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Psychology, Causality, and Court

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Causality is a key issue in psychological injury lawsuits involving claims of psychological or emotional injuries. It is likely that the finder of fact (judge or jury) will require input from a psychologist in order to assess the impact of a claimed Posttraumatic Stress Disorder, traumatic brain injury, chronic pain, or another psychophysiological disorder. In order for the assessment to accurately and adequately address the needs of the fact finder, the psychologist must use methods that are valid and reliable and must present the information in a manner consistent with the requirements of the court process. Specifically, psychologists must acquire knowledge regarding the rules of evidence and rules of civil procedure that govern the admissibility of evidence, and they must understand how courts have addressed science and scientific issues in the present and the recent past.

1. Daubert, Joiner, Kumho, Frye, and Mohan

In 1993, in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (509 U.S. 579, 113 S. Ct. 2786, 125 L.Ed. 2d 469), the U.S. Supreme Court held that the general acceptance test (*Frye v. United States*, 1923, 54 App. D.C. 46, 293 F. 1013, 34 ALR 145) was superceded by the Federal Rules of Evidence (FRE) (2004) and that general acceptance was not a necessary prerequisite for admissibility of expert testimony under Federal Rule of Evidence 702. The Supreme Court held that "all relevant evidence is admissible." As indicated in *Daubert*,

> 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 by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise. . . .
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> The inquiry envisioned by Rule 702 is, we emphasize, a flexible one. Its overarching subject is the scientific validity—and thus the evidentiary relevance and reliability—of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate. (pp. 482–484)

Whereas the Supreme Court identified many criteria, the four official "*Daubert* criteria," according to the Court in *Kumho Tire Co. v. Carmichael* (1999), are as follows: (1) "whether it can be and has been tested . . . [and] can be falsified"; (2) whether the "theory or technique has been subjected to peer review and publication"; (3) that consideration be given to the "known or potential rate of error"; and (4) that there is "general acceptance" of the particular technique within the scientific community (p. 137).

Other factors identified by the Supreme Court as relevant to gatekeeping by federal trial courts include the following: (1) that the expert's testimony "pertain to scientific knowledge," (2) that the "evidence or testimony assist the trier of fact to understand the evidence or to determine a fact in issue" (relevance), (3) "whether that reasoning or methodology properly can be applied to the facts in issue," (4) "the existence and maintenance of standards controlling the technique's operation" (the Court used the example of standards for spectrographic analysis) (*Daubert*, 1993, pp. 593–594), and/or (5) that there be "evidentiary reliability" (*Daubert,* 1993, p. 590). In footnote 9, the Supreme Court indicated that although scientists "distinguish between 'validity' . . . and 'reliability' . . . our reference here is to evidentiary reliability—that is, trustworthiness." It should be noted that some legal scholars list the *Daubert* factors slightly differently (e.g., separating testability requirement into "whether it is testable" and "whether it has been," and adding "whether there are standards controlling the technique's operation" as an additional Daubert factor (Imwinkelried, 2000, p. 21). The Supreme Court explicitly indicated that this list is flexible and these and/or other criteria are to be used by the trial courts to address the scientific validity of the evidence or testimony.

According to the Supreme Court ruling in *Barefoot v. Estelle* (1983), if the psychological expert is testifying on the basis of his or her clinical experience, rather than the state of the art of the science of psychology, a different standard is applicable. Although this type of testimony is admissible, the fact finder may give it greater or lesser weight after cross-examination and, if presented, after contrary evidence by the other party. When clinical evidence is based even in part on research (e.g., on a psychological test or diagnostic syndrome), courts have been more willing to subject the testimony to a rigorous degree of scrutiny (Shuman, 2002a).

The Supreme Court remanded *Daubert* to the Ninth Circuit Court of Appeals [*Daubert V. Merrell Dow Pharmaceuticals, Inc.* (1995)], which indicated, in a ruling often referred to as "*Daubert II*," that federal courts must "analyze not what the experts say, but what basis they have for saying it. . . . We read the Supreme Court as instructing us to determine whether the analysis undergirding experts' testimony falls within the range of accepted standards governing how scientists conduct their research and reach their conclusions. . . ." Further, the Court differentiated research conducted independent of a specific case, or whether "they have developed their opinions expressly for purposes of testifying. . . ." The former "provides important, objective proof that the research

comports with the dictates of good science. . . , [and were] derived by the scientific method. . . .” If the proferred testimony is not based on independent research, the party proffering it must present other objective, verifiable evidence that the testimony is based on “scientifically valid principles.” One means of demonstrating that the testimony is so based is by showing that it has been subjected to peer review and publication, indicating “that it has been taken seriously by other scientists.”

1.1. Joiner

The U.S. Supreme Court reaffirmed its conclusions in *Daubert* and specified that the standard for reviewing the admission or exclusion of scientific evidence by federal district courts was “abuse of discretion” (*General Electric Company, Inc. v. Joiner,* 1997); that is, the trial court has great discretion, in its role as the gatekeeper, to admit or reject proferred evidence. Appellate courts are to offer deference to the trial court’s decision unless the trial court abused its discretion.

1.2. Kumho

In *Kumho,* the U.S. Supreme Court ruled that an individual may be considered an expert if he or she has any type of specialized knowledge or experience that may contribute to the fact finder’s understanding of a case. The knowledge or experience may be technical or “other specialized” knowledge, not only scientific knowledge. Further, the specific factors that the district court may consider are flexible; the court can apply one or many in the process of determining reliability. “The objective. . . is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field” (*Kumho Tire Co. v. Carmichael,* 1999, p. 152).

1.3. Trial Judges Need Not Question Expert Testimony

It should be noted that trial judges are not obligated to question expert testimony; rather, it is up to the attorneys to identify admissibility issues and either bring motions before the court, address the issues during testimony before the jury, or choose to disregard them (Shuman & Sales, 2001).

1.4. Bases for Expert Opinions

According to Federal Rule of Evidence 703, or its state equivalent, expert testimony may be based on facts or information learned by direct observation or by studying various facts or information learned during a trial, as well as facts or information obtained through reading or through discussions with

others. It is further required that the facts or data be of the kind upon which other experts in the same field would rely and that relying on that information is reasonable. Information learned at a trial includes information from other witnesses. It is also possible for an attorney to pose a hypothetical question that includes relevant facts from the instant case and to ask the expert to give his or her opinion on the basis of the statements in the hypothetical question (Kirkpatrick & Mueller, 2003).

1.5. Opinion on the Ultimate Issue

Federal Rule of Evidence 704, or its state equivalent, permits experts in civil cases to state opinions regarding the ultimate issue (e.g., whether the alleged trauma caused the psychological damage identified). The expert must be prepared to provide the reasoning that led to reaching that conclusion, and the information must be deemed helpful to the fact finder if it is to be admitted (Shuman, 1994a, 2003 supplement).

1.6. Error Rates

The critical issue is the mandate to avoid false positives and false negatives to the degree possible. Testimony by the expert must address the likelihood that a given result might be a false conclusion, imparting blame or causality when it is not deserved, or indicating a lack of blame or causality when it is in fact present. Other definitions of "error rate" also exist, further ensuring confusion (Kraus & Sales, 2003; Youngstrom & Busch, 2000). In science, absolute truth does not exist. An hypothesis can be demonstrated to be false, but can never be considered absolutely true. The goal of research is to test hypotheses to identify those that are likely to be true based on current knowledge.

Further confusing matters, *Daubert* gives no guidance to judges in trial courts regarding what error rate should be considered unacceptable. One judge might use 10%, another 20%, and a third another amount. One judge might allow a larger error rate if the scientific evidence underlying the expert's opinion has been tested and was published in a peer-reviewed journal, whereas another might demand a low error rate unless the scientific evidence has been generally accepted within the scientific community, regardless of testability or publication issues.

1.7. State Courts

Although the requirements of *Daubert, Joiner*, and *Kumho* are mandatory in federal courts, they are not mandatory in state courts unless a given state has specifically adopted these requirements, either via a decision by its highest court or by action of its legislature (Youngstrom & Busch, 2000). However, the evidence law of most states mirrors the Federal Rules (Saks, 2000; Shuman, 2002a).

1.8. Practical Effect of Daubert and Its Progeny

According to Shuman and Sales (2001), *Daubert* is perhaps most important because it reminds mental health professionals of their ethical obligation to be aware of the latest research in the areas about which they testify and to offer information to the court that is valid and reliable and has been derived with appropriate methodology. Experts must also be prepared to present evidence that their methodology in a given case is also valid and reliable. In effect, "preparation for a *Daubert* challenge is preparation for cross-examination" (p. 76).

