"Lies, Damned Lies, and Statistics"? Psychological Syndrome Evidence in the Courtroom After Daubert

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INTRODUCTION

From 1923 until 1993, the admissibility of scientific evidence in the federal court system was governed by the standard set forth in *Frye v. United States.*\(^1\) In applying this standard, courts examined whether the proffered evidence had "gained general acceptance in the particular field in which it belong[ed].\(^2\) Over the seventy years that followed its introduction, the *Frye* test penetrated both federal and state courts, governing the admissibility of scientific evidence of many kinds. In many jurisdictions, *Frye* even survived the different test of admissibility adopted by the Federal Rules of Evidence and its parallel state counterparts.

No more.³ In 1993, the Supreme Court decided *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,⁴ in which the Court announced a new standard of admissibility for scientific evidence that, in effect, killed the *Frye* test. The Court held that the Federal Rules of Evidence displaced *Frye*. Thus, it found the appropriate standard of admissibility in Rule 702: "If *scientific*, technical, or other specialized *knowledge will assist the trier of fact* to understand the evidence or to determine a fact in issue,' an expert 'may testify *thereto*." Therefore, the Court reasoned, to be admissible an expert's "inference or assertion" must be grounded in "scientific knowledge," which the Court defined as "derived by the scientific method."

The Daubert standard, like Frye, applies to a very broad range of scientific evidence and testimony, including evidence grounded in the social sciences. Typical uses of such evidence include what Laurens Walker and John Monahan term "the creation of social frameworks," in which "general research results are used to construct a frame of reference or background context for deciding factual issues crucial to the resolution of a specific case." Types of evidence used to construct a social framework in a case include testimony regarding Vietnam veteran's syndrome, rape trauma syndrome, battered woman

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The quoted material in the Title is generally attributed to Mark Twain, but was actually coined by Benjamin Disraeli. It was first applied to scientific evidence in Alexander M. Capron, Facts, Values, and Expert Testimony: Expert Witnesses in Medical Litigation, HASTINGS CENTER REP., Sept. 1993, at 27.

^{1.} In Frye, the court excluded evidence offered by a murder defendant of his results on a "systolic blood pressure deception test," a predecessor to the modern lie detector test. 293 F. 1013, 1014 (D.C. 1923).

^{2.} Id. at 1014.

^{3.} At least not in the federal court system. *Daubert's* influence will also filter into some state court systems, since many states pattern their rules of evidence after the Federal Rules. David E. Bernstein, *The Admissibility of Scientific Evidence After* Daubert v. Merrell Dow Pharmaceuticals, Inc., 15 CARDOZO L. REV. 2139, 2147 n.53 (1994). *But see* People v. Leahy, 882 P.2d 321 (Cal. 1994) (refusing to discard the California version of *Frye*).

^{4. 113} S. Ct. 2786 (1993).

^{5.} Id. at 2795 (emphasis in original) (quoting FED. R. EVID. 702).

^{6.} Id. The standard developed by the Court in Daubert is addressed fully infra part 1.

^{7.} Laurens Walker & John Monahan, Social Frameworks: A New Use of Social Science in Law, 73 VA. L. REV. 559, 559 (1987) (emphasis in original).

syndrome, and battered child syndrome. For example, the defense lawyer for a woman who has killed her spouse may call a psychologist to the stand to testify regarding the typical effects of the "battered woman syndrome." The jury would be left to consider how the information might apply to the defendant. It is likely that the *Daubert* standard will now govern the admissibility of all such evidence.

However, there is no agreement on how this new standard will affect the admissibility of scientific evidence. In fact, recent commentary runs the gamut. Some say that *Daubert* will increase the admissibility of scientific evidence while others say it will decrease the amount of admissible evidence. Still others profess that *Daubert* will have no effect at all. The purpose of this Note is to address *Daubert*'s impact on the admissibility of various types of psychological syndrome evidence. Specifically, four types of psychological evidence are analyzed: combat-induced posttraumatic stress disorder ("PTSD"), rape trauma syndrome, battered woman syndrome, and battered child syndrome.

Part I of this Note analyzes the *Daubert* decision. Any change in the admissibility of psychological evidence will undoubtedly hinge on the difference between *Frye*'s "general acceptance" standard and *Daubert*'s "scientific knowledge" standard. Thus, Part II explores *Daubert*'s effect on the admissibility of the psychological evidence which was typically recognized as "generally accepted" under the *Frye* standard: combat-related posttraumatic stress disorder, rape trauma syndrome, and battered woman syndrome. Part III addresses *Daubert*'s influence on psychological evidence which was typically not considered "generally accepted" within the meaning of *Frye*, specifically, battered child syndrome.

I. DAUBERT: THE END OF THE "TWILIGHT ZONE"

In 1923, the Frye court explained its "general acceptance" test as follows:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or

See Neil J. Vidmar & Regina A. Schuller, Juries and Expert Evidence: Social Framework Testimony, LAW & CONTEMP. PROBS., Autumn 1989, at 133, 134-36.

^{9.} David L. Faigman et al., Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying About the Future of Scientific Evidence, 15 CARDOZO L. REV. 1799, 1818 (1994)

^{10.} See, e.g., Michael H. Gottesman, Should Federal Evidence Rules Trump State Tort Policy? The Federalism Values Daubert Ignored, 15 CARDOZO L. REV. 1837, 1837-38 (1994) (concluding that the "less rigorous" standard set forth in Daubert will result in increased admissibility of some types of scientific evidence and decreased admissibility of other types).

^{11.} See, e.g., Ronald J. Allen, Expertise and the Daubert Decision, 84 J. CRIM. L. 1157, 1172 (1994) (suggesting that testimony which is based in Freudian psychiatry, for example, should be excluded under Daubert due to a lack of empirical testing).

^{12.} See, e.g., Bert Black et al., Science and the Law in the Wake of Daubert: A New Search for Scientific Knowledge, 72 Tex. L. Rev. 715, 786-87 (1994) (concluding that the overall admissibility of evidence will not change much due to the new standard); Jean Macchiaroli Eggen, Toxic Torts, Causation, and Scientific Evidence After Daubert, 55 U. PITT. L. Rev. 889, 926 (1994) (suggesting that Daubert's primary impact will be limited to jurisdictions which were devout followers of Frye); Margaret G. Farrell, Daubert v. Merrell Dow Pharmaceuticals, Inc.: Epistemology and Legal Process, 15 CARDOZO L. Rev. 2183, 2184-85 (concluding that the new standard is a "draw in the power struggle between the plaintiffs' and the defendants' bar"); Randolph N. Jonakait, The Meaning of Daubert and What That Means for Forensic Science, 15 CARDOZO L. Rev. 2103, 2104 (1994) (concluding that Daubert's test may not affect admissibility because it is too flexible).

discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.¹³

In 1993, the Supreme Court reviewed this standard and decided that it had been "displaced" by Federal Rule of Evidence 702, adopted in 1975.¹⁴

The plaintiffs in *Daubert* were two children with limb reduction birth defects. They asserted that their mothers' ingestion of an antinausea drug, Bendectin, during their pregnancies caused their birth defects. Before the trial, Merrell Dow, who manufactured the drug, moved for summary judgment. It supported its motion with an expert's affidavit which concluded that no study had found a statistically significant association between Bendectin and birth defects in humans. The plaintiffs countered Merrell Dow's motion with affidavits from eight experts designed "to establish that Bendectin is a teratogen (it causes limb reduction defects generally), and that Bendectin ingested by the mothers during pregnancy caused the limb reduction" exhibited by the plaintiffs. The trial court granted summary judgment for Merrell Dow, holding that because the plaintiffs did not provide "statistically significant epidemiological proof that Bendectin cause[d] limb reduction," they had not met their burden of showing general acceptance, a "necessary predicate to the admission of scientific evidence." The Court of Appeals for the Ninth Circuit affirmed.

In an opinion by Justice Harry A. Blackmun, the Supreme Court vacated the judgment of the court of appeals and remanded the case for further consideration. After explaining that basic relevancy under Rules 401 and 402 was the "baseline" for admissibility of scientific evidence, the Court turned to Rule 702, which governs expert testimony in the federal court system. That Rule provides: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert... may testify thereto in the form of an opinion or otherwise." Thus, Rule 702 imposes two evidentiary hurdles for expert testimony. the expert must testify as to scientific knowledge, and the expert's testimony must be helpful to the trier of fact. In this regard, the Court explained that the trial judge must make a preliminary admissibility decision pursuant to Rule 104(a) to determine "whether the reasoning or methodology underlying the testimony is scientifically valid and... whether that reasoning or methodology properly can be applied to the facts in issue."

