Kathleen M. Quinn, *The Credibility of Children's Allegations of Sexual Abuse,* 6 BEHAV. SCIS. & L. 181, 184 (1988) (explaining that developmental differences in memory creation impacts the way children respond to leading or suggestive questioning).

5. See Charles F. Bond., Jr. & Bella M. DePaulo, Accuracy of Deception Judgments, 10 PERSONALITY & SOC. PSYCH. REV. 214, 230, 233 (2006) (finding across many studies that people are only able to accurately assess truthfulness approximately half of the time); Paul Ekman & Maureen O'Sullivan, *Who Can Catch a Liar*?, 46 AM. PSYCH. 913, 919–20 (1991) (concluding that even those with professional experience that may make them more effective lie detectors, such as Secret Service officers, cannot detect lies with perfect accuracy); Leanne Ten Brinke, Kathleen D. Vohs & Dana R. Carney, *Can Ordinary People Detect Deception After All*?, 20 TRENDS COGNITIVE SCIS. 579, 579, 581 (2016)

^{1.} See Stacia N. Stolzenberg & Thomas D. Lyon, *How Attorneys Question Children About the Dynamics of Sexual Abuse and Disclosure in Criminal Trials*, 20 PSYCH., PUB. POL'Y, & L. 19, 26–27 (2014) (describing the most common characteristics of prosecution and defense attorney questions of child victims of sexual assault and suspects).

^{2.} See Rachel Zajac, Sarah O'Neill & Harlene Hayne, *Disorder in the Courtroom? Child Witnesses Under Cross-Examination*, 32 DEV. REV. 181, 192–93 (2012) (naming various factors that impede jurors' assessment of the credibility of child witnesses, including the attorneys' style of questioning and comparing accounts).

^{3.} See Julie A. Dale, Comment, Ensuring Reliable Testimony from Child Witnesses in Sexual Abuse Cases: Applying Social Science Evidence to a New Fact-Finding Method, 57 ALB. L. REV. 187, 205 (1993) (arguing that assessments of child witness credibility should consider cognitive abilities, among other factors).

witness's credibility and the use of established psychology tools such as Statement Validity Assessments ("SVAs") to assist jurors with their credibility determinations.⁶

To illustrate the need for a new approach to child witness credibility assessments, imagine Carrie, a ten-year-old girl, comes forward with allegations that her uncle sexually assaulted her. The uncle is charged with sexual assault of a minor, and the case proceeds to trial. Carrie takes the stand to tell the jury her version of the facts. This is the point at which the challenges and pitfalls of child testimony within the current U.S. system become apparent.

The prosecution worked tirelessly to prepare Carrie for her day in court, but the trial procedures and physically intimidating courtroom environment terrify Carrie. She is nervous and embarrassed. The prosecutor tries to conduct direct examination, allowing Carrie to show her sincerity and candor, but Carrie does not understand the vague, open-ended questions.⁷ She does not provide important details. She skips critical events and she equivocates. She is looking down, fidgeting, and downplaying events as children often do when they are scared or feel they have done something wrong.⁸ The prosecution asks

8. See Nicholas Bala, Karuna Ramakrishnan, Roderick Lindsay & Kang Lee, Judicial Assessment of the Credibility of Child Witnesses, 42 ALTA. L. REV. 995, 1002, 1017

⁽suggesting a framework of three circumstances to aid in better conscious deception detection).

^{6.} *See* United States v. Scheffer, 523 U.S. 303, 313 (1998) (finding that the expert testimony regarding the results of a polygraph was inadmissible); Winsett v. State, No. 10-15-00348-CR, 2017 WL 4080156, at *8–9 (Tex. App. Sept. 13, 2017) (finding Criteria-Based Content Analysis (CBCA) testimony inadmissible after considering seven factors, including the *Daubert* five, because the test's methodologies have been "determined to be inappropriate for use in American forensic interviews and, in particular, in evaluating the validity of sexual-abuse allegations"); Salazar v. State, 127 S.W.3d 355, 359–60 (Tex. App. 2004) (noting that the expert's own testimony was not sufficiently reliable and therefore inadmissible given the expert's admission that the CBCA was not "generally accepted by the relevant scientific community, that study of the technique was still ongoing and far from complete, and that the potential for error in using the analysis was still great").

^{7.} See FED. R. EVID. 611(c). "Leading Questions should not be used on direct examination except as necessary to develop the witness's testimony. Ordinarily, the court should allow leading questions: (1) on cross examination; and (2) when a party calls a hostile witness, an adverse party, or a witness identifies with an adverse party." *Id.; see also* Stolzenberg & Lyon, *supra* note 1, at 26–27 (finding that defense attorneys ask children more leading questions and question the truthfulness of answers, but both defense attorneys and prosecutors predominantly ask children simple yes or no questions, which children tend to respond to with very little detail).

permission from the court to lead the witness, but leading does not resolve the issues.⁹ Asking leading questions takes the story away from Carrie, and the jury suspects the words are merely an exaggeration by the prosecutor.¹⁰ As a result, the prosecution has difficulty developing the story, persuading the jurors, and ultimately meeting their burden.

The struggles are not the prosecution's alone. The defense attorney has the arduous task of cross-examining Carrie, a terrified and traumatized child. When she is non-responsive, the defense attorney is severely limited in the appropriate techniques that can be used to obtain responses to essential questions.¹¹ Every "push" appears overbearing, rude, and aggressive. Delving into sexual conduct with a child witness creates an uncomfortable atmosphere that pressures the defense attorney to truncate the cross-examination to avoid alienating the jury.¹² Important avenues of cross-examination are left unexplored, and defense counsel loses credibility as clarifying leading questions are seen by jurors as harassing the child witness.

This problem does not merely hurt the parties' ability to win their case; when cross-examination fails to test the accuracy of a witness's account of the facts, the jury is left with inaccurate information.¹³

^{(2005) (}explaining how typical signs of nervousness, such as fidgeting and gaze aversion, are often misattributed to lying); *see also* Barry Nurcombe, *The Child as Witness: Competency and Credibility*, J. AM. ACAD. CHILD PSYCHIATRY 25, 473–80 (1986) (suggesting modified courtroom proceedings, such as video interviews and pretrial clinical evaluations, to address issues of suggestibility and fabrication in child witnesses).

^{9.} FED. R. EVID. 611(c). "Leading questions should not be used on direct examination except as necessary to develop the witness's testimony...." *Id.*

^{10.} See THOMAS A. MAUET & STEPHEN D. EASTON, TRIAL TECHNIQUES AND TRIALS 134 (11th ed. 2021) (detailing how leading questions switch focus away from the witness to the examining attorney).

^{11.} See, e.g., Davis v. Alaska, 415 U.S. 308, 316 (1974) (emphasizing that the crossexaminer is permitted to not only challenge the witness' story but also use various tools to impeach and discredit the witness); MAUET & EASTON, *supra* note 10 (demonstrating techniques for controlling non-cooperative witnesses on cross examination through tight, leading, one-fact questions; repeating questions; raising a hand; stepping toward the witness; and following up with questions that include "so the answer to my question is yes").

^{12.} *See* Zajac et al., *supra* note 2, at 192 (describing a study finding that jurors are critical of cross-examination that they perceive as inappropriate for the child's developmental stage and questions that seem to distress the child).

^{13.} See Emma Davies, Emily Henderson & Kirsten Hanna, Facilitating Children to Give Best Evidence: Are There Better Ways to Challenge Children's Testimony?, 34 CRIM. L.J. 347, 351–52 (2010) (finding that certain lines of questioning in cross-examination are more likely to yield inaccurate testimony).

Cross-examination is supposed to operate as the ultimate tool to test the veracity of the witness, but with children, it fails to deliver accurate testimony¹⁴ and does not promote truthful testimony or adequately protect the accused's confrontation rights.

As far back as 1940, John Henry Wigmore foreshadowed stepping outside of the traditional process and embracing the possibility of science assisting with the determination of witness credibility when he said "[i]f there is ever devised a psychological test for the valuation of witnesses, the law will run to meet it."¹⁵ More than eighty years later, some courts have embraced such a test for evaluating *pretrial statements* by children in sexual assault cases;¹⁶ the test is the SVA.¹⁷ This interpretive test, administered by psychologists and other trained professionals, is the foundation for expert witness opinions regarding

^{14.} See id. at 353; Zajac et al., supra note 2, at 192-93.

^{15.} JOHN HENRY WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW 237 (2d ed. 1923). Wigmore further asserted that "[w]henever the Psychologist is really ready for the Courts, the Courts are ready for him." *See* Maj. Thomas J. Feeney, *Expert Psychological Testimony on Credibility Issues*, 115 MIL. L. REV. 121, 121 (1987) (citing JOHN HENRY WIGMORE, TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW 368 (3d ed. 1940)).

^{16.} Some of the countries that permit SVA and CBCA expert testimony include Germany, Sweden, the United Kingdom, the Netherlands, and Chile. *See* Aldert Vrij, *Criteria-Based Content Analysis: A Qualitative Review of the First 37 Studies*, 11 PSYCH. PUB. POL'Y & L. 3, 3–4 (2005) [hereinafter *Criteria-Based Analysis*]; Bala et al., *supra* note 8, at 1001–02 (explaining the credibility assessment analytical tools used in Canada); *see also* Mauricio Duce J., *Una Aproximación Empírica al uso y Prácticas de la Prueba Pericial en el Proceso Penal Chileno a la Luz de su Impacto en los Errores del Sistema* [An Empirical Approach to the Use and Practices of Expert Evidence in the Chilean Criminal Procedure in Light of its Impact on Wrongful Decisions of the System] 13 POLIT. CRIM. 42, 46–47 (2018) (explaining that the US is a leader in the study of inadequate use of expert witness from an empirical perspective, with England, Wales, Canada, Germany, and China also debating this issue); Francien Lamers-Winkelman, *Statement Validity Analysis: Its Application to a Sample of Dutch Children Who May Have Been Sexually Abused*, 2 J. AGGRESSION, MALTREATMENT & TRAUMA 59, 73–75 (2000) (discussing the Netherlands' use of the SVA).

^{17.} *See infra* Part II for a full discussion of the individual parts of the Statement Validity Assessment (SVA) including its most critical second step—the Criteria-Based Content Analysis (CBCA).

the veracity¹⁸ of pretrial factual accounts by child witnesses in sexual assault cases.¹⁹

In the case of Carrie, were an expert witness who had conducted an SVA analysis on Carrie's pretrial allegation to take the stand, this would not supplant the testimony of Carrie at trial.²⁰ Carrie would still have to testify, and the Defendant would still have an opportunity to confront her through cross examination.²¹ To be clear, in-court statements are not analyzed under an SVA. Rather, the expert

20. *See* Honts, *supra* note 18, at 895 (noting that the role of the SVA expert would only be to educate the jury about the SVA process).

^{18.} In this Article, the terms "veracity" and "credibility" are used interchangeably. The Author recognizes that these terms are often defined differently. For example, veracity is often used to mean accuracy, while credibility is often used to mean truthfulness in the sense of consciously telling the truth or lying. However, the legal arguments in this Article do not rely on a distinction between the conscious and unconscious inaccuracy of the account. In this Article, while necessary to appreciate the impact of conscious lying versus simply inaccurate accounts, distinctions are made clear in the text. *See generally* Charles Robert Honts, *Assessing Children's Credibility: Scientific and Legal Issues in 1994*, 70 N.D. L. REV. 879, 892 (1994) (emphasizing that from a scientist's perspective, validity refers to the accuracy of a given technique).

^{19.} While the SVA and its second step, the CBCA, were developed to evaluate child victims in sexual abuse cases, some researchers in the field advocate for expanding these techniques to adult witnesses and alleged victims of other crimes. *See* Bárbara G. Amado, Ramón Arce & Francisca Fariña, *Undeutsch Hypothesis and Criteria Based Content Analysis: A Meta-Analytic Review*, 7 EUR. J. PSYCH. APPLIED TO LEGAL CONTEXT 3, 5, 9 (2015) (concluding widespread credibility and generalizability of SVA and CBCA checklist practices); Aldert Vrij & Samantha Mann, *Criteria-Based Content Analysis: An Empirical Test of Its Underlying Processes*, 12 PSYCH. CRIME & L. 337, 338 (2006) (noting that while the CBCA was developed for children, many advocate the use of the technique in the evaluation of various types of adult testimony).

^{21.} If Carrie's out-of-court statements are offered for the truth of the matter asserted in the statement, these statements would likely be inadmissible hearsay. However, when the expert takes the stand, Carrie's out-of-court statements may be admitted as the basis for the expert's opinion under FRE 703 if the proponent of the evidence can demonstrate that the "probative value in helping the jury evaluate the [expert's] opinion substantially outweighs their prejudicial effect." FED. R. EVID. 703. In addition, there are no Confrontation Clause issues as long as the child is testifying in court and is subject to cross examination. In using the statements for that purpose, the expert is not offering the statements for the truth of the matter asserted, but rather, they are admitted to assist the jury in evaluating the expert opinion regarding the veracity of the original allegation. A deeper discussion of the courtroom procedures and potential hearsay challenges to admitting this testimony is outside the scope of this Article.

conducts the three-step SVA process prior to trial.²² That process includes: (1) a structured interview with the child; (2) a series of interpretative tests, called a Criteria-Based Content Analysis ("CBCA"), aimed at analyzing the witness's statement by considering eighteen factors, including the amount of detail, word choice, emotional state, and prior statements in relation to the age of the witness; and (3) a validity checklist that analyzes alternative reasons for the CBCA scores.²³ Then the expert comes to court and testifies to the SVA results based on out-of-court statements that happened *before* the child was subjected to repeated interviews or stressful and suggestive procedures at trial.²⁴ Therefore, the expert is conducting tests before the trial even begins and testifying to the methods, principles, and results of those tests at trial, where their methods and conclusions are also subject to cross examination.²⁵ As with all expert opinions, the factfinder is free to accept, modify, or disregard the expert's assessment.²⁶

This process allows the jurors to use those SVA test results as just one factor in making their own determination as to witness credibility.²⁷ The SVA is not a magic pill that solves all the issues with examining child witnesses. Instead, an SVA provides additional information to jurors who would otherwise be left with the untenable task of

^{22.} *See* Honts, *supra* note 18, at 888–89 (explaining that SVA should be used early in the investigation of child sexual abuse but can be applied with caution at any phase of the investigation).

^{23.} See id. at 888–93; see also David A. Anson, Stephen L. Golding & Kevin J. Gully, *Child Sexual Abuse Allegations: Reliability of Criteria-Based Content Analysis*, 17 L. & HUM. BEHAV. 331, 332 (1993) (describing the goals of the various sub-tests incorporated into the SVA process).

^{24.} *See* Honts, *supra* note 18, at 889–90 (describing that the interview should be "open-ended" and not involve leading the child).

^{25.} See David M. Godden & Douglas Walton, Argument from Expert Opinion as Legal Evidence: Critical Questions and Admissibility Criteria of Expert Testimony in the American Legal System, 19 RATIO JURIS 261, 276–77 (2006) (expressing how it is a unique characteristic of legal proceedings that expert testimony faces cross-examination and a thorough critique).

^{26.} But see id. at 264 (stating that it is unlikely the judge will have sufficient knowledge to disregard the conclusions of the court's own expert).

^{27.} David C. Raskin & Phillip W. Esplin, Statement Validity Assessment: Interview Procedures and Content Analysis of Children's Statements of Sexual Abuse, 13 BEHAV. ASSESSMENT 265, 268 (1991) (emphasizing that the "purpose of SVA is to provide an assessment of the validity of the recorded statement, not of the general credibility of the child witness").

determining the credibility of child witnesses using mere guesswork based on faulty "demeanor evidence" and incomplete trial testimony.²⁸

Although it may seem like a radical concept, SVAs are not new. Rather, expert witnesses have been testifying using SVAs as routine in inquisitorial and some adversarial criminal justice systems outside the United States for decades.²⁹ Thus far, the United States has mostly resisted the allure of SVAs.³⁰ However, that resistance is eroding due to a trend toward the admission of expert testimony as long as it assists the jury in determining the reliability of eyewitness testimony when the jurors lack critical evaluative information.³¹

Still, it is to be expected that some critics will claim that if the factfinder delegates to an expert any aspect of the determination of witness credibility, the trial is actually being decided by the experts

30. See Winsett v. State, No. 10-15-00348-CR, 2017 WL 4080156, at *9 (Tex. App. 2007) (finding CBCA testimony inadmissible); Salazar v. State, 127 S.W.3d 355, 359–60 (Tex. App. 2004) (finding same); see also Commonwealth v. Davis, 541 A.2d 315, 318–19 (Pa. 1988) (finding that counsel's failure to object to expert testimony regarding the credibility of sexually abused children amounted to ineffective assistance of counsel); Tingle v. State, 536 So. 2d 202, 205 (Fla. 1988) (refusing to admit expert testimony about whether the child was telling the truth). But see State v. Bomar, 182 P.3d 47, 52 (Mont. 2008) (permitting testimony based on the CBCA in a trial where defense counsel waived a *Daubert* hearing and did not properly preserve the *Daubert* challenge for appeal).

31. See State v. Felipe G., 532 N.W.2d 145, at *3 (Wis. Ct. App. 1995) (per curiam) (holding that child sexual assault cases present issues that the lay person would struggle with and that expert testimony is admissible if it will assist the jury with said issues). See generally Jules Epstein, The Great Engine that Couldn't: Science, Mistaken Identifications, and the Limits of Cross-Examination, 36 STETSON L. REV. 727, 735–46 (2007) (discussing the use of expert testimony on weapons focus, lineup instructions, post-event information, cross-racial bias, and other areas on the accuracy of eyewitness testimony).

^{28.} See *infra* Section I.A for a discussion on the unreliability of "demeanor evidence."

^{29.} For example, in Chile, a non-jury adversarial system, the court selects and compensates an evaluator to perform the SVA on the out-of-court statement of a child who has alleged a sexual assault in nearly all child sexual assault cases. *See* Duce, *supra* note 16. The evaluator then submits a report and provides testimony to the trial judge, offering an opinion on whether the child's pretrial account of the sexual assault is likely truthful. *Id.* Other countries that permit the SVA and CBCA expert testimony include Germany, Sweden, the United Kingdom, and the Netherlands. *See Criteria-Based Analysis, supra* note 16, at 3 (describing SVAs as the "most popular" method for assessing the credibility of children's claims of sexual assault and naming the countries in which it is used); *see also* Lamers-Winkelman, *supra* note 16, at 73–75 (describing findings from studies of the use of SVAs in the Netherlands); Bala et al., *supra* note 8, at 996–97 (describing studies of Canadian veracity assessments).

rather than the jury.³² In some contexts, this concern is outweighed by necessity because the jury, as laypeople, cannot perform the tests conducted by experts.³³ For example, an attorney may present evidence from the driver of a car detailing how fast she was driving, the fact that she applied her brakes as soon as she saw the oncoming vehicle, and the existence of skid marks created by her car as she attempted to stop. Jurors are free to conclude that witness's credibility based on her testimony.³⁴ Some attorneys would also introduce an accident reconstruction expert who would use scientific methods to analyze the facts of the scene, contextualize them for the jurors and explain conclusions about that evidence based on reliable methods of analysis.³⁵ That expert may offer an opinion on the likely cause of an accident, which may affect the jury's conclusion on the credibility of the driver's testimony.³⁶ That expert testimony is admissible because the

^{32.} See Epstein, supra note 31, at 755–60; see, e.g., United States v. Azure, 801 F.2d 336, 340 (8th Cir. 1986) (emphasizing that although some expert testimony may be helpful in special circumstances, "putting an impressively qualified expert's stamp of truthfulness on a witness' story goes too far"); United States v. Samara, 643 F.2d 701, 705 (10th Cir. 1981) (stating that an expert "may not go so far as to usurp the exclusive function of the jury to weigh the evidence and determine credibility" (quoting United States v. Ward, 169 F.2d 460, 462 (3d Cir. 1948))); Godden & Walton, supra note 25, at 264 (explaining that juries and judges may "be tempted to *defer*" to experts in their judgements of complex information).