1.9. Mohan

In *R. v. Mohan*, (1994), the Supreme Court of Canada ruled that

> [a]dmission of expert evidence depends on the application of the following criteria: (a) relevance; (b) necessity in assisting the trier of fact; (c) the absence of any exclusionary rule; and (d) a properly qualified expert.
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> Relevance is a threshold requirement to be decided by the judge as a question of law. . . . Expert evidence should not be admitted where there is a danger that it will be misused or will distort the fact-finding process, or will confuse the jury. . . . [E]xpert evidence which advances a novel scientific theory or technique is subjected to special scrutiny to determine whether it meets a basic threshold of reliability and whether it is essential in the sense that the trier of fact will be unable to come to a satisfactory conclusion without the assistance of the expert. The closer the evidence approaches an opinion on an ultimate issue, the stricter the application of this principle. . . .
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> An expert's function is precisely this: to provide the judge and jury with a ready-made inference which the judge and jury, due to the technical nature of the facts, are unable to formulate. . . . As in the case of relevance. . . , the need for the evidence is assessed in light of its potential to distort the fact-finding process. . . .
>
> Compliance with criteria (a), (b) and (d) will not ensure the admissibility of expert evidence if it falls afoul of an exclusionary rule of evidence separate and apart from the opinion rule itself. . . .
>
> [T]he evidence must be given by a witness who is shown to have acquired special or peculiar knowledge through study or experience in respect of the matters on which he or she undertakes to testify. . . .

In summary, *Mohan*, like *Daubert*, *Joiner,* and *Kumho*, requires that the trial judge act as a gatekeeper for expert evidence. Both Supreme Court decisions require relevance and that the expert testimony assist the trier of fact to understand the issues and evidence in order to determine a fact in issue. Both require that the expert testimony pertain to special knowledge that the expert acquired through education or experience (i.e., that the expert be qualified to testify in a particular area of inquiry). Although *Mohan* specifies that there must not be any exclusionary rule that would preclude the expert testimony, this is certainly implied by *Daubert, Joiner*, and *Kumho* and is included in other parts of the Federal Rules of Evidence. The final three *Daubert* criteria are not specifically addressed by *Mohan*; that is, whether there has been peer

review and publication, that consideration be given to the known or potential error rate, and/or that there is general acceptance of a particular technique within the scientific community. In most respects, however, *Mohan*, *Daubert, Joiner*, and *Kumho* are comparable decisions.

2. Learned Treatises

Federal Rule of Evidence 803(18), or its state equivalent, defines "learned treatises" as "statements contained in published treatises, periodicals, or pamphlets" in a relevant area that are "established as a reliable authority by the testimony or admission of the witness or by other expert testimony or by judicial notice." Such treatises are generally considered trustworthy because they have been published for inspection by other professionals, with the expectation that they will be criticized for any inaccuracies (Kilpatrick & Mueller, 2003). *Daubert* placed special value on peer-reviewed treatises, but treatises that have not gone through that formal review process might be of equal or greater value in a particular case. As indicated in *Daubert*, "[p]ublication. . . does not necessarily correlate with reliability. . . , and in some instances well-grounded but innovative theories will not have been published." (p. 483) Experts must be *very* familiar with the professional literature related to issues in a given case, as dictated by codes of ethics, forensic guidelines, and the reasonable expectation of the courts that someone retained as an expert *is* an expert on the subject at bar. It should also be noted that it is the professional literature that provides the nomothetic (population) data (see section 19) with which the expert can compare the idiographic (case-specific) data that results from the assessment of the plaintiff.

According to Kassirer and Cecil (2002), "just because a study has been published in a prestigious peer-reviewed journal is no assurance that its results or conclusions are correct" (p. 1383). Further, they indicate, there remain many areas of practice in which objective data are difficult to find, with most of the literature consisting of case studies.

That publication in a peer-reviewed publication as a relative guarantee of reliability (validity, trustworthiness) should be questioned was supported by a study by Garcia-Berthou and Alcaraz (2004). Reviewing two prestigious journals, they found that 11.6% of the computations in *Nature* were incorrect, as were 11.7% of the computations in the *British Medical Journal*. Further, 38% of *Nature* articles and 25% of *British Medical Journal* articles contained at least one computational error.

3. Licensing/Certification Across Jurisdictions

A variety of circumstances might lead to a psychologist or other expert to travel to a "foreign jurisdiction" (i.e., one in which the expert is not licensed

or certified). Among the reasons could be hospitalization or incarceration of the plaintiff, or a plaintiff who is afraid of flying. In-person interviews of collaterals might also be given more credibility by the fact finder.

Many jurisdictions permit psychologists and other professionals to practice temporarily in their jurisdictions—but many do not, with penalties for unlicensed practice ranging from civil forfeitures of $100 to $50,000 and/or felony charges in five jurisdictions. An expert who does not meet licensing/certification requirements might not be permitted to testify. A recent study of requirements in all states and provinces by Kane (2005) can be found in the companion volume to this text or in the work of Ackerman and Kane (2005). (See also McLearen et al., 2004; Simon & Shuman, 1999; Tucillo et al., 2002). Experts are strongly urged to contact the relevant licensing/certifying board prior to accepting a request to provide an evaluation and testimony in a case in a jurisdiction in which he or she is not licensed. Contact information for all U.S. and Canadian psychology boards is available at www.asppb.org.

4. Tort Law

The purpose of tort law is to distribute the costs of events in which harm was done to an aggrieved individual or entity, on the basis of social policies. For the individual who was harmed, "the commonly understood goal of tort compensation is to restore the injured to their pre-accident condition, to make them whole" (Shuman, 1994b). To address this goal, the plaintiff must demonstrate that the defendant owed a duty to the plaintiff, was derelict in that duty, directly caused harm to the plaintiff, and that the harm was significant and the plaintiff should be compensated for the harm done (damages). Tort law intends to reduce harm by deterring unreasonable conduct and to compensate injured individuals with money that may be used for treatment or other means of compensation. To achieve that goal, "a plaintiff must establish both liability (i.e., that the defendant's conduct was intentionally or negligently unreasonable and should be deterred) and damages (i.e., that the plaintiff has suffered injury and should be compensated" (Shuman & Daley, 1996, pp. 294–295). Both liability and a showing that the defendant's intentional or negligent conduct is below the societal standard for reasonable care must be shown, as well as a direct, causal relationship between the defendant's behavior and the injury—that is, *but for* the defendant's behavior, the injury would not have occurred. The typical standard for negligence is the "reasonable person test" (i.e., whether a reasonable person would have behaved as did the defendant) (McLearen et al., 2004; Shuman & Daley, 1996). Because it is difficult for laymen to evaluate psychological or emotional harm, the assistance of an expert, often a psychologist, is necessary to establish the nature and degree of harm and to assess the degree of disability associated with it (McLearnen et al., 2004).

4.1. Thin Skulls, Eggshell Personalities, and Crumbling Skulls

The law of torts indicates that the tortfeasor is liable whether the stressor caused the injury or aggravated a pre-existing condition. In many cases, there will be some combination of the two: a direct psychological/emotional injury and a degree to which pre-existing problems are exacerbated by the traumatic event. This has led to use of terms like "thin skulled man" or "eggshell personality" or variations on those terms to describe an individual with a pre-existing disorder or condition that makes the harm by the defendant more significant than it would otherwise be. The psychologist's task is to identify the nature and extent of the pre-existing condition, the additional damage done by the alleged trauma under consideration, and the prognosis.

The Supreme Court of Canada discussed a variation, the "crumbling skull," in *Athey v. Leonati* (1996) (3 S.C.R.458) The case involved an individual who was in two motor vehicle accidents in 1991, one in February and one in April. The Supreme Court indicated that the "crumbling skull" rule establishes that

> the pre-existing condition was inherent in the plaintiff's "original position." The defendant need not put the plaintiff in a position *better* than his or her original position. The defendant is liable for the injuries caused, even if they are extreme, but need not compensate the plaintiff for any debilitating effects of the pre-existing condition *that the plaintiff would have experienced anyway*. . . .[emphasis added]

4.2. Identifying Deficits

For each area of apparent deficit, the evaluator should be able to specify the anticipated influence of the deficit on the person's ability to function: both what the person would be expected to be able to do and what the person would not be expected to be able to do. For example, if memory problems are claimed, the individual should have difficulty learning new information. By addressing each area of anticipated deficit based on the claimed disability or disabilities, the expert can identify the degree to which the person's presentation is consistent with expectations based on the expert's experience and the research literature. Each discrepancy needs to be investigated and resolved (Faust & Heard, 2003b).

5. Base Rates

The expert also needs to consider base rates. "[B]ase rate refers to. . . the established probability of events in a population prior to the introduction of any novel procedure. . ." (Urbina, 2004, p. 262). One area involves the nature of the trauma. If the plaintiff were hit with an object moving at one-half mile

per hour, for example, the likelihood of a traumatic brain injury would be very small (Faust, 2003).

Lees-Haley and Brown (1993) identified base rates for a number of complaints common among psychological injury claimants. They found that 93% of claimants reported anxiety or nervousness—but so did 54% of the control group. Three other common complaints among psychological injury claimants are headaches (88% vs. 62% for controls), concentration problems (78% vs. 26% for controls), and memory problems (53% vs. 20% for controls). In each example, the probative value of the expert's testimony is very limited unless base rates have been considered, and a good case can be made for excluding the expert's testimony if they have not (Fleishman et al., 1999). Similarly, the base rate for an anxiety disorder is over 16% for adults 18–54 years of age during 1 year, with the base rate for a Posttraumatic Stress Disorder (PTDS) being 3.6%. The lifetime prevalence of exposure to significant trauma in the United States is between 40% and 70%, and the lifetime prevalence of PTSD is between 8% and 14% (Frueh et al., 2004). The presence of a mood or anxiety disorder, by itself, is not proof that an individual suffered from the trauma claimed in a case.

