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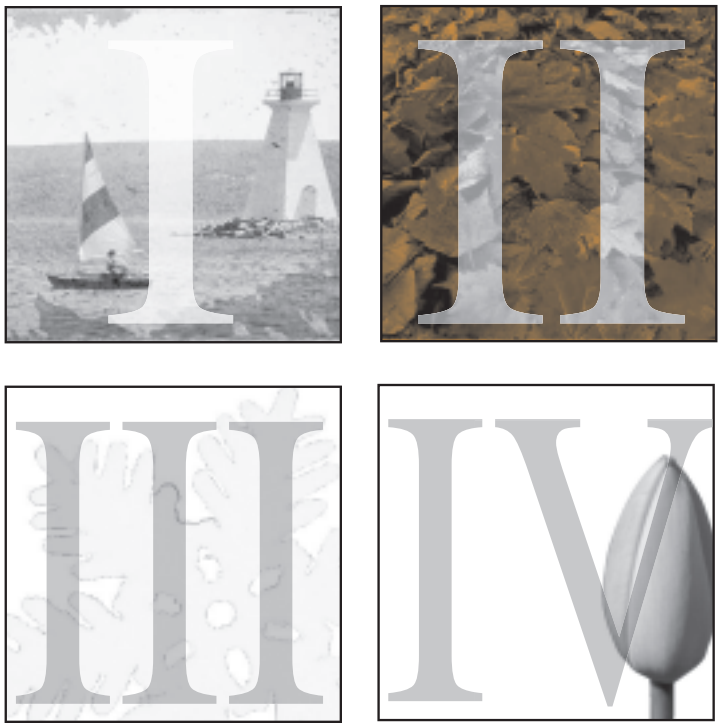

IN THIS ISSUE:

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THE STATEWIDE ASSOCIATION OF ATTORNEYS REPRESENTING THE DEFENSE IN CIVIL LITIGATION

DAUBERT AND FRYE: A NEUROPSYCHOLOGIST'S PERSPECTIVE

[PART 1 OF 2]

By: Sue E. Antell, PhD, ABPN, ABPP

Executive Summary

Neuropsychology presents its own set of issues under the *Frye* and *Daubert* analysis of expert testimony. Although neuropsychology is a recognized specialty within the field of psychology, any licensed psychologist can practice as a neuropsychologist. There are organizations that certify persons as qualified in the specialty of neuropsychology, but there are also "vanity boards" whose credentialing is not accepted within the profession. The attorney must be alert to the qualifications of a person retained by the attorney or the opposing counsel as a neuropsychologist. It is also important to examine the precise methodology that the expert has followed in gathering the data and interpreting it. Neuropsychology requires that regular methods be followed, including the way the testing is conducted, the way the report is prepared and the personnel who may participate in the process.

Introduction

The decision in *Daubert v Merrill-Dow Pharmaceutical*[1] was seen by many in the forensic science community as a reasonable resolution of the difficulties attendant to testimony offered under *Frye*. The *Frye* standard of "general acceptance" was seen by many scientists as too limiting, too broad and too vague.

The *Frye* standard was too limiting because it made it too difficult to introduce testimony based on new data or data commonly known by the research community but not generally known to the practitioner community.

It was too broad because it made it too easy to include testimony based on principles and theories that fail to represent the most current scientific thinking but are still held, wrongly, by many practitioners in the community.

It was also too vague because it allowed the requirement of general acceptance to be met with reference to position papers and polemics based not upon solid data, but upon the opinions and politics of those in positions of authority in various professional groups and government organizations.

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Daubert was seen as an antidote to this. Its emphasis on scientific principles such as falsifiability (ability to be tested), known or potential error rate, peer review, and adherence to standards, as well as general acceptance, offered the hope that scientific evidence would be reviewed by a judge who would have an opportunity to consider its scientific merits before allowing it to be placed before a jury, thus performing the "gatekeeper" function.

To the surprise of many in the forensic science community, it has not always worked out that way. In many jurisdictions, *Daubert* appears to have only added another layer of complication to the process. Judges have frequently not been provided with the tools on which to base decisions under *Daubert*, and the result is that the "gate" stays open and critical scientific issues continue to be decided by the jury under the guise of testimonial "weight" when they should not be presented to a jury at all.