^{33.} *See* Godden & Walton, *supra* note 25, at 264 (emphasizing that the role of experts in court proceedings is often where factfinders are "dependent upon [the experts] in an epistemic sense" and therefore, the judges will defer to the experts because the experts have the authority and background in the areas that the judges and juries are "unfit to question or challenge").

^{34.} See James Chalmers, Fiona Leverick & Vanessa E. Munro, Handle with Care: Jury Deliberation and Demeanour-Based Assessments of Witness Credibility, 26 INT'L J. EVIDENCE & PROOF 381, 382 (2022) (arguing that it is unclear how effectively juries can turn competing testimony into an accurate verdict).

^{35.} *See* FED. R. EVID. 702 ("A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.").

^{36.} See Steven I. Friedland, On Common Sense and the Evaluation of Witness Credibility, 40 CASE W. RES. L. REV. 165, 174–75 (1989) (detailing the types and effects of generalized, indirect credibility testimony).

jurors cannot conduct that reconstruction analysis independently.³⁷ An expert is needed to perform the tests and interpret the evidence.³⁸

Similarly, an expert may be needed to organize and clarify a child's account of sexual assault because of the unusual and often misleading ways children convey information.³⁹ Thus, allowing SVA evidence would not lead to a trial decided by experts. In fact, the experts would be serving a vital role in ensuring the factfinder has the relevant information to assess critical witness credibility under circumstances where the trial testimony may be limited.

While experts and the broader scientific community routinely using the SVA three-step methodologies, the test is relatively unfamiliar to U.S. courts⁴⁰ and there is a general suspicion of the reliability of the underlying science, even though several countries regularly rely on SVA expert testimony. Federal Rule of Evidence Rule 702 (FRE 702) and guidance from the U.S. Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals*⁴¹ provide the standard of evidentiary reliability for an expert's testimony based on scientific knowledge.⁴² Pursuant to FRE 702(c), the judge must determine whether the proffered expert testimony is the product of "reliable principles and methods."⁴³ "Perfect reliability" is not necessary for admission.⁴⁴ The *Daubert* Court

^{37.} See FED. R. EVID. 703 ("[P]robative value in helping the jury evaluate the [expert's] opinion substantially outweighs their prejudicial effect.").

^{38.} See FED. R. EVID. 702(a)(d).

^{39.} See Anne Bowen Poulin, *Credibility: A Fair Subject for Expert Testimony*?, 59 FLA. L. REV. 991, 1035 (2007) (stating that expert testimony can be used to educate juries on issues of perception and memory in child sexual abuse cases).

^{40.} It is important to note that courts outside of the United States follow different rules of admissibility and, in some of these countries, the factfinder is the judge sitting without a jury.

^{41. 509} U.S. 579 (1993).

^{42.} See FED. R. EVID. 702 ("A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case."). See generally Daubert, 509 U.S. at 589–90 (providing guidelines to determine whether the reasoning behind scientific testimony is scientifically substantiated and applicable to the facts of the case, and overriding the need for testimony to be generally accepted to be admissible); Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141 (1999) (expanding a judge's gatekeeping obligations to cases involving any expert testimony, not simply scientific testimony).

^{43.} FED. R. EVID. 702(c).

^{44.} See Nathanson, supra note 4, at 46–49.

established a non-exhaustive list of factors that judges consider when determining the admissibility of expert testimony.⁴⁵ In determining whether SVAs would constitute "reliable science," courts may find that the SVA—although unfamiliar—appears to satisfy some, if not all, of the *Daubert* factors.

This Article addresses the uncertainty and skepticism surrounding SVA testimony in the United States, particularly its subpart, the CBCA. Moreover, the Article advocates for the admission of SVA testimony in appropriate cases where the test's reliability as applied can be demonstrated, and the jury would be assisted by the additional evaluation of the child witness's out-of-court statement.

Part I addresses jurors' difficulties in determining the credibility of witnesses generally and then considers child witnesses in particular. This Part discusses the unique challenges faced when attempting to accurately determine child witness credibility in sexual assault cases and highlights the inadequacies of the current system in producing complete and accurate trial testimony.

Part II takes a critical look into evaluating child witness veracity using the SVA with particular emphasis on the CBCA. This Part discusses the general principles affecting the veracity of child witness statements and the history of the SVA and CBCA in evaluating child witnesses in sexual assault cases.

Part III analyzes this issue in relation to the Federal Rules of Evidence and common law principles of admissibility. Part III explains why SVA testimony would likely pass the threshold for admissibility under FRE 702 and the *Daubert* reliability standard. Specifically, this Part advocates for viewing SVA evidence not as depriving the jury of their ultimate determination of credibility, but rather the testimony of these experts in child sexual assault cases should be viewed as a tool that the jury can use to decipher and make sense of this challenging type of testimony.

^{45.} *Daubert*, 509 U.S. at 593–94 (providing federal judges with key considerations when determining expert testimony admissibility such as whether the scientific community has scrutinized the theory through either peer review or publication, the scientific theory's general acceptance, and the scientific technique's potential rate of error).

I. THE ADVERSARIAL SYSTEM PROVIDES JURORS WITH INSUFFICIENT INFORMATION TO ACCURATELY EVALUATE THE CREDIBILITY OF CHILD WITNESSES IN SEXUAL ASSAULT CASES

Jurors struggle with determining the credibility of witnesses. Moreover, demeanor evidence, traditionally heavily relied on by juries in determining credibility, can be misleading and specious.⁴⁶ Factor child witnesses in sexual assault cases into the equation, who come with a host of additional challenges, and jurors face serious difficulty in separating the facts from fiction.⁴⁷ Children not only lack critical recall skills due to their young age, but direct and cross-examination procedures are ineffective at aiding jurors in making credibility determinations of these witnesses.⁴⁸ Expert witnesses testifying to findings under the SVA could increase the accuracy of child witness credibility determinations, thereby increasing the accuracy of trial verdicts.

A. Jurors Are Poor at Assessing Witness Credibility

In countless studies regarding memory creation, retention, and recall, researchers and scientists have acknowledged the "imperfection" of memory.⁴⁹ This increased understanding of the fallibility of memory has shed light on two of the most essential and ever-present evidentiary questions in our legal justice system: (1) how to assess the credibility of fact witness testimony⁵⁰ and (2) how much

^{46.} Jeremy A. Blumenthal, A Wipe of the Hands, a Lick of the Lips: The Validity of Demeanor Evidence in Assessing Witness Credibility, 72 NEB. L. REV. 1157, 1158, 1165 (1993).

^{47.} See Zajac et al., supra note 2, at 192 (explaining the negative impact of suggestive questioning styles and complex cross-examination on juries' judgments of child victims).

^{48.} *See* Quinn, *supra* note 4, at 184 (explaining the various issues of child memory development and styles of questioning that are ineffective considering the stages of development).

^{49.} Joyce W. Lacy & Craig E. L. Stark, *The Neuroscience of Memory: Implications for the Courtroom*, 14 NATURE REVS. NEUROSCIENCE 649, 649 (2013) (discussing the research and findings from empirical memory experiments showing the fragility of memory, such as the "forgetting curve," indicating "that people are unable to retrieve roughly 50% of information one hour after encoding"); *see* Epstein, *supra* note 31, at 747–65 (discussing the importance of expert testimony on the reliability of eyewitness testimony).

^{50.} For this Article, a fact witness is a person called to testify at the trial about relevant personal observations.

weight to give that testimony.⁵¹ This is an important area of inquiry given that most lay people (including judges and jurors) lack insight regarding the substantial malleability of memory and the external indications of lying and truth-telling.⁵²

Jurors need help assessing the credibility of witnesses, largely because they rely on faulty indicators. Specifically, a 2006 meta-analysis of 206 documents spanning 65 years and hundreds of experiments found that individuals are right about the truthfulness of witnesses almost 54% of the time—the average person is right about the truthfulness of a witness at a rate barely better than chance.⁵³

Numerous factors can affect how likely an individual is to detect truth correctly.⁵⁴ These factors include the witnesses' physical attributes, motivation, and preparation.⁵⁵ Alternatively, a juror's past experiences, biases, or moral views on lying can also affect detection rates.⁵⁶ Awareness of the deficiencies of laypeople in determining truth from lies is not new. Paul Ekman conducted a study in 1991 where 509 people, including members from the U.S. Secret Service, federal polygraphers, judges, police officers, psychiatrists, special interest groups, and students, were evaluated on their ability to detect the

^{51.} See Lacy & Stark, supra note 49, at 649 (emphasizing how the legal system has been "slow to adapt to research findings on memory" despite recent findings that witnesses' memories and testimonies have resulted in false convictions); see also LUCY S. MCGOUGH, CHILD WITNESSES: FRAGILE VOICES IN THE AMERICAN LEGAL SYSTEM 258–59 (1994) (describing the court's decision in the Wee Care Nursery case and the harmful effect of improperly offered expert testimony essentially validating the child's allegation).

^{52.} See Lacy & Stark, *supra* note 49, at 649 (citing recent studies that demonstrate judges, law enforcement officers, and potential jurors are not necessarily more aware of factors that can influence memory than college students); *see also* Dale, *supra* note 3, at 189 (discussing how the malleability of memory is often affected by the integration of inferences and new information); Glenn Littlepage & Tony Pineault, *Verbal, Facial, and Paralinguistic Cues to the Detection of Truth and Lying*, 4 PERSONALITY & SOC. PSYCH. BULL. 461, 463 (1978) (conducting a study concerning lie detection that found that "facial information is not effectively used as an important cue to the perception of truth"); Livia L. Gilstrap, Kristina Fritz, Amanda Torres & Annika Melinder, *Child Witnesses: Common Ground and Controversies in the Scientific Community*, 32 WM. MITCHELL L. REV. 59, 62 (2005) (suggesting that both jurors and judges underestimate witness reliability issues due to a lack of knowledge about factors affecting reliability).

^{53.} Bond & DePaulo, *supra* note 5, at 219. In the 206 documents, a small minority of experiments found a detection rate of around 70%. However, the researcher explains these limited situations as outliers.

^{54.} Id. at 224.

^{55.} Id.

^{56.} Id. at 226–29.

truth.⁵⁷ Most people in Ekman's experiment accurately detected a truth or lie only between 40%–60% of the time.⁵⁸ The only group who were significantly more adept at detecting lies was the Secret Service agents, who have spent part of their professional careers conducting interrogations.⁵⁹ However, later studies have even questioned this finding that well-trained investigators are better than average people at separating liars from truthtellers.⁶⁰

Although humans struggle to differentiate between truth and lie, the legal system continues relying on jurors to act as lie detectors.⁶¹ In part, jurors' limited lie-detection capability is due to our cultural reliance on physical cues, sometimes referred to as "demeanor evidence," to evaluate truthfulness—cues that social science research has shown are often not indicative of lying.⁶²

61. Poulin, supra note 39, at 993; see also Blumenthal, supra note 46, at 1158, 1188– 92 (providing an introduction to the differences between a legal system's reliance on a jury's ability to lie-detect and research finding the contrary); Michael W. Mullane, The Truthsayer and the Court: Expert Testimony on Credibility, 43 ME. L. REV. 53, 64 (1991) (referencing research demonstrating that society, particularly those in the legal profession, overestimates juror's ability to determine truth from lies); Olin Guy Wellborn III, Demeanor, 76 CORNELL L. REV. 1075, 1075 (1991) (citing evidence that people's reliance on a witness's demeanor may lead to inaccurate credibility judgments). The limitation on jurors' ability to assess credibility accurately is exacerbated when they are asked to make cross-cultural determinations of truthfulness because cultural norms often cause jurors to read indicators improperly. See Joseph W. Rand, The Demeanor Gap: Race, Lie Detection, and the Jury, 33 CONN. L. REV. 1, 4 (2000) (suggesting there is a "Demeanor Gap" when witnesses and jurors are of different races because the juror is unable to detect the witness's sincerity cues accurately). See generally Friedland, supra note 36, at 167, 178–87 (summarizing the psychological literature on juror evaluations).

62. See Rand, supra note 61, at 2, 3 (noting that "most observers in controlled studies detect deception about as well as a flipped coin because they focus on 'cues' to deception derived from folklore and common sense—such as the speaker's inability to maintain a steady gaze—that are often more indicative of discomfort than deception. Meanwhile, the savy liar, familiar with that same folklore, successfully suppresses those cues to fool the detector").

^{57.} Ekman & O'Sullivan, *supra* note 5, at 913–15.

^{58.} Id. at 916.

^{59.} Id. at 919.

^{60.} *See, e.g.*, Pär Anders Granhag & Aldert Vrij, *Deception Detection, in* PSYCHOLOGY AND LAW: AN EMPIRICAL PERSPECTIVE 44, 60–61 (Neil Brewer & Kipling D. Williams eds., 2005) (critiquing previous research related to deception detection among laypersons and professionals for being an artificial representation of individual abilities).

The use of demeanor evidence in determining the credibility of witnesses is deeply rooted in the American legal system.⁶³ Examples of demeanor evidence include eye contact aversion, facial movement, hand and other body movement, speech pattern variance, and witness confidence.⁶⁴ Confidence, specifically, is heavily relied upon by jurors.⁶⁵ Studies have shown that the more confident a witness comes across, the more likely jurors will find that the witness is credible, regardless of the accuracy of the witness' testimony.⁶⁶ Moreover, the fact that a witness is overall inconsistent is commonly overshadowed by the confidence with which they relay that information.⁶⁷

Despite the reliance on demeanor evidence, the average juror "does little better than chance" at detecting credibility.⁶⁸ Studies have consistently shown that the jurors' reliance upon nonverbal cues is flawed.⁶⁹ Even data that suggests that using demeanor alone to determine credibility actually lessens the accuracy of jurors in doing so.⁷⁰ To make matters worse, jury instructions, in some cases, even encourage using these cues⁷¹ despite their misleading nature, which

69. See Wellborn, supra note 61, at 1075 (stating that "there is some evidence that the observation of demeanor *diminishes* rather than enhances the accuracy of credibility judgments") (emphasis added).

70. Id. at 1082 (citing study of Norman R.F. Maier & James A. Thurber, Accuracy of Judgments of Deception when an Interview Is Watched, Heard, and Read, 21 PERS. PSYCH. 23, 23 (1968)) (finding that participants who listened to an interview recording or read an interview transcription were better judges of the witness's credibility than participants who watched the interviews, suggesting participants improperly relied on the interviewee's visual cues in determining credibility).

71. Colo. Jury Instr. Crim. 133 (2018), https://www.courts.state.co.us/userfiles/ file/Court_Probation/Supreme_Court/Committees/Criminal_Jury_Instructions/20 18/COLJI-Crim%202018%20-%20Final.pdf [https://perma.cc/68E2-PN7Y]; *see* Friedland, *supra* note 36, at 188 (noting that many courts have not abandoned "[t]he common-sense approach to credibility" that has been challenged by social science research).

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^{63.} See Mark W. Bennett, Unspringing the Witness Memory and Demeanor Trap: What Every Judge and Juror Needs to Know About Cognitive Psychology and Witness Credibility, 64 AM. U. L. REV. 1331, 1338 (2015) (finding that juries tend to falsely rely on misconceptions about memory and demeanor).

^{64.} Id.

^{65.} Id. at 1368.

^{66.} *Id.*

^{67.} *Id.* at 1369.

^{68.} Renée McDonald Hutchins, You Can't Handle the Truth! Trial Juries and Credibility, 44 SETON HALL L. REV. 505, 524 (2014); see Rand, supra note 61, at 14 (noting that the accuracy of most lie-detecting studies demonstrate that observers cannot reliably pick out lies).

further contributes to problems for jurors in determining credibility.⁷² In addition, jury instructions may include vague directives, such as telling the juror to "apply [their] common sense and reason to decide what testimony [they] believe or do not believe."⁷³ If jurors are expected to consider these details and have demonstrably been poor at doing so, why not consider expanding the information provided to them in their credibility assessments?

Allowing jurors to receive SVA expert testimony would not abdicate the jury's vital function of assessing witness credibility.⁷⁴ Rather, it would give jurors another tool to make this difficult determination. At an average rate of around 50%, the typical juror might as well flip a coin when deciding whether a witness is telling the truth.⁷⁵ However, if provided with the right tools, jurors could potentially be able to determine the credibility of a child witness more accurately and still maintain their position as the ultimate decision maker.

B. Child Witnesses Present a Unique and Difficult Challenge Because Traditional Methods of Direct and Cross Examination Are Ineffective

For a jury, the task of accurately determining the credibility of a witness is already onerous. That task becomes even more taxing when it comes to determining the credibility of a child witness. Children present particularly difficult challenges in the courtroom, partly because they are children, but also because of the nature of our adversarial procedures of direct and cross examination.

Children struggle with telling linear accounts of what has happened, using strategies that can aid in memory retrieval and knowing what information is relevant and important.⁷⁶ Studies have shown that memory correlates with age, meaning that the younger the child, the

^{72.} See Blumenthal, supra note 46, at 1197.

^{73. 2} GA. SUPERIOR CT. SUGGESTED PATTERN JURY INSTR. § 1.31.47 (4th ed. 2021), https://georgiasuperiorcourts.org/wp-content/uploads/2021/08/criminal_pattern_jury_instructions_July_2021.pdf [https://perma.cc/MC3V-R5L9]; *see also* JUDICIAL COUNCIL OF CAL. CRIM. JURY INSTR. No. 105 (2023), https://www.courts.ca.gov/partne rs/documents/calcrim_2023_edition.pdf [https://perma.cc/65BR-BSFE]; VA. MODEL JURY INSTR. CRIM. § 2.500 (2023), https://www.vacourts.gov/courts/circuit/res ources/model_jury_instructions_criminal.pdf [https://perma.cc/TXQ9-D796].

^{74.} See generally Hutchins, supra note 68, at 510–24 (discussing the evolution of jurors as arbiters of witness credibility).

^{75.} Bond & DePaulo, *supra* note 5, at 230.

^{76.} Nathanson, *supra* note 4, at 46 (identifying the factors that inhibit a child's completeness and accuracy in recalling past events).

less accurate their recollection is likely to be.⁷⁷ Children also lack the vocabulary and comprehension necessary to accurately convey what has happened to them, especially in cases of sexual assault.⁷⁸ For example, a child might "refer to ejaculation as urination" because of a lack of comprehension and because, at their young age, they correlate sexual anatomy with using the restroom.⁷⁹

Their developmental immaturity also diminishes children's ability to convey information accurately.⁸⁰ This developmental immaturity results from a child's inability to gather, organize, and store information to facilitate accurate retrieval of memories.⁸¹ It is "particularly difficult to determine objectively what constitutes a 'fictitious' report" by a child because children tell their stories using a variety of styles and levels of detail.⁸²

The challenges posed by child witnesses extend beyond age-based limitations. Direct and cross examinations, portions of a trial during which the jury listens to attorneys question witnesses on both sides of the aisle, intended to provide jurors with the information they need to decide whether a witness's testimony holds merit.⁸³ However, traditional methods of conducting direct and cross examination are ineffective on child witnesses due to children's suggestibility (both inside and outside the courtroom), inability to follow complex questions, inclination to answer "yes," and the anxiety caused by the courtroom environment.

One well-established issue with child witnesses is their suggestibility. Suggestibility is "an inclination to readily and uncritically adopt the

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^{77.} Id.