To assist federal judges in this task, the Court supplied some considerations for courts to apply in a "flexible" inquiry.²⁵ With regard to the judge's first determination—the

^{13.} Frye, 293 F. at 1014.

^{14.} Daubert v. Merrell Dow Pharmaceuticals, Inc., 113 S. Ct. 2786, 2794 (1993).

^{15.} Daubert v. Merrell Dow Pharmaceuticals, Inc., 727 F. Supp. 570, 572 (S.D. Cal. 1989), aff'd, 951 F.2d 1128 (9th Cir. 1991), vacated, 113 S. Ct. 2786 (1993).

^{16.} Id. at 575.

^{17.} Id. at 573.

^{18.} *Id*.

^{19.} Daubert, 951 F.2d 1128, vacated, 113 S. Ct. 2786.

^{20.} Daubert, 113 S. Ct. at 2799.

^{21.} Id. at 2793-94. Rule 401 defines relevant evidence as that which has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." FED. R. EVID. 401. Rule 402 provides that "[a]ll relevant evidence is admissible, except as otherwise provided. . . . Evidence which is not relevant is not admissible." FED. R. EVID. 402.

^{22.} FED. R. EVID. 702.

^{23.} Rule 702 also requires that an expert be qualified to testify by reason of knowledge, skill, experience, training, or education. This requirement was not at issue in *Daubert*, and it will not be addressed in this Note.

^{24.} Daubert, 113 S. Ct. at 2796.

^{25.} Id. at 2797.

requirement of scientific knowledge—the Court explained that "the word 'knowledge' connotes more than subjective belief or unsupported speculation." Rather, "[t]he term 'applies to any body of known facts or to any body of ideas inferred from such facts or accepted as truths on good grounds." In the scientific context, however, a fact need not be known to a level of certainty, but instead must be "derived by the scientific method." The Court then offered some factors which it viewed as indicative of a true scientific basis. "[G]enerating hypotheses and testing them to see if they can be falsified" was the starting point for this determination. In a similar vein, the Court added that the technique's rate of error should be considered.²⁹

Because the Court was attempting to define the factors at the heart of "good science," it makes sense that publication and general acceptance were offered as additional considerations. Both are designed to provide clues about whether the proper scientific method was used. "[S]ubmission to the scrutiny of the scientific community is a component of 'good science,'" explained the Court, "in part because it increases the likelihood that substantive flaws in methodology will be detected." Likewise, the technique's level of acceptance in the scientific community, previously the sole criterion of admissibility under *Frye*, may be important in the trial court's admissibility determination since such acceptance reflects the professional community's view of the technique. However, this criterion would only come into play if the scientific evidence was not new. That is, the failure of a piece of evidence to gain general acceptance, over time, would be fatal to its admissibility; the same is not true for novel scientific evidence, which has not had the opportunity for wide distribution and review.

The Court's discussion, however, omits many indicia of scientific reliability. For example, concerus regarding the structure of experimentation and extrapolation of results are not discussed. Among these concerns are operationalization of terms;³¹ generalization of results over time, persons, and settings;³² controlling for confounding factors;³³ and selection³⁴ and investigator bias. Each of these are crucial to the notions of proper testing and replication—core elements of "good science."³⁵

Not only must an offer of evidence meet the "scientific knowledge" requirement of Rule 702, it must also be helpful to the trier of fact. This is essentially a relevancy

^{26.} Id. at 2795 (quoting WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1252 (1986)).

^{27.} Id. at 2795.

^{28.} Id. at 2796 (quoting Michael D. Green, Legal Theory: Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of Agent Orange and Bendectin Litigation, 86 Nw. U. L. Rev. 643, 645 (1992)).

^{29.} Id. at 2797.

^{30.} Id.

^{31. &}quot;Operationalization" refers to the process of defining the variables under study in a way amenable to measurement. Thus, weight might be defined in pounds and intelligence might be defined by performance on the Wechler Adult Intelligence Scale—Revised. Scientific terms are operationalized so that experiments can be replicated by other scientists. See JOHN MONAHAN & LAURENS WALKER, SOCIAL SCIENCE IN LAW: CASES AND MATERIALS 39-41 (3d ed. 1994). Operationalization is crucial to the concept of scientific knowledge.

^{32. &}quot;"Generalization' is the accepted rubric for evaluating how far beyond the specific facts of the study validly-produced research findings remain valid." John Monahan & Laurens Walker, Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law, 134 U. P.A. L. REV. 477, 506-07 (1986).

^{33. &}quot;Confounding factors" are alternative causes of a phenomenon. For example, an experiment which aspires to draw a relationship between the number of hours a student spends studying and the grade that student receives in a class must control for other factors which might influence the results of the experiment. Obvious confounding factors might include level of intellect, previous experience in the subject, study methods, and variations in grading; less obvious factors which might influence the results of the study could include the order in which tests are graded and how much each student slept the night before the test. See id. at 502 (discussing agreement among social scientists that third variables should be controlled for in an experiment).

^{34.} Selection bias refers to preexisting differences between samples. See id. at 502-03.

^{35.} Daubert v. Merrell Dow Pharmaceuticals, Inc., 113 S. Ct. 2786, 2797 (1993).

determination, which the *Daubert* Court termed "fit."³⁶ It explained: "Rule 702's 'helpfulness' standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility."³⁷ Quite simply, "fit" mandates that the subject matter of the expert's testimony bear upon some relevant inquiry in the case. Thus, the purpose for which the testimony is offered is critical to a determination of its admissibility.

Even if a trial judge found a piece of evidence well grounded in science and helpful to the trier of fact, other Federal Rules of Evidence may limit the admissibility of that particular piece of evidence. For purposes of this Note, the most important of these "other rules" is Rule 403: "Rule 403 permits the exclusion of relevant evidence 'if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury "38 This Rule is implicated whenever a piece of evidence tends to suggest a decision on an improper basis. In cases regarding scientific evidence, most commentary centers around two coucerns: the potential for unfair prejudice and the possibility that the evidence will confuse or mislead the jury. Concern has been expressed that juries may overvalue scientific evideuce due to a "'false aura of scientific infallibility."39 This concern is unfounded. Although the facts of each case may affect the Rule 403 calculation, scientific studies have demonstrated that juries actually tend to undervalue scientific evidence. 40 Additionally, unlike scientific evidence regarding DNA, for example, any danger of confusion is virtually nonexistent in the social sciences. 41 For these reasons, this Note will not address the Rule 403 balancing requirement as applied to each type of psychological evidence.

II. EVIDENCE PREVIOUSLY ADMISSIBLE

A. Combat-Induced Posttraumatic Stress Disorder

[A] 36-year-old veteran who was a pointman [in Vietnam] recalls an operation in which he went into a small village during a lull in the fighting, and walked behind a hut to urinate. Suddenly, a four-year-old child came around the far end of the hut and tossed a grenade at the soldier, who grabbed his rifle and emptied a full magazine into the small child. The grenade did not explode, and the soldier felt bewildered. For the past nine years, he has been in and out of several excellent jobs, has had frequent nightmares, and has attempted suicide. Only after he was hospitalized for the first time did he begin to talk with a Vietnam veteran counselor about what had happened.⁴²

^{36.} Id. at 2796.

^{37.} *Id.*

^{38.} Id. at 2798 (quoting FED. R. EVID. 402).

^{39.} See, e.g., Arvin Maskin, The Impact of Daubert on the Admissibility of Scientific Evidence: The Supreme Court Catches up with a Decade of Jurisprudence, 15 CARDOZO L. REV. 1929, 1931 (1994) (quoting Judge Jack Weinstein in In re "Agent Orange" Product Liability Litigation, 611 F. Supp. 1223, 1256 (E.D.N.Y. 1985)).

^{40.} See generally J. Alexander Tanford et al., Novel Scientific Evidence of Intoxication: Acoustic Analysis of Voice Recordings from the Exxon Valdez, 82 J. CRIM. L. & CRIMINOLOGY 579, 596 (1992); Walker & Monahan, supra note 7, at 576.

^{41.} For an argument that testimony in the social sciences is not likely to overwhelm a jury, see David McCord, The Admissibility of Expert Testimony Regarding Rape Trauma Syndrome in Rape Prosecutions, 26 B.C. L. REV. 1143, 1187-88 (1985); see also Helen J. Lauderdale, Comment, The Admissibility of Expert Testimony on Rape Trauma Syndrome, 75 J. CRIM. L. & CRIMINOLOGY 1366, 1391-93 (1984).

