

**BRAIN INJURY CASES: PRACTICAL APPROACHES FOR EVALUATING
MERITS AND DISPROVING FAULTY ASSERTIONS**

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CONCUSSION AND MILD TRAUMATIC BRAIN INJURY CASES INVOLVING CHILDREN, ADOLESCENTS, AND YOUNG ADULTS: SOME KEY POINTS AND CONCEPTS

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Commonly used classifications for determining brain injury severity:

<i>Classification</i>	<i>Clinical Indicators</i>		Glasgow Coma Scale (GCS) Score
	Loss of Consciousness	Post-Traumatic Amnesia	
Mild	< 30 minutes	< 24 hours	13-15 ^a
Moderate	30 minutes – 24 Hours	1-7 days	9-12
Severe	> 24 hours	>7 days	3-8

^a Commonly defined as the lowest GCS score obtained 30 minutes or more post injury

- The most useful information and details regarding an individual's status or standing on these clinical indicators (e.g., whether or not they lost consciousness or experienced post-traumatic amnesia) are often found in the earliest medical or other records, closest in time to an event, such as an ambulance run sheet, police documentation from the scene, or emergency room records (if applicable).
- Try to obtain and examine the records closest in time to the event in question, when appraising status or standing on these clinical indicators, rather than relying on descriptions or accounts provided many weeks, months, or years after the event.
- Appraising the severity of a head injury allows one to apply results of scientific studies documenting, for example, typical or expected course and outcome among individuals who have sustained comparable injuries, or the appraisal of typical versus atypical features.

Where does concussion fit and how is it diagnosed?

- The terms *concussion* and *mild traumatic brain injury (MTBI)* are sometimes placed on a continuum with concussion being distinguished as a lower grade of injury, that typically results in a rapid onset of symptoms and impairment that is, fortunately, often short-lived and resolves spontaneously;
- Concussion is a clinical diagnosis based on reported symptoms, e.g., neurological examinations with individuals with and without concussion can often look the same, and though certain advanced neuroimaging techniques have been proposed and used in research, their diagnostic value has not been firmly established.

Expected course/prognosis/outcome following concussion and MTBI:

- Symptoms and problems acutely following injury vary but can be quite significant in some cases;
- The expected duration of concussion-related symptoms in youth and young adults is up to 4 weeks;
- Recovery is typically rapid, with no measurable neurocognitive deficits within a few weeks to months, and minimal symptom reports by about 3 months following injury;
- Good recovery from concussion and MTBI is expected for most children, adolescents, and young adults but a small percentage can experience prolonged recovery/persistent symptoms;
- Studies have generally found little evidence for negative long-term effects on academic or neuropsychological outcomes following concussion or MTBI;
- For cases with persistent post-concussion symptoms, there is mounting scientific evidence supporting the efficacy of active (exercise-based) rehabilitation to decrease symptoms and improve functioning.

Challenges:

- Concussion symptoms are non-specific for concussion, meaning they are endorsed by children, adolescents, and young adults in their daily life, in the absence of injury or given a host of other health conditions; for example, typical concussion questionnaires include symptoms such as difficulty concentrating and irritability, and many

individuals including normal, healthy, uninjured children, adolescents, and young adults will endorse at least some of these symptoms;

- It can be difficult to establish “baseline” or pre-injury level of functioning for young people; there is often a limited track record of prior functional capabilities (e.g., obtained educational level; work performance), and there are difficulties predicting pre-injury neuropsychological functioning retrospectively, after an injury or suspected injury;
- Neuropsychological functioning is less stable in younger children as they are undergoing rapid changes at times, such as large changes in their physical and cognitive maturation;
- Lifestyle disruption (e.g., limited or no involvement in sports or social activities) and academic stress (e.g., falling behind on assignments) following injury can cause or contribute to mood or cognitive problems.

Potentially important information to gather; potentially important records to collect and review:

<i>Pediatrician/Medical</i>	<i>School</i>
<ul style="list-style-type: none"> • Records from any or all healthcare providers (pre- and post-injury) • Determining pre-injury health conditions or problems • Results from developmental screening tests/questionnaires • To what extent do visits after injury reflect recovery versus continued problems • Pre- or post-injury therapy, such as speech and language, physical therapy, or occupational therapy; evaluation and treatment of cognitive function may be performed by these rehabilitation professionals • Evaluations for return to sport • Prior psychological and psychiatric treatment records • Acute Concussion Evaluation (ACE) form (a concussion evaluation and treatment planning form sometimes used by primary care physicians) 	<ul style="list-style-type: none"> • Pre- and post-injury attendance • Pre- and post-injury grades • Pre- and/or post-injury learning problems/accommodations • Pre- and/or post-injury school nurse notes/documentation or school medical file • Pre- and/or post-injury cognitive and/or emotional testing (children and adolescents being considered for special education services or supports typically undergo testing) • Standardized achievement test results • Return to school sports or gym medical clearance documentation • Special education file (this documentation is often contained in a second, separate file at schools)

How do I evaluate the quality of neuropsychological evaluations?

The quality of evaluations can vary substantially. Below are some parameters you might consider when appraising the quality of neuropsychological evaluations for concussion and MTBI cases involving children, adolescents, and young adults.

- Information gathered from multiple informants (e.g., parents, teachers, other adults familiar with the child, adolescent, or young adult);
- Functioning is examined across multiple contexts (e.g., home, school, extracurricular activities, social settings, work settings);
- Includes a detailed, thorough history (e.g., developmental milestones/delays, psychological difficulties, behavioral problems, learning difficulties, socioeconomic disadvantage);
- Assesses cognitive abilities and skills, particularly attention, working memory (the ability to hold information in mind and manipulate it mentally), information processing speed, memory for verbal and visual information, and executive functioning (e.g., planning, organization, managing time, getting started on tasks, controlling impulses);
- Assesses academic skills and functioning;
- Assesses for psychological health conditions (e.g., PTSD, anxiety, depression);
- Includes formal tests of effort and motivation;
- Includes formal checks for inaccurate or highly atypical symptom reporting;
- Provides a detailed description of injury characteristics, mechanism of injury, initial clinical status, acute and current symptoms (onset and course);
- Provides a detailed history of any prior brain injuries (e.g., age at injury, acute symptoms, recovery time);
- Summarizes key medical records (vs. sole reliance on youth/parent report/description);
- Summarizes treatment received since the injury and treatment response;
- Clearly explains the relationship between evaluation results and impact on everyday functioning;
- Considers various factors that can distort results of neuropsychological evaluations and may lower scores (e.g., test anxiety; fatigue; pain/discomfort; sleep problems);
- Carefully addresses causative factors that may underlie test and evaluation performance and makes conscientious effort to distinguish from potential alternative causes;
- Gives equal attention to evidence of positive functioning and negative functioning, i.e., provides a balanced presentation of evaluation results;
- Considers/discusses the child's estimated pre-injury functioning and whether or not there has been change following injury;
- Discusses time since the index injury and if/how evaluation results comport with or diverge from expectations for recovery;
- Evaluates for post-injury family stress/adversity.

What is pediatric neuropsychology?

Pediatric neuropsychology is a subspecialty area within the field of clinical neuropsychology. It focuses on the study and understanding of brain-behavior relationships in children and adolescents with known or suspected brain injury or disease, neurodevelopmental disorder, or other disorder affecting brain development and function (for more information see <https://theaacn.org/pediatric-neuropsychology/>).

Are clinical and forensic neuropsychological evaluations different?

There are important differences between neuropsychological evaluations conducted for clinical versus forensic purposes. For example, in a clinical evaluation, there is often a supportive, accepting, empathic attitude and a helping relationship established, that may, understandably, make it difficult for an evaluator to be fully objective when interpreting and presenting results. In contrast, forensic evaluators, according to professional standards and guides, must remain neutral and objective, and assume an evaluating relationship. Also, the comprehensiveness of record gathering differs between these contexts, as less time might be spent examining records for a clinical evaluation whereas in the forensic context considerable time and effort will be spent analyzing records. In a clinical evaluation and setting less emphasis or time might be focused on the appraisal of test-taking effort or motivation; in a forensic evaluation, however, test-taking effort and cooperation with the evaluation is of significant importance. Further, for evaluations performed in a clinical or treatment context, causality (factors or circumstances causally related to symptoms or problems) might not make much difference in terms of what treatments might be selected or delivered; whereas causality is highly important in legal evaluations.

BRAIN INJURY CASES: HOW TO IDENTIFY AND CHALLENGE UNWARRANTED CLAIMS

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I. INTRODUCTION

A. Key Questions in Brain Injury Cases

A.1 As do all cases, brain injury cases start out with a number of key questions, such as whether an injury is legitimate or not.

A.2 Correct answers can be very helpful, but incorrect ones can carry heavy human and financial costs.

A.3 The limits of medical and technological science are often exhausted well before a number of core questions are answered; thus, the key to understanding and appraising brain injury cases often rests on other legitimate sources that fall within the lawyer's purview.

B. Levels of Knowledge

B.1 Knowledge can be roughly divided into three levels:

- a. Well-established scientific findings
- b. Commonsense; conclusions derived from logical and rigorous thinking
- c. Ideology (or worse)

B.2 When assertions collide, conclusions derived from higher levels of knowledge are more often correct from those derived from lower levels.

B.3 Unfortunately, there are many instances in which trustworthy science is not available to answer key questions in legal cases involving brain injury.

B.4 In many such circumstances, much of what is presented in brain damage cases is ideology (or worse) disguised as science.

B.5 Ideology does not stand up well to contrary facts, commonsense, and logic.

B.6 It is in this domain – ideology verses facts and commonsense – that the battle should be joined, and it is an arena in which lawyers are often better equipped than experts.

B.7 Much of the lawyer’s task is to pierce the mystique and aura of pseudo-science, obtain the facts needed to answer the questions at hand, and proceed accordingly.

C. Key Questions and Their Relation to the Topics Covered

The main purpose of the presentation is to set out key questions in brain injury cases, suggest means for answering these questions, and provide practical approaches for effectively challenging assertions when justified by the answers obtained. The questions to be addressed, and the subjects they engender, follow:

<u>Question</u>	<u>Topic</u>
1. Is it a genuine injury or a pseudo-injury?	1. Appraising the presence and severity of brain injury
2. Claims of mild traumatic brain injury rest mainly on subjective reports, even when genuine. How do I appraise the legitimacy of subjective injury claims?	2. Strategies for objectifying subjective injury claims
3. Is there any particular information that I need to obtain in brain injury cases that is distinctive to such claims?	3. Key discovery items
4. Neuropsychologists are often crucial witnesses in these cases and may create a compelling appearance of precision and scientific surety. How do I deal with such witnesses and evidence?	4. Recognizing and challenging weak neuropsychological evidence; identifying and demonstrating expert bias
5. Can one tell if the plaintiff tried on testing or feigned disorder?	5. Detection of malingering and insufficient effort

D. Description of “Neuropsychology” and “Neuropsychologist”

D.1 Neuropsychology is a branch of psychology dedicated to the study of brain-behavior relations (i.e., the functioning of the brain in illness and in health), with an emphasis of “higher cortical functions,” such as reasoning and language, as opposed to more basic brain functions, such as primary sensations.