^{78.} Quinn, *supra* note 4, at 186 (highlighting that certain "cognitive factors such as immaturity of language may lead to confusion concerning a child's statements").

^{79.} See id. at 185. Similarly, because of children's lack of life experience and general knowledge, they do not have the ability to organize their separate memories into a "cohesive whole," making them more susceptible to post-event suggestions. Dale, *supra* note 3, at 191. Children's developmental immaturity is also a result of the frequent confusion between fact and fantasy. *Id.* at 193 (emphasizing that both children and adults can confuse fantasy and reality and that children's ability to recognize the difference between the two usually develops between the ages of six and eight years old).

^{80.} Dale, *supra* note 3, at 190.

^{81.} Id.

^{82.} Rhona Lucas & Ian K. McKenzie, *The Detection of Dissimulation: Lies, Damned Lies and SVA*, 1 INT'L J. POLICE SCI. & MGMT. 347, 351 (1998).

^{83.} See sources cited *supra* note 73 (instructing jurors that in addition to considering the factual testimony of each witness, they must also determine the credibility of each witness).

ideas, beliefs, attitudes, or actions of others."⁸⁴ Studies have shown that with some suggestion, children will admit to remembering events that never happened or, conversely, will deny an event occurred when it actually had.⁸⁵ Authority figures such as a child's parents or the police may influence a child's memories to develop inaccurately even before they enter the courtroom. The influence of authority figures may then affect the child's testimony at trial.⁸⁶ This suggestibility also becomes evident during cross examination, where attorneys ask leading questions that may suggest something contrary to the child's actual memories.⁸⁷ A juror listening to testimony to determine the credibility of a child witness will therefore have to examine whether or not the child is telling the truth or a version of events suggested by or affected by others.

Another issue affecting the accuracy of child witness testimony during both direct and cross examination is the complexity of the proposed questions. Witnesses are more likely to accurately recall information when they simply explain the event that has occurred, compared to when answering specific questions.⁸⁸ While asking simple questions may allow for better recollection from children, interviewers pose questions to these young witnesses that are too complex in language for their comprehension.⁸⁹ Complex language includes legal

^{84.} Suggestibility, AM. PSYCH. ASS'N DICTIONARY PSYCH., https://dictionary.apa.org/suggestibility [https://perma.cc/HVY3-STRW].

^{85.} See Pantell, *supra* note 4, at 3 (explaining that a variety of social and psychological factors influence children's proclivity to suggestibility).

^{86.} See id. (noting that children are subject to suggestibility and intimidation by authority figures); Bala et al., *supra* note 8, at 999 (referencing research that demonstrates children are more suggestible than adults, but that depending on the individual child, they may be more or less susceptible to suggestibility).

^{87.} See Nathanson, supra note 4, at 47 (explaining that "these communication failures may actually be reflective of the manner in which an adult elicits information from children"); Quinn, supra note 4, at 185 (describing the most "counterproductive" interviews as ones where the interviewer has a strong preconceived idea of what he or she wants the child to say about the event or allegation).

^{88.} *See* Nathanson, *supra* note 4, at 47 (emphasizing the role of the interviewer in impacting the quality and quantity of a child's recall).

^{89.} See id. (citing studies which informed that linguistically complex inquiries impair children's testimony by creating miscommunication); Davies et al., *supra* note 13, at 353 (referencing a study which showed that children's accuracy about an event was reduced when cross-examiners used complex language and leading questions); *see also* Zajac et al., *supra* note 2, at 182 (discussing complex questioning and techniques specifically designed to confuse witnesses, such as jumping from topic to topic without warning).

jargon and adult vocabulary, which children may need help understanding and can misinterpret.⁹⁰ Despite not understanding a complex question, children are still more likely than adults to answer such questions.⁹¹ In fact, usually when a child does not understand a question in its entirety but can understand a portion, the child will answer the question based on the portion they could understand. This approach leads to unresponsive and misleading answers.⁹² This affects the accuracy of the information conveyed to the jury and makes their task of determining credibility more precarious.

Questioning techniques used during direct and cross examination also pose problems for child witnesses. For example, "yes or no" questions can result in inaccurate information when utilized with children.⁹³ Children are biased towards answering "yes or no" questions with "yes."⁹⁴ This can lead to inaccurate answers to questions and may influence how jurors view the child's credibility.⁹⁵ In fact, traditional questioning techniques used on cross examination run counter to established wisdom for investigative interviewing, which is designed to produce the most accurate information.⁹⁶ Researchers in this field compared cross examination techniques with investigative interviewing and found "[t]he characteristics of a typical . . . crossexamination appear to violate all the principles of best practice, with the predicted outcome of maximi[z]ing the risk of contaminating the evidence."⁹⁷

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^{90.} Nathanson, supra note 4, at 47; Davies, supra note 13, at 352.

^{91.} *See* Pantell, *supra* note 4, at 3 (describing that children are more willing to be responsive to adults, which can be exploited by attorneys who look to diminish the credibility of a child's testimony).

^{92.} See Bala et al., supra note 8, at 1000 (explaining that young children rarely answer with "I don't know," but instead answer the question in a way that may seem confusing or even misleading).

^{93.} *See id.* (expounding that when children require more information or are unsure about the answer to a "yes or no" question, they may be biased to answer "yes," rather than respond "I don't know").

^{94.} Id.

^{95.} *See id.* (suggesting using specialized techniques to assist young children in recalling details and communicating effectively to remedy a child's testimony from appearing misleading or noncredible).

^{96.} Davies, *supra* note 13, at 355 (explaining that cross examination practices are unlikely to demonstrate child witnesses' accuracy and credibility).

^{97.} Id. (quoting SPENCER & FLIN, THE EVIDENCE OF CHILDREN: THE LAW AND THE PSYCHOLOGY, at 307 (2nd ed. Blackstone Press Ltd., Oxford 1993)); see Zajac et al., supra note 2, at 185–86 (referencing studies that rebut the presumption that cross

The environment also presents a challenge for child witnesses. Children have been shown to lack recall accuracy in new, intimidating environments such as a courtroom.⁹⁸ In the courtroom, children also experience fear and anxiety related to having to see the defendant and not knowing the answers to questions, which all affect the child's ability to communicate effectively on the stand.⁹⁹ As discussed earlier, jurors rely heavily on demeanor evidence in determining credibility, making it highly likely that a juror will confuse a child who is extremely nervous and lacking confidence with a child who is not telling the truth.

The above issues with child witnesses occur during witness examination within the courtroom. In contrast, an SVA is conducted based on statements made before court and are therefore untainted by some of the issues of suggestibility, the intimidating courtroom environment, and examination procedures that cause many of these accuracy issues.¹⁰⁰ Without the results of the SVA, these issues present an obstacle for jurors seeking to determine the credibility of a child witness's in-court testimony. Studies have shown that even legal professionals who frequently listen to the testimony of child witnesses struggle to determine whether or not children are telling the truth.¹⁰¹ For example, a study that took place from 2001 to 2003 in Canada assessed whether forty-two law students, thirty-nine child social workers, thirty-nine judges, and twenty-seven other professionals, such

examination leads to accurate child testimony). See generally Annie Cossins, Cross-Examination in Child Sexual Assault Trials: Evidentiary Safeguard or an Opportunity to Confuse? 33 MELB. U. L. REV. 68 (2009) (explaining multiple ways cross examination leads to inaccurate testimony and advocating for extensive reforms in the examination procedure for children in sexual assault cases in Australia).

^{98.} See Dale, supra note 3, at 211 (recommending a videotaped interview rather than physically presenting the child witness in court to protect the child from trauma from face-to-face confrontation with the defendant but also to increase the accuracy of the child's testimony); Caroline Bettenay, Anne M. Ridley, Lucy A. Henry & Laura Crane, *Changed Responses Under Cross-Examination: The Role of Anxiety and Individual Differences in Child Witnesses*, 29 APPLIED COGNITIVE PSYCH. 485, 489–90 (2015) (highlighting that higher anxiety levels in children tend to correlate negatively with their ability to answer questions accurately and consistently).

^{99.} *See* Pantell, *supra* note 4, at 4 (explaining that the more frightened a child is, the less likely the child can answer questions accurately).

^{100.} See Criteria-Based Analysis, supra note 16, at 3 (describing SVAs as the "most popular instrument" for determining the "veracity" of child witnesses' testimony in sexual assault trials).

^{101.} *See* Bala et al., *supra* note 8, at 1008 (introducing the results of a study which showed that judges accurately assessed honesty at a rate comparable to social workers and police officers).

as police officers and doctors, could accurately determine whether a child was telling the truth.¹⁰² The judges and other professionals could accurately detect the truth at a rate of 51%-56% of the time, while law students could only do so 44% of the time.¹⁰³ These results demonstrate that the more experience a person has with child witnesses, the better their detection will be, and that even with a higher detection level, the rate is still only just above chance. This means that an inexperienced juror would likely be at or below a 50% accuracy rate for determining the credibility of a child witness.

With jurors already struggling with determining the credibility of adult witnesses, the added challenges presented by child witnesses make it clear that more needs to be done to assist jurors with this critical task. Allowing expert witnesses to testify using SVAs provides a neutral assessment of the child's prior statement outside of the courtroom before the pressures and procedures of the courtroom have negatively impacted the accuracy of the jurors' assessment of their credibility while still maintaining the accused right to confront the witness on the stand.

II. EVALUATING CHILD WITNESS CREDIBILITY USING A STATEMENT VALIDITY ASSESSMENT PROVIDES CRITICAL INFORMATION TO JURORS

Experts have called the SVA the "most frequently used verbal assessment instrument" and "leading categorical system" for evaluating the credibility of child witnesses in sexual assault cases.¹⁰⁴ German psychologist William Stern pioneered this method at the turn of the twentieth century.¹⁰⁵ Stern found that credibility could be scientifically analyzed by evaluating an individual's statements.¹⁰⁶ The method gained prominence in the mid-twentieth century following a restructuring of German courts that created special courts for child-victim cases and allowed for the admissibility of psychological testimony at trial.¹⁰⁷

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^{102.} Id.

^{103.} Id.

^{104.} Amado et al., supra note 19, at 4; Vrij & Mann, supra note 19, at 337.

^{105.} See Honts, *supra* note 18, at 887 (providing the historical background of scientific credibility assessments and their first uses on children's statements).

^{106.} *Id.* (discussing the practical limitations to the applicability of Stern's research at the time it was developed).

^{107.} *Id.* (discussing how the German judicial system restructuring following World War II and the creation of courts dedicated to adjudicating cases involving individuals

In 1954, after German clinical psychologist Udo Undeutsch testified to the credibility of a fourteen-year-old alleged rape victim,¹⁰⁸ the German Supreme Court promulgated a rule that required "the use of psychological interviews and assessments of credibility in virtually all contested cases of child sexual abuse."¹⁰⁹ This ruling sparked an increased interest in assessing the credibility of alleged child sexual abuse victims, leading to the development of procedures and methods of "Statement Reality Analysis."¹¹⁰ The basis of the analysis became known as the "Undeutsch Hypothesis,"¹¹¹ which is the notion that "truthful, reality-based accounts differ significantly and noticeably from unfounded, falsified, or distorted stories."¹¹² By 1991, scientists and psychologists further developed Undeutsch's basic principles into the formal assessment procedure called SVA.¹¹³

A. Administering the Three-Step SVA in Child Sexual Assault Cases

The SVA is a clinical procedure used to assess the credibility of a child who has allegedly experienced or witnessed sexual abuse.¹¹⁴ This assessment quantifies the child's credibility with a number calculated from the data collected through the SVA procedure.¹¹⁵ SVAs are

under the age of twenty-one eliminated many of the practical limitations to the applicability of Stern's research at the time it was developed).

^{108.} Id.

^{109.} Id.; C.L. Ruby & John C. Brigham, The Usefulness of the Criteria-Based Content Analysis Technique in Distinguishing Between Truthful and Fabricated Allegations: A Critical Review, 3 PSYCH. PUB. POL'Y & L. 705, 707 (1997).

^{110.} See Honts, supra note 18, at 887 (referring to the development of statement analysis as "Statement Reality Analysis"); see also id. at 887–88 ("estimat[ing] that by 1982 Statement Reality Analysis testimony had been offered in more that [sic] 40,000 cases in Germany."). See generally Criteria-Based Analysis, supra note 16, at 4 (discussing the early development of statement analysis).

^{111.} See Honts, supra note 18, at 887 (describing the "Undeutsch Hypothesis").

^{112.} *Criteria-Based Analysis, supra* note 16, at 4; *see also* Kathy Pezdek, Anne Morrow, Iris Blandon-Gitlin, Gail S. Goodman, Jodi A. Quas, Karen J. Saywitz et al., *Detecting Deception in Children: Event Familiarity Affects Criterion-Based Content Analysis Ratings*, 89 J. APPLIED PSYCH. 119, 120 (2004) (emphasizing that the "heart" of the Undeutsch hypothesis is that a description of a self-experienced event from memory will differ qualitatively from an account of an imagined or suggested event).

^{113.} The individuals most frequently attributed with developing Undeutsch's hypothesis and formalizing the modern Statement Validity Assessment (SVA) include Gunter Kohnken, Max Steller, David C. Raskin, and Phillip W. Esplin. *See, e.g.*, Pezdek et al., *supra* note 112, at 119–20; *Criteria-Based Analysis, supra* note 16, at 4.

^{114.} *See* Honts, *supra* note 18, at 888 (stating that SVA procedures are designed to be used with child victims aged two and a half years old to seventeen years old).

comprised of three steps: (1) the semi-structured interview, (2) the CBCA, and (3) the evaluation of the CBCA with the Validity Checklist.¹¹⁶

1. Step one: conducting the semi-structured interview

The semi-structured interview is an investigative interview based on psychological principles. As a result of research and experimentation, the preferred method used in an SVA semi-structured interview is the Cognitive Interview.¹¹⁷ The objective is to allow the child to tell their own account of the alleged event without the interviewer's intentional or unintentional influence.¹¹⁸ The interviewers must adhere to questioning techniques and methods to "maximize the amount of accurate information obtained from the child by relying on free recall"¹¹⁹ Unlike direct and cross examinations at trial, interviews should "begin with an open-ended narrative . . . [allowing a witness] to recall as much detail as possible, even if they recall events out of order

^{116.} Many studies and reports refer to the SVA as only having three components: the semi-structured interview, the Criteria-Based Content Analysis (CBCA), and the evaluation of the CBCA with the Validity Checklist. *E.g.*, *id.* at 889–91; *Criteria-Based Analysis*, *supra* note 16, at 4.

^{117.} See Amy Bradfield Douglass, Neil Brewer, Carolyn Semmler, Lorena Bustamante & Alexa Hiley, *The Dynamic Interaction Between Eyewitnesses and Interviewers: The Impact of Differences in Perspective on Memory Reports and Interviewer Behavior*, 37 LAW & HUM. BEHAV. 290, 291 (2013) (explaining the four processes that are followed by interviewers as part of the cognitive interview: "[1] mental reinstatement of context, [2] the recall of the maximum possible amount of information, [3] changing the order of narration, and [4] retelling the scene from an alternative perspective"). *See generally* Dale, *supra* note 3, at 196 (providing a study conducted on children who recalled more complete accounts of a staged incident, they observed with suggestive questioning and concluded that interviewers should avoid suggestive questioning in order to obtain the most accurate accounts of an incident); AM. PROTECTION SoC'Y ON THE ABUSE OF CHILDREN, PRACTICE GUIDELINES: FORENSIC INTERVIEWING IN CASES OF SUSPECTED CHILD ABUSE (2012), https://www.nationalcac.org/wp-content/uploads/2016/10/Practice-Guidel

ines-Forensic-Interviewing-in-Cases-of-Suspected-Child-Abuse.pdf [https://perma.cc/ELN7-MA96].

^{118.} See Criteria-Based Analysis, supra note 16, at 4 (explaining that the "free narrative style," one of the interview techniques employed during an interview, helps the interviewer obtain as much information as possible from children through certain types of questions and the proper prompting).

^{119.} Honts, *supra* note 18, at 889–90 (articulating the importance of adhering to specific processes and procedures during the interview stage).

or the details seem trivial."¹²⁰ This approach permits a witness to discuss events in the order the witness prefers and at the witness's own pace, which is likely to produce "a more detailed and more accurate report."¹²¹

Research has shown that how an interview is conducted can affect the validity of the memories recalled and reported.¹²² During criminal investigations, many interviews include "a number of undesirable practices, such as [interviewers] asking leading or suggestive questions, interrupting witnesses [during their answers], and discouraging witnesses from offering any information not directly related to" the specific question asked.¹²³ As discussed in Part I, these practices are intentionally and unintentionally used by parents, friends, and police officers and can create false memories and inaccurate reporting.¹²⁴ The Cognitive Interview format strives to avoid the pitfalls of suggestive or leading interviewing; however, it cannot correct for damage already caused by people who have tainted the child's memories in preceding conversations and interviews.¹²⁵

This semi-structured interview is audiotaped or videotaped and transcribed for use in the second step of the SVA, the CBCA.¹²⁶

^{120.} This approach is often contrary to the approach that law enforcement takes in which witnesses are interrupted or asked to describe events in a specific order. Lacy & Stark, *supra* note 49, at 656.

^{121.} Id. (citing Gary L. Wells, Amina Memon & Steve Penrod, Eyewitness Evidence: Improving its Probative Value, 7 PSYCH. SCI. PUB. INT. 45, 45–75 (2006)).

^{122.} Dale, *supra* note 3, at 195 (discussing the impact that suggestive questioning can have on the results of an interview).

^{123.} See Douglass et al., *supra* note 117, at 291 (examining how these negative interview tactics not only decrease the accuracy of the information, but also the amount of information provided).

^{124.} See id. at 291 (referring to "untrained" or minimally trained interviewers as a potential source of undesirable interviewing practices). Positive feedback occurs most often during post-identification; for example, when a witness is informed that his or her choice from a line-up matched another witness's choice, the witness's level of confidence in his or her choice increases. Lacy & Stark, *supra* note 49, at 651. Negative feedback, on the other hand, can deflate a witness's confidence in his or her memory. *Id.; see* Dale, *supra* note 3, at 197 (emphasizing that "[s]trong and repetitive suggestions in questioning . . . alter the validity of children's statements").

^{125.} See generally Douglass et al., *supra* note 117, at 291 (noting that trained interviewers may fail to administer Cognitive Interview techniques if too much time has passed from their last training).

^{126.} See Honts, supra note 18, at 890.

2. Step two: scoring the CBCA factors

The CBCA is considered the most vital component of the SVA.¹²⁷ In the past, proponents praised the CBCA for its "stand-alone value",¹²⁸ however, in a recent study, researchers warned that in the forensic application, the "CBCA is never to be used on its own but only as an element" of an SVA.¹²⁹ The CBCA is an application of the Undeutsch Hypothesis: an individual's account of an actual event will differ from a fabricated event.¹³⁰ CBCA proponents theorize that certain common categories of information and details are present in narrative accounts of actual events.¹³¹ This assessment occurs when the evaluator examines the child's statement, first in its entirety and then by looking specifically for the presence (or absence) of the affirmative CBCA factors.¹³²

The CBCA is based on the principle that each CBCA factor strengthens the hypothesis that the statement is based on a "genuine personal experience," rather than a false account.¹³³ For example, "[a]n account is considered likely to be true if a substantial number of the [eighteen] criteria are present, with the first [three] criteria being necessary but not sufficient."¹³⁴ Although these eighteen CBCA factors

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^{127.} See Ruby & Brigham, supra note 109, at 708 (explaining that the CBCA only deals with the "verbal content of the witness's statement or allegation" and is a "systematic analysis" of these verbal statements).