^{42.} John O. Lipkin et al., Vietnam Veterans and Posttraumatic Stress Disorder, 33 Hosp. & Community Psychiatry 908, 909 (1982).

Approximately 8.75 million Americans served in Vietnam over the course of the war.⁴³ Following their return, many not only faced "the hostile, critical or disinterested responses of strangers, friends, and family,"⁴⁴ they also struggled to maintain relationships, to control psychological difficulties, and to reformulate their self-images.⁴⁵

The postwar, combat-related struggles of the Vietnam veteran are not unusual. "The medical world has long recognized that combat produces dysfunctional psychological and behavioral reactions," from the "nostalgia" of the American Civil War to the "shell shock" and "battle fatigue" of later wars. The Until recently, however, the psychological and psychiatric communities did not officially recognize the specific set of symptoms that accompanied this combat-related disorder.

In 1980, the American Psychiatric Association first included in its diagnostic manual a category of mental disorders termed "post-traumatic stress disorder," commonly referred to as PTSD. The disorder was described as "the development of characteristic symptoms following a psychologically traumatic event that is generally outside the range of usual human experience." Then, as now, PTSD could be triggered by any number of stressors. For veterans, the stressor was war related: participating in combat, being taken as a prisoner of war, witnessing or inflicting death, or viewing dead bodies. Over-all, research in the field supports the usefulness of the . . . rubric of posttraumatic stress disorder [as applied to the postwar experience].

Most frequently, testimony bearing on combat-related stress syndrome is introduced by a criminal defendant as support for the contention that when he committed a criminal act, he was in a dissociative state.⁵¹ Surprisingly, this type of evidence "has met with no problems on the appellate level."⁵² It has provided a successful basis for the legal defense of insanity, and has been used to mitigate sentences.⁵³

Expert testimony regarding combat-induced PTSD has been admitted without controversy in the past, and should continue to be admitted under the *Daubert* test. Many articles and studies have been published regarding the existence and prevalence of this

^{43.} DATAPEDIA OF THE UNITED STATES, 1790-2000, at 452 (George T. Kurian ed., 1994) (citing U.S. Department of Defense Manpower Statistics, Fiscal Year 1988).

^{44.} John O. Lipkin et al., Post-Traumatic Stress Disorder in Vietnam Veterans: Assessment in a Forensic Setting, BEHAV. SCI. & L., Summer 1983, at 51, 54.

^{45.} Lipkin et al., supra note 42, at 910-11.

^{46.} Michael J. Davidson, Note, Post-Traumatic Stress Disorder: A Controversial Defense for Veterans of a Controversial War, 29 Wm. & MARY L. REV. 415, 417-18 (1988); see also David McCord, Syndromes, Profiles and Other Mental Exotica: A New Approach to the Admissibility of Nontraditional Psychological Evidence in Criminal Cases, 66 Or. L. REV. 19 (1987).

^{47.} See OLA W. BARNETT & ALYCE D. LAVIOLETTE, IT COULD HAPPEN TO ANYONE: WHY BATTERED WOMEN STAY 95 (1993); C. Peter Erlinder, Post-Traumatic Stress Disorder, Vietnam Veterans and the Law: A Challenge to Effective Representation, BEHAV. SCI. & L., Summer 1983, at 25, 28 (reporting that "[a] substantial body of research exists which suggests that stress reactions among veterans have followed every major conflict in this century"); Davidson, supra note 46, at 418-19.

^{48.} DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS § 309.89, at 236-38 (3d ed. 1980). PTSD's definition in the current edition of the manual is identical to its initial definition. The essential criteria for a diagnosis of PTSD are exposure to a traumatic event; significant impairment of everyday functioning; persistent reexperience of the event, such as flashbacks and dreams; avoidance of stimuli associated with the trauma and general numbness, such as repressed memories of the event and feelings of isolation; and increased arousal, such as sleep disturbances and anger outbursts. DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS § 309.81, at 424-25 (4th ed. 1994).

^{49.} See DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS § 309.81, at 424 (4th ed. 1994).

^{50.} Arthur Egendorf, The Postwar Healing of Vietnam Veterans: Recent Research, 33 HOSP. & COMMUNITY PSYCHIATRY 901 (1982); see also McCord, supra note 46, at 65-66.

^{51.} See Erlinder, supra note 47, at 41; McCord, supra note 46, at 66.

^{52.} McCord, supra note 46, at 66.

^{53.} See Davidson, supra note 46, at 422-23.

disorder and its relationship with criminal behavior.⁵⁴ More recent studies on the topie have been carefully structured to ensure reliable results.

For instance, one complex experiment conducted for the Veterans' Administration studied 714 veterans. The researchers created a representative sample of 626 nonveterans, taking into account important factors such as age, race, geographical location, and military service. Samples were taken on two occasions, two years apart. Substance use, emotional problems, trouble with the law, and medical problems all correlated with combat exposure. Emotional factors such as angry feelings and active expressions of hostility correlated most strongly with combat exposure. The impact of posttraumatic stress disorder... on the Vietnam veteran patient is now well recognized." Strong to the vietnam veteran patient is now well recognized.

Perhaps most important, this type of evidence is not new; thus, under the Court's analysis, its level of acceptance in the scientific community is an "important factor." Even before PTSD was officially recognized as a diagnosable mental disorder, the professional community accepted the relationship of mental and behavioral responses to combat experience. This recognition is deeply rooted; it has continued steadfast in the professional and the legal communities to the present day. Thus, whenever the mental state of a criminal defendant is at issue and testimony regarding combat-induced PTSD is introduced, the court should admit such testimony if relevant under the facts of the case.

B. Rape Trauma Syndrome

Over a one-year period, Ann Wolbert Burgess and Lynda Lytle Holmstrom studied every patient who visited Boston City Hospital's emergency room claiming to be a rape victim. They interviewed, in person, ninety-two women who were victims of attempted or forcible rape, and, through home visits and telephone counseling, conducted a follow up interview with eighty-five percent of those women.⁵⁸ In 1974, they published *Rape Trauma Syndrome*,⁵⁹ a groundbreaking and insightful article which documented the results of their study and outlined both the short-term and long-term effects of forcible rape on its victims. "Rape trauma syndrome," explained the authors, "is the acute phase and long-term reorganization process that occurs as a result of forcible rape or attempted forcible rape. This syndrome of behavioral, somatic, and psychological reactions is an acute stress reaction to a life-threatening situation."

^{54.} See, e.g., John P. Wilson & Sheldon D. Zigelbaum, The Vietnam Veteram on Trial: The Relation of Post-Traumatic Stress Disorder to Criminal Behavior, BEHAV. Sci. & L., Summer 1983, at 69.

^{55.} ARTHUR EGENDORF ET AL., LEGACIES OF VIETNAM: COMPARATIVE ADJUSTMENT OF VETERANS AND THEIR PEERS 79 (1981).

^{56.} Id. at 377. The correlation of angry feelings with combat exposure was .43; the correlation of actively expressed hostility with combat exposure was .30. Id. at 441, tbl 3.30.

^{57.} Roger K. Pitman et al., Prevalence of Posttraumatic Stress Disorder in Wounded Vietnam Veterans, 146 AM. J. PSYCHIATRY 667, 667 (1989) (finding that 40% of wounded Vietnam veterans carry a lifetime diagnosis of PTSD). Numerous recent studies of soldiers, including one in an operational area of Namibia, support the conclusion that wide-ranging emotional problems are experienced by soldiers in active combat. See, e.g., Anthony Feinstein, Posttraumatic Stress Disorder: A Descriptive Study Supporting DSM-III-R Criteria, 146 AM. J. PSYCHIATRY 665, 665-66 (1989) (finding symptoms of PTSD, as outlined in the DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, 3d ed., revised, in 14 men involved in an ambush).

^{58.} Ann Wolbert Burgess & Lynda Lytle Holmstrom, Rape Trauma Syndrome, 131 Am. J. PSYCHIATRY 981, 981-82 (1974).

^{59.} Id.

^{60.} Id. at 982.

Burgess and Holmstrom described the acute stage as a time of disorganization, followed by a long-term phase of reorganization. In the acute phase, lasting several weeks after the rape, the subjects of the study experienced physical trauma, extreme tension, and gastrointestinal and genitourinary disturbances, as well as intense fear and self-blame. During the long-term phase of the syndrome, many rape victims moved or changed their telephone numbers and experienced violent dreams and nightmares. Victims also displayed phobic "reaction[s] to the circumstances of the rape." These phobic reactions, previously documented in war victims, included fears of being indoors or outdoors, fears of being alone or in crowds, and the fear of people behind them. Many women were also plagued by sexual fears and problems.