6. Diagnosis

Diagnoses serve a useful purpose in clinical work, permitting professionals to communicate with one another and to bill health insurance. Diagnoses are not, however, distinct entities that can be objectively identified; rather, they are explanatory fictions or constructs established by the vote of a group of psychiatrists, making the diagnoses to some degree value judgments (Ackerman & Kane, 1998; Shuman, 2002a; State Justice Institute, 1999). They have significant reliability; that is, for most diagnoses, two psychologists or psychiatrists can come to the same or a very similar conclusion regarding a diagnosis. In the United States and Canada, the relevant diagnostic criteria are those of the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (DSM-IV) (American Psychiatric Association, 1994). The diagnostic criteria in the 2000 "Text Revision" of DSM-IV are the same as those in the 1994 DSM.

The strength of the DSM is its standardization and relative comprehensiveness. The authors of DSM-IV addressed its weakness as a legal resource, indicating that "[i]t is to be understood that inclusion here. . . of a diagnostic category. . . does not imply that the condition meets legal or other nonmedical criteria for what constitutes mental disease, mental disorder, or mental disability. . . ." [DSM-IV, 1994, p. xxvii]

The most common diagnosis in psychological injury is Posttraumatic Stress Disorder (PTSD). However, numerous other diagnoses might be relevant in addition to or instead of PTSD.

It should be noted that the DSM diagnostic criteria for PTSD differ significantly from those of the *International Classification of Diseases and Related Problems, Classification of Mental and Behavioral Disorders,* 10th ed. (ICD-10) (WHO, 1992). The ICD-10 criteria are more similar to those of DSM-III-R than to DSM-IV. Peters et al. (1999) found a 12-month prevalence for PTSD of 3% when using DSM-IV criteria, but 6.9% when using ICD-10 criteria in a sample of 1364 individuals. Under ICD-10 criteria, events that do not pose a threat to life or limb qualify for the diagnosis [e.g., a burglary, sexual misconduct by professionals (clergy, physicians, mental health professionals, etc.) or sexual harassment].

Posttraumatic Stress Disorder and Acute Stress Disorder are the only two DSM-IV diagnoses that require that a traumatic event initiate the disorder. Specifically, it is required that "the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others" (Criterion A). Further, it is required that "the person's response involved intense fear, helplessness, or horror," or, for children, that "this may be expressed instead by disorganized or agitated behavior." There is then a requirement that the individual *re-experiences* (Criterion B) the trauma in one or more of five listed ways, persistently *avoids* "stimuli associated with the trauma and [experiences] *numbing* of general responsiveness" (Criterion C) in three or more of seven listed ways, exhibits "persistent symptoms of increased *arousal* (Criterion D) in two or more of five listed ways, that the symptoms have lasted more than 1 month, and that the symptoms cause "clinically significant distress or impairment in social, occupational, or other important areas of functioning." It is recognized that onset might be delayed 6 or more months after the stressor, in which case one specifies "with delayed onset" (DSM-IV, pp. 427–429, emphasis added).

Posttraumatic Stress Disorder involves both psychological and physiological reactivity to an exceptionally stressful situation (Scrignar, 1996; Wilson, 2004). Components include memory, sensory and/or perceptual experiences, physical symptoms of hyperarousal, disturbance of the sleep cycle, emotional reactivity, and impaired information processing. Further, it must be noted that PTSD is not a singular phenomenon. With the wide variety of ways an individual might react to a severe stressor, there are a number of different presentations that could fall under the PTSD heading. A given individual could also exhibit different aspects of the disorder at one point in time from those exhibited at another point in time. Finally, whereas some people who go through a traumatic experience recover within weeks, others evidence significant symptoms for months, and some for years (Scrignar, 1996; Wilson, 2004).

The goal for the psychological expert is to identify a given individual's areas of dysfunction, determine whether and to what degree those dysfunctions relate to the traumatic event, and couch the description in terms that are relevant to the court process. The expert needs to "present the logic that links these observations to the specific abilities and capacities with which the law is concerned" (Grisso, 2003, pp. 12–13).

In many cases in which an individual shows evidence of symptoms of PTSD, the diagnosis cannot be made because the stressor that caused those symptoms does not meet the requirements of Criterion A [i.e., an event that threatened the individual with death or serious injury, or a threat to his or her physical integrity (or that of others), leading to extreme fear, horror, or helplessness]. When this is the case, the expert might need to refer to a "posttraumatic syndrome" rather than PTSD (Moreau & Zisook, 2002).

Far more important than the specific diagnosis is that the individual's specific symptoms are identified and that all potentially applicable diagnoses are considered, ruling each one in or out on the basis of the person's symptom picture (Ackerman & Kane, 1998; Brown & Eder, 1999). Although the expert does not need to specify why each diagnosis was included or excluded, it is very important to be able to specify that all potentially relevant diagnoses were considered and why the final diagnosis or diagnoses were chosen (Macartney-Filgate & Snow, 2004). Among the diagnoses whose criteria overlap with PTSD are Panic Disorder, Social Phobia (Social Anxiety Disorder), Specific Phobia, Generalized Anxiety Disorder, Major Depressive Episode, Somatoform Disorder, Substance-Related Disorders, some Organic Mental Disorders, and some Adjustment Disorders (Ackerman & Kane, 1998).

The evaluator must also consider other possibilities. There could be malingering or, at least, symptom exaggeration. The evaluator must avoid the logical error of "post hoc, ergo propter hoc" ("after this, therefore because of this"). The facts that an individual experienced a trauma and that he or she was diagnosed with PTSD does not mean that the trauma was the primary or even secondary cause of the PTSD. Rather, the PTSD could have been caused by another event, or a series of events that included the identified traumatic event. Similarly, a *correlation* between an event and a psychological disorder never, alone, indicates *causation*. Height and weight, for example, are correlated, but neither causes the other (Ackerman & Kane, 1998). Every reasonably possible cause of a given injury or condition must be considered, as must other factors that might play a significant role such as pre-existing disorders or problems. Without considering all of these factors, an expert cannot legitimately draw conclusions to a reasonable degree of psychological/medical/scientific certainty (Fleishman et al., 1999). In addition, the Fourth Circuit Court of Appeals indicated, in *Cooper v. Smith & Nephew* (2001), that testimony from an expert who has not conducted a thorough differential diagnostic process could be excluded in federal court. Many state courts would draw the same conclusion.

7. "Reasonable Certainty"

Whereas scientific research generally accepts conclusions only if the probability of getting the result by chance is 5% or less (i.e., a 95% level of certainty), in law the relevant criterion is "more likely than not," and the

degree of psychological (or medical, etc.) certainty necessary for "reasonable certainty" is the same (Bradford, 2001). If the expert cannot state that conclusions are made to a reasonable degree of psychological (or medical) certainty, a court may conclude that the required degree of certainty is absent and exclude the testimony (Shuman, 1994a, 2002 supplement)—or, at the least, give less weight to the evidence (Shuman, 1994a, 2003 supplement).

8. Goals of an Assessment

The primary goal for an evaluator is to be impartial, regardless of who retained him or her, acknowledging the strengths and weaknesses of the data while advocating for the conclusions he or she has drawn from the data, not for a given side in a case. Among the means of maintaining impartiality are to (1) set and maintain professional boundaries regarding the attorney who retained the evaluator, (2) avoid becoming invested in a particular outcome of a case—the evaluator is to advocate for his data and conclusions, not to try to "win" and (3) communicate the results of the evaluation clearly and in simple language, avoiding superlatives (e.g., "absolutely" or "completely"), in both the report and testimony [Greenberg, 2003; Heilbrun et al., 2002; Macartney-Filgate & Snow, 2004; see also the Specialty Guidelines for Forensic Psychologists, Guidelines VII.B., C., and D. (Committee on Ethical Guidelines for Forensic Psychologists, 1991)]. According to Murphy (2000), the American Bar Association has indicated that expert witnesses must be independent, rather than loyal to or an advocate for his or her client, the attorney.

> In essence, an expert must analyze, explain, and offer an accurate opinion of the relevant issue before the court, not strive to advocate and persuade the fact-finder of a certain point of view. The expert's main duty to provide truthful and accurate information comes from the court and the ethical guidelines of his professional organization, if any.

The case-related goal of the assessment is to identify whether, and if so to what degree, the traumatic event caused the plaintiff to suffer a psychological injury. The options include the following: (1) The traumatic event was the sole cause of the individual's assessed psychopathology—a rare event. (2) The traumatic event was the major cause of the individual's assessed psychopathology. *But for* the traumatic event, the individual would not have the degree of psychopathology assessed. (3) The traumatic event was a significant contributing factor ("material contribution" or "substantial contribution") to the degree of assessed psychopathology, but not the major factor; that is, the assessed disorder was identifiably worse because the traumatic event occurred. (4) The traumatic event had little affect on the assessed psychopathology of the individual, but could have exacerbated an existing psychopathology to some degree. (5) No significant relationship was identified

between the traumatic event and any psychopathology that was found by the assessment. (Ackerman & Kane, 1998; Melton et al., 1997; see also Young, this volume).

The means of identifying which of the above five conclusions is most applicable is scientific reasoning. Hypotheses having been formulated, each is subjected to analysis leading (in most instances) to either confirmation or falsification by the idiographic data of the case. The interpretation of the data should be parsimonious: The best conclusion is generally the one that accounts for the most data with the simplest, most direct explanation. (Greenberg, et al., 2003; Heilbrun, 2001). Because the evaluator does not know until near the end of the evaluation what data will ultimately be relevant, everything that *might* be relevant should be noted, because relevance is the legal standard for discovery. Information that appears relevant but proves to be either irrelevant or immaterial will be in the evaluator's notes, but is left out of the report (Greenberg, 2003).