D.2 *In theory* at least, neuropsychologists are psychologists with specialized training in brain-behavior relationships, and in the use of specialized methods (in particular testing) designed to appraise these higher level cortical functions and draw inferences about such matters as the presence or absence of brain dysfunction and its impact on adaptive capacities.

D.3 The phrase “in theory” is used above because there are no formal restrictions on the use of the label “neuropsychologist.” Many individuals who use this label have strong qualifications, but others do not or fall considerably short of training and education recommendations set forth in the field.

**II. DISTINGUISHING BETWEEN GENUINE AND
PSEUDO BRAIN INJURY; APPRAISING INJURY SEVERITY**

A. Some Basic Terminology and Distinctions

A.1 “Head Injury” versus “Brain Injury”

Technically, a “head injury” is an injury to any part of the head, and it may or may not involve a brain injury. Cutting one’s forehead on glass is a head injury.

A.2 “Open” versus “Closed” Head Injury

Injuries that cause disruption to the integrity of the skull (e.g., a depressed skull fracture) are “open” head injuries, and injuries that do not cause such disruption are “closed head injuries.”

It is a mistake to assume that one type of injury is worse than the other, as closed head injuries, for example, can cause death, and some open head injuries minimally involve the brain. It is necessary to know specifics within each category to appraise severity.

Almost all of the presentation and this outline will refer to closed head injuries as they are far more common, and because open head injuries raise a variety of complexities that cannot be covered within the constraints of this seminar.

B. Making Five Basic Distinctions in Appraising Injury Severity

Definitely Not Injured → Probably Not Injured → “Toss Up” → Probably Injured → Definitely Injured

C. Major Parameters for Grading Severity

C.1 Loss of Consciousness (LOC)

C.2 Post-Traumatic Amnesia (PTA) and the Glasgow Coma Scale¹

C.3 Retrograde Amnesia (RA)

TIME



C.4 A report of no LOC usually also indicates no PTA

C.5 No LOC and no PTA indicates, at worst, an injury from which good recovery is expected, and may well signal a negligible injury or no injury.

¹The Glasgow Coma Scale is widely used to rate depth of coma. Three dimensions are appraised, with summary scores across the scales ranging from 3-15. Higher scores represent better functioning. One definition of mild brain injury is a Glasgow Coma Scale score of 13-15 at some time after the event. The problem is that time frames often are not sufficiently controlled or specified with such definitions, and thus exactly when the dimensions are assessed (e.g., moments after the event, 5 minutes after, a hour after) can determine outcome; further, a score of 15 neither rules in or rules out brain dysfunction as achieving the maximum score does not require much in the way of cognitive capacity. The three dimensions are as follows: **Eyes Open:** 1 = nil (or none), 2 = to pain, 3 = to speech, 4 = spontaneously; **Best Verbal Response:** 1 = nil (or none), 2 = incomprehensible sounds, 3 = inappropriate words, 4 = confused conversation,

5 = oriented; **Best Motor Response:** 1 = nil (or none) (flaccid), 2 = extensor response, 3 = abnormal flexion, 4 = withdraws (from painful stimuli), 5 = localizes pain, 6 = obeys commands.

D. What is a Mild Traumatic Brain Injury? (MTBI)

D.1 There is no universal agreement on definition, but similar criteria are often used.

D.2 The point of an explicit definition is clarity, which allows one to access literature on comparable injuries.

D.3 Head injuries are often divided into such coarse categories as mild, moderate, and severe. The focus here is on mild traumatic brain injuries (MTBI).

D.4 The outer boundary of MTBI is often defined in a fashion like the following:

LOC not to exceed about 20-30 *minutes*

AND (not “or”)

PTA not to exceed about 24 *hours*

D.5 It hence follows that MTBI itself covers a broad spectrum of injury, e.g., it encompasses both an injury that produces little or no LOC and a few minutes of PTA, and also one that produces, say, 15 minutes of LOC and 20 hours of PTA: both of these fall under the general category of mild head injury.

D.6 When discussing injury severity, research findings, and likely outcome, it can matter a great deal where someone falls along this mild head injury spectrum. Experts may try to place all such injuries under the same umbrella but should not be allowed to do so. For example, the expert may describe a study showing that mild brain injury produces permanent problems in X% of cases. The expert can be asked to specify where individuals in the study fell on the major parameters for grading severity. It may turn out that the study participants had considerably more severe injuries than the litigant.

(WARNING: This and almost every “flaw” discussed in the materials that follow also may be seen among defense experts, but often in obverse form. For example, a defense expert may also lump together studies on mild head injury, although in this case studies with levels of severity below those of the plaintiff. The comments here are not meant to apply any more or less to defense or plaintiff experts, and it is hoped that when such errors occur, whether by defense or plaintiff experts, they will be detected and exposed in order to promote a fair outcome.)

D.7 Expected outcome of MTBI

D.8 Expected severity of symptoms

D.9 Subtle symptoms usually cause minimal functional impairments. However, in some instances, given a person's everyday life requirements and the nature of the dysfunction, substantial problems in functioning can result.

E. "Typicals" of MTBI

E.1 Typical does not mean "always," but to the extent the number of exceptions and their degree of deviation increases, the more seriously one has to question head injury as explanatory of outcome. For example, most symptoms caused by head injury have an immediate onset or occur within hours. It is one thing if an individual does not fully appreciate her cognitive limitations until returning to a demanding job a week or two after the injury.² It is another thing for her to return to such a job, perform well for a year or two, and claim that she then noticed problems and no longer could manage work requirements.

E.2 Typical include:

a. **Immediate or Early Onset.** Most symptoms have an immediate onset or occur within hours, and certainly within days of the event.

(A notable and common exception is mood disorder. However, a depression with a delayed onset can complicate causal analysis, in part because so many things can cause depression and depressions also commonly occur without apparent environmental or situational triggers.)

b. **Improvement over Time.** The course over time is towards improvement, with more rapid gains typically occurring at first and then decelerating over time.

c. **Proportionality Between Severity of the Injury and Severity of Symptoms.** Although there is a very imperfect association between the severity of injury and the severity of symptoms, reasonable proportionality is expected. For example, a very mild head injury should not cause gross symptoms, especially across broad domains.

²I will alternate gender to minimize the use of such awkward expressions as “he or she.”

In the cases in which mild head injuries cause permanent problems, which is the exception rather than the expected outcome (see below), these problems are usually relatively subtle rather than gross (e.g., a tendency to fatigue more rapidly or difficulty learning things with prior efficiency; as opposed to forgetting the date of one’s birthday or losing the capacity to spell basic words).

d. **Good Outcome.** Most individuals recover unremarkably from MTBI, especially with injuries that fall within the lower end of the severity range.

e. **Symptom Selectivity.** Although the symptoms or problems associated with head injury can vary a great deal, certain problems are more, or much more likely than others, and some almost never occur. When few or none of the “expected” symptoms are present and numerous less likely or unexpected problems are described, questions naturally arise.

Further, it would be extremely unusual for almost all functions to be affected, and especially to be affected severely.

Some of the more typical symptoms include:

- decreased efficiency in mental operations or speed of thinking
- decreased efficiency in learning or retaining new information
- difficulties with complex thinking, or thinking requiring the synthesis of multiple dimensions or pieces of information (as might be required when planning a trip out of town)

The types of symptoms that would be unusual or unexpected are almost unlimited. A few examples include:

- loss of well-learned or overlearned information, e.g., the alphabet; basic motor activities, such as brushing one’s teeth; how to read basic words
- total amnesia for one’s past or forgetting such major life events as being arrested and jailed or being fired from multiple jobs
- a substantial or gross drop in overall intellectual functioning, e.g., a person who purportedly has a prior IQ in the above average range obtains an IQ score well below this level. (Note: Severe or profound head injuries can cause IQ scores to drop considerably, but mild head injuries usually have minimal impact on IQ scores, even when other cognitive capacities are affected.)

F. Concussions, Post-Concussional Syndrome

F.1 What is a concussion?

F.2 What is a “Post-Concussion Syndrome”?

F.3 Some practitioners and experts treat “mild traumatic brain injury” and “post-concussional syndrome” as interchangeable terms. Others draw a line of demarcation between head injury and concussion. The first practice is almost certainly a mistake, and the second is also questionable unless certain qualifiers are specified.

Post-concussional syndrome refers to a set of problems that can present after head injuries of varying magnitude, including moderate or severe head injuries (which are also, technically speaking, concussive events to the brain). Therefore, limiting the term to mild head injuries or using it interchangeably with mild head injury are both questionable.

Whatever the label, concussions/mild head injuries are caused by the operation of forces on the brain. If one is clear, the term “concussion” (not “post-concussional syndrome”) can be used to refer to milder injuries in a spectrum that starts with concussion and proceeds to mild brain injury, moderate brain injury, and so on. The potential problem with such an approach is that it implies that concussions have no association with, or are necessarily distinct from, events that may cause structural brain damage. Without getting into semantic complexities, these connotations are potentially misleading. Perhaps it is clearest to say that head injuries can be so mild that only transient brain dysfunction results (that is, changes in the function but not the structure of the brain), and that the manifestation of such events is passing cognitive disturbance, such as a period of confusion or difficulty recalling information.

Scientific research has not established where the *exact* boundaries lie between an event that does not or cannot cause even transient brain dysfunction, one that only causes transient dysfunction but not structural damage, and one that can cause structural damage. Exactly what labels are attached to these situations is somewhat arbitrary, but it is important to be clear about how one is using terms or confusion or obfuscation is almost inevitable.

F.4 The non-specific nature of symptoms

F.5 What magnitude of injury is necessary to cause a *chronic* Post-Concussional Syndrome? DSM-IV and DSM-IV-TR's approach to the question

G. At What Point Can One Conclude that there has been No Head Injury or Concussion?

G.1 As noted under F.3, exact points of demarcations are unclear. One of the more "liberal" definitions of head injury comes from a document prepared by the American Congress of Rehabilitation Medicine. The document refers to an event that produces any alteration in consciousness (even one that falls short of producing any PTA) as a head injury. For example, being momentarily stunned falls within the definition.

G.2 There is nothing wrong with this line of demarcation per se, as there is no one correct place to set such a boundary. For example, an event that produces sufficient forces to cause transient brain dysfunction can be conceptualized as a brain event or "injury," so long as one realizes what goes along with setting such a low threshold and using the term "injury." For example, the American Congress of Rehabilitation Medicine's definition does *not* set forth the following:

a. The sense of being stunned or dazed or "out of it" can be caused by factors other than brain trauma, such as hyperventilation following a frightening event.

Therefore, being stunned or dazed, by itself, should not be equated with experiencing brain trauma.

b. Injuries can be so slight that only brief dysfunction is likely and full recovery is almost certain. All head injuries should not be lumped together, and a definition like this one is prone to misuse by experts who want to blur matters and suggest that a very slight head trauma is equivalent to much more serious events and similarly likely to cause devastating problems.

G.3 Even if an expert uses a liberal definition, at least specific criteria are likely to be involved, sometimes making it possible to establish the absence of head injury. Thus, for example, a definition may set forth as requirements the occurrence of either LOC, PTA, or at least a transient period of feeling dazed or confused. Proper investigation and contemporaneous records may show convincingly that none of these conditions occurred and thus, under the expert's own definition, that a head injury was not sustained.