^{128.} Pezdek et al., *supra* note 112, at 120; *see also* Vrij & Mann, *supra* note 19, at 337 (referring to the CBCA as the "core component of SVA").

^{129.} Valerie Hauch, Siegfried Ludwig Sporer, Jaume Masip & Iris Blandón-Gitlin, *Can Credibility Criteria Be Assessed Reliably? A Meta-Analysis of Criteria-Based Content Analysis*, 29 PSYCH. ASSESSMENT 819, 829 (2017) (cautioning against the use of the CBCA as a "credibility assessment tool" or "lie detection tool" because it was "never meant to be used as such in isolation"; but rather, "against the background of the individual witness in the specific case context"); *see also* Ruby & Brigham, *supra* note 109, at 705–06 (1997) (further supporting the notion that the CBCA should not be used without components of the SVA).

^{130.} *See* Amado et al., *supra* note 19, at 4; Pezdek et al., *supra* note 112, at 120; *see also id.* at 126 (outlining the eighteen CBCA criteria in Appendix I). *But see* Ruby & Brigham, *supra* note 109, at 705 (expressing doubt regarding the ability to differentiate between whether a child is telling the truth or fabricating the story).

^{131.} Honts, *supra* note 18, at 890 (referring to the CBCA as "affirmative" because the criteria's presence is considered to be indicative of a valid or truthful statement).

^{132.} *See id. But see* Hauch et al., *supra* note 129, at 820 (stating that the absence of a CBCA criteria in a statement "does not necessarily indicate a lie").

^{133.} Vrij & Mann, *supra* note 19, at 337.

^{134.} Pezdek et al., *supra* note 112, at 120. However, it is important to note that some scholars have identified a nineteenth CBCA factor: an offense-specific element or

are assessed individually, they are often organized into three broad categories: (1) General Characteristics of the Statement, (2) Specific Contents of the Statement, and (3) Motivation-Related Contents.¹³⁵

The chart below presents the CBCA factors and their breakdown by category.

General Characteristics of the StatementFactor 1Logically StructuredFactor 2Unstructured ProductionFactor 3Quantity of DetailsSpecific Contents of the StatementFactor 4Contextual EmbeddingFactor 5Descriptions of InteractionsFactor 6Reproduction of Speech
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Factor 4Contextual EmbeddingFactor 5Descriptions of InteractionsFactor 6Reproduction of Speech
Factor 5 Descriptions of Interactions Factor 6 Reproduction of Speech
Factor 6 Reproduction of Speech
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Factor 7 Unexpected Complications
Factor 8Unusual Details
Factor 9Superfluous Details
Factor 10 Accurately Reported Details Misunderstood

characteristic of the offense. See Criteria-Based Analysis, supra note 16, at 6–7. This factor is present if a child's description of the alleged event is "typical for the type of crime under investigation." *Id.; see also* Ruby & Brigham, *supra* note 109, at 708 (citing researcher's elimination of the nineteenth criteria from the CBCA because it was "more characteristic of the investigative questions as a whole, rather than verbal content criteria addressed in the CBCA"; therefore, it belonged in the Statement Validity Checklist).

^{135.} Some researchers use the same factors separated into three categories with an additional category added for the nineteenth criterion, "Details characteristic of the offence." Vrij & Mann, *supra* note 19, at 348–49; *see* Amado et al., *supra* note 19, at 4 (table 1). *See generally* Pezdek et al., *supra* note 112, at 120 (describing the three categories of CBCA criteria).

^{136.} See Amado et al., supra note 19, at 4 (table 1).

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Factor 11	Related External Associations		
Factor 12	Accounts of the Child's Subjective Mental State		
Factor 13	Attributions of the Perpetrator's Mental State		
Motivation-Related Contents			
Factor 14	Spontaneous Corrections		
Factor 15	Admitting Lack of Memory		
Factor 16	Raising Doubt About One's Own Testimony		
Factor 17	Self-Deprecation		
Factor 18	Pardoning the Accused		

The eighteen CBCA factors are consistent with the overarching assumption that certain cognitive and motivational factors are present in a child's account of an actual event, affecting the CBCA score.¹³⁷ Moreover, in a recent comprehensive review of CBCA studies, researchers found that a CBCA score is an effective tool to discern whether children's statements are based on real-life memories or fabricated accounts.¹³⁸

The first category, "General Characteristics of the Statement" ("General Characteristics"), comprising factors 1–3, includes CBCA cognitive factors.¹³⁹ Cognitive factors are the details likely to depict an actual event because they are too difficult to fabricate.¹⁴⁰ Some researchers consider these three factors the most important within the CBCA evaluation.¹⁴¹ When determining whether statements are more likely to be true, evaluators look for elements that are *logically structured*

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^{137.} See Vrij & Mann, supra note 19, at 338–39 (discussing the presence of cognitive and motivational factors that many CBCA criteria fall under and are likely to affect a CBCA score, with motivational factors being the criterion likely to occur in truthful statements for motivational reasons). But see Honts, supra note 18, at 891 (cautioning that the CBCA can be misleading if a child has had a sexual experience, but the experience occurred with someone other than the perpetrator).

^{138.} Amado et al., supra note 19, at 8.

^{139.} See Pezdek et al., supra note 112, at 120.

^{140.} Vrij & Mann, supra note 19, at 338.

^{141.} Pezdek et al., supra note 112, at 120.

and coherent (factor 1), provided through an *unstructured production* of the account, including digressions from chronological sequencing or often with shifts in focus (factor 2), and provide a strong *quantity of details* in the account (including locations, sights, and feelings) relating to the individuals and acts involved in the event (factor 3).¹⁴²

"Specific Contents of the Statement" ("Specific Contents") is the CBCA's second category comprised of factors 4–7.¹⁴³ This grouping focuses on the substance of the specific details and relationships provided in the account.¹⁴⁴ Evaluators consider *contextual embedding*: whether the events are placed in the context of time and location (factor 4)¹⁴⁵ and if there are *descriptions of interactions* between the alleged perpetrator and the victim or witness (factor 5).¹⁴⁶ Evaluators also consider a child's *reproduction of speech* or specific dialogue exchanged during the event verbatim (factor 6).¹⁴⁷ Factor 6 is most commonly identified when the child provides a quotation, such as "Michael said, 'I'm hungry, let's go to the kitchen and get something to eat."¹⁴⁸ Factor 7 in this category includes consideration of the child's description of any *unexpected complications*,¹⁴⁹ such as the phone ringing or a dog barking.¹⁵⁰

Similarly, the inclusion of *unusual details* (factor 8), *superfluous details* (factor 9), or *accurately reported details misunderstood* (factor 10) are all considered valuable indicators of a truthful statement in this process.¹⁵¹ Unusual details are descriptions that are "uncommon but

^{142.} See, e.g., id.; Vrij & Mann, supra note 19, at 338.

^{143.} See, e.g., Pezdek et al., supra note 112, at 120; Vrij & Mann, supra note 19, at 338.

^{144.} See Pezdek et al., supra note 112, at 120.

^{145.} For example, "[h]e approached me for the first time in the garden during the summer holidays." Vrij & Mann, *supra* note 19, at 338.

^{146.} *See id.* One example of this would be "[t]he moment my mother came into the room, he stopped smiling." *Id.; see also* Pezdek et al., *supra* note 112, at 126 (identifying that evaluators should consider whether there are "reports of actions and reactions or conversation composed of a minimum of three elements involving at least the accused and the witness").

^{147.} Pezdek et al., supra note 112, at 120; see Vrij & Mann, supra note 19, at 338.

^{148.} *See, e.g.*, Pezdek et al., *supra* note 112, at 120 (describing that a truthful person is more likely to report verbatim content of speech or conversation).

^{149.} *Criteria-Based Analysis, supra* note 16, at 6 (explaining that factor 7 is also referred to as descriptions of unplanned interruptions that occurred during the alleged sexual assault).

^{150.} *See id.* (providing an example of an unexpected complication as a child mentioning that the perpetrator had a difficult time starting the car's engine). 151. *Id.*

meaningful,"¹⁵² such as a perpetrator's tattoos, scars, or limp.¹⁵³ *Superfluous details* are those that, while described in the context of the alleged events, are peripheral to the main story.¹⁵⁴ *Accurately reported details misunderstood* are details or descriptions beyond the scope of the child's understanding and comprehension.¹⁵⁵

The remaining three factors in the Specific Contents category that, in the context of CBCA analysis, serve as indicators of truthfulness include: *related external associations* (factor 11), *accounts of the child's subjective mental state* (factor 12), and *attributions of the perpetrator's mental state* (factor 13).¹⁵⁶ *Related external associations* (factor 11) refer to details that may not be intrinsically part of the allegation but are still related.¹⁵⁷ A victim recounting that the perpetrator mentioned other women he had slept with and the differences between the women is an example of a related external association.¹⁵⁸ *Accounts of the child's subjective mental state* (factor 12) considers whether the child describes the feelings or thoughts they experienced during the incident.¹⁵⁹ *Attributions of the perpetrator's mental state* (factor 13) refers to a child's interpretation of the perpetrator's feelings, thoughts, or motives.¹⁶⁰

^{152.} Id.

^{153.} Id.; see also Vrij & Mann, supra note 19, at 338.

^{154.} *See* Pezdek et al., *supra* note 112, at 126 (noting that a given statement or detail is not likely to be labeled superfluous if it satisfies any CBCA criteria numbered 4–18); *see also* Vrij & Mann, *supra* note 19, at 338 (describing one example of a superfluous detail as the child mentioning that the perpetrator was allergic to cats).

^{155.} See Criteria-Based Analysis, supra note 16, at 6 (discussing the common example used to understand accurately reported details misunderstood when a child describes the perpetrator's sexual behavior or gratification as pain or associates it to a sneeze); see also Pezdek et al., supra note 112, at 126 (considering this factor through the question: "Did the child correctly describe an object or event but interpret it incorrectly?").

^{156.} See, e.g., Pezdek et al., supra note 112, at 126; Vrij & Mann, supra note 19, at 338–39.

^{157.} Criteria-Based Analysis, supra note 16, at 6.

^{158.} Vrij & Mann, *supra* note 19, at 338.

^{159.} See, e.g., Criteria-Based Analysis, supra note 16, at 6; Vrij & Mann, supra note 19, at 338. However, it is important to note that this factor evaluates the feelings or thoughts that the child volunteers and not the descriptions provided in response to a direct question. Pezdek et al., supra note 112, at 126 (emphasizing that the details must have been provided without prompting or must be information that, while included in an answer to a question, goes beyond the scope of the question).

^{160.} See Vrij & Mann, supra note 19, at 338–39 (discussing the attribution of the accused's mental state and the example of a child saying that the perpetrator "was nervous, his hands were shaking").

"Motivation-Related Contents" is the third category and is comprised of five factors (14–18).¹⁶¹ These factors are likely to occur in truthful statements for motivational reasons.¹⁶² The factors in this category are based on the assumption that truthful persons are less concerned with the impression that they make on others compared to non-truthful persons.¹⁶³ From this perspective, deceivers (persons who are conscious that they are being untruthful) are more likely to "try to construct a report that they believe will make a credible impression on others, and so they leave out information that, in their view, will damage their image of being a sincere person."¹⁶⁴ These five factors include spontaneous corrections (factor 14), admitting lack of memory (factor 15), raising doubt about one's own testimony (factor 16), selfdeprecation (factor 17), and pardoning the accused (factor 18).¹⁶⁵ Spontaneous corrections are instances when the child makes corrections to their account without any prompting from the interviewer.¹⁶⁶ An example is a child saying, "He wore a black baseball hat. No sorry. It was blue."167 Another "Motivation-Related Content" factor is when a child raises doubts about their testimony through comments like, "I know

^{161.} See Dale, *supra* note 3, at 203 (explaining that the third part of the analysis helps detect when a witness is lying or coached, as a witness that is doing either will stick directly to the storyline without modifying it in any way, try answering all of the questions, or fail to raise any doubts about the story); Pezdek et al., *supra* note 112, at 126.

^{162.} See Vrij & Mann, supra note 19, at 339; Criteria-Based Analysis, supra note 16, at 6.

^{163.} See Vrij & Mann, supra note 19, at 339; Criteria-Based Analysis, supra note 16, at 6. It is important to emphasize that the motivation related factors may not help uncover inaccurate statements made by persons who believed their inaccurate statements were actually true. For example, statements by children who had their true memories tainted by a suggestive interview that occurred prior to the SVA semi-structured interview.

^{164.} *Criteria-Based Analysis, supra* note 16, at 6. The weakness of these CBCA factors to differentiate between inaccurate but truthful accounts is clear in the circumstance where the child does not know that he or she is being inaccurate. In this context, an inaccurate but truthful account is a statement that is not an accurate statement of what occurred, even though the witness believes and intends to tell the truth. In essence, the witness is unintentionally mistaken as to the facts of the event and this could occur if a witness was sexually assaulted but is mistaken as to the perpetrator, for example.

^{165.} Pezdek et al., *supra* note 112, at 126.

^{166.} See Vrij & Mann, supra note 19, at 339 (describing factor 14 in the CBCA).

^{167.} See generally Criteria-Based Analysis, supra note 16, at 6 (providing example of spontaneous corrections).

this all sounds really odd."¹⁶⁸ *Self-deprecation* is evident when the child describes part of their own behavior as wrong or potentially unfavorable.¹⁶⁹ For example, a child may say, "I know I should not have gotten into the stranger's car."¹⁷⁰ The last of the "Motivation-Related Content" factors is *pardoning the accused* (factor 18).¹⁷¹

A few studies recognize the validity of particular individual CBCA factors in evaluating whether a child recounts an actual event.¹⁷² For example, some research demonstrates a high reliability for five of the eighteen CBCA factors: "*Reproduction of Conversation* (06), *Accurately Reported Details Misunderstood* (10), *Raising Doubts about One's Own Testimony* (16), *Self-Deprecation* (17), and *Pardoning the Perpetrator* (18)."¹⁷³ Comparatively, research has shown that the "*Unstructured Production* (02) and *Superfluous Details* (09)" factors have a lower reliability.¹⁷⁴

Researchers also found that other external factors affect CBCA scores.¹⁷⁵ These factors include a child's age, cognitive abilities, and

172. Hauch et al., *supra* note 129, at 825–26. Note that this is not a claim that the SVA or the CBCA is reliable, but rather that some individual factors correlate positively with the truthfulness of the statement.

173. *Compare* Hauch et al., *supra* note 129, at 826 (concluding that the demonstrated high reliability of these factors "may be explained in terms of their relatively straightforward definitions"), *with Criteria-Based Analysis, supra* note 16, at 15–18 (identifying factors 1, 2, 3, 4, 6, and 19 as supporting the hypothesis; the motivational criteria (14–18) as receiving less support; and factors 16 and 17 occurring in less than 10% of statements). *But see* Ruby & Brigham, *supra* note 109, at 717 (finding that there have been few consistent findings in regards to which criteria are most effective; out of thirteen samples, "not [one] of the [nineteen] possible CBCA criteria was found effective in every study (although not every researcher chose to analyze each criterion)... [t]hese wildly differing performances... suggest that the CBCA is far from a unitary, coherent evaluation technique").

174. Hauch et al., *supra* note 129, at 826 (finding that the demonstrated low reliability of these factors was consistent with the researchers' expectations because these factors are "very subjective").

175. Criteria-Based Analysis, supra note 16, at 7.

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^{168.} See Criteria-Based Analysis, supra note 16, at 6; see also Pezdek et al., supra note 112, at 126 (noting that "[m]erely asserting that one is telling the truth does not qualify" as raising doubts about one's own testimony).

^{169.} See Vrij & Mann, supra note 19, at 339; see also Pezdek et al., supra note 112, at 126.

^{170.} See Criteria-Based Analysis, supra note 16, at 6.

^{171.} See generally Pezdek et al., *supra* note 112, at 126. An example of factor 18 is a child indicating they "now feel[] sympathy for the defendant," who may be sent to jail. *Criteria-Based Analysis, supra* note 16, at 6; *see also* Pezdek et al., *supra* note 112, at 126 (identifying certain rhetorical questions that the evaluator can consider when assessing this factor).

language understanding.¹⁷⁶ One example of how these external factors could affect a child's CBCA score is that younger children may have a difficult time viewing the world from someone else's perspective; therefore, *accounts of the perpetrator's mental state* (factor 13) is unlikely to occur in younger children's statements.¹⁷⁷ For example, younger children may have a difficult time viewing the world from someone else's perspective and are less likely to recognize gaps in their memories due to their "less developed metacognitive and metamemorial capabilities."¹⁷⁸ These external factors are likely to affect *accounts of the perpetrator's mental state* (factor 13), and *admitting lack of memory* (factor 15).¹⁷⁹

In addition, one criticism of the use of the CBCA is its inability to adequately address and differentiate between truthful and yet inaccurate allegations.¹⁸⁰ Witnesses have several different ways of relaying an account; however, "[a]n account that is intended to be truthful may be accurate or it may be inaccurate" because of a number of contributing factors, including "the reconstructive nature of memory or external biasing factors."¹⁸¹ Psychologists must differentiate

^{176.} Id.

^{177.} Id. (defining younger children as under the age of eight).

^{178.} *See id.* (describing metacognitive and metamemorial capabilities as understanding whether the child knows or remembers an answer).

^{179.} See id.

^{180.} *See* Ruby & Brigham, *supra* note 109, at 706. *But see* Amado et al., *supra* note 19, at 3, 8 (finding that all of the CBCA criteria discriminated significantly between the real-life memories of children and fabricated accounts).

^{181.} Ruby & Brigham, supra note 109, at 706 (providing examples of outside influences that could affect an individual's ability to recount an event, such as suggestions from others or biased questioning formats). These inconsistencies are particularly troubling in the context of children's accounts of sexual assault where a child could sincerely believe he or she is reporting an event that actually occurred, but the reporting is the result of reinforcing feedback by the interviewer, fantasizing, or being exposed to repeated or suggestive questioning. Id. at 720. In this context, a "false positive" means the testimony is "inaccurate but truthful" in that the witness believes that the account he or she is providing is accurate, but it is not. The statement, therefore, will score as a positive response and ultimately result in a higher veracity score. See Honts, supra note 18, at 891 (cautioning that the CBCA does not address the effect of unintentionally inaccurate statements on the veracity score); see also Dale, supra note 3, at 191 (explaining that children are more prone to confuse fantasy with reality, and they have a less developed ability to encode information resulting in "a greater susceptibility to postevent suggestions [which] may exist because the child is less likely to distinguish between the actual memory and postevent input"); Pezdek et al., supra note 112, at 124 (supporting the research that a young child's account of an event is as structured as an older child's account).

between unintentional inaccurate reporting and intentional lies while reporting.¹⁸² The CBCA factors arguably do a poor job of distinguishing between these two very different possible recounts of information.¹⁸³ However, the combination of SVA and CBCA-related methods may relieve some of the weaknesses of the CBCA alone.¹⁸⁴ In addition, these weaknesses in the test could be explored during cross examination of the expert at trial and, therefore, should not present a bar to their admissibility.

The general reliability of the underlying methods used in the CBCA has been confirmed and tested. Phillip Esplin and David Raskin conducted the first field study utilizing the CBCA procedure in the United States.¹⁸⁵ They analyzed forty child victim statements from sexual abuse cases to determine confirmed versus doubtful instances of sexual abuse.¹⁸⁶ Of the forty cases, researchers were able to "confirm" twenty cases of sexual abuse while categorizing the remaining twenty cases as "doubtful."¹⁸⁷ In the twenty "confirmed" cases, fifteen CBCA factors were often present, with seven factors present in every confirmed case and seven factors absent in all doubtful cases.¹⁸⁸ A later study, applied the CBCA to seventy-five children who

^{182.} Ruby & Brigham, *supra* note 109, at 706; *see also* Dale, *supra* note 3, at 203 (explaining how to discern when a child is intentionally lying (giving every single detail of the account) and when a child is recalling an actual experience (admitting to not being able to recall all of the details of the incident)). *But see* Ruby & Brigham, *supra* note 109, at 719 (emphasizing that across several studies, "there has generally been a higher tendency to falsely classify fictitious statements as truthful than to falsely classify true statements as fabricated").