In neuropsychology, *Daubert* and *Frye* standards have been applied unevenly, even at times whimsically, and often politically, in civil litigation. When the standards are applied, they have been typically used to assess the validity (*i.e.* the "weight") of ultimate expert opinions, and less often to matters of professional credentials and the methodology used in testing and reporting (*i.e.*, as the gatekeeper function). This is unfortunate, because qualification standards and procedures for administrating, scoring, and interpreting tests are clear-cut within the profession and not subject to variability in opinion and fit well with the gatekeeper function of the court. These criteria relating to credentials and methodology are better suited to the exclusion of

Continued on page 14

Continued from page 13

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testimony rather than the evaluation of its "strength."

Although these comments are specific to neuropsychology, they may have applicability to other clinical medical or allied medical expert testimony as well.

Neuropsychology

Neuropsychology is a recognized specialty within the area of psychology and is focused on the description of cognitive disorders and dysfunctions based on an analysis and understanding of brain-behavior relationships, and how these relationships can be understood through a specific evaluation process which is called "neuropsychological evaluation."[2] Neuropsychologists have undergone specific education and training not required of other psychologists to enable them to describe how certain behaviors are related to brain dysfunction and also to consider the etiology (causes and origins) of such dysfunctions. Discussions continue in many jurisdictions regarding whether neuropsychologists may give "causation" testimony,[3] but virtually all states will allow a neuropsychologist to testify about what the neuropsychological literature reports as the cognitive "outcomes" of particular injuries.

Licensing Credentials

Licensing laws for psychologists in Michigan, as in most other states, are generic, enabling an individual to practice "psychology," but excluding methods that are clearly defined as the special province of medicine.[4]

The laws provide for the licensing of psychologists by "ascertaining minimal entry level competency." This is similar to the language used for licensing those who practice medicine, where the license is also generic, allowing for the practice of "medicine and surgery." The psychology laws also typically require that an individual provide only those services for which he or she is qualified by training and experience.

Psychology licensing laws in most states (including Michigan) are at least based in part upon a model promulgated by the American Psychological Association and most psychologists practicing today come either out of clinical psychology PhD or PsyD programs where they have been required to complete a generic predoctoral internship covering all aspects of psychological practice, and then a supervised postdoctoral year which is also typically broad and generic. Persons who have graduated from other kinds of psychology programs are also eligible for licensure as long as their programs meet certain requirements, and such graduates are typically required, if they did not do a formal predoctoral internship, to undergo two supervised years of postdoctoral training, at least one of which is in an organized training program and both of which involve a specified number of actual client contact hours. In most states, purely research, teaching or consultative experiences would not satisfy the licensing criterion.

Following the satisfaction of these basic requirements, the individual is eligible to sit for an examination, and upon successful completion of this may be awarded a license to practice psychology. This credential, like the medical license, does not allow an individual to represent that he or she is a specialist within the field of psychology or has any particular expertise beyond that required for the license.

Specialization

In medicine, the determination of additional specialty qualifications has been nicely resolved by the longstanding practice of offering specialized postdoctoral medical residencies and fellowships that provide a level of training recognized within the profession as the minimum additional requirement for claiming a specialty designation. Medicine also offers specialty board examinations that confer upon the practitioner a credential as a recognized specialist in a particular field.

Psychology is at a much younger stage regarding specialization. While specialty training programs exist, and there are recognized board certifications in various specialties, there is little encouragement for psychologists to complete such training and certifications. There are rarely outside agencies that require them for employment, privileges, or insurance. In addition, there is no single agency, as there is in medicine, that accredits psychological specialty boards. One effect of this has been the creation of some "vanity boards."

Unlike physicians, psychologists do not typically practice in hospitals, and malpractice insurers do not typically require evidence of specialty training, so the only restriction upon a psychologist's practice is the ethical need to comply with restrictions based upon competence. While this may have been adequate when the practice of psychology in a clinical setting was in its infancy, over time the field has become increasingly specialized with each specialty requiring a different skill set. This

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specialization has created a serious problem both for patients and the legal system in attempting to determine whether a particular provider is indeed qualified to provide the services for which he or she is being retained in the absence of any publicly identified credential.

While the American Psychological Association has declined to endorse any specific board, in neuropsychology there are two boards that are recognized by the Neuropsychology Division of the American Psychological Association, National Academy of Neuropsychology and the International Neuropsychology Society, as providing sufficient basis to claim the title "neuropsychologist." These are the American Board of Professional Neuropsychology (ABPN) and the American Board of Professional Psychology in Clinical Neuropsychology (ABCN or ABPP-CN). Any other board certifications claiming to credential neuropsychologists are not so recognized. This would include the Neuropsychology Board of the American Board of Psychological Specialties, which is in fact an offshoot of the American Board of Forensic Examiners, a fairly notorious vanity board.