One might wonder why an expert would use a definition that more or less rules out head injury in the instant case, and yet still conclude that a head injury occurred. There may be various explanations, but perhaps the most common one is that the expert has not obtained records from the time of the accident and is relying on questionable or inaccurate retrospective accounts.

G.4 Some events are so slight or trivial, such as 2 or 3 mile an hour accidents, that it is highly implausible to believe a head injury occurred. The trivial nature of events may not be uncovered or credibly established, however, without considerable digging for information.

H. Sources of Information for Grading Injury Severity

H.1 Police and accident reports

H.2 Ambulance run sheets; EMT records

H.3 Emergency Room records

(Note: It is very common to get incomplete ER records. Be sure that all components of the chart have been produced, including triage notes.)

H.4 Witnesses on the scene, witness statements

H.5 Recorded statements

H.6 Emphasis on contemporaneous records

III. REDUCING THE SUBJECTIVITY OF SUBJECTIVE INJURY CLAIMS

Question: What differences can be expected in the results of a neurological examination or an MRI when a person has a pseudo versus a genuine mild brain injury?

Answer: Nothing usually. Both procedures will typically yield normal results in either case.

A. The Pervasiveness of Subjective Elements and Implications for Exams

A.1 The frequency with which medical findings do not differ across genuine and pseudo brain injuries, and with which hard evidence is lacking even with genuine injury, go to the heart of the problem. (Other procedures intended or purported to objectify these injuries – such as Quantitative EEG – are usually based on shaky or highly questionable scientific foundations.) Consequently, both genuine and pseudo brain injury cases typically rest primarily or fully on subjective evidence.

Further, the subjective evidence or reports in both genuine and non-genuine cases may appear very similar or identical. Nevertheless, in one instance there may be no injury and in the other a genuine injury that has produced major life alterations.

A.2 Subjectivity often pervades these cases at multiple levels. In addition to plaintiff's subjective complaints, experts' judgments about the veracity of these complaints often rest on these experts' own subjective appraisals. Other sources of information, such as neuropsychological tests, which may be, or which may seem to be, more objective than other sources, nevertheless also contain varying levels of subjectivity and subjective elements. For example, the results of tests depend partly on the level of effort the plaintiff exerts, and the administration, scoring, and especially the interpretation of tests may be based (appropriately or not) to varying extents on subjective judgments. Further, not only the plaintiff's self-report, but also descriptions of functioning that appear in experts' reports and testimony may be relatively abstract or vague, colored by subjective factors, and involve matters that are not amenable to direct observation (e.g., "anxiety," "learning capacities").

A.3 When injury claims rest primarily on subjective evidence, medical evaluations may be of little or no value, or worse.

- a. In almost every one of these cases, the plaintiff's description is ultimately some variation on two fundamental themes: 1) there is something wrong with me; and 2) it started after the event in question. The event is usually described, at least over time, as something that seems sufficient to cause problems.

b. As both genuine and pseudo injuries usually yield no objective findings, the examiner's conclusions usually do not rest on the results of medical exams (which typically do not differentiate the injured and the uninjured) but rather on subjective judgment about whether someone is providing an accurate history and self-description.

c. Across an array of circumstances, physicians and mental health professionals should not be expected to make trustworthy determinations about the accuracy of subjective reports. Problems reaching trustworthy judgments are particularly likely when professionals lack (or have not bothered to review) collateral records and rather depend mainly or exclusively on the history they obtain and their examinations. Exceptions may occur of course when self-report is obviously absurd or highly implausible.

(Note: An enhanced capacity to distinguish genuine and pseudo injuries may sometimes be achieved with the use of specialized methods to appraise the accuracy of self-report or effort on examination procedures. Such methods are perhaps most commonly used by psychologists and neuropsychologists, although within these fields and across other fields some of the methods are much better than others and the weaker ones may produce high error rates. For example, genuinely injured individuals may commonly be misidentified as exaggerators. For further discussion of these methods, see Section VII below.)

d. Thus, even when there is no genuine injury, there is still often a thin line between the typical self-description that includes the two elements noted above (I have been changed since something bad happened) and a professional concluding that there is abnormality caused by the event at issue.

- Once a conclusion is reached about the presence of disorder, even if it can later be shown that there are strong or sufficient reasons to think otherwise, the lawyer is still often stuck with an adverse opinion, whether it was originally voiced by the plaintiff's doctor, a treating doctor, or a doctor retained by the defense.

- Honest doctors will say what they believe, even if what they believe is based on a misplaced faith in their ability to use their judgment to separate out true and false injury claims.

● Given these factors, even if a person is uninjured and a claim is unfounded, it is not at all unusual for honest doctors to make horrendous mistakes in subjective injury cases, especially if document procurement by the attorney and document review by the expert is insufficient. The result may be a costly, if not fatal blow to the defense of a case.

B. Developing an Adequate Information Base in a Subjective Injury Claim: Three Steps

A sufficient data base in a subjective injury case is one that allows the attorney to check on the overall veracity of the subjective claims. In order to determine whether information is adequate, it may be helpful to consider steps that can be taken to reduce the subjective component of cases. Three such steps, to be discussed in order, include:

Explain in English → translate into observables → check and verify

B.1 Step 1: Explain Terms and Conclusions in English

- a. The expert can be asked to explain significant terms, phrases, and conclusions in understandable language.
- b. The attorney needs to keep at it with the expert until she really understands what is being said or determines that the expert will not cooperate or cannot provide such an explanation. (In the latter instance, the jury is not likely to understand the explanation either.)

For example, a technical term like “visuo-motor integration” is ultimately reducible to something like, “activities that require eye-hand coordination, such as copying a drawing.” If the expert’s first explanation is unsatisfactory, ask for further clarification.

- c. Experts may try to intimidate attorneys who pursue this line of questioning by saying such things as, “Others can understand the explanation I just gave without difficulty,” but this likely should be viewed as a signal that it is worth continuing.

B.2 Step 2: Translate to Observables

- a. The process and aim here is to go from the abstract, indirect, and inferential, to concrete and material occurrences in the real world.

b. The lawyer can focus on the functional implications of problems and how they do or could manifest as observable behavior.

c. Experts may be highly resistant to translating their abstractions or assertions to the concrete. They may not habitually think about such practical matters, and may be worried that if the conversion to particulars occurs the lawyer can check on their accuracy. However, under proper questioning experts often have little choice: unless their conclusions translate in some way to functional impairments or incapacities, their testimony is of limited or no value. For example, what difference does it make if a person supposedly has a problem in memory if the expert cannot specify a single way in which this problem affects functioning in everyday life?

Further, experts often draw implications about reductions in functional abilities, which may involve relatively minor issues but also much larger ones, such as work capacity, providing an inroad for this type of questioning.

At minimum, if an expert resists all efforts, ask whether he will be addressing *any* issues about functional capacity when testifying, such as work abilities. If the answer is “no” one can probably stop there, and if this questioning brings out a “yes” the procedure can go forward.

d. Working from the descriptions one has elicited from the expert, which, if not perfect, are likely to be clearer than those available before, the lawyer can ask how these problems affect day-to-day activities. For example, the lawyer might ask questions like the following:

Q: What are some of the activities that are affected (or likely to be affected) by the decrease in eye-hand coordination?

Q: If I followed Mr. Smith around for a day, what are some of the things I might observe or activities that I might see affected by his problems in eye-hand coordination?

Q: Can you describe the activities requiring eye-hand coordination that Mr. Smith can do as well as before, can still do but not as well as before, and cannot do at all?

Q: Can you provide examples of everyday tasks that require eye-hand coordination?

Q: Were Mr. Smith to regain normal eye-hand coordination, what differences would I observe in his activities (or in the manner in which he carries out various tasks)?

Q: What are some of the things that Mr. Smith cannot do presently that he was able to do before the loss in eye-hand coordination (or that he will be able to resume if he recovers)?

Q: Do you think that Mr. Smith is able to use a screwdriver (a saw, certain machinery, drive a car, or whatever), and, if so, how well?

e. The lawyer need not be merely a passive participant in this process of translation to observables, that is, depend solely on what the expert says about everyday activities and functions. One can also consider how the deficits that are being claimed should (and should not) relate to everyday activities and observable manifestations and question accordingly.

- For example, diagnostic criteria often can be translated into potential observables. Consider the diagnostic criteria for Posttraumatic Stress Disorder, such as avoiding reminders of the event. Did the individual replace the car in which the accident occurred with another of the same make and model? Does the plaintiff drive by the accident site on a regular basis even if alternative routes are available?

- The lawyer usually knows much more factual information about the case than the expert, and thus experts often acknowledge things or take positions that are directly contrary to concrete occurrences (and non-occurrences).

For example, suppose the expert tests grip strength and obtains very low scores. The expert may endorse questions involving the inability to perform various activities that, in truth, the plaintiff has performed or continues to perform post-accident. Knowledge of case facts and a comparison of these facts with an expert's conclusions as set forth, for example, in a report, will suggest various lines of questioning. It is for similar reasons that cases in which claims are extreme are often ultimately easier to handle because so many compelling discrepancies can be developed between presumed problems and concrete behaviors.

●As follows, it is especially important for a lawyer to be alert to the manifestations of injuries that should be observable to others, including laypersons. For example, a vaguely described problem in “retention of novel information under conditions of limited exposure” gives the lawyer little useable material. The same can be said for problems that, even if genuine, may be difficult to observe directly (e.g., nightmares).

In contrast, a clear description of an observable problem, and especially one that is said to be severe, is another matter. For example, suppose the plaintiff is described as having almost no capacity to remember anything she sees or hears, even after multiple repetitions; or is described as having marked problems engaging in even rudimentary give-and-take conversation. Such problems should often be easily observable. In such instances, when behavior of this type, which purportedly appeared right away, was not observed or reported by witnesses on the scene, the police officer, the EMT, the triage nurse at the Emergency Room, the Emergency Room doctor, and the family MD who had known the plaintiff for years before the accident, serious questions are raised.

f. Although not all claimed problems or deficits can be translated to observables, if those that can be translated do (or do not) check out, it is natural to draw like inferences about the matters that cannot be checked on or observed directly.

B.3 Step 3: Check and Verify

Once terms are explained in English and translated to observables, the last step is to check on their occurrence or non-occurrence, which raises the next topic, that of discovery.

IV. COMMONLY OVERLOOKED DISCOVERY ITEMS

A. Some General Strategic Guides

A.1 **Discovery as a Dual Process**

- a. As fact gathering
- b. As a way of obtaining direct and indirect indicia of past and present functional capacities

A.2 It may be as important to think about what should *not* be present as what should be present, and then to compare both to what is present and what is not present.

- a. Consider the prior described strategy of reducing subjectivity by translating the abstract to the concrete and observable. Assume that this process has been followed for the diagnosis of Posttraumatic Stress Disorder, and that the particular diagnostic criterion under consideration is a “sense of foreshortened future,” or the belief that one will not have a future. In such circumstances, one would not expect behavior or actions directed by an anticipation of future consequences.
- b. Thus, for example, placing a down payment on a retirement home that one will move into in about 10 years is something that is present that ought not to be present.