^{183.} See Ruby & Brigham, supra note 109, at 720 (adding that maturity can contribute to deceptive results as well as exposure to coaching).

^{184.} *See* Honts, *supra* note 18, at 891 (describing how the Validity Checklist of the SVA is used to evaluate the CBCA's accuracy and quality).

^{185.} See Ruby & Brigham, supra note 109, at 711 (outlining the specifics of Esplin and Raskin's study).

^{186.} The child witnesses involved in the study ranged from three to fifteen years old. *Id*.

^{187.} *Id.* (stating that perpetrators confessions confirmed sexual abuse, unequivocal evidence supporting the allegation, or both, and doubtful cases determined through the accused repeatedly denying the allegations, lack of evidence to corroborate the allegation, the child recanting, polygraph evidence, or judicial dismissal).

^{188.} *Id.* (listing criteria 1, 3, 4, 5, 9, 14, and 19 as present in every confirmed case and criteria 6, 7, 8, 11, 13, 16, and 17 as absent in every doubtful case); Dale, *supra* note 3, at 204–05 (finding that the sample was too limited to establish any conclusive guidelines); *see also* Honts, *supra* note 18, at 892–93 (criticizing the reliability of laboratory studies conducted to detect children telling the truth from those who were lying, as often times these studies lack realism).

alleged sexual abuse, found that factors 1–8, 11, 12, 14, and 19 were more often present in confirmed allegations rather than in those that were doubtful.¹⁸⁹ Finally, as recently as 2015, researchers conducted a "meta-analytic review" that identified and analyzed numerous empirical studies and confirmed the Undeutsch Hypothesis and efficacy of CBCA criteria in discriminating between true statements of actual experiences and invented or imagined accounts by children.¹⁹⁰

Although the CBCA is a critical step in the SVA process, it is only part of it. SVA practitioners added the third and final step of the SVA to address some of the weaknesses of the CBCA standing alone and increases the accuracy of the final results.¹⁹¹

3. Step three: evaluating the CBCA through the Validity Checklist

The third and final step in the SVA acts as a check and balance for the entire process.¹⁹² This final step aids in evaluating the truthful but inaccurate witness.¹⁹³ Step Three of the SVA applies a Validity Checklist to both the statement from Step One and the CBCA scores from Step Two.¹⁹⁴ In this final step, the psychologists evaluate the CBCA results and apply the Validity Checklist.¹⁹⁵ "It is a heuristic checklist of items that are designed to force the evaluator to consider the alternative hypotheses and all of the available information" to enhance accuracy.¹⁹⁶ These alternative hypotheses and outcomes are the checks and balances of the entire SVA process. In considering alternative hypotheses supporting why an individual may deceive deliberately—or tell the truth inaccurately—an evaluator can better understand the individual's veracity.¹⁹⁷

^{189.} Children ranged from four to sixteen years old. *See* Ruby & Brigham, *supra* note 109, at 711.

^{190.} Amado et al., *supra* note 19, at 5 (explaining an exhaustive multi-method search that was undertaken in international and domestic databases).

^{191.} See infra Section III.A for further discussion of the error rate of the SVA and CBCA.

^{192.} See Honts, supra note 18, at 891.

^{193.} Id.

^{194.} Id. at 892.

^{195.} Pezdek et al., *supra* note 112, at 120.

^{196.} Honts, *supra* note 18, at 892.

^{197.} Id. at 892-93.

Common elements of the Validity Checklist include an evaluation of psychological characteristics,¹⁹⁸ interview characteristics,¹⁹⁹ motivational factors,²⁰⁰ and investigative questions.²⁰¹ Within these elements, several subsets of the factors are included in the table below.²⁰² This process challenges the CBCA results and considers alternative justifications for the CBCA outcome.²⁰³

203. See Criteria-Based Analysis, supra note 16, at 7. These external factors include:

(a) appropriateness of language and knowledge (mental capability of the child); (b) appropriateness of affect shown by the interviewee; (c) interviewee's susceptibility to suggestion; (d) evidence of suggestive, leading, or coercive questioning; (e) overall adequacy of the interview; (f) motives to report, for example, whether the interviewee's relationship with the accused or with other people involved suggests possible motives for a false allegation; (g) context of the original disclosure or report, for example, whether there are questionable elements in the context of the original disclosure; (h) pressures to report falsely, such as indications that others suggested, coached, pressured, or coerced the interviewee to make a false report; (i) consistency with the law of nature, that is, whether the described events are unrealistic; (j) consistency with other statements, that is, whether there are major elements of the statement that are inconsistent or contradicted by another statement made by this interviewee; and (k) consistency with other evidence, for example, whether there are major elements in the statement that are contradicted by reliable physical evidence or other concrete evidence."

^{198.} *Id.* at 902 (noting that psychological characteristics include the child's cognitive-emotional limitations, language or knowledge, affect during the interview, and suggestibility).

^{199.} *Id.* (explaining that examples of interview characteristics that are part of the validity checklist are interview procedures and any influence on statement content).

^{200.} *Id.* (listing the motivational factors including motives for reporting, the context of disclosure, and any influence by others).

^{201.} *Id.* at 902–03 (displaying that the investigative questions portion of the checklist looks at the lack of realism, inconsistencies, contradictory evidence, and characteristics of the offense).

^{202.} ALDERT VRIJ, DETECTING LIES AND DECEIT: PITFALLS AND OPPORTUNITIES 214 (2d ed. 2008) [hereinafter VRIJ, DETECTING LIES AND DECEIT].

THE VALIDITY CHECKLIST ²⁰⁴
Psychological Characteristics
1. Inappropriateness of language and knowledge
2. Inappropriateness of affect
3. Susceptibility to suggestion
Interview Characteristics
4. Suggestive, leading, or coercive questioning
5. Overall inadequacy of the interview
Motivation
6. Questionable motives to report
7. Questionable context of the original disclosure or report
8. Pressures to report falsely
Investigative Questions
9 Inconsistency with the laws of nature
10. Inconsistency with other statements
11. Inconsistency with other evidence

The Validity Checklist addresses some of the major issues and challenges to the reliability of the CBCA. In particular, the checklist addresses the risk that the witness was tainted by suggestive questions from a parent or by contact with biases could be brought to light.²⁰⁵ Individual characteristics, motivation, and inconsistencies are all common cross examination topics, and this third step of the SVA highlights the topics impact on the expert's analysis. Similarly, "[b]y systematically addressing each of the issues addressed in the Validity Checklist, the [SVA] evaluator explores and considers alternative interpretations of the CBCA outcomes."²⁰⁶ In other words, an SVA evaluator could conduct both a direct and cross examination on the same statement without subjecting the child to live testimony. Considering the entire SVA process, the Validity Checklist helps the evaluator testify to the veracity of a child's statement.²⁰⁷

If the CBCA produces a "high-quality statement" (containing many factors), then the Validity Checklist is used to evaluate the likelihood

^{204.} VRIJ, DETECTING LIES AND DECEIT, supra note 202, at 214.

^{205.} Id.

^{206.} Aldert Vrij & Giorgio Ganis, *Theories in Deception and Lie Detection, in* CREDIBILITY ASSESSMENT: SCIENTIFIC RESEARCH AND APPLICATIONS 301, 339 (David C. Raskin, Charles R. Honts & John C. Kircher eds., 2014).

^{207.} Criteria-Based Analysis, supra note 16, at 7-8.

of the alternative hypotheses.²⁰⁸ By examining the data collected, the quality of the statement, and any additional factors that could affect the outcome of the results, evaluators consider alternative reasons for the CBCA outcomes.²⁰⁹ If, however, the semi-structured interview produces a "low-quality statement" (containing few factors), then the Validity Checklist may be used to examine the statement holistically.²¹⁰ This Checklist may illuminate alternative factors that lead to the low-quality statement. For example, the interview may have been poorly conducted, the child may demonstrate an imperfect mastery of language, or the child's cognitive functioning may be questionable.²¹¹

All three steps of the SVA contain well-established techniques and strategies that psychologists have been using to evaluate children's allegations in sexual assault cases for decades.²¹² These are not novel or particularly controversial in practice and should be given serious consideration for admissibility in U.S. courts.

III. EXPERT TESTIMONY REGARDING CHILD WITNESS CREDIBILITY IS RELIABLE AND DOES NOT INVADE THE PROVINCE OF THE JURY

In the United States, courts evaluate the admissibility of expert testimony in terms of reliability and helpfulness to the factfinder using the Federal Rules of Evidence 702 (FRE 702) and the evaluative factors set out by the U.S. Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*²¹³ In an appropriate case, expert testimony concerning the underlying principles and results of an SVA could

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^{208.} *See* Honts, *supra* note 18, at 889 (listing the alternative hypotheses considered to include: "the allegations are basically true; the allegations are basically true, but the child has substituted a different person for the perpetrator; the fundamental allegation is true, but the child has made additional allegations that are false; the child has been influenced or pressured to make a completely false allegation to serve the needs of someone else; the child has made a false allegation for personal motives; the child has fantasized the allegations, possibly because of psychological problems").

^{209.} VRIJ, DETECTING LIES AND DECEIT, *supra* note 202, at 214.

^{210.} Id. at 219.

^{211.} Honts, supra note 18, at 891; Criteria-Based Analysis, supra note 16, at 31-32.

^{212.} Id. at 889-90.

^{213. 509} U.S. 579, 590 (1993) (promulgating the "standard of evidentiary reliability" for an expert's testimony based on scientific evidence); *see* United States v. Amaral, 488 F.2d 1148, 1153 (9th Cir. 1973) (explaining that qualified expert witnesses may testify only if their testimony assists the trier of fact in understanding the evidence or determining a fact at issue).

satisfy the requirements of FRE 702²¹⁴ and the *Daubert* reliability test.²¹⁵ Further, SVA-related expert testimony is beneficial to the jury in determining the credibility of child witnesses in sexual assault cases because of the developmental and testimonial concerns presented by these witnesses and the failures of the adversarial procedures to address those issues.²¹⁶

A. Expert Testimony Based on an SVA Satisfies Federal Rule of Evidence 702 and the Daubert Reliability Standard

Expert witnesses educate factfinders and assist them in understanding evidence beyond the jurors' common knowledge.²¹⁷ FRE 702 governs a trial judge's gatekeeping responsibility to ensure that expert testimony fits its intended educational purpose and is "not only relevant, but *reliable*."²¹⁸ Expert testimony is relevant when it assists the factfinder in determining a fact of consequence or applying the facts to the law.²¹⁹ On the other hand, reliability is determined by evaluating "whether the reasoning or methodology underlying the testimony is scientifically valid"²²⁰

For a trial judge to admit expert testimony, the proponent of the expert testimony must prove by a preponderance of the evidence that the proffered testimony satisfies the requirements of FRE 702.²²¹ FRE 702 provides:

^{214.} FED. R. EVID. 702. The full text of Rule 702 is provided supra Section III.A.

^{215.} See, e.g., Daubert, 509 U.S. at 590–92 (illustrating a situation in which the Daubert reliability test and the requirements of Rule 702 can be satisfied by certain expert testimony).

^{216.} See generally id. (discussing expert testimony); Vrij & Mann, supra note 19 (discussing different SVA studies).

^{217.} Colleen M. Berryessa, Educator of the Court: The Role of the Expert Witness in Cases Involving Autism Spectrum Disorder, 23 PSYCH. CRIME & L. 575, 575 (2017).

^{218.} Nimely v. City of New York, 414 F.3d 381, 396 (2nd Cir. 2005) (emphasis added) (citing *Daubert*, 509 U.S. at 589); *see also* Curtis v. M&S Petroleum, Inc., 174 F.3d 661, 668 (5th Cir. 1999) (relying on *Daubert*, 509 U.S. at 597).

^{219.} FED. R. EVID. 401; *see* State v. Salazar-Mercado, 325 P.3d 996, 999 (Ariz. 2014) (supporting the "gatekeeper' obligation" that FRE 702 imposes "on trial judges to admit only relevant and reliable expert testimony").

^{220.} *Daubert*, 509 U.S. at 592–93, 597 (explaining expert testimony must be deemed reliable and applicable to the "task at hand").

^{221.} FED. R. EVID. 702; United States v. Bright, No. 20-3792, 2022 WL 53621, at *2 (2nd Cir. Jan. 6, 2022); Wilson v. Taser Int'l, Inc., 303 F. App'x 708, 711 (11th Cir. 2008); State v. Bernstein, 349 P.3d 200, 202 (Ariz. 2015); *see also* Freeman v. Package Mach. Co., 865 F.2d 1331, 1337 (1st Cir. 1988) (discussing the plaintiff's burden to lay the proper foundation before eliciting expert testimony).

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert has reliably applied the principles and methods to the facts of the case. 222

Of particular importance to the SVA and CBCA admissibility analysis is FRE 702(c), which requires that a qualified expert demonstrate that the proffered testimony is the "product of reliable principles and methods..."²²³ In *Daubert*, the U.S. Supreme Court established a nonexhaustive list of five factors that judges should consider in determining if expert testimony is based on reliable principles and methods: (1) whether the scientific hypothesis is testable; (2) whether the hypothesis has been subjected to peer review and publication; (3) whether there is a known error rate; (4) whether there are standards that control the administration of the method or test; and (5) whether the theory on which the hypothesis is based is generally accepted in the applicable scientific community.²²⁴ The *Daubert* factors assist judges in determining whether a particular expert's testimony is the "product of reliable principles and methods," and therefore satisfies FRE 702(c).²²⁵

^{222.} FED. R. EVID. 702; In 2023, the Advisory Committee unanimously approved amendments to Rule 702 "to clarify and emphasize that expert testimony may not be admitted unless the proponent demonstrates to the court that it is more likely than not that the proffered testimony meets the admissibility requirements set forth in the rule." *Summary of the R. of the J. Conf. Com. on Rules of Practice and Proc., 117th Congress,* (Sept. 2022), https://www.uscourts.gov/sites/default/files/sept_2022_jcus_rules_rep ort_final_for_website.pdf [https://perma.cc/X9ZQ-BG6A]. Barring any Congressional action, the amendment goes into effect December 1, 2023. *Id.*

^{223.} Fed. R. Evid. 702(c).

^{224.} *Daubert*, 509 U.S. at 593–94; *see also* Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141 (1999) (extending the application of the *Daubert* standard to non-scientific evidence).

^{225.} FED. R. EVID. 702(c).

1. Daubert factors analysis

The *Daubert* factors attempt to ensure that courts screen out "junk science"²²⁶ while "also enabl[ing] the courts to entertain new and less conventional forms of [expert analysis]."²²⁷ The Court's addition of the more expansive factors put an end to the "wholesale exclusion [of expert testimony based on scientific innovations] under an uncompromising 'general acceptance' test. . . ."²²⁸ Evaluating the SVA and CBCA processes in the context of the *Daubert* factors demonstrates the potential for admission of "reliable science" of expert testimony that offers an opinion regarding the veracity of a child witness's prior out-of-court statement.

The first *Daubert* factor asks whether the methods are testable and have been tested. The clear answer to these questions regarding the SVA and CBCA is a resounding "yes."²²⁹ The underlying hypothesis and CBCA factors have been tested and confirmed repeatedly.²³⁰ As early as 1988, Esplin, Boychuk, and Raskin conducted a comprehensive field study of the SVA and CBCA.²³¹ Since then, researchers have conducted multiple studies on the SVA and CBCA.²³² One such researcher is

^{226.} United States v. Crisp, 324 F.3d 261, 268 (4th Cir. 2003). *See generally* CHRIS FABRICANT, JUNK SCIENCE AND THE AMERICAN CRIMINAL JUSTICE SYSTEM (1st ed. 2022) (finding that the use of unreliable scientific methods in jury trials results in the convictions of innocent individuals, this science is known as "junk science").

^{227.} Crisp, 324 F.3d at 268.

^{228.} *Daubert*, 509 U.S. at 596–97 (referring to the "general acceptance" test under Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923)); *Crisp*, 324 F.3d at 268.

^{229.} Amado et al., *supra* note 19, at 8.

^{230.} See id.; Aldert Vrij, Lucy Akehurst, Stavroula Soukara & Ray Bull, Will the Truth Come out? The Effect of Deception, Age, Status, Coaching, and Social Skills on CBCA Scores, 26 LAW & HUM. BEHAV. 261, 262 (2002) (describing the sixteen CBCA studies and Vrij analyzed, which ultimately found general support for the scientific hypothesis (the Undeutsch hypothesis) and many of the specific CBCA criteria). See generally Amado et al., supra note 19; Anson et al., supra note 23; Honts, supra note 18, at 887; Vrij & Mann, supra note 19, at 337.

^{231.} Lucas & McKenzie, supra note 82, at 354.

^{232.} See generally Hauch et al., supra note 129; Honts, supra note 18; Raskin & Esplin, supra note 27; Criteria-Based Analysis, supra note 16; Vrij & Mann, supra note 19 (providing the leading studies on the SVA and CBCA). Note, however, that although there are many studies on the SVA and CBCA, the reliability of these studies varies. Researchers do not use a standard method for calculating the studies' accuracy rates, thus the methodologies used can be unrealistic and highly subjective. Criteria-Based Analysis, supra note 16, at 23–24. These variations in testing methodologies and evaluator interpretations lead to a wide range of accuracy rates. Id. at 24 (referring to Table 4). But see Amado et al., supra note 19, at 8 (finding, after a comprehensive review

Aldert Vrij. In evaluating multiple CBCA studies, Vrij found that the underlying hypothesis that interviewees who told the truth would "obtain a higher total CBCA score than liars" was supported in eleven out of twelve (92%) studies.²³³ Note that the 92% result reported by Vrij does not translate into an 8% error rate for any expert who testifies that a particular witness is telling the truth or lying. Rather, the 92%shows a strong correlation between truth telling and a higher CBCA score. Vrij also identified some of the specific CBCA criteria that commonly support the hypothesis (factors 1, 2, 3, 4, 6, and 19), that the motivational factors 14-18 received less support, and that factors 16 and 17 occurred in less than 10% of truthful statements.²³⁴ Since Vrij's study in 2002, numerous other researchers have tested the underlying hypothesis and component parts of the SVA.235 These studies and findings support the conclusion that the SVA and CBCA methodologies can and have been tested, satisfying the first factor of the Daubert test.

The second *Daubert* factor asks whether the hypothesis has been subjected to peer review and publication.²³⁶ Peer review is important and supports a finding of reliability because it helps to eliminate "methodological errors."²³⁷ The more the process is exposed to critique by other experts in the field, the more feedback is generated that can be used to improve the process.²³⁸ There have been numerous SVA and CBCA studies published in peer reviewed journals for the past thirty years.²³⁹ These publications range from scientific and medical to sociological and legal. Initially, these articles were primarily laboratorybased studies on children, but they have expanded to include field

of CBCA studies before 2014, that the "results of the total CBCA score supported the validity of the Undeutsch hypothesis in discriminating between truthful statements based on self-experienced events and fictious accounts").

^{233.} Criteria-Based Analysis, supra note 16, at 16.

^{234.} *See id.* at 15–18. *But see* Hauch et al., *supra* note 129, at 826 (finding that there was a higher reliability rate for factors 6, 10, 16, 17, and 18 and noting that the low reliability for other factors was consistent with the researchers' expectations because these factors are "very subjective").