Burgess and Holmstroms' original work, as well as other early studies of rape trauma syndrome, have been eriticized as suffering serious methodological flaws.⁶⁷ The criticism has been perceptive and biting. It includes lack of a control group, problems with the sample size and characteristics, failure to operationalize important definitions and concepts, potential selection bias, inconsistent interviewing methods, and inadequate long-term follow-up of victims.⁶⁸ Due to these shortcomings, many conclude that "these [early] studies provide little, if any, scientifically valid data regarding the effects of a rape experience, although they do provide interesting anecdotal impressions."⁶⁹

The methodology of later studies on rape trauma significantly improved, even according to the harsher erities. Though not error-free, these studies "assessed victim recovery at several points after the assault using standardized assessment measures and . . . employed earefully matched control groups." The newer studies confirm those documented by Burgess and Holmstrom, with vietims exhibiting fear, depression, guilt, increased motor activity, sleep disturbances, substance abuse, somatic complaints, sexual difficulties, and emotional disorders. The increased motor activity is suffered from

^{61.} *Id.* at 982-83. Somatic reactions commonly experienced by the victims included bruising and irritation, tension headaches and sleep disturbances, stomach pains, vaginal discharge, itching, and burning. *Id.* The authors did not provide data regarding the percentage of women with these complaints.

^{62. &}quot;Forty-four of the 92 victims changed residences within a relatively short period of time after the rape." Id. at

^{63.} Twenty-nine of ninety-two victims suffered from violent dreams. Id. at 984.

^{64.} Id. The percentages of women suffering from phobic reactions is not provided.

^{65,} Id

^{66.} Id. The authors did not provide the percentage of subjects dealing with sexual fears or problems.

^{67.} See, e.g., Patricia A. Frazier & Eugene Borgida, Rape Trauma Syndrome, 16 LAW & HUM. BEHAV. 293, 299 (1992); Dean G. Kilpatrick et al., The Aftermath of Rape: Recent Empirical Findings, 49 AM. J. ORTHOPSYCHIATRY 658, 658-59 (1979); Note, Checking the Allure of Increased Conviction Rates: The Admissibility of Expert Testimony on Rape Trauma Syndrome in Criminal Proceedings, 70 VA. L. REV. 1657, 1667-72 (1984).

^{68.} See Kilpatrick et al., supra note 67, at 658-59; Note, supra note 67, at 1671-72.

^{69.} See, e.g., Kilpatrick et al., supra note 67, at 659.

^{70.} Note, supra note 67, at 1673.

^{71.} Frazier & Borgida, supra note 67, at 301. Some of the newer research includes: Patricia Frazier & Eugene Borgida, Juror Common Understanding and the Admissibility of Rape Trauma Syndrome Evidence in Court, 12 LAW & HUM. BEHAV. 101 (1988) (finding that expert testimony regarding the effects of rape could be helpful to jurors due to a discrepancy between experts and laypersons on knowledge of the subject); Kilpatrick et al., supra note 67, at 166-68 (finding disruptive effects immediately after the rape and up to six months thereafter); Carol C. Nadelson et al., A Follow-Up Study of Rape Victims, 139 AM. J. PSYCHIATRY 1266 (1982) (finding continued rape-related problems one to three years after the assault).

^{72.} See McCord, supra note 41, at 1155.

^{73,} See generally RAPE AND SEXUAL ASSAULT III 22-23 (Ann Wolbert Burgess ed., 1991).

methodological deficiencies, their conclusions have been abundantly supported by *every* subsequent, more sophisticated study."⁷⁴

Another validation of the methods and results of these studies is the general acceptance of rape trauma syndrome by most experts in the field. Soon after PTSD was added to the American Psychiatric Association's diagnostic manual in 1980, "[t]he authoritative treatise interpreting PTSD immediately recognized that rape trauma syndrome was a quintessential example." Today, most experts still consider rape trauma syndrome to be a subset of PTSD. 76

Evidence about rape trauma syndrome is usually introduced against male criminal defendants charged with forcible rape. Sometimes it is offered as social framework evidence to put the victim's actions in context. For instance, the prosecution may offer an expert on rape trauma to explain the victim's actions around the time of her alleged rape, especially if they seem inconsistent with the expected behavior of someone who has just been raped.⁷⁷ Other times, testimony regarding rape trauma syndrome or PTSD is offered to support the contention that the victim did not consent to intercourse⁷⁸ or to show that intercourse did, in fact, take place.⁷⁹

Courts applying the *Frye* test of admissibility have acknowledged rape trauma syndrome, explaining that "an examination of the literature clearly demonstrates that the so-called 'rape trauma syndrome' is generally accepted to be a common reaction to sexual assault." In *State v. Marks*, for instance, the Supreme Court of Kansas held rape trauma evidence relevant and admissible in a ease where a rape defendant asserted the defense of consent. Using the *Frye* test, the court reviewed the psychological literature, concluding that rape trauma syndrome was generally accepted in the scientific community to be "a common reaction to sexual assault." The court reasoned that the expert's opinion would not interfere with the jury's factfinding function, since the expert was

^{74.} McCord, supra note 41, at 1168 (emphasis added). But see Note, supra note 67, at 1678-80 (arguing that recent studies suffer from inadequate operational definitions and biased research samples, and that individual reactions to rape are so dependent upon various factors that no eausal relationship could be established).

^{75.} McCord, supra note 41, at 1152 (noting the recognition of rape trauma syndrome in MODERN SYNOPSIS OF COMPREHENSIVE TEXTBOOK OF PSYCHIATRY/III 448 (Harold I. Kaplan & Benjamin J. Sadock eds., 1980)).

^{76.} See Frazier & Borgida, supra note 71, at 111-12; Vidmar & Schuller, supra note 8, at 133. For the diagnostic criteria of PTSD and a description of the disorder, see supra note 48 and accompanying text.

^{77.} See, e.g., People v. Taylor, 552 N.E.2d 131 (N.Y. 1990) (allowing such testimony to aid in explaining the victim's behavior); LYNDA LYTLE HOLMSTROM & ANN WOLBERT BURGESS, THE VICTIM OF RAPE 186-88 (1978). Moreover, in a case where the rape victim was calm after the assault, the defense lawyer might assert that if the victim had actually been raped, she could not possibly have been calm. See Henson v. State, 535 N.E.2d 1189 (Ind. 1989).

^{78.} See, e.g., State v. Huey, 699 P.2d 1290 (Ariz. 1985); State v. Marks, 647 P.2d 1292 (Kan. 1982); State v. Saldana, 324 N.W.2d 227 (Minn. 1982).

^{79.} See, e.g., State v. Bressman, 689 P.2d 901 (Kan. 1984); Taylor, 552 N.E.2d 131. Evidence of rape trauma syndrome has also been offered in the civil context of third party victims' rights. For examples of uses of testimony regarding PTSD generally, see Ann Wolbert Burgess, Rape Trauma Syndrome, BEHAV. SCI. & L., Summer 1983, at 97, 111 (describing the use of PTSD testimony in torts cases for the failure to screen employees properly and to provide adequate safety precautions on work premises); Lawrence J. Raifman, Problems of Diagnosis and Legal Causation in Courtroom Use of Post-Traumatic Stress Disorder, BEHAV. Sci. & L., Summer 1983, at 115, 118-19 (describing, for example, the use of PTSD testimony in mass disaster litigation such as the Buffalo Creek flood in West Virginia).

^{80,} McCord, *supra* note 46, at 38-39 (reporting "solidified acceptance of the existence and characteristics" of rape trauma syndrome); *see also Taylor*, 552 N.E.2d at 135 (reviewing the literature and concluding that "rape trauma syndrome is generally accepted within the relevant scientific community").

^{81.} Marks, 647 P.2d at 1292.

^{82.} Id. at 1299.

subject to cross-examination, 83 leaving the jury free to draw its own conclusions from his testimony.