A.3 If serious deficits are being claimed and the expert’s translation into real-life correlates includes an incapacity to handle various fundamental activities, determine whether everyday behaviors, especially those involving potentially serious or dangerous matters, fit with the expert’s assertions.

Suppose the expert describes serious problems in frontal lobe functioning, which impair judgment, planning, and impulse control, and are said to produce extreme recklessness. Such a description naturally raises questions about whether the plaintiff engages in activities in which recklessness could lead to serious consequences, and whether others who have a direct stake in the outcomes that might occur knowingly or willingly go along with such activities. For example, does the plaintiff drive the children to school, hunt with a shotgun, handle potentially dangerous power tools, use the riding mower, engage in large financial transactions, or rewire the house when performing a home repair project?

A.4 Develop as clear a chronology as possible, and compare the timing described across multiple sources, including lay witnesses and health care providers, for consistency with one another and with scientific knowledge about the expected course of the disorder and symptoms.

chronology..cont.

a. One does not expect anything approaching perfect consistency across sources. However, multiple inconsistencies across sources, especially if substantive and involving symptoms that should be obvious to informants who have had ample opportunity to observe the individual, can raise serious doubts. For example, if the plaintiff states that she had unrelenting and severe problems with language expression from the day of the accident forward, but the spouse reports a starting point about 3 months after the accident and the records of various medical providers do not document any such problem for almost 2 years, there is obviously something that needs to be explained.

(*Warning:* With brain injuries that are more severe, such as those involving massive damage, individuals may show marked deficits in self-awareness. The result may be discordant chronologies or descriptions that, in such instances, tend to *bolster* damage claims. Take, for example, an individual with an obviously severe brain injury and gross dysfunction, who claims that he is perfectly able to return to his job as an air traffic controller, that any problems he may have had have long since resolved, and that he should be able to do as he pleases and requires no further treatment or supervision.)

b. Research on mild head injury shows that in the great majority of cases, symptom onset is early or immediate, and that individuals who do experience initial problems show improvement over time. (Genuine exceptions can occur, or there may be a delay in noticing problems until the person encounters environmental demands, but, nonetheless, for most people and most symptoms the course is an improving one.) Thus, if the plaintiff claims that almost all of his problems started about 4 months after the accident and that almost every symptoms is getting worse over time, both descriptions conflict with typical expectations.

c. Timing and order of onset are often, of course, important cues to causation, which is one reason it is crucial to develop as clear a chronology as possible. Expert's impressions about timing often rest largely or entirely on the plaintiff's self-report, making inconsistencies across sources potentially quite important and fruitful cross examination material. Further, the plaintiff's own report may be highly variable over time and circumstance, the result being that almost anything anyone else reports about timing will be incongruent with one or another of the plaintiff's version of events.

d. When inquiry is conducted retrospectively, for example, when an expert interviews an individual years after the event and asks about chronology, a tight temporal sequence between the event and the onset of major symptoms may well be reported or implied. Closer scrutiny of timing across multiple sources may suggest or show otherwise. For example, memory problems said to have started right after the accident may have first been observed months later, perhaps around the time significant family stressors evolved and led to severe problems with sleep. Other inquiry may show that certain cognitive difficulties, such as problems with reading or writing, were present years before the accident, perhaps from the time of elementary school.

A.5 The lawyer should be especially alert to situations in which the incentives for ability and disability are reversed from the usual situation in the litigation context, and carefully review the impact this reversal has on the level of functioning displayed.

Although the severity of various problems or symptoms can change depending on such factors as fatigue, stress, and motivation, disabilities and impairments are not matters of convenience that come and go, or shift suddenly and dramatically, depending on whether there is an incentive to be well versus unwell.

For example, an individual with serious memory difficulties may perform somewhat better earlier versus later in the day, but would not be expected to recall the name of every doctor, every medical procedure completed, and every medication and exact dosage when there would seem to be some legal benefit to describing such matters. A similar change in functioning may be seen when the person interviews with a banker when trying to procure a loan, or writes an angry letter to protest some type of treatment he believes is unfair and for which he seeks some remedy. In some cases, individuals who claim severe language, memory, and attentional dysfunction will obtain a copy of the expert's report and correct fine details or errors in the history described therein.

A.6 Many statements or conclusions in records that are based on self-report are not properly documented as originating from this source and may appear to be direct examination findings. Try to separate out findings that were based on self-description versus those that were observed.

a. Many expert reports will separate out sources of information in the initial sections but then merge them in a section detailing conclusions. Be aware of this potential shift.

b. A good question to ask oneself (and often to ultimately ask an expert) is whether any of the problems the plaintiff describes were directly observed during any of the contacts with the plaintiff. For example, the plaintiff may repeatedly complain about memory problems, but write-ups of 10 neurological appointments or 30 therapy sessions may not document one instance of forgetting.

The treating health care provider may proceed as if he or she does not take the problems into account or believe that they are present. For example, the treater may fall to write down important instructions on paper for a person who reportedly has a severe memory disorder, or may obtain an unwitnessed signature on a complex consent form from a patient reporting great difficulty understanding verbal materials or even basic concepts. If the health provider acts as if he or she does not take the problems seriously, why should the jury do so?

B. Sources of Information

B.1 OFTEN THE SINGLE BEST SOURCE OF INFORMATION IN THE ENTIRE CASE IS THE NEUROPSYCHOLOGIST'S OWN FILE. IT IS ESSENTIAL, IN VIRTUALLY EVERY CASE, TO OBTAIN THE FULL FILE, EVEN IF IT REQUIRES A PROTRACTED EFFORT.

a. It is rarely advisable to agree that the file be sent to your own expert alone. It is essential that you obtain the full file for a number of reasons. Two of the most important reasons follow.

- Much of the material will be understandable to the attorney, especially with some guidance. Further, given an attorney's perspective and case knowledge, she is likely to garner things from the materials that a mental health professional might not recognize or notice. For example, statements may have been made that bear on liability issues.
- Access to the file is often extremely helpful in preparing for and conducting depositions and cross examinations. For example, suppose your own expert (who you have agreed is the only one who will have access to the opposing expert's test data) identifies a key scoring error in that expert's work. What will you do if you cross the expert on the error and the expert denies the mistake? In many cases, it will not be possible to establish or show the error without access to the expert's materials. Waiting to put on your own expert is usually not nearly as effective as establishing the error on the spot, during the cross examination, and in many cases you might not wish to have a testifying neuropsychologist.

b. To the extent the expert has made errors or engaged in biased handling or reporting of information, advanced access to the file is the best way to detect, and ultimately to prove, the existence of such practices.

B.2 What if the Expert Refuses to Comply with Requests for the File?

Experts commonly refuse requests for their complete files, even when the proper consents have been obtained. They may cite various guides to support their refusal, such as copyright laws or ethical guides. Although points that are raised may sound sensible or contain legitimate elements, the overall argument is rarely defensible and is usually contradicted by principles and standards promulgated by major professional organizations in psychology and neuropsychology.

a. One component of the argument – that tests need to be protected and should not be distributed to the general public – has clear merit. If test items become known, the value of the test may be reduced or compromised completely. For example, knowing questions in advance may allow an individual to feign insanity or cognitive disorder. However, the need to protect test materials can be dealt with through a variety of mechanisms, such as court orders that restrict distribution to those directly involved in the case and require the materials to be returned or destroyed upon completion of the case.

b. Various professional guides do cover the need to protect test materials, but do not forbid disclosure to non-psychologists under proper circumstances. For example the “Specialty Guidelines for Forensic Psychologists” (*Law and Human Behavior*, Vol. 15, 655-665, 1991), a publication of the Division of Psychology and Law of the American Psychological Association, states that “forensic psychologists have an obligation to document and be prepared to make available, subject to court order or the rules of evidence, **all data** that form the basis for their evidence or services” (p. 661, emphasis added). The guides further state that “the data upon which one’s evidence is based is subject to the normal rules of discovery, disclosure, confidentiality, and privilege that operate in the jurisdiction in which the data were obtained. Forensic psychologists have an obligation to be aware of those rules and regulate their conduct in accordance with them.” (p. 661).

The original version of the Specialty Guidelines has now been revised but will not be official until published in the journal, the *American Psychologist*. (For now, the updated version can easily be found on the Internet. Various guides in the updated version set forth the same basic tenets contained within the prior version (e.g., 8.01, 8.02, 10.06, and 10.07). For example, 10.06 states: “Forensic practitioners are encouraged to recognize the importance of documenting all data they consider with enough detail and quality to allow for reasonable judicial scrutiny and adequate discovery by all parties. This documentation includes, but is not limited to, letters and consultations; notes, recordings, and transcriptions; **assessment and test data**, scoring reports and interpretations; **and all other records** in any form or medium that were created or exchanged in connection with a matter.” (emphasis added)

c. The National Academy of Neuropsychology, one of the major professional organizations in the field, has a website that provides access to various position papers it has sponsored. The position papers are described as official statements of the organization. Included is a document titled “Test Security Update,” and a supplementary document titled “Test Security Appendix.” A careful reading of these documents, and in particular the flow sheet that appears in the latter document, makes it clear that this professional organization is not opposed, per se, to the release of test data to non-neuropsychologists.

One can also access ethical guides for psychologists, such as the “Ethical Principles of Psychologists and Code of Conduct,” from the American Psychological Association’s website. None of these guides provide blanket prohibitions against releasing tests data, although the need to avoid uncontrolled circulation is strongly endorsed, and with good reason. However, the American Psychological Association also discusses the need for psychologists to comport their behavior to the requirements of law, which certainly could include obeying a court order for the release of test data.

d. If the lawyer needs to file a motion for the release of test data or argue it before the court, some of the following points may be helpful:

- Perhaps the most obvious and compelling point is that the data and test results form a major basis for the expert’s conclusions.
- In preparing for deposition and cross examination, it is essential for counsel to understand the procedures used in conducting the evaluation, how the plaintiff responded to specific items, and how such responses were evaluated. These matters cannot be communicated in generalities, and the specifics are not described fully in the expert’s report. [Note: This is not intended as a criticism of the expert as it would hardly be typical to list, for example, the response to every test question, but this does not change the lawyer’s need for these materials.] Thus, in order for counsel to see, grasp, and appreciate much of the data that served as a basis for the expert’s conclusions, counsel must be able to obtain the data.
- It is not unusual to uncover significant problems in methodology that may alter, if not completely change, test results and interpretations. In order for counsel and jury to see such possible errors or problems for themselves, access to the data is required.
- Cross examination will likely cover the procedures used in conducting the evaluation, the plaintiff’s responses, and the expert’s scoring and interpretation of these responses. Such examination is essentially precluded unless counsel has access to the underlying data.

arguments for obtaining the experts file. cont.

- Although professional guides argue against the uncontrolled distribution of test materials, something that is not being contested, these same guides do not oppose disclosure to non-professionals when certain conditions are met (e.g., consent for release, arrangements to protect the materials and limit circulation to appropriate parties). These same guides also indicate that psychologists should follow the law and the will of the court. As such, despite any counterclaim that may have been made, the psychologist who comports with a court order to release test data will not face any professional sanctions, especially if the psychologist makes a reasonable attempt to alert the court to the importance of protecting the test materials. (Alternatively, if the psychologist insists that test data cannot be divulged, a simple solution is to exclude the expert from testifying.)