^{235.} See generally Amado et al., supra note 19, at 4–5.

^{236.} Daubert v. Merrell Dow Pharms. Inc., 509 U.S. 579, 593 (1993).

^{237.} John B. Meixner, Liar, Liar, Jury's the Trier? The Future of Neuroscience-Based Credibility Assessments in the Court, 106 Nw. U. L. REV. 1451, 1483 (2012).

^{238.} Id.

^{239.} See generally Amado et al., supra note 19; Epstein, supra note 31; Hauch et al., supra note 129; Honts, supra note 19; Raskin & Esplin, supra note 27; Criteria-Based Analysis, supra note 16; Vrij & Mann, supra note 19.

studies and the application of the SVA and CBCA to adult witnesses.²⁴⁰ Given the depth and volume of the publications, the second *Daubert* factor is abundantly present.

The third *Daubert* factor asks a more difficult question: is there a known error rate? There is no official error rate identified for the entirety of the SVA three-step process; however, there are established error rates for the CBCA based on a 2015 meta-analytic review.²⁴¹ This study established three applicable error rates: one general rate for all studies; one for experimental studies; and one for field studies.²⁴² The results for the first two categories estimated the error rate at approximately 30%.²⁴³ The error rate for the final category for field studies was substantially lower at approximately 10%.²⁴⁴ These error rates for the CBCA at between 68% and 76% in classifying truth tellers.²⁴⁵ Vrij suggested that the error rate for the CBCA could be extended to estimate an error rate for the SVA, as a whole, at approximately 30%.²⁴⁶ While a 30% error rate might seem high, it is substantially lower than the alternative 50%–54% error rate associated

^{240.} See Amado et al., supra note 19, at 5 (explaining the benefits and drawbacks to various experimental paradigms); Criteria-Based Analysis, supra note 16, at 13, 15, 23, 29, 32–34.

^{241.} *See generally* Amado et al., *supra* note 19, at 8 (comparing the results and implications of the error rates for field studies and experimental studies).

^{242.} Id.

^{243.} *Id.*; *see Criteria-Based Analysis, supra* note 16, at 32–33 (defining the error rate for laboratory studies as 30%).

^{244.} Amado et al., supra note 19, at 8.

^{245.} *See* Vrij et al., *supra* note 230, at 261–62 (reporting initial accuracy rates for the CBCA).

^{246.} *Criteria-Based Analysis, supra* note 16, at 32; *see also* Gilstrap et al., *supra* note 52, at 77 (2005) (indicating that "in the study that showed the best prediction rates of lying and truth-telling in children and adults using a combination of verbal and nonverbal indicators, the error rates were always higher than 22%"). This estimated error rate is complicated by the fact that researchers use different methods to calculate accuracy rates in their studies of the CBCA components. *Criteria-Based Analysis, supra* note 16, at 23–25 (commenting that some of the accuracy rate calculations are based on approaches that do not reflect real life and are highly subjective because they are the CBCA's assessor's own interpretation of the statement). Therefore, there is no way to monitor or ensure that two different CBCA experts, judging the same statements, will make the same decisions. *Id.* at 23. These different approaches to calculating accuracy may be one of the main reasons for the wide range of accuracy rates, 65% to 90%, reflected across the CBCA studies. *See generally id.* at 23–24 tbl.4.

with leaving jurors to determine credibility all on their own.²⁴⁷ In sum, there is a known error rate of 24%–32% for the CBCA and a hypothesized error rate of approximately 30% for the SVA.²⁴⁸ Unfortunately, the *Daubert* Court did not provide any guidance on what constitutes an acceptable error rate. Rather, courts are left to weigh this factor based on the testimony in each case.²⁴⁹

The fourth *Daubert* factor is an analysis of whether the test has standards that control its administration.²⁵⁰ Experts agree that there are established guidelines for the interview process (Step One) of an SVA.²⁵¹ However, the standards for CBCA factor interpretation and scoring are not consistent across all administrations of CBCA tests by different evaluators.²⁵² Some evaluators use slightly different factors while some use different scoring ranges.²⁵³ In addition, experts have criticized the CBCA because of the subjectivity of the determination of

^{247.} See Bond & DePaulo, supra note 5, at 214, 219 (finding in a 2006 meta-analysis of 206 documents, which spanned sixty-five years and hundreds of experiments, that individuals are right about 54% of the time); Ekman & O'Sullivan, supra note 5, at 916 (finding a random sample of college students to be 52.82% accurate when detecting whether a person is lying).

^{248.} It is worth noting that during the SVA process and through the Validity Checklist, "SVA experts typically look at alternative hypotheses to explain CBCA scores, such as cognitive limitations of the child, characteristics of the interview, and motivational factors." Vrij et al., *supra* note 230, at 264. Unfortunately, no studies were specifically conducted to determine if the Validity Checklist is effective in its appointed purpose as a check on the accuracy of the CBCA. However, considering alternate hypotheses suggests that the error rate could be less than 30%.

^{249.} Daubert v. Merrell Dow Pharms. Inc., 509 U.S. 579, 591 (1993).

^{250.} *Id.* at 594.

^{251.} See Lindsay E. Cronch, Jodi L. Viljoen & David J. Hasen, Forensic Interviewing in Child Sexual Abuse Cases: Current Techniques and Future Directions, 11 AGGRESSION & VIOLENT BEHAV. 195, 199 (2006) (explaining the four processes that are followed by interviewers as part of the cognitive interview: "mentally reconstructing the event . . ., reporting every detail of the event . . ., recalling the event in different sequences, and describing the event from various perspectives").

^{252.} *See Criteria-Based Analysis, supra* note 16, at 23 (stating that "the accuracy rate obtained by one expert in a CBCA study does not predict the accuracy rate [that may be] obtained by a second expert in the same study").

^{253.} See id. at 5–7 (detailing what some evaluators use as a nineteenth CBCA factor); Paolo Roma, Pietro San Martini, Ugo Sabatello, Roberto Tatarelli & Stefano Ferracuti, Validity of Criteria-Based Content Analysis at Trial in Free-Narrative Interviews, 35 CHILD ABUSE & NEGLECT 613, 614 (2011) (noting that some CBCA studies use a zero and one rating rather than a zero, one, and two system); Vrij & Mann, *supra* note 19, at 343 (explaining the use of a five-point scale to measure the presence or absence of each criterion, ranging from (1) absent to (5) strongly present).

whether a factor is strongly present, present, or not present.²⁵⁴ While the existence of different factors and scoring ranges may be a point to exploit on cross examination, it does not render the test unreliable. There are established areas of science, admitted in courts, where experts apply subjective criteria in reaching their expert conclusions.²⁵⁵ It is not uncommon for experts to contradict each other based on methodologies that, while equally supported by tests and error rates, lead to different conclusions.²⁵⁶ Thus, it could be argued that the varying factors and subjective criteria goes to weight, not admissibility, and reliance upon the test is a topic that can be addressed through cross examination of the expert at trial. As to the fourth *Daubert* factor, therefore, standards for the SVA and CBCA, though subjective, are present.

The fifth and final *Daubert* factor is whether the hypothesis is generally accepted²⁵⁷ in the applicable scientific community. This factor asks whether the science is accepted by members of the scientific

^{254.} See Criteria-Based Analysis, supra note 16, at 23 (commenting that some approaches are highly subjective because they rely on the CBCA's assessor's own interpretation of the statement).

^{255.} See In re Johnson & Johnson Talcum Powder Prods. Mktg., Sales Pracs. & Prods. Litig., 509 F. Supp. 3d 116, 152 (D.N.J. 2020) (finding that the expert's method was sufficiently reliable because it was based on reliable scientific methods even though the rules governing the analysis were generally subjective and further stated that the defendant could challenge the expert's opinion before a jury "as any purported inaccuracies in his method . . . go more appropriately to the weight of his opinion rather than reliability"); United States v. Weiss, No. 05-CR-00179, 2007 WL 9677017, at *5 (D. Colo. 2007) (disagreeing with the defendant's argument that the expert's methods lacked scientific rigor due to subjective criteria, and finding that the presence of subjective elements in the expert's analysis, or absence of quantitative criteria, did not make this testimony inadmissible).

^{256.} For a discussion of the "battle of the experts," and when conflicting expert testimony can skew the applicable science, see *Conflicting Expert Witnesses Can Give Inaccurate View of Science*, VAND. UNIV. RSCH. NEWS (Apr. 9, 2012, 12:41 PM) https://news.vanderbilt.edu/2012/04/09/dueling-witnesses [https://perma.cc/Z9Q B-6YBY].

^{257.} Watkins v. Telsmith, Inc., 121 F.3d 984, 991 (5th Cir. 1997) (evaluating "whether the expert is a hired gun or a person whose opinion in the courtroom will withstand the same scrutiny that it would among his professional peers"); Braun v. Lorillard, Inc., 84 F.3d 230, 235 (7th Cir. 1996) (noting "a judge or jury is not equipped to evaluate scientific innovations" and finding that if an expert tries to "depart from the generally accepted methodology of his field and embark upon a sea of scientific uncertainty, the court may . . . insist that he" change course and "ground his departure in demonstrable and scrupulous adherence to the scientist's creed of meticulous and objective inquiry").

community with knowledge of the area of science at issue by way of a "process of criticism by well-motivated and skillful experts who have not been able to detect any significant errors."²⁵⁸ General acceptance looks at both the theory and methodology of the science and requires "a demonstrable, objective procedure for reaching the opinion and qualified persons who can either duplicate the result or criticize the means by which it was reached."²⁵⁹ Notably, it does not require a majority of scientists to have adopted the science—if the science is "espoused by a recognized" or a "relevant minority" of scientists in the field, it could sufficiently be generally accepted.²⁶⁰

Support for the reliability of the SVA and CBCA comes from the long-standing practice of psychologists who routinely use these assessments to aid law enforcement and judges outside of the United States.²⁶¹ More specifically, SVA and CBCA-based expert testimony is used in investigations of criminal child sexual assault cases and accepted by factfinders in courts in Germany, France, and Sweden, among other countries.²⁶² Therefore, at first blush, the testimony

262. See, e.g., Bala et al., supra note 8, at 995 (explaining credibility assessment analytical tools used in Canada); Honts, supra note 18, at 887 (providing the historical background of scientific credibility assessments and their first uses on children's

^{258.} David E. Bernstein, *The Admissibility of Scientific Evidence After* Daubert v. Merrell Dow Pharmaceuticals., Inc., 15 CARDOZO L. REV. 2139, 2151 (1994) (quoting JOHN ZIMAN, RELIABLE KNOWLEDGE: AN EXPLORATION OF THE GROUNDS FOR BELIEF IN SCIENCE 2–3, 108 (1978)).

^{259.} United States v. Brown, 557 F.2d 541, 556 (6th Cir. 1977) (quoting United States v. Baller, 519 F.2d 463, 466 (4th Cir. 1975)); United States v. Bonds, 12 F.3d 540, 562 (6th Cir. 1993).

^{260.} Lust v. Merrell Dow Pharms., Inc., 89 F.3d 594, 597 (9th Cir. 1996).

^{261.} Germany, France, and Sweden are several of the countries that accept SVA and CBCA-based expert testimony in their courts. Countries with an inquisitorial system may be more accepting of these practices because of the different roles that the judge plays in determining guilt. In an inquisitorial system, the judge often controls the investigation of the facts, appoints the expert, and is typically responsible for questioning the expert witness regarding his or her findings. Expert witnesses are often thought of as aides to the judges, rather than witnesses. *See* David Sonenshein & Charles Fitzpatrick, *The Problem of Partisan Experts and the Potential for Reform Through Concurrent Evidence*, 32 REV. LITIG. 1, 36–46 (2013) (describing the relationship between judges and experts in inquisitorial legal systems). In these systems, expert analysis of witness veracity is commonplace. Perhaps this difference is due to those systems' recognition of the judge as more than a layperson who could be swayed, as a juror could, by expert testimony. Another possible reason for this drastic difference in the treatment of SVA and CBCA expert testimony can be attributed to the more stringent evidentiary admissibility rules in the U.S.

seems to be generally accepted; however, U.S. courts have not traditionally used the courts of other countries as the "relevant community" under the *Daubert* analysis. Consequently, this factor is harder to assess.

The applicable community is the scientific community that develops, performs, and administers the tests.²⁶³ The relevant community, with regard to SVA and CBCA, is psychologists and other practitioners who analyze the statements of alleged child sexual abuse victims for use in tailoring treatment, law enforcement investigations, and criminal prosecutions.²⁶⁴ In that arena, SVA and CBCA testimony and analysis has been performed and used for decades. This testimony is not emblematic of a small group of psychologists who use some novel or unique methodology. Instead, an expert in the United States would be doing the same analysis that is being done across the world.²⁶⁵ Additionally, since this same analysis is done across the world, it can be consistently duplicated and tested in similar manners. Simply crossing the Atlantic Ocean does not make scientific analysis any less reliable or less accepted in the scientific community. Therefore, there is support for the final factor due to the extensive international community of psychologists that use these tests on a regular basis.

In sum, the SVA and CBCA factors have been tested repeatedly, are the focus of numerous published peer review studies and articles, present both known and hypothesized error rates, are subject to objective and subjective standards controlling administration of the tests, and are widely accepted by the relevant scientific community around the world. Therefore, the SVA and CBCA arguably satisfies the *Daubert* test.

2. Limited and inconsistent caselaw

Court opinions provide little to no insight on the issues of the admissibility of SVA testimony. No federal courts and few state courts

statements); Lamers-Winkelman, *supra* note 16, at 64, 66 (discussing the use of SVA in the Netherlands); Pezdek et al., *supra* note 112, at 119–20; *Criteria-Based Analysis, supra* note 167, at 3–4; Duce, *supra* note 16 (discussing the use of SVA in Chile).

^{263.} See Lauzon v. Senco Prods., Inc., 270 F.3d 681, 691 (8th Cir. 2001) (discussing general acceptance within the scientific community). But see United States v. Crisp, 324 F.3d 261, 268–69 (4th Cir. 2003) (noting that general acceptance can be viewed through a history of courts accepting the evidence). See generally Harvey Brown, Eight Gates for Expert Witnesses, 36 HOUS. L. REV. 743, 758–59 (1999) (considering the factors of expert qualification).

^{264.} See supra Part II (regarding the use and history of the SVA and CBCA).

^{265.} See, e.g., sources cited supra note 16.

have analyzed whether SVA and CBCA-based expert testimony meets the *Daubert* reliability test. In *Salazar* and *Winsett* the Texas Court of Appeals confronted expert testimony based on an SVA of a child witness statement.²⁶⁶ In both cases, the Texas Court of Appeals found that the expert testimony offered by the defense, based on the SVA, was properly excluded by the trial court because the experts' methodologies and conclusions lacked sufficient reliability.²⁶⁷

However, in Vasquez v. State²⁶⁸, the Court of Appeals of Texas took a more expansive view of the admissibility of a modified statement validity assessment in an earlier case.²⁶⁹ In Vasquez, a psychologist testified that the statement validity assessment of a sexual abuse victim revealed that the victim's statement shared characteristics of descriptions of actual events.²⁷⁰ The court held that the testimony was admissible to rebut the defense's theory that the victim had falsely accused the defendant of sexual misconduct.²⁷¹ The court stated plainly that "[s]pecific testimony that statement validity analysis indicates that the person's statement is in fact an account of real events is usually inadmissible," but that such testimony "may be adduced only to rebut specific testimony that such analysis indicates that the statement is not an account of real events."272 Relying on Yount v. State,²⁷³ the Vasquez court found that the expert testimony adhered to the principle that "[e]xpert testimony that a child exhibits behavioral characteristics that have been empirically shown to be common among children who have been sexually abused is relevant and admissible as substantive evidence under rule 702."274 Of most importance, the court concluded that such testimony is not objectionable on the ground that it bolsters the child-witness's credibility.²⁷⁵

^{266.} See Winsett v. State, No. 10-15-00348, 2017 WL 4080156, at *8 (Tex. App. Sept. 13, 2017), *petition ref d*, (Feb. 7, 2018); Salazar v. State, 127 S.W.3d 355, 359–60 (Tex. App. 2004), *tatition ref d* (Aug. 31, 2004)

App. 2004), petition ref'd, (Aug. 31, 2004).

^{267.} Winsett, 2017 WL 4080156, at *8; Salazar, 127 S.W.3d at 360.

^{268. 975} S.W.2d 415 (Tex. App. 1998).

^{269.} Id. at 418.

^{270.} Id.

^{271.} Id. at 418-19.

^{272.} Id. at 418.

^{273. 872} S.W.2D 706, 708–09 (Tex. Crim. App. 1993) (en banc).

^{274.} Vasquez, 975 S.W.2d at 417 (citing Yount, 872 S.W.2D at 709).

^{275.} Id.; see also Cohn v. State, 849 S.W.2d 817, 819-21 (Tex. Crim. App. 1993) (en

banc) (holding that relevant expert testimony should not be excluded for bolstering simply because it corroborates the testimony of an earlier witness).

The Supreme Court of Montana also took a favorable view of this type of evidence in *State v. Bomar*,²⁷⁶ where it upheld the trial court's use of an expert witness to testify to the credibility of a child witness in a sexual assault prosecution using SVA methodologies.²⁷⁷ In *Bomar*, the expert testified that "based on her statement validity assessment, 'it appeared many of [the child's] statements. . . were consistent with the research, which shows valid statements of sexual abuse.'"²⁷⁸ The Montana Supreme Court did not specifically analyze whether the SVA testimony satisfied the *Daubert* reliability test because it decided that defense counsel waived its substantive *Daubert* challenge when it did not insist on a *Daubert* hearing²⁷⁹ and failed to sufficiently articulate a basis for challenging the expert testimony.²⁸⁰ Although this case does not provide a direct analysis of SVA testimony under *Daubert*, it demonstrates that expert testimony based on the SVA principles is being admitted at the state court level.²⁸¹

The Montana Supreme Court provided additional insight in *State v*. *Geyman*,²⁸² when it addressed the admissibility of expert testimony

280. Bomar, 182 P.3d at 52-53.

282. 729 P.2d 475 (Mont. 1986).

^{276. 182} P.3d 47 (Mont. 2008).

^{277.} *Id.* at 51, 53; *see also* Wilkinson v. Timme, No. 11-CV-00454-REB, 2012 WL 1969273, at *6–7 (D. Colo. June 1, 2012) (denying the applicant's writ of habeas corpus on the grounds that the applicant failed to object when the prosecution's witness testified regarding the credibility of the child victim using an SVA methodology).

^{278.} Bomar, 182 P.3d at 48. Note that Montana has a specific rule that allows expert testimony regarding the child witness's credibility in child sexual assault cases once the "child testifies at trial and his or her credibility is brought into question," but even under this "Montana Rule" the expert testimony must meet the same standards of reliability as other expert testimony. *Id.* at 51; *see also* State v. Riggs, 113 P.3d 281, 285 (Mont. 2005) (excluding defendant's expert testimony on the subject of credibility of victims because the prosecution did not bring forth evidence of the child's credibility and the child did not testify); State v. Scheffelman, 820 P.2d 1293, 1298 (Mont. 1991) (barring expert testimony because the expert was only experienced with children who were sexually abused, and thus was unqualified to discuss behavior changes resulting from sexual abuse); State v. Geyman, 729 P.2d 475, 478 (Mont. 1986) (holding expert testimony as admissible for the purpose of helping the jury assess credibility).

^{279.} *Bomar*, 182 P.3d at 52–53. A *Daubert* hearing is a hearing conducted without the jury to determine if the proffered expert testimony meets the *Daubert* reliability test. David G. Owen, *A Decade of* Daubert, 80 DENV. U. L. REV. 345, 362 (1994).