Similarly, the top New York court handed down an opinion in 1990 discussing the admissibility of expert testimony on rape trauma syndrome. In *People v. Taylor*, ⁸⁴ the court first reviewed scientific literature on rape trauma syndrome, noting that rape was listed as one of the potential stressors in the American Psychiatric Association's diagnostic manual. From this it concluded that the syndrome was generally accepted. The court then decided that expert testimony about rape trauma syndrome would assist the jury. Finally, the court considered the potential for unfair prejudice poscd by the evidence. In the end, the court allowed the testimony to explain the victim's conduct after the rape, but not to show that a rape had occurred. ⁸⁵

A 1992 review of case law concluded that the reliability and validity of scientific research on rape trauma syndrome was not often a concern of courts. 86 When it was an issue, however, two basic themes emerged: 87 1) problems recognizing a single syndrome, given the broad range of symptoms and responses exhibited by different victims; and 2) problems ruling out alternate causes of PTSD. 88

Since Daubert, no federal courts have considered the admissibility of expert testimony regarding rape trauma syndrome. However, one published state case has applied the new "scientific knowledge" standard to PTSD in a rape case, State v. Alberico. 89 The Supreme Court of New Mexico engaged in what appears—on its face—to be a Daubert analysis. First, they found that "PTSD testimony [wa]s grounded in valid scientific principle," since it had been catalogued in the diagnostic manual of psychiatrists and psychologists and "appear[ed] to be grounded in basic behavioral psychology."90 Then, the court indicated that PTSD met the basic relevancy requirements under the Federal Rules, and would assist the jury. This was true even though PTSD may be caused by many other stressors, since the testimony need only possess "the tendency to show that [the alleged victim] might have been sexually abused."91 Finally, the court held that testimony regarding PTSD was not unfairly prejudicial when offered to establish "whether the alleged victim exhibit[ed] symptoms of PTSD that [we]re consistent with rape or sexual abuse."92 The court noted that nearly all courts considering the issue "have concluded that PTSD evidence is admissible to explain a victim's behavior that is apparently inconsistent with having been raped" and to comment "directly on the credibility of the

^{83.} Id. Conversely, the Supreme Court of Minnesota found the evidence inadmissible in a case where the defense was consent. Minnesota v. Saldana, 324 N.W.2d 227 (Minn. 1982). In the process of this confused opinion, Justice Scott asserted that the testimony would be of "no help," that it was not reliable because it did not determine "whether a rape occurred," and that it was unfairly prejudicial because "jurors of ordinary abilit[y] are competent to consider the evidence." Id. at 229-30. The court seemed to be reaching for any and every hook to hang its hat on, in the desperate fear that if any doors were left open, the ghost of PTSD would come back to haunt it.

^{84.} Taylor, 552 N.E.2d 131.

^{85.} Id. at 138.

^{86.} Frazier & Borgida, supra note 67, at 296.

^{87.} Id. at 300.

^{88.} See, e.g., State v. Saldana, 324 N.W.2d 227, 229-30 (Minn. 1982).

^{89, 861} P.2d 192 (N.M. 1993).

^{90.} Id. at 208-09.

^{91.} Id. at 209.

^{92.} Id. at 210. The court held the evidence inadmissible if offered toward the victim's credibility, the identification of the defendant, or causation. It also held that information regarding rape trauma syndrome specifically was inadmissible because it was not incorporated into the diagnostic manual. Id. at 212. However, the court failed to recognize both that the diagnostic manual listed rape as one of the potential stressors, and that the authoritative treatise on PTSD rated rape as a "quintessential example" of that syndrome. See supra text accompanying note 75.

rape victim."93 The court did not, however, discuss any of the factors articulated in *Daubert*, nor did they consider any other factors which are critical to "good science."94

An examination of the rape trauma research under *Daubert* reveals that it should remain admissible as social framework evidence to aid in explaining the victim's post-rape behavior. As noted above, later studies on the topic have used standardized testing and statistical measures to test hypotheses about the typical reactions which rape victims exhibit upon being raped; they have been widely published in peer-reviewed journals. Additionally, these studies have provided for replication by defining critical terms, carefully matching control groups, and remaining attentive to individualized reactions to rape which could affect the outcomes of the studies. In addition to resting on a sound scientific foundation, this evidence is helpful to the jury. Recent studies have demonstrated disparate knowledge levels between experts and laypersons regarding the mental and behavioral impact of rape on its victims. Because this evidence is scientifically sound and helpful to the jury, it should remain admissible under the *Daubert* standard.

C. Battered Woman Syndrome

"The battered woman syndrome is a descriptive term that refers to a cluster of typical behaviors and emotional reactions that may develop in a woman repeatedly subjected to mental and physical abuse by a male with whom she is intimately involved." The seminal work on the battered woman syndrome is Lenore E. Walker's *The Battered Woman*. In this work, which is based on Walker's experiences as a counselor and not on any scientific studies, Walker outlines two concepts central to this syndrome: the cycle theory of violence and learned helplessness.

The cycle of violence consists of three phases. The first phase is the tension-building phase, characterized by numerous abusive incidents. In this phase, the victim usually tries to deescalate the batterer by nurturing or avoiding him. ⁹⁹ Eventually, however, this behavior fails to placate the batterer, and he "discharge[s]" the tensions built up during the first phase in an acute battering. This explosion of violence, the second phase in the cycle, is distinguishable from the first phase because of its major destructiveness and uncontrolled nature. ¹⁰⁰ In the last phase, the batterer recognizes the nature of his behavior and becomes very loving in an attempt to reconcile with the victim. ¹⁰¹ Eventually, phase three's caring gives way to additional minor batterings, and the cycle begins again. ¹⁰²

^{93.} Alberico, 861 P.2d at 207.

^{94.} See Daubert, 113 S. Ct. at 2797; see also supra notes 28-35 and accompanying text. The New Mexico court's failure to critique the psychological literature underlying rape trauma syndrome is unfortunate, since "decisions that simply state the court's conclusions, without providing any supportive reasoning, are unlikely to persuade future decisionmakers." Monahan & Walker, supra note 32, at 501-02.

^{95.} For an argument that the admissibility of evidence about rape trauma syndrome disserves the women's movement, see Susan Stefan, *The Protection Racket: Rape Trauma Syndrome, Psychiatric Labeling, and Law*, 88 NW. U. L. REV. 1271 (1994).

^{96.} See Frazier & Borgida, supra note 67, at 301-02; Frazier & Borgida, supra note 71, at 115-18; Toni M. Massaro, Experts, Psychology, Credibility, and Rape: The Rape Trauma Syndrome Issue and Its Implications for Expert Psychological Testimony, 69 MINN. L. REV. 395 (1985).

^{97.} Vidmar & Schuller, supra note 8, at 148-49.

^{98.} LENORE E. WALKER, THE BATTERED WOMAN (Harper & Row 1980) (1979).

^{99.} Id. at 56.

^{100.} Id. at 59.

^{101.} Id. at 65.

^{102.} Id. at 69.

Walker reports that women who strike back at their batterers typically do so after phase one has recurred. 103

Walker uses the psychological concept of learned helplessness to explain why battered women often do not leave their abusers. Learned helplessness, which is induced by being "unpredictably subjected to [a] painful stimul[us]," is characterized by "passivity, feelings of powerlessness, [a] diminished capacity for problem-solving, and a general inability or unwillingness to attempt to avoid the painful stimul[us]." Walker explains that women in battering relationships often develop this feeling of powerlessness over their situation, as illustrated by thoughts such as "No matter what I do, I have no influence. . . . I am incapable and too stupid to learn how to change things." Due to this "psychological paralysis," the nature of the woman's responses to her situation changes. She begins to believe that no matter what action she takes, things will not improve. Thus, she "avoid[s] responses—like escape, for instance—that launch [her] into the unknown." If children are involved, the situation is obviously even more complex.

The battered woman syndrome arises most frequently in criminal litigation when the victim of long-term battering kills her abuser. Evidence about the syndrome is offered by the defense to educate the jury on the typical effects of battering on its victim—the homicide defendant.¹⁰⁸ In other words, it is not offered as part of an insanity defense,¹⁰⁹ but to place the defendant's behavior into context—"to shed light on the *reasonableness* of the defendant's behavior."¹¹⁰ Walker relates:

[W]hile many other emotions play a part in the tragic stories of battered women who kill, nearly all of them kill not out of anger, jealousy, or other emotions, but out of terror. They are in terrible fear for their lives. They kill in self-defense; their ultimate fear is that they will be murdered themselves if they do not kill.¹¹¹

Thus, testimony regarding the battered woman syndrome is offered in the battered woman's self-defense claim to help the jury evaluate tough questions like, "Why didn't she just leave, rather than killing him?" and "If he had threatened to kill her before but didn't, why would she have taken him seriously this time?"

^{103.} Id. at 70.

^{104.} CHARLES P. EWING, BATTERED WOMEN WHO KILL 11 (1987).

^{105.} WALKER, supra note 98, at 50,

^{106.} LENORE E. WALKER, TERRIFYING LOVE: WHY BATTERED WOMEN KILL AND HOW SOCIETY RESPONDS 51 (1989).

^{107.} Another commentator describes a variety of reasons why battered women do not leave their relationships, only one of which is learned helplessness. He also discusses the lack of financial and supportive resources, traditional sex role stereotypes, depression, the "traumatic bond" between the partners, and the reinforcement the woman receives from her mate for staying in the relationship. EWING, *supra* note 104, at 12-21.