C. Items to Obtain

C.1 In addition to standard sorts of records, such as any post-accident medical and psychological records, various other sources of information can prove useful to confirm or disconfirm injury.

C.2 Prior Testing

Almost every litigant has been tested multiple times before the event at issue occurred, and sometimes the measures used are related, or identical, to post-event tests. Common sources of testing include:

a. School Records

It is often worthwhile to obtain records from all schooling, even if a later record, such as a high school transcript, seems cumulative. Records from the prior school settings may contain information missing from that later record, such as involvement in special education classes or reports of prior intellectual or psychological evaluations.

b. Military Records

Military records are typically a hassle to obtain but often worth it.

Military tests usually use somewhat different standards for rating performance than many of the tests that experts administer. For example, a score of 120 on a military test may not mean the same thing as a score of 120 on an IQ test. Differences occur because the samples on which the scores are based may be drawn from somewhat contrasting segments of the population, and the method for converting level of performance to numbers is also likely to differ. Aids to interpreting military tests are increasingly available on the web.)

c. Employment Testing

C.3 Additional Items that Might be Helpful

- a. email
- b. records of business transactions and loans
- c. applications for health or disability insurance
- d. any post-injury classes or courses, such as work training, continuing education experiences, or formal classes. Training and education seminars for work may include post-tests to check on mastery of materials. Copies of these tests, or even the plaintiff's protocol, can sometimes be obtained.
- e. home videos
- f. travel records, passports
- g. job applications, letters of recommendation
- h. information about recreational activities and hobbies, e.g., using ATVs, hunting, computer games, book club, writing, art work
- i. information about the use of programmable electronic devices, e.g., learning computer programs, using an i-Pod, programming a personal planner or a cell phone
- j. use of equipment that requires physical strength or dexterity, or that is dangerous if not used properly, e.g., chain saws, power saws, bow and arrow, certain kitchen utensils
- k. work samples, e.g., an architectural plan, a blueprint, a report on marketing strategies, school papers or reports, a piece of furniture that the plaintiff built

- l. employment records, job evaluations
- m. home projects and repairs, e.g., redoing wiring, plumbing, building a deck, repairing home gadgets
- n. pharmacy records (look for overlapping prescriptions, consistency with reports to doctors about use and compliance, possible interactions that are not recognized because multiple prescribers are unaware of each other)
- o. handling of major responsibilities at home, e.g., Who brings the children to medical appointments? Who attends school meetings about the children? Who drives when the weather is bad? Who handles the banking, budgeting, and bill paying? Does the individual engage in activities that would create major risks if the deficits are as claimed? For example, does an individual described as having frequent seizures smoke in the house?
- p. compliance with treatment recommendations. The lawyer can make a list of all treatment recommendations and tally the number of recommendations that were and were not followed.
- q. diaries and calendars

V. EVALUATING AND CHALLENGING NEUROPSYCHOLOGICAL EVIDENCE

A. The Word “Test” May Imply More than is Warranted

The term “test” may convey an aura of precision and exactitude that is not warranted. To a surprising extent, test administration and interpretation may be influenced by subjective factors. It is often very helpful to show the jury the degree of subjectivity that is involved. For example, very subtle distinctions might be applied in deciding whether a test response deserves full, partial, or no credit. The examiner may ask the individual to define a word such as “paragraph.” If the response is something like, “A composition of sentences intended to convey a meaning,” credit may be reduced by 50% because the individual failed to indicate that a paragraph expresses more than just a meaning, but rather a “complete” meaning.

B. Problems with Methodology

B.1 Methodology can roughly be divided into three components:

- a. Data Gathering
- b. Preparation of Data for Interpretation

Data preparation may involve graphing or charting results, calculating summary indices, or applying adjustments or transformations, such as correcting scores for age level.

- c. Interpretation

Interpretation may be based entirely on objective and established procedures, but much more commonly contains subjective elements, or may be dominated by subjective elements.

B.2 Problems in methodology are common, and some experts make so many errors that it can be shown, by these errors alone, that their opinions are not trustworthy. When lawyers obtain experts' files, they are sometimes surprised, if not shocked, to find out how many errors have been made and how gross some of these errors might be.

Serious methodological problems can provide a strong basis to challenge admissibility, even if the methods themselves, when used properly, pass muster. Although a test may satisfy some or all of the Daubert criteria, consider what happens if it is not given properly, and especially if the errors are noteworthy and cannot be corrected.

For example, suppose that the standard method for administering Measure A calls for 5 attempts at the task using standard equipment, with only the best performance counted. The expert, however, provides only one attempt, used modified equipment, and obtains a low score. Even if the standard version of the measure has solid scientific backing, how could the expert's procedures satisfy the Daubert criteria?

Even if the measure has been tested for accuracy, is the subject of multiple peer-reviewed publications, is generally accepted, and has a known and respectable error rate, all of these foundations will almost certainly be based on the standard or proper procedures for administering Measure A, not the improper procedures that the expert used.

For example, an accuracy rate of 80% under standard procedures does not establish the same accuracy rate when other procedures are used, and markedly different results may be obtained under varying procedures (which is exactly why studies are needed on the altered or flawed procedure). It is like a surgeon telling a patient that the standard procedure for a kidney operation has an 80% success rate, but that she is going to try a rather different procedure, which has not been evaluated. Should the patient be assured if told that the 80% success rate that the other procedure achieves *might* apply to the altered procedure, but then again that it might not? Similarly, of what relevance is publication or peer acceptance of a specified procedure if the expert did not follow that procedure but deviated from it substantially?

In many or most circumstances, when experts deviate from standard methodology (and especially when they botch the methodology), there is likely to be little or no research on the methods that the expert used. The expert may assert that in his or her experience, the modified procedure works well, but in this context experience is not a substitute for scientific evaluation (as noted as well in *Kumho Tire*). Further, there is usually no independent way to determine if the expert's case-by-case impressions are accurate and, therefore, just how successful the expert's methods might be.

For example, how can one tell how accurate an expert is when that expert claims that his neuropsychological examination procedures detect brain damage that cannot be identified through any other means? In this context, "detect" really refers to an inferential conclusion rather than a direct observation. It is not akin to finding something that, once found, is evident or self-interpreting, such as finding one's house keys under a rock. No sensible person would argue about whether keys were spotted, but this is hardly parallel to the situation with the neuropsychologist. The neuropsychologist's position is more that of one who infers that the keys are under a rock based on indirect evidence (e.g., indications that the ground around the rock has been disturbed), but cannot lift up the rock to check on the accuracy of the inference.

B.3 Some problems can occur across these three facets of methodology and others are unique to specific facets.

a. Methodological problems that may be seen at all levels include:

● **Lack of standardization.**

-There are usually standard procedures for administering and scoring tests, and often for interpreting tests, which are specified in detail in accompanying materials, such as test manuals. The need to follow standard procedures is

lack of standardization, cont.

rooted in the way tests are used. In particular, an individual's test performance will usually be compared to that of other individuals to determine whether the results fall within normal limits. Additionally, a person's test results are often checked against literature that provides guidance on how to interpret comparable performances, such as whether the score falls within the range commonly obtained by brain-damaged individuals or individuals with difficulties maintaining gainful employment.

-If, however, individuals are not tested under the same conditions, comparisons to the performance of others, or the use of research on the test to determine the implications of the results, may be rendered questionable or of minimal value. For example, although remembering less than 70% of the presented materials on a memory test may represent impaired performance when an individual is shown the items 3 times, if the examiner only presents the items once, how is a score that falls below 70% to be interpreted? Perhaps a 65% retention rate under these altered conditions represents intact or strong performance, not impairment.

-Different sources may detail varying or inconsistent procedures for the same test. In other instances, experts follow a routinized procedure but do not even know the source of the procedure. For example, they may still be using a mimeographed sheet with no citations that was given to them 20 years ago in a graduate class. It is thus important to establish the specific procedures the expert used in administering tests, the exact sources the expert relied on that describe the procedures followed, and whether, or the extent to which, the expert may have deviated from these specifications.

-Interpretations of data may be partly based on standard procedures (e.g., the application of a cut-off point for some summary index that classifies results as normal or abnormal). However, the overall interpretive process, and the ultimate conclusions reached, are rarely based in their totality on pre-specified, scientifically established procedures; rather, they usually rest *heavily* on what is commonly termed "clinical judgment." The phrase "clinical judgment" is often just a more impressive sounding way of describing a subjective reasoning process that does not strictly adhere to a formal, scientifically established procedure. In many cases, there may be rather limited scientific foundations for

these clinical judgments, and rather they depend primarily on subjective and unverified methods. In some cases the judgments may be based on almost no science at all, and in others they may directly contradict what is known scientifically.

Thus, it is almost always reasonable to ask whether there is even a single formal scientific study that has examined the accuracy of the total procedure the expert followed. Experts may be very evasive when answering such inquiries and may respond with such statements as, “The procedures are commonly used within the field.” However, if the lawyer is persistent, the ultimate answer about the existence of any supportive study for the method as a whole often turns out to be “no,” creating a potential foundation for a Daubert or related challenge. Even if the answer is “yes,” the amount of scientific evidence may be very limited and not nearly sufficient to reach trustworthy conclusions about the method’s merits.

●Failures to follow standard procedures

Even if there are standard procedures, experts may not follow them when administering tests, scoring tests, or tallying results, or they may make unintended mistakes across methodologic domains.

●Using procedures that lack scientific support

Not uncommonly, experts use their own idiosyncratic versions of procedures, even if they lack any research on these variations. For example, they may change standard test instructions, change scoring procedures, or skip whole sections of tests despite admonitions in test manuals calling for the administration of all test components.

●Use of obsolete tests

The old version of Wechsler Intelligence Scale had a question asking about the date of Washington’s birthday, something more people knew before most holidays were moved to Fridays and Mondays. Society changes and tests may become obsolete. Although new versions of tests are not always better, and when the revised version comes out it may initially have a much more limited research base than the old version, revisions are often undertaken for good reasons and can result in improved products.

Experts may not keep up with changes in testing methods. The lawyer can often identify passages from the manual for the updated version of the test that explain the reasons the revision was needed, the changes in the test, and the improved features of the new version.

●**Subjective or biased judgment influences the process** (see illustrative visuals for this and other entries in this section; see also the section below on expert bias)

b. Additional methodological problems that may occur in preparing test results for interpretation:

●**Failure to make needed adjustments in test scores**

Test scores are often adjusted in relation to such factors as age or level of education. An expert may fail to make these adjustments or may perform them improperly, sometimes causing major distortion in the results.

c. Additional methodological problems that may occur at the level of interpretation:

●**Testing is performed too soon after the injury to determine permanency**

There is nothing wrong per se with performing early testing, but the question is whether the evaluation occurred far enough after the injury to make judgments about permanency. This question is not necessarily rendered moot if one or more additional evaluations are performed, because they also may be conducted too early in the process to judge ultimate outcome.