In addition to neuropsychology, the American Board of Professional Psychology examines candidates in 12 other specialty areas. It is important to recognize, however, that just as board certification in internal medicine does not confer competence in surgery, neither does certification in clinical psychology confer competence in neuropsychology (although the clinical psychologist as a generalist probably has some training in this area.)

In neuropsychology, only practitioners with ABPN or ABCN certification, or who meet the basic requirements for examination, would appear to satisfy the general acceptability prong of *Daubert* and *Frye*. Courts do not necessarily restrict experts to those who have licenses or board certifications, often saying that this goes to the "weight" given to the expert's testimony, but this approach has been successful in at least one case in Maryland in which a circuit court judge ruled that a psychologist could not testify as a "neuropsychologist" (although he was allowed to testify as a psychologist) because he lacked the appropriate qualifications, and that his report, which was labeled a "neuropsychological evaluation" could not be used by the medical expert as a basis for his own testimony.[5] Much of this decision was upheld on appeal, although the trial court was felt to have abused discretion to the extent it made a decision without a "*Davis-Frye*" hearing.

Qualifying the witness

In light of the breadth of licensing for psychologists, the attorney must be prepared to address the issue of qualification to testify as a neuropsychologist. One method is to retain a neuropsychologist who has been certified by the American Board of Professional Neuropsychology (ABPN) or the American Board of Professional Psychology in Clinical Neuropsychology (ABCN or ABPP-CN). Another is to determine the credentials required to sit for the board examination in a specialty; these are available on public websites. Attorneys must also be alert to the many "vanity boards," which are not recognized even informally by the appropriate professional organizations, and which do not automatically confer the same status as the more formal boards.

In applying *Daubert/Frye* criteria to the evaluation of expert credentials, it would appear that the general acceptability criterion is the one with the most relevance. Organized psychology has specific standards by which neuropsychologists can be differentiated from other psychologists, and neuropsychology is recognized as a separate and specific area within psychology. Based upon this, a judge may have the discretion to determine if a non-neuropsychologist psychologist can give neuropsychological opinions or if that portion of his or her testimony is to be excluded.

Methodology - Testing

Discussions of methodology in the context of *Daubert* and *Frye* usually refer to the methods experts use in coming to their opinions and the methods used in scientific investigation. However, neuropsychology poses an entirely new set of methodological issues upon which challenges can be mounted. These fall into three categories.

First, neuropsychology involves the administration of standardized

Continued on page 16

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Continued from page 15

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and clinical tests and measures, each of which is intended to be administered according to a standard methodology outlined by the test authors. This methodology includes restrictions on whom the test may be administered (*e.g.*, by age or gender), the specific questions and instructions that must be asked, how responses are to be scored, what materials are to be used, time limitations, etc. Methodology also includes the qualifications of the examiner and the use of paraprofessionals in testing. Violations of methodology impair both the *validity* (the degree to which a test can be expected to test what it claims to test) and *reliability* (the degree to which the results are likely to be reproducible). Validity is covered in part by the *Daubert* requirement of "falsifiability" or ability to be tested: if a test is not valid, then we have no way of determining if the results actually reflect what we are testing. Reliability relates to the "known error rate," also known in testing as the error of measurement. Failure to adhere to standard principles of test administration adds the potential for additional error (beyond the anticipated error of measurement), which cannot be measured and which thereby reduces the reliability (as well as the validity) of the measure or battery.

The standards regarding psychological testing also require that tests be interpreted in a specific fashion. For example, in an IQ test, scores between 90–109 are said to reflect "average" performance, those between 110–119 "above average," and scores of 120 and higher "superior" performance. Conversely, scores between 80–89 are "low average," those between 70–79 are "borderline," and those below 70 reflect mental retardation or intellectual deficiency. These categories are terms of art in psychology and neuropsychology. They relate to the standing of a score in relation to a statistical concept called the "normal curve" along which traits are distributed based upon the frequency of their appearance in the population. Thus, these scores refer to specific percentiles, which tell us how an individual scores in relation to the rest of the same population. For example, a score of 70 falls in the 2nd percentile which means that 98% of the population scores higher. Similarly, a score of 130 falls at the 98th percentile, which means that only 2% of the population scores higher. IQ scores are only one type of standard score; others include Z scores, T scores and even LSAT scores, but each of these scores identifies an individual's performance in relation to the normal curve, and by using the mean and standard deviation for that test, any standard score can be converted into any other standard score.