If a relationship is found between the traumatic event and the individual's psychological condition, recommendations should be made for treatment and a prognosis stated regarding the likelihood of a return to his or her prior level of functioning. Prognosis is, in effect, "future damages" (Greenberg, 2003, p. 245). The evaluator is to make a statement regarding the likelihood the plaintiff can be treated, the likelihood (if there are data to so indicate) that the plaintiff will recover, and an estimate of the period of time required for optimal or maximal recovery to occur if the individual actively participates in treatment. A cost estimate, based on community rates, is usually of value as well.

9. Conducting the Evaluation

There is no gold standard for the conduct of an evaluation. Each evaluator must design an evaluation that properly and adequately addresses the legal questions at issue in each individual case. A number of authors have suggested models that might be used for an evaluation (see, e.g., Greenberg, 2003; Grisso, 2003; Heilbrun, 2001; Wilson & Moran, 2004).

It is essential that multiple methods and sources be utilized in the assessment, to try to ensure that all important factors are considered and that the data from each factor can be compared with those from the other factors, looking for convergent validity. The issue is not, *per se*, how damaged the individual might now be, but, rather, how different the individual is from the way he or she was prior to the traumatic incident. Significant inconsistencies must also be addressed (Ackerman & Kane, 1998; Greenberg, et al. 2003; Heilbrun, 2001; Heilbrun et al., 2002; McLearen et al., 2004; Walker & Shapiro, 2003; Weiner, 2002). In most cases, this will involve three areas of investigation: review of records, psychological testing, and clinical interviews.

9.1. Review of Records

The forensic expert needs to review the Complaint (i.e., the allegations) and all records that will potentially shed light upon the functional and mental status of the individual, both pretrauma and posttrauma. The pretrauma information identifies a baseline—what the individual was like prior to the traumatic event. The posttrauma data indicate the changes the individual went through as a result of the trauma or other events in his or her life. In general, the records reviewed should go back at least 5 years, and a minimum of 3 years, prior to the allegedly traumatic event, to try to ensure that nothing important is missed and to form a substantial baseline of pretrauma functioning. The records reviewed should include all medical (including psychotherapy), arrest and conviction, school, employment, military, personnel, and any other records that might shed light on the individual's functional abilities prior to and following the traumatic event. Information regarding changes in the individual's lifestyle since the trauma might be available via checkbook registers and credit card statements (Greenberg, 2003). Physical activities and hobbies engaged in prior to and after the traumatic event should be listed. Medication records should identify any direct or side effects that might affect the clinical picture. Although these data do not stand alone as evidence of changes caused by the traumatic event, without a strong database it will be difficult to clearly identify the pretraumatic status and posttraumatic changes for the individual. Without a strong database, it will also be difficult, if not impossible, for an expert to testify to a "reasonable degree of psychological (or medical or social work, etc.) certainty," and the record review should be considered to be below the standard of practice (Ackerman & Kane, 1998; Grisso, 2003; Heilbrun, 2001).

9.2. Questionnaires

Self-report questionnaires can provide important information for the evaluation and understanding of an individual's beliefs, attitudes, and behavior (Heilbrun, 2001). There are a number of instruments commercially available or easily constructed that are not necessarily meant to be formal evaluation instruments. Most are face-valid; that is, it is not difficult to tell what the assessor is looking for by simply looking at the items included in the instrument. Most also have no, or minimal, validity scales and could be falsified by an individual who is so inclined. The forensic expert may also design questionnaires to gather relevant information without tying up the limited time of the assessor, who would otherwise have to gather the information through interviews. These instruments should generally be considered to be "information gathering instruments" or "interview extensions," rather than tests. Although most are not standardized, if they are a standard part of an evaluator's assessments they will generally be accepted in courts. Types of information gathered include personal history, work history, medical history, trauma history (accidents or other

traumas that preceded the currently alleged trauma), pain history, and so forth. Norris and Hamblen (2004, pp. 66–98) described a number of instruments, with varying degrees of standardization, which address PTSD symptoms. All of them address the key question: *How has the individual changed as a result of the trauma/incident/accident*? What objective evidence is there that the claimed changes are real and are interfering with the individual's ability to function in some way?

9.3. Informed Consent

Prior to beginning the assessment, the psychologist obtains the informed consent of the individual being assessed. This includes telling the person the nature and purpose of the evaluation (including who retained the psychologist), the fact that the evaluation is not confidential (although the number of people with access to the information might be small), and who might have access to the results of the evaluation (Specialty Guidelines for Forensic Psychologists, Guideline IV.E. [Committee on Ethical Guidlines for Forensic Psychologists (1991)]. If there is any reason to question the individual's understanding of the explanation given, the person should be asked to paraphrase the information. If the individual does not understand and therefore cannot give informed consent, this should be discussed with the retaining attorney, who (if not the attorney for the individual) should contact the individual's attorney prior to proceeding with the evaluation, unless the evaluation is court ordered or otherwise not voluntary. In that case, a simple explanation should be given, but assent rather than informed consent may be sufficient. The psychologist's report should indicate the questionable understanding and discuss the apparent reason(s) for it and any impact that it is likely to have on the results of the evaluation (Heilbrun, 2001).

9.4. Psychological Testing

Although a "test" is technically a highly structured instrument with responses that are evaluated for quality or correctness, in general the use of the terms "test," "inventory," "scale," and "instrument" is interchangeable (American Educational Research Association, 1999). Experts can use psychological tests and other sources of information to reliably describe individuals' emotional, motivational, intellectual, neuropsychological, and social characteristics, as well as their daily behavior. In addition, there is empirical research that connects these types of information with past, present, and future behavior and outcomes. Further, there are theories of both normal and abnormal behavior that use constructs and assumptions to connect behavior with its causes. Such a theory is a "convenient fiction that is useful for generating hypotheses about how various events, behaviors, and human characteristics interrelate" (Grisso, 2003, p. 31).

10. Clinical Versus Actuarial Assessment

Although there has been debate among psychologists for decades regarding the relative merits of actuarial [statistical, e.g., the Minnesota Multiphasic Personality Inventory, Second Edition (MMPI-2)] versus clinical (e.g., interviews, some projective techniques) assessment, both methods have a substantial amount to offer in an evaluation. Research suggests that the actuarial method is better about half the time, and there is no significant difference the other half of the time, indicating that the actuarial method does not always lead to better information (Heilbrun, 2001). When there is an actuarial instrument available and appropriate to the nature of the assessment, it should generally be used, along with appropriate means of clinical assessment.

11. Correct Administration Is Essential

To be valid and reliable, a psychological instrument must be correctly administered. Each instrument has been standardized with a specific population under specific testing conditions. The further one deviates from the standardized conditions, the less likely one is to have test results that are valid. Among the considerations indicated by Ackerman and Kane (1998) are the following:

1. Tests and other assessment instruments, and interviews, should be administered in a relatively quiet area that is free of distractions. If conditions deviate significantly from this requirement, it might not be possible to conduct a valid assessment. Any environmental factors believed to have affected the results should be noted in the report (see also Heilbrun, 2001).
2. The individual being assessed should be alone with the examiner, because assessment instruments are standardized under this condition and there is no research literature indicating whether, and to what degree, the results from a nonstandardized administration might change the results of a particular instrument. This is also true with regard to audio or video recording. There is no research indicating that the assessment is as valid when a third party is present or the assessment is recorded as when it is not. (See also Constantinou & McCaffrey, 2003; Constantinou et al., 2002; Kehrer et al., 2000; Lezak et al., 2004). Further, the U.S. Supreme Court, in *Estelle v. Smith* (1981) indicated that the physical presence of an attorney during an evaluation "could contribute little and might seriously disrupt the examination." Ethical standards also suggest that there might be serious problems with validity if there is a third party present or if other nonstandard conditions are present. [See Ethical Standards 9.02, 9.06, and 9.11 of the *Ethical Principles of Psychologists and Code of Conduct* (2002); Standards 1.4, 5.4, and 12.19 of the *Standards for Educational and*

Psychological Testing (1999).] Further, Dean (2002, p. 141) indicated that "a medical examination itself is not part of the adversarial proceedings," so federal courts do not permit the presence of attorneys at evaluations without a compelling reason.

3. The psychologist should personally administer all tests and other formal instruments, if possible, to ensure that standard testing conditions were in place and to record extratest behavior (e.g., reactions, expressions, side comments) as well. If absolutely necessary, testing may be done by the psychologist's well-trained staff, under the psychologist's direct supervision.
4. *No standardized test should ever be taken home by or left with the individual being assessed*. If the administration is not directly observed, the psychologist cannot guarantee that the test or other instrument was in fact answered by the individual being assessed, or that the individual was sober while taking the test, or that other people did not influence the individual's responses to the test (Ethics Committee, American Psychological Association, 1993).
5. Tests and other assessment instruments must be appropriate for the individual being assessed. If reading level is a concern, it must be assessed prior to test administration.
6. If the psychologist makes any substantial changes from the standardized conditions for test administration, it is the responsibility of the psychologist to demonstrate that the test remains valid and reliable despite the changes. If the psychologist cannot do so, he or she cannot testify to a reasonable degree of psychological certainty that the results are valid.