There is lack of agreement about the *exact* period of time during which positive changes may occur. Further, it may make a difference whether one is addressing spontaneous recovery of brain functioning versus improvements that can be achieved through interventions, such as treatments to improve mood or efforts to teach compensation strategies. Additionally, injuries of differing severity have different recovery periods, with the time tending to extend out longer as injury severity increases (within limits, that is, some injuries may be so bad that little or no recovery is expected at any point).

For whatever reasons, such as insufficient familiarity with the literature, experts commonly underrepresent recovery periods. For example, they may cite earlier studies, which have since been overturned, that reported a more limited window for recovery. The expert might indicate, for example, that even with a severe head injury, most or all of the recovery that will occur usually takes place within a year, despite multiple studies that have documented gains far beyond this time frame.

Even if the length of time between the event and testing is normally sufficient to evaluate permanency, other factors may impede the determination. For example, the evaluation may be conducted 5 years out from a mild head injury, which is well beyond the time improvements are expected (assuming reasonable interventions have been applied to any residual problems). However, if the individual is experiencing uncontrolled hypoglycemic episodes, it may contaminate the testing results and produce a misleading representation of abilities under conditions of better diabetic control. Many factors, such as substance abuse, medication side effects, or insufficient effort on the plaintiff's part, may impact testing results and prohibit trustworthy judgments about permanency.

There are certainly often grounds for respectable scientific disagreement about the period of time during which recovery may continue under various circumstances, especially when fine points are being considered. In many cases, however, there is essentially no legitimate basis for argument because, according to any reasonable standard, testing was conducted much too soon to draw conclusions. For example, the individual may have been evaluated within a week of the event. An expert who concludes that problems seen during this time period are likely to reflect permanency may get away with it once or twice but is likely to have a short half-life.

When early testing is performed, the neuropsychologist will often suggest re-evaluation at a later point in time, a recommendation that usually would make little sense if the practitioner believed the point at which positive changes could occur had passed.

- **The use of procedures with high error rates**, such as those that may falsely identify a high percentage of normal individuals as abnormal
- **Failure to incorporate cultural factors and/or language into the analysis**

- **Overinterpretation of select weaknesses or normal human shortcomings**

- **Misappraising level of pre-event functioning and, therefore, drawing erroneous conclusions about change in status**

Misappraisal of prior functioning can result from a variety of practices and circumstances, such as the collection of insufficient information, the use of weak methods, or uneven handling of data (e.g., possible indicators of good prior functioning are given undue weight over contrary indicators). If the lawyer makes a conscientious effort to obtain information about prior functioning (see the previous section on discovery) and the expert has made errors, these errors can often be exposed with great effectiveness. The result may be to negate almost the entire basis for the expert's opinion that adverse change has occurred.

- **Failure to rule out alternative factors**

Many factors can lower performance on neuropsychological tests, and many things that can affect the brain diffusely, such as closed head injuries, toxins, substances, various diseases, and sleep deprivation, produce symptoms that overlap considerably or entirely.

Various alternative factors may be pertinent in a case. Through deposition questioning, it is usually possible to establish the potential affects of multiple such factors (including those the lawyer believes can be shown to be independent of the accident). Experts frequently claim an ability to determine that factors associated with the accident are having an impact by the pattern of results they uncovered during the evaluation. For example, they may claim that a MTBI produces highs and lows across testing that can be distinguished from alternative possible factors, such as a prior history of learning difficulties. Such assertions about the capacity to disentangle causal factors are often highly questionable and can be dealt with in the following way:

Pair up these factors, one at a time, with brain injury. For example, starting with sleep disorder, the expert can be asked to specify: 1) any symptoms that are associated with sleep disorder but are never seen with brain injury, 2) any symptoms that are associated with brain injury but are never seen with sleep disorder, and 3) the symptoms that overlap across the two conditions. Usually, one ends up with answers specifying considerable, if not total, overlap.

The expert can then be asked how the distinction was made, and the answer is usually by temporal sequence. (Expert's statements that there is a stronger

alternative factors, cont.

association among one or another set of symptoms and one or the other disorder are frequently speculative and can be dealt with as such.) However, the expert's beliefs about temporal sequence may not comport with the factual data, and differences can be used at trial to impeach the expert's causal attributions. For example, the expert may state that difficulties in concentration, although associated in the hypothetical with conditions independent of the accident, did not start until afterwards, whereas work records pre-dating the accident may contain multiple comments from supervisors about the plaintiff's lack of concentration.

(Note: The alternative factors that lawyers sometimes try to establish may not be independent of the event and may be worse than a mild brain injury. For example, the morbidity and mortality associated with a severe major depression, which may be triggered when a physical injury creates pain, lack of sleep, loss of a job, etc., may be considerably worse than that associated with a very mild brain injury.

It should go without stating that if there is a legitimate association between the event and such an adverse outcome, it should be recognized and taken into account in judging the value of the case. The lawyer may be making a terrible mistake by assuming that the psychological disorder at issue represents a soft claim, cannot be associated with the accident, and is no big deal. In other cases, of course, alternative conditions and factors do not arise from the event or may be less serious or more treatable than a brain injury.)

C. Test Results May Provide Powerful Evidence of Intact Functions and Capability

C.1 When plaintiff experts describe test results in an unjustifiably negative way or use faulty tests that over-identify pathology, there will often be a major disconnect between their stated conclusions and the evident difficulty of the test items that the plaintiff responded to correctly. If the lawyer proceeds in a fair and balanced manner, showing jurors the proficiency of the test taker can have a profound corrective influence.

In particular, when the expert has overrepresented difficulties or described functioning as problematical when it is not, jurors may be shocked to find that the plaintiff is capable of answering test items that they themselves cannot answer correctly. The lawyer can start by presenting the question or problem posed to the plaintiff, without

test results as evidence of intact functions, cont.

providing the answer. Jurors exposed to this material will naturally try to figure out the correct response. After a pause, or perhaps a question establishing that the item was presented accurately, the expert can be asked if the plaintiff answered the item successfully, or the plaintiff's answer can be provided and the expert asked to affirm that it was correct (as some items are so hard it may not be evident). There is perhaps nothing more sobering or impactful to jurors then to find that an individual who has been described as impaired or incapable, or perhaps grossly disabled, is more proficient than they are.

Expert non-cooperation can usually be dealt with easily. For example, experts can be asked to describe tasks at deposition (that the lawyer intends to introduce at trial), or task descriptions can be read directly out of manuals. Alternatively, if the expert gets fussy about minor details, the expert can be invited to provide an instructive lesson about the test procedures. (And when it is completed, jurors may be annoyed to find that the expert was arguing about trivialities, being non-cooperative, and wasting their time.)

(Warning: I would again emphasize that this strategy is not intended as a trick. For example, when overall results show considerable dysfunction, it would be very misleading, and potentially disastrous, to pick out a few select items on which an individual did well and try to convey the idea that they are representative of performance. To proceed in this manner under such circumstances is not only potentially unethical. It is also something that even a mediocre opposing attorney should be able to counter effectively on re-direct by bringing out the preponderance of poor or impaired performances. Jurors are likely to believe, perhaps with good justification, that the defense attorney is engaged in manipulation at the cost of an injured individual. Rather, this approach is recommended when the expert has misrepresented the results, been unbalanced in describing strengths and weaknesses, or used poorly designed tests that overidentify dysfunction.)

C.2 It can be especially effective to show positive performances on tests that:

- a. Were described as supporting a conclusion of abnormality, or
- b. were described by the expert as most sensitive to brain damage, or

c. fall within areas in which the plaintiff described her own functioning as impaired. (For example, if the plaintiff says she can no longer make change in her head, the lawyer might read aloud some difficult math problems that the plaintiff solved correctly without the aid of paper and pencil.), or

d. demonstrate skills that ought to make multiple occupational options feasible. For example, if the plaintiff has to be retrained because of physical injury, showing a strong capacity to learn and memorize new information may argue for the likely success of such efforts.

D. Responses on Questionnaires or Personality Tests May Contradict Statements About Emotional or Cognitive Problems

To illustrate the point raised in the above heading, the expert may claim that the individual is very depressed, but the plaintiff may have answered question after question relating to mood, such as, “I almost always feel happy,” in a positive direction.

Other questions and responses may relate to such matters as:

D.1 Cognitive functioning

D.2 Work functioning

D.3 Signs and symptoms of PTSD

D.4 Honesty and character (e.g., the plaintiff may answer that it is OK to deceive if there is something to be gained from it, or that he has had legal problems). Lawyers might be amazed at how often certain responses are given, perhaps in part because an individual lacks judgment about which answers reflect societal norms or might create the impression that he is not being forthright.

D.5 Alternative causal factors (e.g., the individual may indicate a past history of poor school performance or extensive use of hard drugs before the accident)

E. Inconsistencies in Responses

If the plaintiff took multiple tests or the same test on more than one occasion, responses may contain frank contradictions. Of course, an individual’s status may change over time, thereby calling for different responses that reflect these alterations. Rather, one is looking for inconsistencies that cannot be explained legitimately on the basis of fluctuation or change in condition. For example, when taking a test the first time, if an individual

inconsistencies in response, cont.

answers “yes” to an item like, “I have been arrested multiple times in the past?” the answer ought not to change the second time.

Such implausible alterations in responses may be especially frequent when there are differences in the circumstances under which evaluations were conducted. For example, the first evaluation may have taken place before the individual brought suit and in a treatment context, unlike the second evaluation, or the individual may be involved in a custody dispute that has nothing to do with the accident and in which there is a strong incentive to appear as physically and mentally healthy as possible.

Sometimes an earlier post-accident questionnaire, which was still administered well within the time period symptoms from the injury should have appeared, is relatively “clean,” and various difficulties are first reported on a subsequent questionnaire, thereby suggesting that problems were caused by some other factor or are being embellished.

F. The Advantages of Obtaining the Test Materials in Advance

There is a tremendous potential advantage in having the plaintiff’s test and questionnaire materials in advance of a deposition. These questionnaires will likely contain hundreds of items, and may have been administered across a period of years. If a person was making up answers, it is very unlikely she will be able to remember much of what was reported. If the lawyer asks parallel or related questions to check on consistency, numerous meaningful discrepancies may result. For example, if the plaintiff’s responses to questionnaires administered 3 and 9 months after the accident (and before litigation was initiated) indicated that she felt in a happy mood on most days, deposition testimony indicating that life has been nothing but misery every day from the accident forward raises an inconsistency that may be revealing.

VI. IDENTIFYING AND DEMONSTRATING EXPERT BIAS

A. Forms of Bias to be Addressed

My focus here is not on the forms of bias which lawyers are far better able to spot than I might be, but rather on bias in the use and interpretation of testing methods.

A common element and ultimate expression of bias is to represent matters as more positive or more negative than is warranted. This misrepresentation is not merely a mistake or a reasonable error, e.g., the result of an imperfect procedure applied correctly that, due to its fallibility, produces an erroneous result. Rather, bias involves unfair or uneven handling of data, with errors tending to be systematic or repetitive.

The common manifestation of bias, which, when present, is expressed in mirror image across biased plaintiff and defense experts, is to either make pathology appear and blame it substantially or solely on the accident or, in the inverse, to make pathology disappear and blame it on anything but the event.