Thus, all standard scores can be described qualitatively, and these qualitative statements relate specifically to the percentile in which the individual falls. In interpreting the test data, psychologists and neuropsychologists are expected to use these qualitative terms as terms of art within their appropriate statistical definitions. Failure to do so renders them meaningless. Individuals who redefine these terms, or who use them in an idiosyncratic manner (often to make performance look better or worse than it actually is), mislead non-psychologists who are reading the report. The misuse of terms of art not only fails the general acceptance criterion but also violates the methodological requirements of *Daubert*. Beyond this, such misuse, if it is intended to mislead, also violates ethical restrictions upon the way test data is to be used.

Methodology — the Report

Second, the neuropsychological report itself is expected to include certain kinds of information upon which conclusions (and opinions) may be based. Although the issue of specific causation will be discussed more broadly later when we discuss the application of epidemiological research to individual cases, the informational requirements of a neuropsychology report provide the only basis upon which we can make causal attributions. This is because, in order to assess a "new deficit," we must have an estimate of the individual's functioning (or hypothesized functioning) prior to an alleged injury. In older children and adults, such information is typically available either directly in the form of prior standardized test scores, or indirectly in the form of academic and vocational records and information. There are also a variety of formulae and techniques available which purport to compute a pre-injury estimate; however, in general, these do no better than a careful review of the record. In young chil-

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dren, or those in whom an alleged injury preceded the collection of any formal data, pre-injury estimates must take into account a number of factors including developmental information in the medical records, known or suspected medical conditions which may impact neuropsychological functioning, and social/ genetic information, including information regarding the performance of close family members, especially mothers. Thus, deficits attributed to a specific cause (or set of causes) can be measured as the difference between known or estimated pre-injury function and function following the injury.

According to Muriel Lezak, whose work is seminal and considered by virtually all neuropsychologists to be authoritative in this regard, the minimum informational data in the report includes a) social history, b) description of present life circumstances, c) context of the examination, d) nature of referral/patient understanding of referral, and e) medical history/ developmental history

In addition, reports must present results in an acceptable format, with scores appropriately identified and with correct qualitative attributions. The measures used must be clearly identified, and the relationship between the data and the conclusions must be adequately explained. Deviations from standard methodology must be identified and explained, and limitations to the validity of the evaluation must be discussed.

Methodology — the Personnel

Third, methodological requirements lay out clearly who may administer, score, and interpret tests, and how paraprofessionals may be used in the collection of data. The National Academy of Neuropsychologists clearly states that paraprofessionals may only be used for test administration and scoring, that they must be appropriately "supervised" in the collection of such data, and that the neuropsychologist is entirely responsible for interpretation, report writing, and feedback.

The neuropsychologist should also have interviewed the patient, had some involvement in the testing, and be responsible for any feedback to the patient (or in litigation, for the testimony). Data collected by another individual is the responsibility of the supervising neuropsychologist, and errors in the collection of such data are likewise the neuropsychologist's responsibility. The profession is also quite specific in what is intended by "supervision." At the very least, this requires that the neuropsychologist know and have trained the paraprofessional or be aware of the education and prior training of the technician, and have at least some communication with the paraprofessional about the conduct of each evaluation.

Basic supervision also requires that the neuropsychologist be available for consultation during the evaluation; some states require that he or she be in the same physical location where the testing is taking place, although, especially with well-trained and experienced technicians, most would agree that the physical presence of the supervisor in the facility is not required so long as he or she can be reached if necessary.

Although it is preferable that the neuropsychologist expert (with or without his or her supervisees) collect test data, on some occasions it is impractical to do so. In such circumstances, it is preferable that the retaining attorney hire an additional licensed professional, preferably a licensed psychologist who will collect test data, do an interview, and record behavioral observations. Contact between the psychologist doing the actual testing and the neuropsychologist expert should allow the neuropsychologist to get answers to questions about the patient's performance and the testing psychologist to give diagnostic impressions. Following this, the neuropsychologist expert can write a report, although the report should make it clear that the opinions are based upon data collected by Dr. X, a licensed psychologist in the state in question.

Recently, in Alabama, two experts were excluded from providing testimony because of a clear failure to satisfy the requirements for supervision.[6] In that matter, an individual professing to hold another license, which may have qualified him to administer tests independently, was retained by an attorney to perform

Continued on page 18

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Continued from page 17

testing on plaintiffs. The data collected by this individual were then provided to a psychologist licensed in another state. That psychologist, based upon his review of the data, formed certain interpretations and opinions about the plaintiffs. A physician, based upon the psychologist's report, then formulated his own medical opinion. Neither the physician nor the psychologist ever actually examined or interviewed the plaintiffs. The psychologist admitted that he had never met the individual who collected the data, had no personal knowledge of his skills, never spoke with this individual regarding the testing, and was not consulted at any time during the collection of the data.