12. Response Style

The individual's response style, or "test-taking attitude," must be assessed. Specifically, the psychologist must identify whether the individual is responding honestly, is malingering, is defensive, is responding in a relevant manner, is cooperative, and is not impaired by communication problems related to age, thought or speech disorganization, deficits of intellect, and/or problems with memory (Heilbrun, 2001; Heilbrun et al., 2003; Rogers, 1997; Rogers & Bender, 2003). The most widely used instrument for addressing an individual's response style is the MMPI-2 (Boccaccini & Brodsky, 1999; Greenberg et al., 2003; Lees-Haley, 1992; Otto, 2002; Posthuma et al., 2002; Shuman, 1994a, 2002 supplement) The MMPI-2 is particularly well suited for addressing whether an individual is malingering or otherwise not answering questions in an open, forthright manner (Rogers, 2003). Further, the MMPI-2 should have no difficulty meeting the requirements of the Federal Rules of Evidence (or their state equivalents), including the requirements for relevance, reliability, falsifiability, peer review and publication, and general acceptance with the scientific community (Otto, 2002).

A related question is that of *motivation*. Does it appear that the individual did his or her best in responding to the tests and other instruments? Does it appear that the individual wants to get better, or is there evidence that he or she is comfortable in the "sick role?" Some of these data will come from the above instruments and some from the clinical and collateral interviews.

13. Specific Tests

Although the popularity of a test or other instrument does not guarantee either validity or reliability, in most cases the most frequently used instruments will be both valid and reliable, as well as satisfying the criterion for "general acceptance" by psychologists. The most widely used test in both forensic and clinical evaluations is the MMPI-2 (Boccaccini & Brodsky, 1999; Camara et al., 2000; Watkins et al., Hallmark, 1995), in part because of its success at identifying the individual's response style. Although it is certainly not guaranteed, the individual who responds consistently, nondefensively, and so forth on the MMPI-2 is relatively likely to respond similarly throughout the evaluation (Ackerman & Kane, 1998; Boccaccini & Brodsky, 1999; Graham, 1993; Pope et al., 2000).

The second most widely used test in forensic evaluations is the Wechsler Adult Intelligence Scale, the current edition of which is the third (WAIS-III) (Boccaccini & Brodsky, 1999; Camara et al., 2000; Watkins et al., 1995). Third is the Millon Clinical Multiaxial Inventory, Second or Third Edition (MCMI-II or III) (Boccaccini & Brodsky, 1999; Camara et al., 2000; Watkins et al., 1995). This last finding is a matter of concern because there was no normal comparison group in the standardization sample, which was comprised solely of psychiatric patients. As a result, it is well documented that the MCMI–II and MCMI–III exaggerate an individual's psychopathology (Ackerman & Kane, 2005; Craig, 1999; Faust & Heard, 2003a; Groth-Marnat, 2003; Hess, 1998; Hynan, 2004; Rogers et al., 1999; Rogers, Salekin & Sewell, 2000; Schutte, 2000). Although the MCMI's emphasizing of psychopathology helps clinicians identify personality disorders that might require treatment, the overpathologizing is a serious confounding factor in forensic evaluations.

Other tests used by at least 25% of psychologists in at least one survey include the Rorschach Inkblot Technique (or Method), the Beck Depression Inventory, the Thematic Apperception Test, and the Symptom Check List-90 (Boccaccini & Brodsky, 1999; Camara et al., 2000; Watkins et al., 1995). The most widely used tests by neuropsychologists, according to Lees-Haley et al. (1995) are, in order, the Wechsler Adult Intelligence Scale, the current edition being the third (WAIS-III), the Minnesota Multiphasic Personality Inventory, Second Edition (MMPI-2), and the Wechsler Memory Scale, the current edition of which is the third (WMS-III).

14. PTSD Instruments

If the plaintiff is indicating symptoms consistent with a PTSD, the areas of symptoms to address are those involving three components: reexperiencing, avoidance, and hyperarousal. (Briere, 2004, p. 102). Although few instruments address all three of these areas, two that do are the Trauma Symptom Inventory (TSI) and the Detailed Assessment of Posttraumatic Stress (DAPS). The former addresses 10 types of posttraumatic response, as well as having three validity scales (Briere, 2004; Briere et al., 1995; Demare' & Briere, 1996; Edens et al., 1998). An alternative for the expert who wishes to use an instrument with documented psychometric properties is the DAPS, which directly correlates with the criteria of PTSD in DSM-IV-TR (Briere, 2004; Greenberg et al., 2003; McLearen et al., 2004). The DAPS also includes two validity scales and assesses comorbid conditions often found with PTSD: dissociation, substance abuse, and suicidality (Briere, 2004, see also Chapters 6–8; see also the chapter by Polosny in this volume.)

15. Malingering and Exaggerated Responding

There are a number of instruments designed to identify whether the individual is malingering. In a psychological injury case, at least one such instrument should be utilized. The validity scales of the MMPI-2 are the most frequently used scales for this purpose (Fishbain et al., 2003; Kane, 1999; Pope et al., 2000; Rogers, 1997). The individual who is forthright and consistent on the MMPI-2's validity scales is relatively likely to be forthright and consistent throughout the evaluation. Conversely, the individual who significantly exaggerates is extremely defensive, is inconsistent, or otherwise obfuscates raises a question about the veracity of the balance of the evaluation. Significantly elevated validity scales might be indications of malingering, a "cry for help," or of severe psychopathology. Individuals who have been stigmatized or rejected because of posttraumatic changes might respond in a manner that draws attention to their felt pain and injury, so that their problems do not get overlooked (Briere, 2004).

The MMPI-2 has a number of validity scales and one additional factor, the number of items to which no response was given or for which both "true" and "false" were marked, the "Cannot Say" or "?" Scale. Samuel et al. (1995) indicated that significantly more blanks are left by people involved in psychological injury litigation than among people who are not so involved. They also indicate that the closer the evaluation is to the date of the injury, the more likely it is that the individual will leave more than 30 items blank, producing a profile that is likely to be invalid, or, at the least, questionable.

Next, the consistency of responding is addressed with two scales, the Variable Response Inconsistency Scale (VRIN) and the True Response

Inconsistency Scale (TRIN). Either random responding or a fixed response set could lead to an invalidating score (above a T score of 79) on either or both of these scales.

The L Scale addresses the degree to which the individual tries to appear "perfect" or especially "virtuous." T Scores of 70–79 suggest blatant exaggeration of positive qualities (Pope et al., 2000). MMPI-2 profiles are generally invalidated by T scores of 80 or more on the L Scale (Butcher et al., 2001).

The F (Infrequency) Scale includes items that were endorsed by 10% or fewer of the normative population. T scores of 80–89 suggest questionable validity, whereas T scores of 90 or greater indicate that the test is likely to be invalid (Butcher et al., 2001). An invalid score could be the result of malingering, exaggeration of problems (including a cry for help), extreme defensiveness, random responding, and/or significant psychopathology (Groth-Marnat, 2003). Research indicates that there is a positive correlation between high F Scale scores and histories of trauma, depression, dissociation, PTSD, and traumatic environments in the family of origin, making the F Scale much less useful in assessing malingering among trauma victims (Elhai et al., 2004).

The F_B (F Back) Scale primarily addresses items in the second half of the test. The same cutoff scores should be used as for the F Scale (Butcher et al., 2001).

The K Scale addresses a more subtle and sophisticated defensiveness than does the L Scale. A high score does not imply psychopathology. T Scores from 65 to 74 suggest substantial defensiveness, whereas T scores of 75 or higher suggest "faking good." High K Scale T scores make it much less likely that psychopathology will be indicated on the clinical scales (Butcher et al., 2001). Individuals with advanced education and/or high socioeconomic status are relatively likely to get high K Scale scores regardless of whether they are intentionally being defensive (Pope et al., 2000).

The S (Superlative Self-Presentation) Scale is similar to the K Scale, but includes items from throughout the test, rather than only the first 370. Individuals with high scores might be claiming one or more positive qualities (e.g., a belief in human goodness, a feeling of serenity, feeling content with life, denial of negative feelings, and/or denial of moral flaws). T scores of 69 or less suggest a valid test protocol, scores of 70–74 indicate moderate defensiveness, and scores of 75 or higher indicate that the protocol might be invalid because of "faking good." If the T score is 65 or higher, the five subscales of the S Scale may be interpreted (Butcher et al., 2001; Pope et al., 2000).

The F_P (Infrequency-Psychopathology) Scale consists of items that were answered in the scored direction by no more than 20% of either the normative sample or a sample of psychiatric inpatients. When the F Scale is elevated and random responding has been ruled out, a T score of 100 or higher on F_P suggests significantly excessive reporting of psychopathology (i.e., "faking bad"). In contrast, if F_P is below 70, it is relatively likely that severe

psychopathology reported is real. T Scores between 70 and 99 suggest either exaggeration of symptoms or a "cry for help" (Butcher et al., 2001; Nichols, 2001). The F_P Scale is the most specific and most sensitive measure of over-reporting on the MMPI-2 (Nichols, 2001; Pope et al., 2000). Briere (2004) and Elhai et al. (2004) indicated that F_P appears to be more sensitive than the F Scale in determining whether a PTSD protocol is valid.