B. The Expert's File is Usually the Best Source of Information for Uncovering and Establishing Bias

Detecting and demonstrating the types of bias that I will address usually rests, more than anything else, on obtaining the expert's file and understanding what is in it. Comparison of current work to former work or testimony may also be very helpful.

C. Some Types of Bias

C.1 Applying Overly Demanding Standards for Normality: The Normative Shell Game

Norms refer to standards for establishing what is normal performance on a test. Norms are generally used to transform a "raw" test score, such as the number of items an individual answers correctly, to a standard or uniform score. For example, 10 correct answers on a very difficult test may place someone's result above 9 of 10 individuals, but on a much easier test 10 correct answers may be worse than 9 of 10 individuals. Therefore, without conversion to standard scores, which reflect someone's standing in comparison to others, raw test scores are often of limited or no value.

There are various forms of standard scores, but, in essence, all indicate how a person compares to other individuals. For example, percentiles represent the percentage of individuals that one does as well as or better than on a test. To illustrate, if someone falls at the 25th percentile, she has surpassed 1 in 4 individuals; at the 50th percentile, 1 in 2 individuals; and at the 95th percentile, 19 of 20 individuals.

The labels used to describe test performance (e.g., "Superior," "High Average," "Low Average," "Deficient") may be applied idiosyncratically, and the lawyer can ask the expert to convert the labels into percentile ranges. For example, one expert may indicate that she uses "High Average" to indicate scores that fall between the 70th and 90th percentiles, and another expert scores between the 60th and 80th percentile. Tests often come with manuals that detail the types of standard scores that are recommended for the test and the labels that can or should be applied to different performance levels.

Properly developed norms usually require a fairly large, representative sample of individuals. Norms may be based on the general population and/or may be divided into various subgroups depending on the type of test and purpose for which it is being applied. When a psychologist uses the test, the examinee's performance, in turn, may be compared to the general population or, if more suitable, to like individuals, such as persons of similar age. For example, it would be wrong to conclude that an 8-year-old boy who is 4 ½ feet tall is having a growth problem because more than 95% of adult men are taller than him.

Although determining which type of comparison is the appropriate one (i.e., the general population or a like subgroup) can become technical, it is almost always worth asking about the normative sample for the test and the group or groups to which the plaintiff is being compared. It may become evident that the comparison is problematical. For example, an elderly individual may be compared to a much younger group on a measure of physical strength, and performances which are perfectly consistent with normal aging may be falsely classified as abnormal and attributed to the accident.

The technical adequacy of norms varies from superb to dismal. Practitioners may use norms that are very carefully developed or norms that approach exercises in scientific obscenity, such as those developed decades ago on very small and idiosyncratic groups using procedures that differ in a number of ways from the one the expert applied when administering the test. Also, one should not assume that the norms a particular neuropsychologist uses are of consistent quality. Practitioners may compile their own group of tests, some of which have much better norms than others. Some neuropsychologists give little attention to the quality of norms and thus, almost by happenstance, end up using some tests with excellent norms, others with passable norms, and others that fall at the bottom of the normative heap. (One can also imagine what havoc this creates because these varying tests do not provide a consistent standard for rating level of performance and, consequently, the highs and lows across the tests, which may be interpreted as showing meaningful patterns or as pointing to certain causes, may be largely a product of measurement artifact.)

For many tests used in neuropsychology, rather than there being an official or authoritative set of norms for a test, there are multiple sets of norms that have been generated through varying research studies. Partly due to the inconsistent quality of the research, these varying norms may conflict with one another, sometimes substantially, and there may be little agreement about which should be used or which are better than others. Consequently, the particular norm the expert selects can sometimes change test outcomes or classifications dramatically, for example, from one that falls well within the "High Average" range to one that falls within the "Impaired" range.

A biased expert may frequently use norms that are inappropriate or poorly developed, and that set unjustifiably high standards for what is normal. The result is to misclassify many normal individuals or results as abnormal, or to over-represent the level of dysfunction.

Although there may be literature showing the flaws in the norms used, here as elsewhere, an expert may deny the import of the literature. The lawyer cannot afford a tussle over technical esoteria, but this does not mean that nothing that can be done. Rather, as will be explained, the lawyer often can use this denial to his benefit and convincingly demonstrate the flaw in the expert's approach and testimony.

- One can start with a question that makes an affirmative, factual statement about what the literature shows, such as, "Doesn't research show that Test X misidentifies many normal individuals as having problems in memory?"
- The expert may well respond in the negative or say something to minimize the problem with the test.
- The lawyer can then present the task to the jury and ask the expert how many items the individual answered correctly or something comparable to this depending on the testing format. For example, one commonly used test presents a fairly long series of grocery items. After the list is presented a number of times, a span of about 20 minutes is filled with other, distracting activities. Recall of the list is then tested again.

The first edition of this test was so flawed that even if an individual made two or three errors across nearly 50 items when indicating whether they were or were not on the original list, the result might still be classified as reflecting memory problems. Jurors exposed to this task, who, like the rest of us, might be happy if they can remember 3 of 4 items at the grocery store or perhaps even complete the activity without losing the list, may be shocked to find out that this result was considered abnormal or pathological.

- After the lawyer walks the expert through a demonstration of the task and the plaintiff's performance, jurors are likely to be suitably impressed, aware that the lawyer's original question about the literature was well grounded, and increasingly skeptical about the expert's veracity or judgment.

- As noted, when experts are this biased or off in describing test results and using norms, these types of startling and self-evident discrepancies are not uncommon.

- One might consider this a “tell and show” strategy, that is, one tells what is in the literature (through the question or statement posed to the expert), and then shows that it is so. When the answer to the question the lawyer has posed can be demonstrated so convincingly, one really does not care how the expert responds or even hopes that the expert will fight the bad fight.

- The lawyer need not fear introducing the literature if it is almost certain she can show that the affirmative point raised in the question is accurate. This is a type of courtroom demonstration that, if used appropriately and judiciously, almost never fails. (And even should an unlikely failure occur, it really should not set things back very much, unlike some other types of failed demonstrations.)

C.2 The expert administers numerous tests and concludes that abnormality or brain damage is present based on isolated or unremarkable relative weaknesses.

Studies show that, especially if given enough tests, most normal individuals obtain at least some low or “deviant” test scores, that is, it is normal to be abnormal up to a point. For example, results reported for a very commonly used normative system developed by Robert Heaton show that about 9 in 10 *normal* individuals obtained at least one “abnormal” score if given 40 tests or subtests (as is not uncommon), and that the typical or “average” normal individual obtained abnormal results on about 15% of the tests. (See: Heaton, R.K., Miller, S.W., Taylor, M.J., & Grant, I., Revised Comprehensive Norms for an Expanded Halstead-Reitan Battery. Professional Manual. Lutz, Florida: Psychological Assessment Resources, 2004).

If the expert uses a system for which such data on “failure rates” are available, these data are very likely to show that normal individuals often have difficulty with a certain percentage of tests. Varying systems, depending on such matters as the number of tests given and where the boundary is set between normal and abnormal performance, have either similar, higher, or lower rates of failure among normals than the Heaton system.

An example is provided by the Impairment Index, which reflects overall performance on a set of core measures from the widely used Halstead-Reitan Battery. The result is expressed as the percentage of tests that fall outside the

overinterpretation of select weaknesses, cont.

normal range. For example, if no score falls outside normal limits the result on the Index is .00, if all of the scores are deviant the result is 1.00, and so on. Although there may be disagreement over this matter, according to Reitan at least, the co-developer of the battery, the overall score should equal or exceed .50 (or a 50% abnormality rate) before the Index itself is classified as abnormal. Thus, for example, a 10% or 20% or 30% rate of abnormality is not abnormal. (Reitan classifies a 40% rate as “borderline.”)

The expert may claim, contrary to research on the system used, that isolated abnormalities reflect brain dysfunction, or may use a system for which rates of failure among normal individuals have not been studied scientifically. Thus, judgments about such matters are impressionistic, something of a paradox because the reasoning is basically circular: “X percent of abnormality signals brain damage because I believe it signals brain damage; the people that I see and that (I believe) are brain damaged based on the testing demonstrate such rates of abnormality; and those that (I believe) do not have brain damage show different rates of abnormality.” Of course, the expert typically has no way to determine whether the separation of individuals into normal and abnormal groups is correct in the first place.

When experts use systems that have not been studied, they often classify overall results as deviant even when failure rates are well below the levels observed among normal individuals for systems that have been studied. Thus, the rates found with established systems can be contrasted with the rate the expert obtained in the case at hand and used as a basis for identifying abnormality. Alternatively, the absence of scientific data on failure rates for the expert’s procedure as a whole can be brought out, and hence the unknown meaning of the obtained results.

C.3 The expert opines that because an individual has a high overall level of intellectual ability, he or she should perform about as proficiently across measures.

The flaw in this reasoning is at least two-fold. As discussed under C.2 immediately above, and congruent with commonsense, individuals usually show considerable variation in ability, or strengths and weaknesses. Second, a number of the measures in a typical neuropsychological battery (i.e., group of tests) show weak associations with overall intellectual ability. As follows given these weak associations, intellectual ability is not an accurate predictor of performance on these other tests.

If experts will not concede these scientifically established points, questioning can show the absurdity of the position. Suppose, for example, that the expert has administered an IQ test and a measure of finger tapping speed. The IQ test may examine, among other things, word knowledge. The lawyer might ask a question like the following, “So what you are saying is that because Mr. Smith is better than 19 out of 20 individuals in defining such words as “pundit” and “obviate,” he should also be able to tap his fingers faster than about 19 in 20 individuals, and because he cannot this it shows that he is brain damaged?” Other obvious disconnections can be raised between the test that was used to project high level skills across all areas and the nature of the things that these other tests measure to help bring home the point.

Also, it will often be possible to gather information about prior functioning, such as school testing. Given how common it is for individuals to show variation in functioning, prior testing, rather than showing uniform excellence across the board, is also likely to demonstrate inconsistencies. Additionally, if asked on deposition, many individuals will describe past areas of strength and weakness.

C.4 Some experts, despite obtaining normal results, will describe them as abnormal anyway. A perfectly normal score may be said to reflect impairment, or the expert may downplay normal scores and emphasize qualitative characteristics of test performance that they deem to be abnormal, often without any decent research support for the contention or in the face of contrary literature. For example, even if an individual completes a timed test very quickly, the expert may note that this came at the cost of accuracy, although it may turn out that only a few errors were made and that normal individuals often make as many or more errors.

D. Systematic “Errors”

D.1 The expert may commit multiple errors, almost all of which are in the direction of the favored conclusion or agenda.

D.2 For example, there may be multiple scoring errors, each of which fails to assign credit that is due.

D.3 The expert may seem to make errors in both directions, but most instances of *overcrediting* might occur on tests described as measures of prior functioning, and of *undercrediting* on tests described as sensitive to brain damage. The end result is an fallacious discrepancy, or an inflated discrepancy, between the scores on supposed measures of pre- versus post-accident functioning.

The underlying notion is that some tests are relatively insensitive to brain damage and also show a fairly strong relation to overall abilities. In contrast, other tests are more likely to be affected by brain damage. The former, or supposed baseline tests, are compared with the latter, or sensitive tests, to determine whether, or the extent to which, loss has occurred. (There is an entirely separate problem here: the tests intended to provide reflections of prior functioning generally lack precision and are prone to substantial error when used to “post-dict” abilities.)