^{108.} Regina A. Schuller & Neil Vidmar, Battered Woman Syndrome Evidence in the Courtroom: A Review of the Literature, 16 LAW & HUM. BEHAV. 273, 277 (1992) ("The intended function of expert testimony on battered women is to provide the jurors with an alternative perspective, or 'social framework' for interpreting the woman's beliefs and aetions—an interpretive social schema from which to view her actions as reasonable rather than aberrant.").

^{109.} CYNTHIA K. GILLESPIE, JUSTIFIABLE HOMICIDE: BATTERED WOMEN, SELF-DEFENSE, AND THE LAW 160 (1989). This use of the evidence distinguishes it from evidence regarding combat-related PTSD. See supra text accompanying notes 51-57.

^{110.} GILLESPIE, supra note 109, at 159 (emphasis in original). Factored into the equation of reasonableness is the battered woman's belief that social institutions such as the police and the court system will not help her. Id. at 135-44; see also ANGELA BROWNE, WHEN BATTERED WOMEN KILL 159 (1987) (explaining that "although many women in the homicide group had made repeated unsuccessful appeals to the police for protection and assistance... the same system that failed to protect them from their partner's violence immediately arrested and prosecuted them when they responded in their own defense"). An exploration of the reasonableness of the woman's behavior is important since a successful assertion of self-defense typically requires that the defendant establish a reasonable perception of imminent danger and the use of reasonable force to repel that danger. Id. at 171; Schuller & Vidmar, supra note 108, at 276.

^{111.} WALKER, supra note 106, at 65.

Some researchers contend that the battered woman syndrome "has been officially recognized as a subcategory of PTSD by experts in the field." Many studies have confirmed this relationship. To example, researchers in one recent study found that forty-five percent of their sample of battered women met the diagnostic criteria for PTSD. Others have identified avoidance behaviors and self-protective actions, both common to sufferers of PTSD, in battered women.

Research regarding the battered woman syndrome has been directly attacked for methodological flaws in the early stages of its development. The most serious attacks on Walker's research, for example, are that she failed to employ a control group, failed to use tests of statistical significance, and failed to take precautions to curtail researcher bias. ¹¹⁶ While these are valid criticisms under *Daubert*, it appears that later studies have confirmed much of Walker's theory. ¹¹⁷ Her cycle theory of violence, initially grounded in something less than scientific technique, seems to have some predictive value in over half of the couples studied. ¹¹⁸ One recent study found that "intermittency of abuse," or "extreme positive behavior and extreme negative behavior," was the best determinant of the battered woman syndrome. ¹¹⁹

Her application of learned helplessness has been more controversial. A recent review of literature on learned helplessness revealed several studies in which battered women took action to end their abuse and employed a wide range of coping skills in their relationships. 120 These self-help measures, however, conflict with learned helplessness theory, which would predict that battered women would not take positive action to change their situations. However, the actions taken by these women are typically passive, such as fantasizing or obtaining social or spiritual support, rather than active. 121 Thus, "[d]espite the contradictory evidence from studies of help-seeking activity, the weight of evidence is consistent with learned helplessness as a factor contributing to battered women's behavior." 122

Some recent studies have attempted to address criticisms regarding lack of control groups in this area by comparing battered women who kill their abusers with those who

^{112.} Id. at 48-49 n.*. But see GILLESPIE, supra note 109, at 155-56 (arguing that diagnosing battered women with posttraumatic stress disorder implies that their behavior is maladaptive, and presenting an alternate view that these women actually exhibit great strength).

^{113.} See BARNETT & LAVIOLETTE, supra note 47, at 97-100.

^{114.} See id. at 97.

^{115.} See generally id. at 99-100.

^{116.} See David L. Faigman, The Battered Woman Syndrome and Self-Defense: A Legal and Empirical Dissent, 72 VA. L. REV. 619, 633, 642 (1986); Schuller & Vidmar, supra note 108, at 281.

^{117.} See, e.g., Walter J. Gleason, Mental Disorders in Battered Women: An Empirical Study, 8 VIOLENCE & VICTIMS 53, 62 (1993) (finding "a cluster of serious disorders... including major depression, post traumatic stress disorder, generalized anxiety disorder, and obsessive compulsive disorder," which "seem related to the battered woman syndrome described by Walker").

^{118.} See Schuller & Vidmar, supra note 108, at 280. The first stage was found in 65% of couples and the second stage was found in 58%. Id. "Over time in a battering relationship, [however,] tension-building becomes more common[, increasing to 71% of couples,] and loving contrite behavior declines [to 42%]." LENORE E. WALKER, THE BATTERED WOMAN SYNDROME 97 (1984).

^{119.} Donald G. Dutton & Susan Painter, The Battered Woman Syndrome: Effects of Severity and Intermittency of Abuse, 63 Am. J. ORTHOPSYCHIATRY 614, 620 (1993).

^{120.} See Schuller & Vidmar, supra note 108, at 280; see also BARNETT & LAVIOLETTE, supra note 47, at 105-07 (reviewing these studies).

^{121.} See BARNETT & LAVIOLETTE, supra note 47, at 105-06; see also LEE H. BOWKER, BEATING WIFE BEATING 63, 111 (1983) (noting that the most common methods of self-help are personal, such as hiding or talking the man out of abuse, while the second most common methods involve the use of informal resources, including talking with family and friends, and formal sources of self-help, including contact with social service agencies, lawyers, and police, rank last).

^{122.} BARNETT & LAVIOLETTE, supra note 47, at 106.

do not. Angela Browne, for instance, found significant differences between these couples. She used a semi-structured interview format¹²³ with forty-two women who had killed their abusive mate. She later matched the results from these women with a comparison group of 205 battered women who did not kill their abusers. Men who were killed by their abused wives tended to batter them more frequently and more severely. These same men "more frequently raped or otherwise sexually assaulted their partners, and many more of them had made threats to kill."

In spite of methodological flaws in the early data on this syndrome, ¹²⁵ its admissibility over time has varied only slightly. ¹²⁶ Most courts have, in fact, tended to admit the evidence. ¹²⁷ Perhaps this is attributable to the general agreement within the professional community regarding the effects of spousal abuse, ¹²⁸ which "suggest[s] that the scientific literature bearing on a battered woman's [syndrome] . . . is sound." ¹²⁹

Application of the *Daubert* test demonstrates that evidence regarding the battered woman syndrome is based on scientific knowledge.¹³⁰ The presumption of evidence admissibility, the extensive research on the syndrome, and the widespread acceptance of that research in the professional community all support its admissibility. Although most of the studies have not employed the traditional statistical techniques used in the hard sciences, this research has complied with typical research methods in the social sciences. Many interviews and field studies have been performed, some using comparison groups of nonbattered women or battered women who did not kill.¹³¹ Moreover, while the researchers have not professed their samples to be representative, they have been large in number, especially when compiled.¹³² These methods comply with those typically used

^{123.} Browne included some relatively open-ended questions combined with more narrow follow-up questions.

^{124.} BROWNE, supra note 110, at 127.

^{125.} See GILLESPIE, supra note 109, at 171 (noting the use of "self-selected samples"); Faigman, supra note 116, at 619 (criticizing Walker's cycle theory and application of learned helplessness as suffering from many flaws, such as researcher bias, and contesting the use of battered woman syndrome as a component of self-defense); Schuller & Vidmar, supra note 108, at 280 (noting that Walker's research did not use a control group and had sampling problems).

^{126.} See Ibn-Tamas v. United States, 407 A.2d 626 (D.C. 1979) (ruling evidence on the battered woman syndrome admissible to boost the defendant's credibility and to support the defendant's testimony that she believed she was in imminent danger); State v. Kelly, 478 A.2d 364, 377-78 (N.J. 1984) (holding that expert testimony on the battered woman syndrome was sufficiently relevant and scientifically reliable to warrant admissibility). But see State v. Thomas, 423 N.E.2d 137, 139-40 (Ohio 1981) (finding no error in exclusion of battered woman syndrome evidence as irrelevant and immaterial in self-defense claim).

^{127.} See Schuller & Vidmar, supra note 108, at 273 (reporting that a trend toward admissibility of this evidence has appeared); Cynthia L. Coffee, Note, A Trend Emerges: A State Survey on the Admissibility of Expert Testimony Concerning the Battered Woman Syndrome, 25 J. FAM. L. 373, 396 (1986) (same).