The F–K (F minus K) Index, also known as the Dissimulation Index, suggests "faking bad" if the *raw* score for the F Scale is 15 or more points greater than the *raw* score for the K Scale (Butcher et al., 2001). Scores of 25 or more strongly suggest exaggeration of psychopathology (Nichols, 2001; Rogers et al., 1994). If F–K is equal to or less than –8, it is very unlikely that the person was feigning (Rogers et al., 1994). The F–K Index has been found to be especially good at identifying "motivated faking" (Briere, 2004).

Other commonly used instruments that have been demonstrated to be both valid and reliable measures of malingering include the Structured Interview of Reported Symptoms (SIRS), the Personality Assessment Inventory (PAI), the Test of Memory Malingering (TOMM), and the Validity Indicator Profile (VIP) (Ackerman & Kane, 1998; Briere, 2004; Rogers, 1997; Rogers & Bender, 2003). Neuropsychologists assessing malingering are also likely to use the MMPI-2, with one of the others above as an alternative or addition, or they might use a forced-choice test [e.g., the Portland Digit Recognition Test (PDRT)] (Lally, 2003). With these and/or other instruments designed to detect malingering, it is usually possible to at least raise a significant question about malingering and often to make a statement with a substantial degree of certainty.

To further assess malingering, Wilson and Moran (2004, p. 628) have developed a list of "critical cues to malingering," including lack of cooperation with psychological and medical assessment procedures and requests, evasiveness and vagueness, incorrect details or implausible information, evidencing behavior inconsistent with PTSD, blaming all problems on the traumatic symptoms, falsifying or altering documentation, overemphasis on "flashbacks," inconsistent, defensive, or malingering patterns in test responses, a history of antisocial personality or behavior, or previous legal claims for injuries.

Because an accusation of malingering is very serious, multiple methods should be used to assess it, coming to a positive conclusion only if malingering is strongly indicated, and contrary results, if any, can be explained as well (Rogers & Bender, 2003). Discordant results are hypotheses to be addressed, not results that are contradictory (Greenberg, 2003).

16. Other Factors

Any test or other standardized instrument utilized should have an identified level of *sensitivity* and *specificity*. The former refers to the ability of the

instrument to correctly detect pathology that is present (correct positives). The latter refers to the ability to identify when the pathology is *not* present (correct negatives). The goal is to minimize both false positives and false negatives (Gouvier et al., 2003).

Part of the evaluation of malingering or secondary gain is the assessment of secondary *cost*. The sick role involves a variety of limitations on behavior, travel, and general functioning. If the potential gain from a lawsuit is relatively small (e.g., a few thousand dollars), there is little reason to suspect that the individual is consciously (malingering) or unconsciously (secondary gain) demonstrating the degree of dysfunction associated with the injury (Miller, 2003).

17. Interviews

A personal interview of the plaintiff is extremely important in any evaluation. Without it, there is a marked limitation to the conclusions that can be drawn about the individual and the impact of the traumatic event on that individual, even if the expert has access to psychological testing of and other information regarding the plaintiff and his or her description of the traumatic event (Greenberg, 2003; Heilbrun, 2001). The *Specialty Guidelines for Forensic Psychologists* (Committee on Ethical Guidelines for Forensic Psychologists, 1991) indicated that forensic psychologists must attempt to have an "examination of the individual adequate to the scope of the statements, opinions, or conclusions to be issued. . . . When it is not possible or feasible to do so, they make clear the impact of such limitations on the reliability and validity of their professional products, evidence, or testimony." Without an interview, the expert lacks a key source of data concerning the connection between historical, test, and other information and the legal question at issue. Even if there is an interview, the clinician might not have an adequate basis for an opinion if the interview had been too short, if essential areas were not covered, if there was not sufficient privacy during the interview, and so forth. Courts generally admit testimony under these conditions (Shuman, 1994a, 2002 supplement). However,

> standard psychiatric and psychological diagnostic techniques include an examination of the patient. . . . Thus, an in-court opinion not based on a personal examination of the patient, when it is possible to do so, violates accepted practice. This failure should bear on the weight given the resulting opinions

as well. (Shuman, 1994a, 2003 supplement, p. 9–7)

In the United States, Rule 35(a) of the Federal Rules of Civil Procedure permits a party to the litigation to have an evaluation of the plaintiff by an independent expert in nearly every case "when the mental or physical condition. . . of a party. . . is in controversy. . . ." The party requesting the examination must make the report of the examination available to the opposing

party if so requested. If the report is not given to the requesting party, the expert's testimony may be excluded. If the attorney requesting the examination does not like the contents or conclusions of the verbal report by the expert, however, he or she will most likely not request a written report, thereby eliminating the unfavorable testimony by the expert (Greenberg, 2003). States generally have similar provisions in their statutes.

Whereas some psychologists prefer a structured interview, others prefer to use formal and informal instruments such as those listed above to address most, if not all, of the areas that must be considered and to spend several hours interviewing the individual regarding his or her experience and the responses to the tests and questionnaires (Greenberg et al., 2003).

The goal is to not only formally evaluate the individual but also to understand *what the trauma means to the individual*, as no two people have exactly the same response to a given event (Ackerman & Kane, 1998; Wilson & Moran, 2004). It is *essential* that the evaluator understand the meaning of the stressor for the individual being evaluated—this is in many ways the primary purpose of the interview.

Another aspect of identifying the meaning of the trauma for the individual is the assessment of whether the person has an unconscious psychological need to identify a physical or other traumatic cause for his or her symptoms. The individual who does is *not* malingering; his or her pain and suffering are real.

Because there is evidence that social support following traumatic events is associated with an improved prognosis, it is important to assess the individual's perceived and actual levels of social support (Briere, 2004). The individual whose family and friends accept the fact that emotional injuries are as real as physical injuries is relatively likely to simply discuss his or her symptoms in a straightforward manner. Lacking the social support of family and friends, however, an individual might feel a need to "prove" that the disability is real, including asserting that his or her injury is organic (e.g., a mild traumatic brain injury or a soft tissue injury). These individuals are generally not primarily seeking financial gain; they are trying to have their suffering acknowledged by family and friends and, in the legal context, by having the jury independently confirm that the individual has really been hurt *and* that it is not his or her fault (Miller, 2003). Some individuals have such goals as trying to prevent the defendant from hurting someone else, punishing the defendant, or other "social justice" goals (Ackerman & Kane, 1998).

18. Number and Length of Assessment Sessions

A complete evaluation requires at least two meetings with the plaintiff, and often more (Ackerman & Kane, 1998; Wilson & Moran, 2004). It is simply not possible to do a complete evaluation in a single session; the story of the traumatic experience requires ample time if it is to be fully told

(Wilson & Moran, 2004). Although the needed tasks might be accomplished in one 8-hour day, there will be a real question about whether fatigue is an increasing factor as the day wears on, making conclusions potentially less valid. It is also very difficult to get a complete picture of an individual in a single day. Further, scheduling a second session a week or so later permits the tests and other instruments from the first day to be scored and interpreted, and some, if not all, collateral calls to be made, so that the value of the clinical interview (at session two) is greater. If the plaintiff or his or her attorney refuses to permit sufficient time for a complete evaluation, it might be necessary to request that the court order that the plaintiff be available for sufficient time to permit a complete evaluation to occur.

19. Review of Research

There is a large body of research addressing aspects of causality and the assessment of psychological status, disability, and related factors. The research addresses samples of people with various characteristics (e.g., age, education, gender, trauma history, education) who have been assessed using specified instruments under various conditions. This is referred to as *nomothetic* data. Nomothetic data are group or population based and are especially useful for establishing the validity and reliability of instruments (tests, information forms, etc.) used for forensic assessments and for prediction related to the course of psychological disorders and impairments. Nomothetic data also tell us what is statistically "normal" and what is significantly different from normal. In addition, base rates are established by nomothetic data. Hypotheses can be generated on the basis of research regarding the typical behavior (including test results) of individuals who have experienced one or more specific types of traumatic event and/or the absence of behavior or other characteristics *not* typical of individuals who have experienced a traumatic event (Heilbrun, 2001). Experts must be able to identify relevant professional articles or other learned treatises that support their methodology, if asked, and it might be appropriate for the expert to include that information in his or her report. (Baer & Neal, 2000).

Idiographic data are those pertaining to the individual who is being assessed. Through psychological testing, use of information-gathering forms and interviews, and review of documents related to the case, the psychologist identifies relevant characteristics of the individual, the nature of the alleged traumatic incident and its meaning for the individual, and the impact of the alleged traumatic incident on the individual (Ackerman & Kane, 1998; Wilson & Moran, 2004). In the course of doing so, the psychologist develops a number of hypotheses, each of which can be tested against further data that become available from some source. The greater the consistency among sources (e.g., tests, life history information, interviews of the individual, and collaterals), the greater the likelihood that a given piece of data is accurate.

Through the analysis of idiographic data, the psychologist identifies possible causal links between changes in the condition of the individual and the alleged traumatic incident (Greenberg et al., 2003; Heilbrun, 2001).