In an initial ruling, the trial judge decided that the expert psychologist had failed to provide supervision as required by the profession, and then ordered a hearing to determine whether the individual who administered the tests was qualified to do so independently. The judge reasoned that, if he was so qualified, then the data could be relied upon by the testifying expert. If not, then the data could not be used in forming an opinion, and the expert's testimony would be excluded. Apparently, the plaintiffs' lawyer lacked confidence that this individual would survive such a hearing and withdrew all test data. While the absence of such data might have led directly to a dismissal, plaintiffs attempted to resurrect their case by providing expert affidavits in which they claimed that they did not need any data to come to their conclusions. The court was unimpressed, and the case was dismissed with prejudice.

Ultimately, the case was dismissed because experts lacked a basis for their specific causation testimony; however, the failure to adhere to accepted methodology for supervision and/or collection of test data caused the exclusion of the data, which ultimately led to the dismissal.

Different states undoubtedly have different requirements regarding the use of "technicians" in neuropsychological examinations, the credentials required of such technicians, and the minimum supervision requirements, and the failure to adhere to state law may result in exclusion of the test data upon which opinions are based. Lack of data makes it impossible for a neuropsychologist to formulate an opinion based upon accepted, peer-reviewed methodology and thereby provides grounds for the exclusion of an expert's opinion even where he or she meets minimum qualification requirements.

Dr. Antell is a Clinical and Forensic Neuropsychologist with more than 20 years experience in the diagnosis and evaluation of children and adults with known or suspected brain dysfunction. She is board certified (Diplomate Status) in Clinical Neuropsychology by the American Board of Professional Neuropsychology (ABPN) and in Child and Adolescent Psychology by the American Board of Professional Psychology (ABPP).

In her forensic practice Dr. Antell has focused on personal injury with specialties in lead litigation, mold litigation, obstetrical malpractice, anoxic brain injury and mild closed head injury. Dr. Antell has also been interested in issues regarding the application of rules of evidence to scientific testimony, and has consulted with a number of attorneys in such matters. She has given invited presentations on multiple occasions to Mealey's seminars, and has also been invited to provide commentaries in Mealey's publications.

Dr. Antell received her PhD from the University of Maryland Baltimore County and completed a postdoctoral fellowship un Neuropsychology in the Department of Psychiatry and Behavioral Science at Johns Hopkins University School of Medicine with a Clinical Appointment at the Kennedy-Krieger Institute. Following this, she was on faculty at Johns Hopkins/Kennedy for five years, before leaving to establish her practice.

Her email address is seantell@forensicneuroscience.net and she can also be reached at

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Endnotes

1. 509 U.S. 579 (1993)
2. Lezak, M. D., *Neuropsychological Assessment Fourth Edition*. New York: Oxford University Press, 2004.
3. Among the states holding that a neuropsychologist is not competent to testify concerning medical causes are California, Florida, Oklahoma, Louisiana, and North Carolina. *See Grenitz v Tomlian*, 858 So2d 999 (Fla Sup Ct 2003); *Summers v Missouri Pacific R.R System*, 897 F Supp 533 (ED Okla 1995); *Sanderson v IFF*, 950 F Supp 981 (CD Cal 1996); *Hubbard v State*, 852 So2d 1097 (La Ct App 2003); *Martin v Benson*, 125 NC App 330 (NC Ct App 1997).
   Among the states holding that a neuropsychologist is competent to testify concerning medical causes are Delaware, South Carolina, Oregon, Virginia, and Missouri. *See New Haverford Partnership v Stroot*, 772 A2d 792 (Sup Ct Del 2001); *Means v Gates*, 348 SC 161 (SC Ct App 2001); *Cunningham v Montgomery*, 921 P2d 1355 (Or Ct App 1996); *Seneca Falls Greenhouse & Nursery v. Layton* 389 SE2d 184 (Va Ct App 1990); *Landers v Chrysler Corp*, 963 SW2d 275 (Mo Ct App ED 1997).
4. MCL 33.18201.
5. *Askins v Polakoff*, Maryland Court of Special Appeals No. 389 September Term 1998 Filed 1/15/1999
6. *Patterson v Housing Authority*, Jefferson County Alabama Case No. CV01-2425 2006