^{128.} Schuller & Vidmar, *supra* note 108, at 279 (reporting that the American Psychological Association has recognized the validity of the battered woman syndrome by filing amicus briefs discussing the syndrome in homicide cases against battered women); Vidmar & Schuller, *supra* note 8, at 150-51.

^{129.} Schuller & Vidmar, supra note 108, at 281.

^{130.} There have only been two cases discussing the admissibility of battered woman syndrome evidence since the Daubert opinion. The U.S. District Court for the District of Kansas admitted testimony regarding the battered woman syndrome in a June, 1995 case. Unfortunately, that court focused its discussion on the liberal rules of relevancy and did not discuss the scientific basis for this syndrome. Thus, the court did not attempt a Daubert analysis. United States v. Brown, 891 F. Supp. 1501 (D. Kan. 1995). Such cursory analysis is unfortunate, and will undoubtedly lead to the admission of evidence which is scientifically unsound because it ignores the Daubert factors which block out scientifically unsupported evidence.

One state case has considered the admissibility of scientific evidence since *Daubert* was handed down. In State v. Riker, 869 P.2d 43 (Wash. 1994), the Supreme Court of Washington declined to discard the *Frye* test in favor of *Daubert* in a case involving battered woman syndrome evidence.

Due to the cursory analysis of the first federal court to apply *Daubert* to this type of evidence and the refusal of the Washington court to adopt the *Daubert* standard, there are currently no clues as to how judges will apply the *Daubert* test to this type of evidence.

^{131.} See, e.g., BROWNE, supra note 110, at 12-13.

^{132.} See EWING, supra note 104, at 23-40 (reviewing the work of several researchers on battered woman syndrome).

in psychological field research. The numerous books written and articles published in legal, psychological, and psychiatric journals fulfill *Daubert*'s call for publication and scrutiny by the scientific community. Finally, there seems to be a "fairly high consensus" in the professional community that battered women share common characteristics. ¹³³ This is a crucial factor in the *Daubert* analysis any time a theory, such as battered woman syndrome, is no longer new.

There is also evidence that expert testimony regarding long-term battering's typical effects on a woman is helpful to juries. A recent study of a sample of jurors awaiting duty compared the jurors' responses on a questionnaire with those of experts. "[S]ignificant differences between the experts and the sample of laypersons" were found, 134 indicating that expert testimony would be helpful to the average juror. 135

Battered woman syndrome evidence meets the *Daubert* standard and should therefore be admitted. In this regard, expert testimony would be offered to place the battered woman's act of killing into context. It would be offered as a social framework which the jury could use to evaluate the reasonableness of the defendant's actions at the time she killed. 136

III. EVIDENCE NOT ADMISSIBLE UNDER FRYE: BATTERED CHILD SYNDROME

The term "battered child syndrome" was coined in the 1960's to call attention to the widespread incidence of nonaccidental injury to children. "In 1961, the American Academy of Pediatrics conducted a symposium on the problem. . . . This symposium, which attracted a large number of pcople, was the stimulus for the beginning of present-day interest" in the miseries parents inflict on their children. The focus of this syndrome, unlike the syndromes previously discussed, is on the physical injuries suffered by its victims, not the psychological ones. These injuries include contusions and concussions, broken bones, welts, burns, and ruptured organs. There are repeated, documented cases where children end these verbal and physical assaults by killing their parents:

Mr. Jahnke . . . was known to the community as a strict disciplinarian who often beat his children severely if they chewed food with their mouths open or brushed their teeth improperly. . . .

^{133.} Schuller & Vidmar, supra note 108, at 280-81.

^{134.} Id. at 282 (describing a recent study designed to assess the differences between lay and expert conceptions of the circumstances of battered women).

^{135.} See id. at 282-83. Fortunately, research has not demonstrated that jurors typically believe many myths about abuse. Id. at 283.

^{136.} See, e.g., Ibn-Tamas v. United States, 407 A.2d 626, 633-34 (D.C. 1979); State v. Kelly, 478 A.2d 364, 375 (N.J. 1984). In Arcoren v. United States, the prosecution successfully offered evidence about the battered woman syndrome to provide an explanation of why their witness would have recanted her previous inculpating testimony about her husband. 929 F.2d 1235, 1240 (8th Cir. 1991).

^{137.} This Note will not focus on the concept known as the "battering parent profile." This profile is typically used by the prosecution to show that a parent charged with killing his child meets the profile of a batterer. In these cases, evidence of prior batterings is offered to establish the parent's character as a battering parent, not as social framework evidence. Therefore, it is madmissible as character evidence under Federal Rule of Evidence 404(a) unless it is raised by the defendant. See, e.g., State v. Loebach, 310 N.W.2d 58, 64 (Minn. 1981).

^{138.} Samuel X. Radbill, A History of Child Abuse and Infanticide, in THE BATTERED CHILD 16 (Ray E. Helfer & C. Henry Kempe eds., 1968).

^{139.} See, e.g., THE BATTERED CHILD, supra note 138, app. B.

Before going out for dinner one night, the elder Jahnke, in one of his typical tirades, shoved his son, saying, "I'm disgusted with the shit you turned out to be. I don't want you to be here when I get back." . . . Several hours later, as Mr. Jahnke was getting out of the family car, [his son] Richard ended his namesake's life.

. . .

... [Donald] lived on a small farm in the West Virginia panhandle with his father, a brick mason. Much like Richard Jahnke, Donald had been mercilessly beaten and verbally belittled since he was a young boy. As his dad watched a game show one evening, the short boy with braces and Coke-bottle eyeglasses snuck up from behind and shot his father three times in the head.¹⁴⁰

Evidence regarding the battered child syndrome is introduced to support an assertion of self-defense when a child kills his battering parent. Like information about the battered woman syndrome, this evidence is introduced in an attempt to educate the jury about the typical effects of long-term battering on its victims¹⁴¹—to show that the defendant perceived an immediate threat and acted reasonably in the face of that threat.¹⁴² However, unlike evidence pertaining to battered woman syndrome, information regarding the battered child syndrome has not been greeted warmly by most courts.

Although the widespread rate of child abuse has been documented, parricide "seems largely to have escaped the attention of lawyers, psychologists, psychiatrists, social workers, and sociologists." Perhaps this is attributable to the relatively low rate of parricide—approximately 400 cases per year. Even less attention has been devoted to the use of the battered child syndrome in support of a claim of self-defense in these cases. This relatively unexplored possibility has led at least one parricide defendant's attorney to observe: [T]he heart of a parricide defense is the child abuse prosecution of the dead parent." To date, however, few cases have reached the appellate level.

Evidence on the battered child syndrome failed its first test of admissibility in *Jahnke* v. *Wyoming*. ¹⁴⁷ Richard Jahnke¹⁴⁸ was on trial for fatally shooting his abusive father. The trial court excluded psychiatric testimony about how battered children behave, as well as a psychiatrist's conclusion that Richard was a battered child. ¹⁴⁹ The Supreme Court of

^{140.} PAUL A. MONES, WHEN A CHILD KILLS: ABUSED CHILDREN WHO KILL THEIR PARENTS 9-10 (1991).

^{141.} This evidence would be used to place the defendant's murderous actions into context. See Joelle A. Moreno, Comment, Killing Daddy: Developing a Self-Defense Strategy for the Abused Child, 137 U. PA. L. REV. 1281, 1299 (1989); Susan C. Smith, Comment, Abused Children Who Kill Abusive Parents: Moving Toward an Appropriate Legal Response, 42 CATH. U. L. REV. 141, 152 (1992).

^{142.} See Mavis J. Van Sambeek, Parricide as Self-Defense, 7 LAW & INEQ. J. 87, 96, 99 (1988); see also State v. Janes, 822 P.2d 1238 (Wash. Ct. App. 1992); Jahnke v. State, 682 P.2d 991 (Wyo. 1984).

^{143.} MONES, supra note 140, at 6. See Van Sambeek, supra note 142, at 89-91, for a discussion of the legal system's inattention to particide.

^{144.} See MONES, supra note 140, at 24 (reporting over 300 parricides each year sinee 1976); Van Sambeek, supra note 142, at 89 (stating that "about 400 parricides occur in the United States" every year). Charles Ewing reports that "virtually all [parricides] involve juveniles killing physically, psychologically, or sexually abusive fathers or stepfathers." CHARLES P. EWING, KIDS WHO KILL 19 (1990). When children kill their mothers, he reports that "the more severe abuse is usually psychological or sexual rather than physical." Id. at 24.