The primary difficulty that could arise is if the individual (ideographic) data does not match the parameters of the group (nomothetic) data, so that hypotheses about the individual cannot adequately be tested or, therefore, firm conclusions drawn. If all research in a particular area of inquiry has been conducted on men, for example, it might not be possible to accurately generalize to women. If the normative group consists solely of psychiatric patients, it might not be possible to accurately generalize to individuals who are not psychiatric patients (see the discussion of the MCMI, p. 30). Further, some information is available based on controlled experiments, whereas other information is based on naturalistic groups. For example, it would be unethical to do controlled research that involved causing severe pain to the experimental group in order to ascertain how people respond to a variety of pain experiences. Instead, we have to do research with people who have already been injured and who already feel severe pain to try to understand their pain experience. It is the task of the expert to accurately identify the ways the individual is similar to and different from both the controlled and naturalistic research populations and to carefully draw conclusions from that data (Haney & Smith, 2003). The expert must also be at all times cognizant of the fact that "trial courts are usually concerned with specific effects on specific individuals. While science attempts to discover the universals hiding among the particulars, trial courts attempt to discover the particulars hiding among the universals" (Faigman, 1999, p. 340).

20. Every Evaluation Has Some Limits

Every evaluation leaves some questions unanswered or marginally answered. Exhausting every possible avenue of inquiry and administration of every psychological test or other instrument that might have utility would take so much time and be so expensive that it could not be justified. In addition, limits imposed by the parties or the court (e.g., number of hours permitted for the assessment) could also hinder the ability of an evaluator to provide a strong statement regarding some of his or her conclusions. There might also be inconsistencies among the results of different parts of the evaluation, including two tests, or a test and an interview, and so forth. Further, information considered important or essential might not be available (e.g., school records, medical records, or other objective information). It is incumbent on the evaluator to try to identify any significant limits of the evaluation and to indicate them in his or her report, together with a statement regarding the impact of those limits on the validity of his or her conclusions. The expert also has an obligation to indicate any significant findings that are not consistent with his or her conclusions (Heilbrun, 2001). Because every evaluation

has some limits, experts are expected to testify not to absolute certainty but, instead, to "a reasonable degree" of certainty.

21. Ecological Validity

"Ecological validity" refers to the degree to which an instrument or procedure yields information applicable not only to the standardization sample or theoretical model but also to an individual's real-world functioning. A given injury might cause one individual to spend much of each day in bed, whereas another person with a seemingly identical injury is much more active, goes to work, and so forth. Further, a "normal" psychological or neuropsychological test result does not mean that the individual does not have a real problem and a real inability to function in certain areas (Miller, 2003).

The ecological validity of the individual's complaints might also be addressed by interviewing people familiar with the plaintiff's daily functioning. Both the plaintiff and the collaterals might be asked questions regarding exactly what the individual is able or unable to do. Does the individual actually do things that he or she has told the evaluator cannot be done (Faust & Heard, 2003a)?

Information from collaterals also increases the face validity of the evaluation and can help identify whether an apparent or claimed deficit is a problem in the individual's daily life (Heilbrun, 2001; Heilbrun et al., 2002). There is research suggesting that telephone collateral interviews regarding the plaintiff may also be equivalent to face-to-face interviews (Heilbrun, 2001). The possibility of biased responding by a collateral can be addressed by gathering information from multiple sources, developing conclusions based on trends in the data collected rather than any single response. The evaluator should limit inquiries to what the collateral source saw and heard, not any conclusions drawn by the collateral source (Greenberg, 2003; Heilbrun, 2001). To identify collaterals who might be interviewed, the evaluator might request that the plaintiff provide the names and telephone numbers of individuals who have knowledge about his or her functioning (Greenberg, 2003).

If the plaintiff is part of a couple, there is often value in having the partner come to the first evaluation session but sit in a different room and fill out questionnaires that address his or her perceptions of the plaintiff and the plaintiff's functional abilities. Among the information requested would be, for example, "things my husband/wife/spouse used to do alone, but which I now have to help with or do for him or her." The partner could describe an average day for the plaintiff and could describe the plaintiff before and after the traumatic event. This information needs to be gathered at the first evaluation session because the couple is likely to discuss the nature of the testing and interviewing of the plaintiff after the first session and the partner's responses might be different after hearing what the plaintiff had said.

22. Incremental Validity

Each source of data in a forensic evaluation adds some amount of *information*, but not necessarily *new* or *useful* information. The goal is to investigate all of the relevant and important issues and to stop there (Faust, 2003; Hunsley, 2003; Hunsley & Meyer, 2003). Because the evaluator cannot be certain what a given test, interview, or review of records will produce, he or she should generally stop when a substantial amount of data has been collected and there is a clear direction to the data. According to Garb (2003), personality inventories, interviews, and brief self-rating instruments generally add incremental validity in both diagnosis and the assessment of psychpathology and personality. Projective tests might provide a rich source of hypotheses that can be addressed in the evaluation (Ackerman & Kane, 1998).

23. Controversy Regarding the Comprehensive System for the Rorschach

Although the Rorschach Inkblot Method (or Test) is the most widely used projective test, questions have been raised regarding the validity of many scales of the most widely used scoring and interpretive system, the Comprehensive System by John Exner. Since 1999, many articles by prominent authors such as Gregory Meyer, Irving Weiner, James Wood, and Howard Garb have been published that either defend the Comprehensive System or point out its alleged problems. A psychologist who uses the Rorschach as part of an evaluation must be aware of the controversy and, if he or she uses the Comprehensive System to score and interpret the test, to defend the use of any of the questioned scales.

The present author believes that the Rorschach has much to offer in forensic evaluations, particularly through the generation of hypotheses about an individual that might have been missed without this test. As is true of all tests, the Rorschach should not be used in isolation; it should be part of a complete evaluation involving other tests, interviews, and review of records.

24. Sources of Bias

There are many types of bias that could interfere with the validity of an evaluation:

1. *Observer effects* refer to the fact that the thoughts, feelings, experiences, and expectations of scientists, like any people, could influence their perceptions and conclusions. The expert must be aware of his or her biases and try to ensure that they do not interfere with the validity of the evaluation (Risinger et al., 2002).

2. *Anchoring bias* refers to research indicating that information received early in the evaluation process is remembered better and used more than information received later in the process. The evaluator needs to ensure that this tendency is monitored so that it does not interfere with the validity of the evaluation (Bowman, 2003; Risinger et al., 2002).
3. *Confirmation bias* refers to evaluators giving more weight to information that is consistent with their own beliefs. This might cause the evaluator to pay more attention to information confirming his or her bias and disregarding contrary information (Bowman, 2003; Risinger et al., 2002).
4. *Overconfidence bias* results when the evaluator feels certain of his or her conclusions and therefore assumes they are valid. However, confidence in and validity of conclusions are not correlated. The evaluator must keep an open mind while examining all of the relevant data (Bowman, 2003).
5. *Attribution bias* involves "discounting contextual factors accounting for behavior and imputing it instead to a permanent characteristic of an individual" (Sageman, 2003, p. 325). For example, an individual might act aggressively when attacked, but at no other time, but the evaluator might assume that it is a personality characteristic.
6. *Hindsight bias* occurs when people who are aware of how an incident turns out believe that that outcome was more likely than objective prediction would indicate. Because both experts and fact finders know how an incident turned out, they might attribute more foreseeability than appropriate (Shuman, 1995; Wayte et al., 2002).

Awareness is the primary means of addressing these forms of bias. The expert must guard against the validity of the evaluation being compromised by any form of bias and must always endeavor to remain impartial.

25. Treating Versus Independent Expert

Whereas a treating psychologist, psychiatrist, or other mental health professional has a great deal of information about an individual who has been traumatized, it is not possible for the treating professional to be an independent expert, and it is very likely an ethical violation for the treater to attempt to maintain these conflicting roles. Further, if the "treating expert" recommended psychotherapy, it might appear to be feathering his or her own nest. Because malingering must be considered by the expert in a case, the therapeutic relationship could be irreparably damaged if the treater were to find evidence of malingering. There are, thus, many incompatibilities between the treating and expert witness roles (Ackerman & Kane, 2005; Greenberg, & Shuman, 1997; Heilbrun, 2001; Shuman, 1994a, 2002 supplement; Simon & Wettstein, 1997; Strassburger et al., 1997). This does not preclude the therapist from being interviewed by the independent evaluator or from testifying as a fact witness. In both cases, the therapist should be circumspect regarding information released and should get the written consent of the patient, if

possible, prior to releasing or discussing information that is potentially harmful or embarrassing (Greenberg & Shuman, 1997).

26. Expert Consultant Versus Expert Witness

An expert may be retained to advise an attorney rather than to testify. As a paid consultant to the attorney, the expert is bound by the attorney's work product privilege. The retaining attorney does not have to tell the opposing attorney that the expert has been retained.

27. For Whom Does the Expert Advocate?

Whether retained by either side or appointed by the court, experts are bound by the ethics codes of their professions and the statutes and administrative codes governing their licenses. The expert is to advocate for his or her data and conclusions, not for either side, regardless of who is paying the fees. This will not produce agreement among experts, because each comes to any given case with beliefs based on both theory and experience and might draw conclusions far different from those of a different expert (Heilbrun, 2001). The Specialty Guidelines for Forensic Psychologists (1991, p. 665) indicate that the psychologist's "essential role [is] as expert to the court. . . ."

28. Expert Ethics

The American Psychological Association adopted a revised Ethical Principles of Psychologists and Code of Conduct (EPPCC) in 2002, which became effective on June 1, 2003. Many of the changes are in response to the requirements of *Daubert* and its progeny.