^{281.} See Wilkinson, 2012 WL 1969273, at *6–7 (demonstrating, from a review of the denial of Writ of Habeas Corpus by the U.S. District Court for the District of Colorado, that the defendant was not entitled to relief because the defense counsel did not properly object to the expert testimony relying on a CBCA analysis) (state court opinion unavailable).

regarding the credibility of a child alleged to have been the victim of sexual assault.²⁸³ The expert, a clinical psychologist, testified that her general experience with children is that they "don't make up" stories of sexual assault.²⁸⁴ She testified to her opinion that the child victim was sexually assaulted based on his credibility, the story he recounted to her, and his consistency.²⁸⁵ The court held that:

[E]xpert testimony is admissible for the purpose of helping the jury to assess the credibility of a child sexual assault victim. The expert testimony in no way impinged upon the jury's obligation to decide the victim's credibility. It merely enlightened the jurors on a subject with which many or most jurors have no common experience they can use to judge the victim's credibility. . . . The jury had the discretion to accept or reject the expert testimony in its entirety and in the end they were the sole judge of the child's credibility.²⁸⁶

Texas and Montana are the only U.S. states with courts that have dealt directly with the admissibility of SVA testimony.²⁸⁷ Federal courts offer even less insight, as no federal court has addressed the admissibility of SVA and CBCA evidence directly. Due to this small pool of relevant cases and the inconsistencies within the rulings, questions remain regarding this type of evidence and its admissibility.

B. Expert Testimony Evaluating Child Witness Credibility Does Not Invade the Province of the Jury Because of the Challenges Presented by Child Witnesses in Sexual Assault Cases

Expert SVA and CBCA-based testimony does not invade the province of the jury because SVA and CBCA-based testimony does not analyze or offer an evaluation of the in-court testimony of witnesses and, in light of the unique challenges presented by child witnesses, it is helpful to the jury in accomplishing the difficult task of assessing their credibility. SVA and CBCA-based testimony uses the expert's specialized knowledge and experience to apply proven techniques to assess prior out-of-court statements to assist the jury in their overall assessment of the child witness's credibility. This is particularly useful for child

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^{283.} Id. at 479–80.

^{284.} Id. at 479.

^{285.} Id.

^{286.} Id. at 479-80.

^{287.} *See, e.g.*, Salazar v. State, 127 S.W.3d 355, 359–60 (Tex. App. 2004) (considering SVA in Texas); Winsett v. State, No. 10-15-00348, 2017 WL 4080156, at *9 (Tex. App. Sept. 13, 2017) (same); United States v. Bomar, 182 P.3d 47, 52–53 (Mont. 2008) (considering SVA in Montana).

witnesses due to their difficulty providing competent trial testimony, commonly held misconceptions regarding child witness statements, and the ineffectiveness of existing adversarial procedures such as cross examination in producing accurate testimony.²⁸⁸

To discuss whether SVA evidence interferes with the duty of the factfinder, it is crucial to first identify what exactly is meant by the 'province of the jury' in this context. The definition of the concept emerges from two requirements necessary for expert testimony: the expert must contribute specialized knowledge not commonly held by jurors, and the expert's opinion must assist the jury in understanding the evidence or determining a fact at issue.²⁸⁹ Whether an expert witness is a cardiologist, mechanic, or importer of Roman antiquities, their duty is to impart specialized knowledge to the factfinder that the factfinder lacks, or without which the factfinder would misunderstand or misinterpret the evidence presented in the case.²⁹⁰

The task of determining the credibility of witnesses was not always the jury's responsibility. Prior to the advent of jury trials, 'truth' was decided in trials by "ordeal" either by water or fire.²⁹¹ The support for these methods was founded in faith and reliance on God to determine

^{288.} See discussion supra Part I. See generally Dale, supra note 3 (discussing the trauma experienced by children on cross-examination and suggesting expert testimony may yield more reliable testimony); Nathanson, supra note 4, at 46–49 (describing developmental factors, interview characteristics, and environmental details that may impact children's accounts of prior events); Pantell, supra note 4 (discussing the myriad challenges and limitations of child testimony and outlining the role of pediatricians and techniques for eliciting truthful testimony from children).

^{289.} FED. R. EVID. 702(a); see Ric Simmons, Conquering the Province of the Jury: Expert Testimony and the Professionalization of Fact-Finding, 74 U. CIN. L. REV. 1013, 1014–15 (2006) (advocating for a uniform evaluation of expert testimony based on the reliability standards because the traditional notion of the "province-of-the-jury prohibition" lacks a solid foundation).

^{290.} FED. R. EVID. 702; *see* United States v. Duncan, 42 F.3d 97, 101 (2d Cir. 1994) (describing that an expert witness has a limited "role of providing the groundwork in the form of an opinion to enable the jury to make its own informed determination").

^{291.} See Hutchins, supra note 68, at 510 (citing Margaret H. Kerr, Richard D. Forsyth & Michael J. Plyley, Cold Water and Hot Iron: Trial by Ordeal in England, 22 J. INTERDISC. HIST. 573, 573 (1992)). The Kerr article explains that a trial by fire entailed inflicting burns with a hot iron on the palms of the accused, bandaging those wounds, and waiting several days to see if the wounds were healed. If the wounds were healed, the accused was believed innocent. If the wounds were not healed, the accused was said to be deemed guilty by God. In a trial by water, the accused hands and feet were bound, and he was thrown in cold water above his head. If he sank to the bottom, he was considered innocent because the water accepted him; however, if he rose to the top, he was guilty because the water rejected him. Kerr et al., at 582–83, 589.

the truth.²⁹² From ordeals, the justice system moved to reliance on the rule of law and the administration of oaths to ensure truthful testimony.²⁹³ It was not until the late 1800s that American courts bestowed on juries the primary responsibility of evaluating the credibility of the witnesses.²⁹⁴ The system has come a long way from determining truth by drowning or burning the accused's palms, but the system is still evolving. Unfortunately, the American jury system still puts juries in the untenable position of determining the credibility of a complete stranger based on unarticulated and unsupported criteria such as facial expressions, body language, and speech inflections.

Courts are protective of the jury's function as lie-detector and have found that experts who usurp the jury's role by determining credibility of a witness at trial do not aid the jury.²⁹⁵ This is true even in light of studies that have shown that jurors are poor at the task.²⁹⁶ Pursuant to FRE 702(a), expert testimony is admissible only if it helps the trier of fact to "understand the evidence or to determine a fact at issue."²⁹⁷ Expert testimony is inadmissible if it attempts to substitute the expert's judgement for the factfinder's or undertakes to instruct the jury on the proper outcome of the case.²⁹⁸ For example, expert witness testimony

297. FED. R. EVID. 702(a) provides that:

"A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if . . . the expert's scientific, technical, or other specialized knowledge will *help the trier of fact* to understand the evidence or to determine a fact in issue."

Id. (emphasis added).

298. See United States v. Duncan, 42 F.3d 97, 101 (2d Cir. 1994) (requiring experts to offer legal conclusions instead of guiding the jury toward specific outcomes, which prevents the substitution of the expert's judgment for the jury's and enables the jury to make informed determinations); United States v. Bilzerian, 926 F.2d 1285, 1294 (2d Cir. 1991) (explaining that expert testimony on legal matters is inadmissible; experts must avoid assuming the trial judge's or jury's roles in instructing on and applying the law to the facts); see also United States v. Filler, No. CR-97-20087, 2000 WL 123446, at *2 (9th Cir. Feb. 1, 2000) (affirming the trial court's decision to bar a psychiatric expert from "concluding that ... [defendant's] statements were false" because

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^{292.} Hutchins, supra note 68, at 509-10.

^{293.} Id. at 510-16.

^{294.} Id. at 516.

^{295.} See Mark A. Allen, District Court Limits Expert Testimony for Rendering Legal Conclusions, A.B.A. (Jul. 6, 2015), https://www.americanbar.org/groups/litigation/committees/expert-witnesses/practice/2015/district-court-limits-expert-testimony-rendering-legal-conclusions [https://perma.cc/7EW5-T859].

^{296.} See supra Section I.A for a discussion about the studies regarding witness credibility assessments.

including an evaluation of another trial witness's credibility by analyzing that witness's in-court trial testimony generally violates FRE 702(a) even when those evaluations are based on scientific principles.²⁹⁹

To be clear, this is not what is occurring when an expert testifies to an analysis of an out-of-court statement by a child witness using an SVA. For example, testimony by an expert who watches the child on the stand and then provides an opinion based on the child's demeanor and in-court recitation of the facts would be barred by FRE 702. Courts have repeatedly found this type of evidence inadmissible.³⁰⁰ However, these prohibitions against credibility testimony should not bar the

[&]quot;credibility is an issue for the jury"); United States v. Scop, 846 F.2d 135, 142 (2d Cir. 1988) (opining that witness credibility should be reserved exclusively for the jury and holding that experts may not offer opinions on relevant events based on their personal assessments of the credibility of other witnesses), *modified on reh'g*, 856 F.2d 5, 6 (1998) (reversing defendants remaining convictions for perjury because they were also tainted by the improper testimony); United States v. Azure, 801 F.2d 336, 340–41 (8th Cir. 1986) (finding that highly-qualified experts go too far when they put their "stamp of truthfulness" on the credibility of a witness).

^{299.} Nimely v. City of New York, 414 F.3d 381, 398 (2d Cir. 2005); see United States v. Lumpkin, 192 F.3d 280, 289 (2d Cir. 1999) (excluding the expert testimony based on concern that the "proposed testimony and explication of the scientific studies would have confused the jury's assessment of the officers' credibility"); United States v. Charley, 189 F.3d 1251, 1267 (10th Cir. 1999) ("[E]xpert testimony which does nothing but vouch for the credibility of another witness encroaches upon the jury's vital and exclusive function to make credibility determinations, and therefore does not 'assist the trier of fact' as required by Rule 702."); Westcott v. Crinklaw, 68 F.3d 1073, 1076–77 (8th Cir. 1995) ("[A] qualified expert may inform the jury of characteristics of sexually abused children and describe the characteristics exhibited by the alleged victim but may not state an opinion that sexual abuse has in fact occurred." (quoting United States v. Johns, 15 F.3d 740, 743 (8th Cir. 1994))). But see United States v. Partin, 493 F.2d 750, 762 (5th Cir. 1974) (recognizing that a jury has a right to hear all information that could affect a witness's credibility regarding insanity or mental derangement and that a defendant has a right to explore every avenue relating to the credibility of witnesses against him).

^{300.} See Azure, 801 F.2d at 336, 340–41 (excluding expert testimony that the story of the victim was believable and that the expert could "see no reason" why the victim was not telling the truth) (internal quotations omitted); see also United States v. Binder, 769 F.2d 595, 598, 602 (9th Cir. 1985), overruled on other grounds by United States v. Morales, 108 F.3d 1031, n.1 (9th Cir. 1997) (excluding expert testimony that bolstered the children's story and usurped the jury's fact-finding function because the jury was "impermissibly being asked to accept an expert's determination that these particular witnesses were truthful"); Nichols v. Am. Nat'l Ins. Co., 154 F.3d 875, 883 (8th Cir. 1998) (holding that an expert may not offer an opinion regarding a witness's credibility).

admissibility of SVA-based testimony because, for starters, an SVA does not analyze the witness's in-court trial testimony. The three-step SVA process is completed long before the child witness takes the stand at trial.³⁰¹ The evaluation of the in-court testimony is left exclusively in the jury's hands. The use of SVA evidence to aid the jury is similar to the use of other forensic tools that analyze evidence collected out-ofcourt, such as DNA analysis of a blood sample. Like all expert opinions, the jury can accept, reject, or give as much weight as it sees fit to the

expert's analysis.³⁰² Some may see this distinction between the analysis of in-court testimony and out-of-court statements as mere semantics. That position is understandable as both types of testimony are commenting on the veracity of the child witness and provide an expert 'stamp of approval' or 'disapproval' that may unduly influence the jury.³⁰³ Historically, the resistance to this evidence is based on a concern that the expert testimony would allow the jury to "abdicate its own responsibility [by] relying on the questionable premise that the expert is in a better position to make such a judgment."³⁰⁴ However, that concern is overcome when the jury needs the information the expert

^{301.} *See* Honts, *supra* note 18, at 898 (explaining that the educational form of the SVA process presents scientifically researched information to the trier of fact, assisting in the evaluation of the child witness's testimony before the court).

^{302.} *Cf.* Simmons, *supra* note 289, at 1065–66 (supporting more liberal rules for the admissibility of expert testimony regarding witness credibility).

^{303.} *Id.* at 1061; *see* United States v. Barnard, 490 F.2d 907, 912 (9th Cir. 1973) (stating that expert testimony on witness credibility invades the province of the jury and usurps its role as the "lie detector in the courtroom"); *see also* McGOUGH, *supra* note 51, at 252 ("We agree that in these types of special circumstances [involving allegations of child sexual abuse] some expert testimony may be helpful, but putting an impressively qualified expert's stamp of truthfulness on a witness' story goes too far in present circumstances." (alteration in original) (quoting *Azure*, 801 F.2d at 340)).

^{304.} Elaine D. Ingulli, *Trial by Jury: Reflections on Witness Credibility, Expert Testimony, and Recantation*, 20 VAL. U. L. REV. 145, 148 (1986) (discussing the judge's authority to exclude expert testimony that does not assist the jury); *see* Andrew Ligertwood & Gary Edmond, *Expressing Evaluative Forensic Science Opinions in a Court of Law*, 11 LAW PROBABILITY & RISK 4, 298–302 (2012) (arguing that forensic science evidence should be presented in a manner more easily understood by judges and juries alike); *see also* Poulin, *supra* note 39, at 1005 (suggesting that courts should use the Rules of Evidence to "facilitate, rather than bar" expert witness testimony on credibility to promote the search for the truth). *But see* Simmons, *supra* note 289, at 1021, 1051 (asserting that the "expert witness is merely stating an opinion that, like all expert opinions and indeed all other testimony, the jury can accept, reject, or give as much weight as it sees fit" and discussing that some psychologists have found that jurors are capable of weighing expert testimony similarly to how they evaluate any other witness' testimony.

has to offer because there is a common misconception or myth that must be explained, or because the procedures for eliciting in-court testimony fail to produce accurate information.³⁰⁵ Sometimes, the jury needs expert assistance.

The groundwork has already been laid to admit specialized testimony regarding the cognitive functions, social influences on memory, and behaviors commonly associated with child victims of sexual assault. For example, clinical studies show that laypersons (jurors and judges alike) assume, incorrectly, that certain behaviors such as delayed reporting, inconsistencies in accounts, and recanting statements, are indicative of untruthfulness.³⁰⁶ In addition, expert testimony has routinely been admissible when confirming statements made by child sexual assault victims³⁰⁷ regarding the symptoms and characteristics of sexually abused children,³⁰⁸ confirming a child's

^{305.} See Epstein, supra note 31, at 747-65.

^{306.} See MCGOUGH, supra note 51, at 254–55 (stating that, in many cases, experts have been permitted to testify to the vast clinical data discussing how delayed reporting, withdrawing statements, and other conduct are consistent with common behaviors of sexually abused children and referring to this type of testimony as "corrective" or "rehabilitative" evidence, the use of which is often seen as only a "comment on the child's credibility" once at issue); United States v. Miner, 131 F.3d 1271, 1273–74 (8th Cir. 1997) (describing recantations in child sexual abuse cases as a "recurring phenomenon" and stating that expert testimony revealed that recantations are very common in such cases (quoting United States v. Provost, 969 F.2d 617, 621 (8th Cir. 1992))); State v. R.E.B., 895 A.2d 1224, 1233 (N.J. Super. Ct. App. Div. 2006) (holding that "[t]he victim's delay in reporting or silence may be considered by the jury in assessing the victim's credibility, but the jury must also be told that the 'silence or delay, in and of itself, is not inconsistent with a claim of abuse'" (quoting State v. P.H., 840 A.2d 808, 820 (N.J. 2004))).

^{307.} *See, e.g.*, State v. Oliver, 354 S.E.2d 527, 533–34 (N.C. Ct. App. 1987) (finding that an expert with years of specialized experience was "in a better position than the trier of fact to have an opinion on the credibility of children in general who report sexual abuse" and could testify generally that children do not lie about sexual abuse). 308. *See* Allison v. State, 353 S.E.2d 805, 807 (Ga. 1987) (per curiam) (concluding that expert testimony of child sexual abuse syndrome was competent evidence because "[1]aymen would not understand this syndrome without expert testimony, nor would they be likely to believe that a child who denied a sexual assault, or who was reluctant to discuss an assault, in fact had been assaulted").

performance on personality and IQ tests,³⁰⁹ and describing post-traumatic stress disorder (PTSD).³¹⁰

In particular, courts have permitted experts to debunk misconceptions and assist the jury in understanding and assessing the witness's credibility.³¹¹ In a broader application of this reasoning, courts have permitted expert testimony on the effect stress has on perception and memory,³¹² suggestive questioning,³¹³ and social contagion.³¹⁴

^{309.} See State v. Kennedy, 357 S.E.2d 359, 365–66 (N.C. 1987) (holding that the expert's testimony that the victim "responded to the test questions in an 'honest fashion'" and "did not attempt to give false responses on a psychological test, thereby skewing the test results and rendering the result unreliable" was admissible as it was not directed at "the credibility of the victim but to the reliability of the test itself").

^{310.} See Kruse v. State, 483 So. 2d 1383, 1385–86 (Fla. Dist. Ct. App. 1986) (finding the admission of an expert's testimony that the alleged victim "exhibits symptoms consistent with one who has been sexually abused" was a harmful error), *abrogated by* Hadden v. State, 690 So. 2d 573, 581 (Fla. 1997); *see also* State v. Allewalt, 517 A.2d 741, 741–42, 751 (Md. 1986) (finding that admission of expert testimony that the victim suffered from PTSD and that, in the expert's opinion, "the cause of the disorder was the rape complained of by the victim" was not an abuse of discretion by the trial court).

^{311.} See Livia L. Gilstrap & Michael P. McHenry, Using Experts to Aid Jurors in Assessing Child Witness Credibility, 35 COLO. LAW. 65, 66 (2006) (noting that jurors often give more weight to an expert's testimony "that goes beyond describing the scientific studies to tie those studies to the case at hand"); see also Fiona Leverick, What Do We Know about Rape Myths and Juror Decision Making?, 24 INT'L J. EVIDENCE & PROOF 255, 256–57 (2020) (discussing the "false and prejudicial beliefs" jurors may hold about rape and rape victims and "how these might impact upon the way in which jurors approach the evidence").

^{312.} Simmons, *supra* note 289, at 1030, 1035 (describing the admissibility of expert testimony in general terms in areas related to "non-intuitive factors, such as the existence of violence in an event, heightened levels of stress on the witness, and past experiences and cultural biases or prejudices that influence what the witness expects to see").

^{313.} See United States v. Rouse, 111 F.3d 561, 571 (8th Cir. 1997) (allowing an expert's testimony regarding "the dangers of implanted memory and suggestive practices when interviewing or questioning child witnesses"); see also Guam v. McGravey, 14 F.3d 1344, 1348–49 (9th Cir. 1994) (stating that the defendant "could have, but did not, present expert testimony on the issue of sexual abuse of children or the susceptibility of children to suggestion"). See generally Gail S. Goodman & Jodi A. Quas, Repeated Interviews and Children's Memory: It's More than Just How Many, 17 CURRENT DIRECTIONS PSYCH. SCI. 386 (2008) (evaluating the impact of repeated and suggestive questioning on the accuracy of child testimony).