^{145.} Pertinent literature would not address the historical use of the battered child syndrome, which is limited to the physical context, but the psychological effects of long-term child abuse on its victims. Any such research would parallel that regarding the battered woman syndrome. In fact, commentators considering the admissibility of the psychological effects of battering on children have cited cases and research from the battered woman arena, hoping for an extension of these findings to children. See, e.g., Van Sambeek, supra note 142; Moreno, supra note 141. Smith, supra note 141. Such attempted doctrinal extension is understandable considering the void of information focusing solely on battered children.

^{146.} MONES, supra note 140, at 10.

^{147. 682} P.2d 991 (Wyo. 1984).

^{148.} Richard Jahnke is the first youth described above. See text accompanying note 140.

^{149.} Jahnke, 682 P.2d at 991.

Wyoming affirmed the district court's judgment dcclining to admit the evidence, since it did not feel the evidence met the criteria of scientific knowledge. 150

Conversely, in a more recent case, a Washington court permitted the use of this type of evidence. In *State v. Janes*, Andy Janes shot his stepfather as he entered the door to their home. The court reported that "[a]n understanding of the nature of the relationship between Andy and his stepfather [was] important to an understanding of [its] decision," since Washington used a "subjective standard to evaluate the imminence of the danger a defendant faced at the time of the act." The court then detailed Andy's history with his stepfather, discussed the possible effects on children of battering as explained by two law review articles and one book, 152 and extended the battered woman syndrome to children, asserting that there was a "sufficient scientific basis to justify extending the battered woman syndrome to analogous situations affecting children." 153

Both emotion and logic would seem to indicate that the Washington court was correct in admitting this evidence. There are strong emotional undercurrents to arguments urging its admissibility. Consider Mones' argument that the word "abuse" is actually too gentle for what some children experience:

Abuse is actually the wrong word, for it sugarcoats what these children are forced to endure. Torture far more accurately describes when a mother ties her two-year-old daughter to a chair, then locks her in a dark closet for eight hours a day. And it is torture, not abuse, when a father, while raping his ten-year-old daughter, threatens to kill her—or her mother or siblings—if she tells anybody. 154

Mones is right—many of these kids are tortured. Emotionally, at least, one would like to admit evidence of prior batterings, to aid these children in claims of self-defense.

Facially, there is also some degree of logic underlying the potential admissibility of evidence which probes the effects of prior batterings on children. There are compelling circumstances where children are involved which are either not present or are present only to a lesser degree, in the battered woman cases. For instance, the typical battered woman is smaller in size and frame than her abuser; the typical battered child, however, is overshadowed both physically and mentally by her parent. The child is also financially dependent on his parents for basic needs, and may not (legally) be able to obtain employment if he leaves. Finally, the abused child, unlike the battered adult, has no life experiences available to provide context for the batterer's behaviors. Is It would therefore seem that a child would be more apt to develop learned helplessness than a larger, more experienced, and more capable adult woman. Despite the many compelling

^{150.} Id.

^{151. 822} P.2d 1238, 1240, 1242 (Wash. Ct. App. 1992). Paul Mones would agree with the court's view. He has explained that in a typical murder case, "an attorney need only concern herself with events on the day of the killing or perhaps two or three days prior to it. In particides, [however,] an incident that occurred twelve years before the killing is as important as what took place twelve hours before it." MONES, supra note 140, at 11.

^{152.} The three sources cited by the court as authority for these effects were MONES, supra note 140; Van Sambeek, supra note 142; and Moreno, supra note 141. Janes, 822 P.2d at 1242-43.

^{153.} Janes, 822 P.2d at 1242.

^{154.} MONES, supra note 140, at 12-13 (emphasis in original).

^{155.} See Van Sambeek, supra note 142, at 99; Jamie H. Sacks, Comment, A New Age of Understanding: Allowing Self-Defense Claims for Battered Children Who Kill Their Abusers, 10 J. CONTEMP. HEALTH L. & POL'Y 349, 366-67 n.120 (1994).

^{156.} Janes, 822 P.2d at 1243.

emotional and logical reasons to admit this evidence, neither emotion nor logic is relevant under the *Daubert* standard of admissibility.¹⁵⁷

Those who advance the admissibility of this evidence, like the Washington court, premise their arguments on the view that children's responses to long-term battering closely parallel those of battered women. Such authors are unable to cite *any* scientific study which demonstrates such a connection. Recognizing this lack of scientific attention as to how batterings affect children, these commentators have tried to ride the coattails of research performed on the battered woman syndrome. At least two advocates have simply renamed Walker's research the "Battered Person Syndrome," and assumed that it would apply with equal force to ehildren. 158

At first blush, an extension of the battered woman syndrome to battered children may seem legitimate, especially given the special considerations which apply to children.¹⁵⁹ However, such an extension ignores the *Daubert* requirement of scientific knowledge. Evidence regarding the effects of battering on children's behavior currently cannot meet this mandate because the hypothesis that battering affects children's behavior and mental states has not been tested. Therefore, none of the indicators of "good science" can even be discussed. There is currently no rate of error, probability rating, or sample, for instance, upon which to base an analysis. Further, while several commentators have written about the speculated effects of battering on children, those currently published do not have a scientific focus. Medical writings are available, but they examine only the physical characteristics of battered children, not the mental effects of the batterings.¹⁶⁰ Legal articles and books have been published,¹⁶¹ yet they simply analogize to the battered woman syndrome and rely on case studies, not scientific hypothesis and testing. Stated simply, the effects of long-term battering on children have not been borne out by research; these theories are not "derived by the scientific method."¹⁶²

An extension of the battered woman syndrome is unwarranted. The studies supporting the scientific reliability of that syndrome cannot necessarily be generalized to the behavioral and psychological states of children. That is, those studies may not be externally valid as applied to children, since past experiments have used adult women as subjects. This is a problem of "generalization across persons." Sometimes, the results of an experiment on one group "may be generalizable to [other people of differing gender, age, or race], but . . . it would take additional research to demonstrate" the

^{157.} In Janes, the court posited that: "Neither law nor logic suggests any reason to limit to women recognition of the impact a battering relationship may have on the victim's actions or perceptions." Id. Although "logic" may not limit the evidence's admissibility in federal courts, under the Daubert "law," a lack of scientific knowledge does. Interestingly, in holding that there was a "sufficient scientific basis to justify extending the battered woman syndrome to analogous situations affecting children," the court merely cited three nonscientific sources. Id. at 1242-43.

^{158.} See Van Sambeek, supra note 142, at 96 n.87; Steven R. Hicks, Comment, Admissibility of Expert Testimony on the Psychology of the Battered Child, 11 L. & PSYCHOL. REV. 103, 106, 126 (1987) (asserting, with no scientific support, that "[t]here is no reason to believe that the same reasoning will not as readily apply to battered children").

^{159.} See supra text accompanying notes 155-56.

^{160.} See, e.g., THE BATTERED CHILD, supra note 138.

^{161.} See, e.g., EWING, supra note 144; MONES, supra note 140; Van Sambeek, supra note 142; Moreno, supra note 141; Smith, supra note 141. Because the articles appear in law reviews, they are not peer reviewed, but student reviewed.

^{162.} See Daubert v. Merrell Dow Pharmaceuticals, Inc., 113 S. Ct. 2786, 2796 (1993).

^{163.} MONAHAN & WALKER, supra note 31, at 48 (emphasis removed).

^{164.} Id. at 50 (emphasis in original).

validity of such an extension. This additional research is not available for the battered child syndrome, which has traditionally only been applied to physical injuries. 165

Because there is no research available which demonstrates scientific knowledge regarding the long-term effects of battering on children, and because no research demonstrates the generalizability of studies performed on battered women, this evidence should not be admissible under the new *Daubert* standard.

CONCLUSION

Examination of the scientific bases for most of the psychological evidence examined in this Note exposes as unfounded the fears of those apprehensive of the legitimacy of social science evidence. Much of it is well grounded in accepted scientific methods and principles. Expert testimony regarding combat-related PTSD, rape trauma syndrome, and battered woman syndrome have typically been admissible in the past; they should remain admissible under the new *Daubert* standard. However, testimony regarding the battered child syndrome is not currently at a level of scientific knowledge which warrants its admissibility. The results of research on the battered woman syndrome should not be extended to cover this evidence, since those studies have not been shown externally valid as applied to children. Because there is simply no research to support the contention that the battered child syndrome is grounded in "good science," it should be excluded. Overall, however, psychological syndrome evidence is not "lies, damned lies, and statistics" when offered as social framework evidence in the courtroom.

^{165.} The assumptions which underlie the argument for an extension of the battered woman research are troubling. Perhaps advocates of that extension have implicitly subscribed to the archaic notion that the lesser mental stability and/or emotional strength suffered by women and children make them scientifically interchangeable.