Psychologists' work is to be based on "established scientific and professional knowledge" (EPPCC, Std. 2.04). Their opinions are to be based "on information and techniques sufficient to substantiate their findings" [EPPCC, Std. 9.01(a)]. In all cases except those in which only a records review is deemed sufficient for a given purpose, "psychologists provide opinions of the psychological characteristics of individuals only after they have conducted an examination of the individuals adequate to support their statements or conclusions" [EPPCC, Std. 9.01(b)]. If a personal examination is not possible, psychologists must indicate the "probable impact of their limited information on the reliability and validity of their opinions, and appropriate limit the nature and extent of their conclusions or recommendations" [EPPCC, Std. 9.01(b)]. Similarly, assessment instruments and methods are to be used only for populations upon which they have been standardized and for which validity and reliability have been established. If the psychologist utilizes instruments and methods that do not meet this requirement, the psy-

chologist is required to indicate how that might impact the validity and reliability of his or her findings and interpretations [EPPCC, Std. 9.02(b)].

Psychologists also indicate any significant limitations on their interpretations as a result of the characteristics of the person being evaluated (e.g., language or cultural differences) (EPPCC, Std. 9.06). The *Canadian Code of Ethics for Psychologists* covers essentially the same points as well, although in less detail (Canadian Psychological Association 2000). Because certain behavior might be considered normal in one culture but aberrant in another, cultural factors must be carefully considered by the evaluator (Briere, 2004).

An area of contention for many years is the conflicting responsibilities of psychologists and attorneys regarding raw test data. The psychologist has an ethical and legal duty to maintain the integrity of the testing materials, whereas an attorney wants to obtain all information upon which a psychologist bases his or her opinion. This battle may be eased somewhat by an attempt to differentiate *test data* from *test materials.* Thus, *test data* refer to raw and scaled scores, client/patient responses to test questions or stimuli, and psychologists' notes and recordings concerning client/patient statements and behavior during an examination. Those portions of test materials that include client/patient responses are included in the definition of *test data* [EPPCC, 9.04(a)].

If the psychologist has a signed release, he or she can provide test data to the client/patient or other persons who are identified in the release. However,

> Psychologists may refrain from releasing test data to protect a client/patient or others from substantial harm or misuse or misrepresentation of the data or the test, recognizing that in many instances release of confidential information under these circumstances is regulated by law. [EPPCC, 9.04(a)]

This section is generally taken to indicate that the raw (test) data must be released to someone who is able to interpret it (i.e., another licensed or certified psychologist) to prevent the harm that might occur if the data are misinterpreted or misrepresented.

This Ethical Standard must be considered along with Ethical Standard 9.11, Maintaining Test Security:

> The term *test materials* refers to manuals, instruments, protocols, and test questions or stimuli, which do not include *test data* as defined in Standard 9.04, Release of Test Data. Psychologists make reasonable efforts to maintain the integrity and security of test materials and other assessment techniques consistent with law and contractual obligations, and in a manner that permits adherence to this Ethics Code. [EPPCC, Std. 9.11]

Thus, *test data* refer to a specific client/patient and to the responses of that particular individual, whereas *test materials* refer to the instrument or test to which the client/patient was responding. Test material, therefore, contains nothing that is unique to a given individual. Taken together, these two Ethical Standards indicate the following:

1. Psychologists may provide test data, as defined, to attorneys, provided that the client/patient has given informed consent, in writing, to that release.
2. However, the psychologist may withhold test data from the client/patient, from the attorney, and/or from others if the psychologist believes that release of the test data might cause substantial harm to the client/patient or others or if the psychologist believes that the test data that are released might be misused or misrepresented.
3. Statutory law takes precedence over ethical standards. If a state law prohibits release under the circumstances in a given case, the psychologist would not release the test data. The same would be true if release of the test data was believed by the psychologist to violate the U.S. Health Insurance Portability and Accountability Act (HIPAA). However, "HIPAA does not require release of [records] in situations in which information is compiled in reasonable anticipation of, or for use in, civil, criminal, or administrative actions or proceedings" (Fisher, 2003, p. 195).
4. If the client/patient has not provided a written, informed consent for release, the psychologist is not permitted to release the test data without specific statutory authority or a court order. A subpoena from an attorney is not a sufficient basis for the release of test data. Further, because attorneys are not trained to understand or evaluate most of the raw obtained data from an evaluation, in most cases raw data may be released only to a psychologist retained by that attorney. A psychologist who releases test data with neither a signed, informed consent from the client/patient nor a court order is likely to be in violation of Standard 9.04.
5. "Test materials" are defined as the test instruments themselves. If the client/patient responds by writing on the test materials or if the psychologist writes the individual's responses on the test materials, the test materials *become* test data because of the presence of those client/patient responses. If, however, the responses are recorded on a separate document or paper, it is only the responses, not the test questions or stimuli, that can be released.
6. If the psychologist has been retained by an attorney, appointed by a court, or otherwise retained by an organization rather than by the individual who is being evaluated, the test data do not have to be released to that individual because he or she is not the client.
7. Whenever possible, psychologists have a responsibility to avoid releasing test materials, because of the need to maintain the integrity and security of those test materials, the contractual agreements between the psychologist and the test publisher, and the need to minimize entry of the test materials into the public domain.
8. Ethical Standard 9.04 specifies that "test data" include "psychologists' notes and recordings concerning client/patient statements and behavior *during an examination*." [emphasis added] "The term 'notes' in this standard is limited to the assessment or test and does not include

psychotherapy notes documenting or analyzing the contents of conversation during a private counseling session."

29. Specialty Guidelines for Forensic Psychologists

There are also Specialty Guidelines for Forensic Psychologists (Committee on Ethical Guidelines for Forensic Psychologists, 1991). The Specialty Guidelines are aspirational, not binding, but many courts and licensing boards have considered them when addressing the conduct of forensic psychologists.

Specialty Guideline VI.A. indicates that "[b]ecause of their special status as persons qualified as experts to the court, forensic psychologists have an obligation to maintain current knowledge of scientific, professional and legal developments within their area of claimed competence".... Specialty Guideline VI.B. indicates that "[f]orensic psychologists have an obligation to document and be prepared to make available... all data that form the basis for their evidence or services...." Specialty Guideline VI.H. indicates that "[f]orensic psychologists avoid giving written or oral evidence about the psychological characteristics of particular individuals when they have not had an opportunity to conduct an examination of the individual adequate to the scope of the statements, opinions, or conclusions to be issued...." Specialty Guideline VII.F indicates that "[f]orensic psychologists are aware that their essential role as expert to the court is to assist the trier of fact to understand the evidence or to determine a fact in issue."

30. Potential Liability of the Psychologist

In *Deatherage v. Washington Examining Board of Psychology* (1997), the Washington Supreme Court ruled that a psychologist did not have immunity from discipline by the state's psychology licensing board for failing to qualify statements made in child custody evaluations, mischaracterizing information, failing to verify information, and misinterpreting test data (Cohen, 2004; Ewing, 2004). Further, although witness and/or quasi-judicial immunity prevents civil lawsuits against experts by nearly anyone, a few courts have permitted litigants to sue their own experts for malpractice, alleging that the expert was negligent and/or practiced below the minimum standard for his or her profession (Cohen, 2004; Ewing, 2004). In any forensic evaluation, the expert must do a competent job of gathering and processing information.

31. Conclusions

1. Psychologists are well equipped by training, experience, codes of ethics, and specialty guidelines to follow the requirements of *Daubert, Mohan,* and their progeny.

2. The expert must adhere to the best practices of his or her profession, because this will help ensure that the expert's testimony will be admitted into evidence.
3. The expert must be aware of the latest scientific evidence (learned treatises) concerning causality and the assessment of individuals who have allegedly sustained a traumatic injury.
4. Multiple methods must be used to assess an individual, including, when appropriate, psychological testing, interviews, and review of all relevant medical, work, arrest/conviction, school, military, and other records.
5. Most, if not all, of the methodology of an assessment should utilize instruments and methods widely accepted in the professional community, with well-established reliability and validity. These instruments must also be used according to the standardization and validation procedures of the instrument's originators, as well as other uses validated by the research literature.
6. The expert should be prepared to defend the appropriateness of procedures utilized in an assessment.
7. Experts may utilize information-gathering forms that are, in effect, "written interviews" rather than tests and that are not necessarily standardized instruments.
8. Experts providing psychological services outside of the jurisdiction in which he or she is licensed/certified must verify that he or she will not be violating the statutes or administrative code of the "foreign" jurisdiction by providing those services.
9. The expert must be familiar with the relevant case law in any jurisdiction in which he or she practices.
10. In arriving at conclusions, experts must weigh all the evidence gathered in their assessments, consider all reasonably possible causal factors, and rule in or rule out all potentially relevant explanations for the findings.

32. The Rest of the Book

This chapter has been an introduction to the ethics and the legal and practical information and procedures that a psychologist needs to know prior to being involved as a consultant or testifying expert assessing causality in a psychological injury lawsuit. The balance of this book is devoted to the psychological knowledge that is also essential to have if one is to be part of the legal process.

For those who wish a substantially greater background in the legal and psychological processes and procedures involved, the companion book to this volume, *Causality: Psychological Evidence in Court*, is highly recommended.

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