^{314.} See NAACP v. A.A. Arms Inc., Nos. 99 CV 3999 (JBW), 99 CV 7037(JBW), 2003 WL 2004641, at *2 (E.D.N.Y. April 29, 2003) (allowing expert testimony "with respect to the social 'contagion' of gun violence and the relationship between illegal gun possession and gun homicides in New York"). For a discussion of social contagion in

Specifically, courts have also permitted expert testimony regarding a child's psychological evaluation to determine the consistency of the child's psychological status with sexual abuse by an adult, a specific syndrome, or a diagnosis.³¹⁵ In these cases, the expert identifies symptoms of psychological issues, reports on behaviors and patterns of the victim observed during an examination, and discloses their professional opinion as to whether the observed behaviors are consistent with an experience related to sexual abuse.³¹⁶ Certain behaviors related to psychological traumas may seem illogical. These behaviors may be present even when the witness is telling the truth. Because these behaviors are so complex and likely unfamiliar to the lay juror, courts permit experts to provide insight.³¹⁷ When an expert provides this

316. Lorenzen, supra note 315, at 1041.

the context of witness credibility, *see generally* Henry L. Roediger, Michelle L. Meade & Erik T. Bergman, *Social Contagion of Memory*, 8 PSYCHONOMIC BULL. & REV. 365, 365, 368 (2001) (referring to the "social contagion" of memory as the process in which an individual incorporates another individual's memories from an event into his or her own recollection and later recalls aspects from that same event that did not occur).

^{315.} Dirk Lorenzen, *The Admissibility of Expert Psychological Testimony in Cases Involving the Sexual Misuse of a Child*, 42 U. MIA. L. REV. 1033, 1040–41 (1988); *see* Acuna v. State, 629 A.2d 1233, 1235–36 (Md. 1993) (allowing an expert to attribute the symptoms of PTSD to the conduct charged and recognizing it as being consistent with the alleged conduct without stating that it was caused by that conduct).

^{317.} See Allison v. State, 353 S.E.2d 805, 806-07 (Ga. 1987); Kruse v. State, 483 So. 2d 1383, 1385 (Fla. Dist. Ct. App. 1986) (noting that "[expert] testimony should usually be received only where the disputed issue for which the evidence is offered, is beyond the ordinary understanding of the jury"), *abrogated by* Hadden v. State, 690 So. 2d 573, 581 (Fla. 1997); Veronica Serrato, Expert Testimony in Child Sexual Abuse Prosecutions: A Spectrum of Uses, 68 B.U. L. REV. 155, 163–65 (1988) (expert testimony helps a jury contextualize behaviors of child victims of sexual abuse that the jury might otherwise see as indicative of dishonesty); see also State v. Shomberg, 709 N.W.2d 370, 382 (Wis. 2006) ("Recantation is a subject clearly beyond the common knowledge or understanding of a jury or other fact finder. As such, it is an example of an area of specialized knowledge that will assist the trier of fact to understand the evidence or to determine a fact in issue." (internal quotations omitted) (citation omitted)); State v. Middleton, 657 P.2d 1215, 1220 (Or. 1983) ("It would be useful to the jury to know that not just this victim but many child victims are ambivalent about the forcefulness with which they want to pursue [a] complaint, and it is not uncommon for them to deny the act ever happened. Explaining this superficially bizarre behavior by identifying its emotional antecedents could help the jury better assess the witness's credibility."); Hutton v. State, 663 A.2d 1289, 1301 (Md. 1995) (stating that testimony about the effects of PTSD on child victims of sexual abuse could be admissible where the defense of consent is raised or where it is asserted that the victim's behavior is inconsistent with what lay jurors consider typical behavior); State v. Sargent, 738 A.2d

testimony they are providing evidence that directly affects the jury's credibility assessment.³¹⁸ Similarly, SVA and CBCA-related evidence assists juries in their evaluation of a child witness's credibility because the scientifically proven CBCA factors are not commonly known by jurors and specifically address easily misunderstood aspects of the child's statement.

In all of the above situations where the courts permitted expert testimony directly affecting witness credibility assessment, there was a risk that jurors would discard their own judgment in favor of replacing it with the expert's assessment.³¹⁹ However, the risk is mitigated when the expert testimony may dispel commonly held myths that lead jurors to objectively inaccurate assessments.³²⁰ SVA and CBCA's underlying principles properly assist the jury in making their own credibility assessment in the context of child witnesses because, specifically in the context of sexual assault and abuse cases, there is a host of "[u]nique and peculiar issues" that arise due to the involvement of children.³²¹ For example, as discussed in Section I.B, children are particularly

^{351, 353 (}N.H. 1999) (finding that "expert testimony on the danger of false memory implantation from improper interview techniques may aid a jury in evaluating the reliability of a child's recollections"), modified, 813 A.2d 402, 403, 408 (N.H. 2002) (finding that the trial court on remand permissibly restricted defendant's expert from testifying about the specific effects of implantation on the three testifying complainants because expert testimony can neither be used "to prove whether a child has been sexually abused . . . [nor] the veracity of a child's testimony about being abused"). See generally John E.B. Meyers, Expert Testimony in Child Sexual Abuse Litigation: Consensus and Confusion, 14 U.C. DAVIS J. JUV. L. & POL'Y 1, 35, 39-40, 44 (1989) (discussing the role of the expert witness and the duty to assist the jury in understanding a particular issue); Godden & Walton, supra note 25, at 272, 275 (analyzing the admission of expert testimony that is beyond the jurors' common knowledge and commenting on how the jury uses expert testimony to make factual conclusions).

^{318.} See United States v. Barnard, 490 F.2d 907, 912 (9th Cir. 1973).

^{319.} See id. at 912 (stating that testimony on witness credibility carries the risk of the jury giving up its own "common sense" determination of witness credibility).

^{320.} See Hutton, 663 A.2d at 1302 (recognizing that symptoms and behaviors associated with PTSD are not common knowledge and expert testimony can assist in dispelling myths about PTSD).

^{321.} Lorenzen, supra note 315, at 1038. Courts have allowed educational expert testimony in areas as divergent as organized crime, battered women, and Child Sexual Abuse Accommodation Syndrome ("CSAAS"). However, experts in these fields remain constrained in the parameters of the application of their expertise. See generally Gilstrap & McHenry, supra note 311, at 66 (emphasizing that it is often questioned whether experts, like clinical psychologists, should be allowed to "generalize their anecdotal experiences to the facts of an unrelated case").

susceptible to suggestion before and during examination.³²² The timing of the SVA and CBCA helps to minimize the negative effects of repeated and suggestive interviewing because the evaluation can and should take place early in the process.³²³

In addition, the CBCA was specifically created to assist in assessing child witness accounts and is tailored to assist the factfinder in dispelling some commonly held misconceptions.³²⁴ For example, people often believe that accounts are more likely to be true if more detail is provided or if the victim is more certain in their telling, yet both beliefs are incorrect and addressed during the CBCA.³²⁵ In addition, specific CBCA factors such as the description of any unexpected complications (factor 7), inclusion of unusual details (factor 8), superfluous details (factor 9), or accurately reported details misunderstood (factor 10) are all considered valuable indicators of a truthful statement in this process but may be misunderstood by a jury as indicating confusion or deceit.³²⁶ SVA and CBCA-related testimony assists the factfinder in understanding what factors actually are indicative of truth-telling and lying without replacing the factfinder's own rationally-based conclusions; therefore, it does not invade the province of the jury.³²⁷ Given such a wide variety of concerns, expert

^{322.} See Pantell, supra note 4, at 3 (explaining scientific findings around children's 'suggestibility' and connecting those findings to realities of courtroom questioning processes); Bala et al., supra note 8, at 999–1000 (describing 'suggestibility' and noting the impact of question styles on that reality); Nathanson, supra note 4, at 47 (explaining the concept of 'suggestibility,' that children "acquiesce" to leading questions, but noting that this issue improves with age and can be ameliorated with specific interview strategies).

^{323.} See supra Part I for a discussion of the suggestibility of children.

^{324.} See Criteria-Based Analysis, supra note 16, at 4 (discussing the historical evolution of SVA and CBCA in response to the difficulty of reconciling a defendant's credibility with that of the alleged victim's in sexual abuse cases where there is often "no independent witnesses to give an objective version of events"); Honts, *supra* note 18, at 887 (providing the historical background of scientific credibility assessments and their first uses on children's statements); Anne Cossins, Jane Goodman-Delahunty & Kate O'Brien, *Uncertainty and Misconceptions About Child Sexual Abuse: Implications for the Criminal Justice System*, 16 PSYCHIATRY, PSYCH., & L. 435, 449–50 (2009) (concluding that expert analysis is essential to remediate juror misconceptions and uncertainty about the validity of child sexual abuse claims).

^{325.} *See supra* Part II for a discussion of the CBCA factors that indicate that children are being truthful.

^{326.} See supra Part II.

^{327.} Recognizing that courts are resistant to change, the courts could, at least, permit expert testimony regarding the presence of certain factors indicative of

testimony can provide context and understanding to a jury unfamiliar with the behavior and psychology of children.³²⁸

As discussed in Section I.A and demonstrated by multiple studies,³²⁹ people are not good at the task of differentiating truth-telling from lying, and demeanor evidence is of no help. The jury needs more reliable information. It is widely believed that cross examination is "the principal means by which the believability of a witness and the truth of his testimony are tested."330 That may be true in the general sense, but does it hold true for child witnesses? The researchers say "no."³³¹ The traditional leading questions used in cross examination, and sometimes also in direct examination if the child is struggling to answer open-ended questions, do not produce accurate testimony.³³² Being cross examined is difficult and uncomfortable for any witness. Children, however, find the intimidating atmosphere of the courtroom and leading nature of cross examination questions particularly disconcerting because the questions tend to fall outside of what is familiar and understandable to them based on their limited life experience.³³³ Although touted as a sufficient and effective method for

332. Bala et al., *supra* note 8, at 999–1000, 1017.

truthfulness without offering an opinion regarding the overall credibility of the witness based on a full CBCA. For example, a court could admit expert testimony regarding why a witness may make a *self-deprecating statement* (factor 17) that blames themself even though they are not to blame. Then the jurors could come to their own conclusions. This approach would take the evidence one step further away from invading the factfinder's ultimate function to determine the credibility of the witness. A deep dive into the specific factors and their individual reliability and admissibility is outside the scope of this Article.

^{328.} Lorenzen, supra note 315, at 1038-41, 1055.

^{329.} Bond & DePaulo, *supra* note 5, at 214, 216, 219; Ekman & O'Sullivan, *supra* note 5, at 915–16.

^{330.} See, e.g., Davis v. Alaska, 415 U.S. 308, 316 (1974). See generally Hoffa v. United States, 385 U.S. 293, 311 (1966) (describing the purpose of cross examination as one of the American legal system's "safeguards" that can test the veracity of a witness's testimony); JOHN HENRY WIGMORE, TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW 27 (3d ed. 1923) (labeling cross examination as the "greatest legal engine ever invented for the discovery of truth").

^{331.} See Pantell, supra note 4, at 1, 3–4; Bala et al., supra note 8, at 999–1000, 1006, 1017; Nathanson, supra note 4, at 46–48 (describing numerous factors making the traditional courtroom examination environment inadequate for testing the truth of children's account of events, including suggestibility, an unsupportive and unfamiliar atmosphere, delays in legal proceedings, and intimidating settings).

^{333.} Zajac et al., *supra* note 2, at 182 (citing Margaret Donaldson, *Conversation: What is the Question?*, 73 BRIT. J. PSYCH. 202–03 (1982); then T.D. Lyon, *Applying Suggestibility*

uncovering deceit, "the empirical evidence does not support the assertion that relying on leading questions, or any other potentially contaminating questioning techniques, is an effective way of demonstrating that a child witness is lying."³³⁴

Some researchers asked a particularly telling question on this point: "Are leading questions in the hands of lawyers less likely to lead to contamination than leading questions in the hands of interviewers?"³³⁵ The kinds of questions that are asked during cross examination "differ markedly from 'best practice' guidelines for questioning children" in other contexts and can lead to inaccurate testimony.³³⁶ Researchers once compared cross examination with investigative interviewing and found that the characteristics of a typical cross examination "violate[d] "all the principles of best practice" and produced a high risk of contaminating the evidence.³³⁷ Therefore, cross examination is unlikely to be the proper tool to bring accurate testimony to light when examining witnesses.³³⁸ If accurate information is the goal, cross examination of child witnesses is not the answer.³³⁹

SVA and CBCA-based testimony uses established reliable methods to assess prior out-of-court statements to assist the jury in their overall assessment of the child witness's credibility. This is particularly useful for child witnesses due to their difficulty providing trial testimony, commonly held misconceptions regarding their statements, and the ineffectiveness of existing adversarial procedures in producing accurate testimony. Because of the unique need for this testimony and the fact that it does not actually comment on the testimony provided by the child witness at trial, this evidence should not be seen as

Research to the Real World: The Case of Repeated Questions, 65 LAW & CONTEMP. PROBS. 97, 99, 107–08, 119–20 (2002)).

^{334.} Davies et al., supra note 13, at 353.

^{335.} Id.

^{336.} Zajac et al., supra note 2, at 182.

^{337.} JOHN. R. SPENCER & RHONA H. FLIN, THE EVIDENCE OF CHILDREN: THE LAW AND THE PSYCHOLOGY 307 (2d ed. 1993).

^{338.} Davies et al., supra note 13, at 355.

^{339.} The Author recognizes that there are purposes for cross examination other than truth-seeking. It is the traditional means by which the accused demonstrates the weakness and, in some cases, the dishonesty of a witness. Defense attorneys are responsible for zealously representing their client's interests and when all they are left with is the cross examination of a scared and non-communicative child, they are severely limited in protecting their client's Confrontation Clause rights under the Sixth Amendment. This topic, although very important, is outside the scope of this Article.

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invading the province of the jury. The jury can use this evidence, just like any other forensic evidence, as the jury sees fit.

CONCLUSION

In this Article, SVA and CBCA testimony was discussed in the context of its procedures, reliability, and admissibility. First, the Article explained the current difficulties that juries have in competently playing their role as a human lie-detector. Adding to the difficulty of their task are the inherent challenges of obtaining accurate information from child witnesses using the traditional adversarial tools. Second, the Article described and demystified the three-step SVA process with a specific focus on the CBCA. The roots of SVA and CBCA are based on decades of research, and the SVA has checks and balances that ensure that the expert's analysis looks at the child's statement wholistically taking into consideration circumstances that could affect the reliability of the tests as applied.

Third, the Article addressed the reliability of the SVA and CBCA.³⁴⁰ The *Daubert* factors help to illuminate the reliability of this evidence. It is important to remember that the *Daubert* factors are not all mandatory nor do they require absolute reliability.³⁴¹ The SVA and CBCA methodologies fared well under the *Daubert* analysis.³⁴² These methods have been tested and found to be effective means of evaluating the credibility of statements by child witnesses with an estimated error rate of 30% for the SVA as a whole.³⁴³ These studies have been published in peer review journals, opening the methods and findings to feedback and critique.³⁴⁴ Finally, according to the researchers, the methods are the most frequently used 'verbal assessment tool' for evaluating child witnesses of sexual assault demonstrating an acceptance by experts in the field.³⁴⁵ These tests are commonplace and used routinely in courts around the world to assist

^{340.} *See supra* Part III for a discussion on the reliability of expert analysis via the implementation of the SVA and CBCA.

^{341.} Daubert v. Merrell Dow Pharms. Inc., 509 U.S. 579, 588, 590 (1993).

^{342.} See *supra* Part III for a full discussion of the analysis of these methods under the *Daubert* factors.

^{343.} Criteria-Based Analysis, supra note 16, at 32.

^{344.} Id. at 33.

^{345.} See Amado et al., supra note 19, at 4 (CBCA is the most widely relied upon assessment tool to evaluate testimony in many foreign courts).

the factfinder (the judge in these countries) to determine the credibility of the child witnesses in sexual assault cases.³⁴⁶

Based on U.S. jurisprudence and because this evidence deals with the credibility of witnesses, it is not be enough to merely meet the *Daubert* standard; the evidence must be helpful to the jury and not invade their function.

The U.S. judicial system is not perfect, and juries are not infallible. We know this by the sheer number of overturned convictions secured by the Innocence Project³⁴⁷ and the studies that clearly demonstrate that juries are poor at lie-detecting.³⁴⁸ We have seen that the average person is typically going to be right only around 50% of the time when deciding if an individual is being truthful or not.³⁴⁹ Isn't it time we improved on those odds?

One places where we can improve those odds is when a child witness, such as ten-year-old Carrie, takes the stand. Carrie is going to do her very best. She may be nervous, she may fidget too much, or she may just forget everything on the spot because of the intimidating environment. No matter what happens, the jury is watching and judging her credibility because that is exactly what they are supposed to do. Maybe they think Carrie's fidgety foot or apparent nervousness means that she is lying. Maybe opposing counsel is unable to effectively cross examine Carrie on sensitive topics without seeming aggressive and overbearing, or maybe Carrie says "yes" to everything as a default.³⁵⁰ If so, the evidence comes into the courtroom largely untested, and the jury is left to process it based on incomplete information and faulty notions of demeanor evidence and the contents of a truthful statement. Either way, both sides are likely to have a difficult time presenting evidence and building their case through Carrie's trial testimony. Simply put, the process has failed.

^{346.} See supra note 16 for resources on the use of these tests in other countries.

^{347.} See generally Cases Index, INNOCENCE PROJECT, https://innocenceproject.org/a ll-cases [https://perma.cc/GSZ5-9R2J] (providing details regarding numerous cases that have been overturned based on evidence that contradicted the testimony of eyewitness).

^{348.} *See supra* Section I.A for a discussion of the studies regarding juror assessment of witness credibility.

^{349.} Ekman & O'Sullivan, *supra* note 5, at 913, 916; Bond & DePaulo, *supra* note 5, at 214.

^{350.} See Bala et al., *supra* note 8, at 1000 (noting that 'yes or no' questions are problematic for children because those children "may have a bias to produce 'yes' answers").

If the goal is an accurate credibility assessment by the jury, an expert testifying based on an SVA of Carrie's prior out-of-court statement can ensure that the process remains effective and reliable. This is a benefit to both sides of the case because the credibility of the child witness can be effectively supported and challenged. In Carrie's case, if that testimony helps the jury determine that Carrie is telling the truth, then the process has worked. If that testimony helps the jury determine that Carrie is not telling the truth, then the process has worked. Either way, the process allowed evidence to be presented and the jury to reach a more informed verdict.

This type of expert testimony is nothing new in U.S. courtrooms. Experts have previously been permitted to testify in general terms regarding cognitive functions, social influences on memory, and behaviors commonly associated with child victims of sexual assault.³⁵¹ Thus, relevant expert testimony is already admissible to aid the factfinder in areas where errors and misunderstandings are likely.

Most importantly, the admissibility of SVA and CBCA-related evidence does not supplant Carrie's in-court testimony. This testimony is merely a *tool for the factfinder* to use to make their own assessment of the child witness's credibility. The goal of admitting and presenting this type of evidence is to aid the factfinder and reduce the chance of error. This testimony has been used and developed for decades, it is reliable, and it is introduced to be a tool for the jury not as a substitute for their judgement.

The SVA and CBCA may not be that perfect "psychological test for the valuation of witnesses"³⁵² that Wigmore foreshadowed, but it may bring the U.S. courts one step closer to jury credibility assessments in child sexual assault cases that are better than mere chance.

^{351.} See MCGOUGH, supra note 51, at 255, 265 (noting in 1994 that an expert could interpret witness behaviors to assess reliability).

^{352.} WIGMORE, supra note 15, at 237.