When an expert engages in these practices, the lawyer may want to divide a board into two columns, labeling one column (intended) “measures of pre-accident functioning” and the other column (intended) “measures of post-accident functioning.” Errors can be classified as *overcrediting* or *undercrediting* responses, with each example entered into its appropriate column. It will not take too many examples of each type of “error” to make the expert’s game apparent.

E. Unevenness in Including vs. Excluding Materials from the Report or When Testifying

E.1 The expert may be far more inclusive in describing negative than positive findings. For example, even if 15 responses to a questionnaire are positive and 5 are negative, only the latter are described.

E.2 In some extreme cases, entire test results are not mentioned, and the expert may not even list the test as having been given.

Much like the strategy described above, charts that separate out what was included and excluded in relation to whether the findings are positive or negative can be very effective. Although the meaning of answers to complex or vague questionnaire items may be uncertain, the lawyer can select items for which there is no difficulty separating out the positive from the negative responses, as might be the case with a depression inventory. For example, items might provide very direct alternatives like the following: “Check off the answer that best applies to you at present: I feel happy. I feel somewhat happy. I feel a little sad. I feel very sad.”

unevenness in handling data, cont.

When the jury finds that almost every (or every) negative answer falls under the “include” column and almost every (or every) positive answer falls under the “exclude column,” the expert’s bias should be glaringly obvious.

F. Inconsistency with Multiple Neutral Evaluators

The expert’s results or conclusions may stand in uniform contrast to the results of multiple neutral, credible evaluators (perhaps not only in this case, but in case after case).

(Note: Inconsistency may only mean something if these neutral evaluators work from an adequate data base or observational foundation. For example, multiple neutral evaluators may generally agree that certain problems started after the accident, but all of them may lack collateral documents and may have been told the same false story. In other cases, plaintiffs seek out professionals who are at the fringes of their professions, share the same questionable views, and hence may reach the same questionable conclusions.)

G. Inconsistency across Cases

Inconsistency across cases comes, of course, in many forms. For example, an expert who insists that normal tests results provide a sufficient basis to rule out disorder in a defense role may argue that the tests often miss problems when retained by the plaintiff. Or the expert may alter the description of tests that are most sensitive to brain dysfunction versus those that provide the best measure of prior functioning. For example, when Test A is abnormal and Test B is normal in one case, Test A is described as a very sensitive measure of brain damage and Test B as a good measure of prior functioning because it is rarely affected by brain damage. When these tests produce opposite results in another case, the description of their comparative properties is turned on its head.

H. Inconsistent Treatment of Positives and Negatives Depending on Whether the Pre-Accident or Post-Accident Period is being Addressed

In this variation of bias, negatives in the past are downplayed or omitted and positives overstated, whereas these practices are reversed when the post-accident period is referenced, that is, positives are now downplayed and negatives emphasized.

inconsistent treatment of positives and negatives, cont.

For example, when discussing performance on tests completed before the accident, perhaps in a school setting, good performances may be highlighted and weaker performances barely mentioned, but when discussing tests completed after the accident, negative results are emphasized and positive results downplayed. Or the multiple instances in which a person was fired from jobs before the accident are attributed to situational versus personal factors, such as bad bosses, whereas loss of jobs after the event are all due to deficits. Alternatively, a self-report of positive characteristics or areas of strength before the accident are taken at face value, but a description of post-accident strengths are rejected because the plaintiff is said to lack insight into her deficits or to be in denial.

Of course, some plaintiffs will describe their histories in a systematically distorted manner in relation to whether they are addressing the pre- or post-accident period, but experts may just go along with these reports without checking them against collateral documents for accuracy or, if aware of inaccuracies, may not bother to mention them. The overall approach is one of treating alike things as unlike, with the direction of the distortion changing systematically depending on whether the pre- or post-accident time frame is at issue, or in relation to whatever helps the case.

VII. EXAGGERATION OF PROBLEMS, AND INSUFFICIENT EFFORT WHEN COMPLETING ABILITY TESTS

A. Choice of Terms can Matter

The word “malingering” is highly loaded and places a heavy and dangerous burden on the lawyer. In many cases, more apt terms or phrases might be “embellishment,” “exaggeration,” or “an attempt to manipulate the outcome.”

B. Professionals’ Capacities to Detect Falsification

Many experts are unduly confident about their abilities to detect exaggeration or malingering. The literature does not support such confidence. Rather, a relative consensus has emerged that the detection of exaggeration or malingering is often difficult, especially if the expert limits herself to standard procedures, such as interviews or routine tests, and does not use specialized techniques of the type described below.

B.1 Various studies show that individuals, professionals included, often have marked difficulty distinguishing honest statements from lies.

B.2 Other studies show that examinees can manipulate the results of many tests and may well fool clinicians when doing so.

B.3 The famous forensic psychologist, Jay Ziskin, framed the following question for overconfident clinicians, “Each time you have been fooled, you don’t know it, do you?”

B.4 The possibility of malingering and the difficulty involved in detecting it with routine procedures is sufficiently recognized that the National Academy of Neuropsychology recently published a position paper describing the importance of evaluating effort and the need to use specialized methods, especially in legal cases. (Bush, S.S., Ruff, R.M., Troster, A.I. et al., Symptom validity assessment: Practice issues and medical necessity. NAN Policy and Planning Committee. Archives of Clinical Neuropsychology, Vol. 20, 419-426, 2005.)

(For reviews of literature, see such sources as: Ziskin, J., Coping with Psychiatric and Psychological Testimony, 5th Edition, Vol. 2, Chapter 18, Los Angeles: Law and Psychology Press, 1995 [the revised edition of this book should be out fairly soon]; Rogers, R. (Editor), Clinical Assessment of Malingering and Deception, 2nd Edition, New York: Guilford Press, 1997; Reynolds, C.R. (Editor), Detection of Malingering During Head Injury Litigation, New York: Plenum Press, 1998; Frederick, R.I., Neuropsychological tests and techniques that detect malingering. In Halligan, P.W., Bass, C., & Oakley, D.A. (Editors), Malingering and Illness Detection, pp. 323-335, New York: Oxford University Press, 2003.)

C. Methods for Detecting Exaggeration of Emotional Disorder

Many brain injury cases also involve claims of emotional disorder. Events that cause brain injury can also produce psychological dysfunction, either by impacting brain areas involved in the regulation of emotion or, secondary, by causing adaptive struggles and adverse experiences that create stress and distress. Further, emotional conditions, which may or may not be related to the accident, can impede cognitive functioning in such areas as concentration and memory. These cognitive alterations, even if based on emotional struggles that are independent of the accident, can mimic the symptoms of brain injury. Thus, appraisal of both emotional status and possible exaggeration of such difficulties are relevant in most brain injury cases.

C.1 The original Minnesota Multiphasic Personality Inventory, since revised and now titled the MMPI-2, is the most thoroughly researched and scientifically established personality test for the detection of exaggerated emotional disorder.

C.2 Although brain pathology will often produce some elevation in MMPI-2 malingering indices (for reasons that need not be detailed here), it is typically not to the point that the profiles of such individuals are confused with those who are markedly exaggerating emotional pathology. More subtle discriminations, however, may be restricted or impeded.

C.3 In some cases, experts seem to minimize, or even totally disregard, substantial elevations on MMPI-2 malingering indices. This is one more reason it is essential to obtain the expert's file.

C.4 Many experts will submit the MMPI-2 for computer scoring and interpretation. Various companies provide computerized interpretations, and some offer somewhat different interpretive programs for legal cases. The lawyer should check to determine whether a forensic program was used. If it was not, it may be worth determining whether a forensic program would yield interpretations that contradict either the expert's conclusions or important statements generated by the program the expert did use.³ For example, the forensic program might include stronger statements about the possibility of malingering or attempts to manipulate the outcome of the case. Although an expert is likely to have a sensible rationale for avoiding slavish adherence to a computerized printout, if the program is treated as sufficient to confirm hypotheses, it should also be sufficient to disconfirm hypotheses.

C.5 Other personality tests are likely to lack indices for appraising under- or over-reporting of emotional problems that have sufficient scientific verification or a consistent body of supportive evidence. Thus, for example, if the MMPI-2 indicates exaggeration and another personality test the opposing result, the lawyer may wish to point out the disparity in underlying research across the measures.

³At relatively small cost, the lawyer may be able to retain a psychologist or neuropsychologist to submit the results to an alternative program.

D. Methods for Detecting Lack of Effort on Cognitive or Neuropsychological Testing

D.1 Tremendous efforts have been made in the last decade or so to develop and augment the limited methods that had previously been available for detecting insufficient effort on neuropsychological testing. These efforts have produced various techniques that have value. However, under many circumstances, either false-positive errors (calling a non-malingering a malingerer), false-negative errors (missing malingering), or both are potential problems. Also, some very poor methods are nevertheless used regularly and frequently make errors in one or the other, or both directions. For example, the Rey 15-Item Test often falsely identifies individuals with severe brain injuries and amnesia as malingerers, and at the other end of the spectrum often fails to detect malingering when it does occur.

At times, however, specialized techniques with sounder qualities provide very compelling evidence of malingering. For example, the obtained results may be so extreme as to require deliberate effort to perform so poorly, and there is little doubt that the individual is not cooperating with the evaluation procedure.

D.2 Commonly used methods and approaches include:

- a. symptom validity testing or forced choice methods
- b. the TOMM
- c. the VIP

D.3 As noted, these various methods for malingering detection or exaggeration have their limits and, in the practical context of the courtroom, are unlikely to be very convincing in and of themselves. For example, jurors will probably not be bowled over to learn from the expert that “the F scale on the MMPI-2, which has received considerable research support, is highly elevated and easily within the range expected with malingering.” The lawyer is perhaps being self-deluded if he thinks that an expert can carry the day without other evidence of malingering that is more convincing to most jurors, and more immediate and concrete.

- a. Substantial discrepancies between test performances and functioning outside the immediate testing context may provide impressive evidence. For example, in one case, a plaintiff who obtained very low scores on measures of motor coordination and produced a writing sample filled with grossly malformed letters, wrote a perfectly legible check when paying the receptionist for the evaluation!

b. The lawyer may want to start by concentrating on particularly low scores in areas that should produce observable deficits. For example, a very poor score on a measure of analogous reasoning may give the lawyer much less with which to work in comparison to a very low score on a measure of motor strength and speed, or a measure of the ability to understand simple conversation. This goes back to the idea of having the expert convert findings to observables, and then checking these assertions about what an individual can and cannot do against what the individual is and is not doing.

c. Depositions, which often provide an extensive sample of various mental abilities, may offer excellent opportunities to perform checks on certain claimed or assumed problems. (Illustrative examples follow in the presentation.)

VIII. CONCLUSION

If the lawyer can frame the right questions and pursue systematic strategies for obtaining answers to those questions, the chances are maximized for appraising cases accurately, separating legitimate and unwarranted assertions, and disproving false claims. The aim is not to sharpen swords but to sharpen pencils, that is, to derive clear and correct answers that will drive the direction and resolution of the case.