WORKER'S COMPENSATION

AND

CLINICAL NEUROPSYCHOLOGICAL ASSESSMENT

Antonio E. Puente

University of North Carolina at Wilmington

and

James B. Gillespie, Jr.

Wilmington, North Carolina

Despite the common perception that the practice of psychology has focused almost exclusively on the delivery of clinical services to clinical populations, psychology does have a lengthy history of involvement with the legal process (Asch, 1984). More recently psychology and forensic concerns have broadened to include a wide variety of issues including assessment of work disability from a psychological perspective (Volle, 1975).

Specific concerns have arisen over the past few years in the application of the rapidly developing field of clinical neuropsychology to the legal setting (e.g., Dorken, 1979). Due to the intrinsic nature of the etiology of brain dysfunction (e.g., head trauma), a significant and increasing number of these types of cases have legal implications. For example, Puente (1987) recently reported that 41 percent of all applications for Social Security assistance each year (or close to 150,000 individuals) have organic brain syndromes or related disorders. This chapter will focus on the application of clinical neuropsychology, especially assessment issues, to one source of support covering work-related disabilities, namely worker's compensation.

WORKER'S COMPENSATION AND NEUROPSYCHOLOGICAL INFORMATION

Defining Worker's Compensation

According to Merrikin, Overcast and Sales (1982) the origin of present day

worker's compensation could be traced to the late 19th and early 20th century when employers were legally responsible for the welfare of their employees. Nevertheless, worker's compensation issues and laws are quite different from common law test recovery (Mussoff, 1981) as well as from government regulated insurance programs such as Social Security disability. Social Security programs support the workers if total disability is present while worker's compensation assists in providing partial assistance based on the amount of deficit relative to the original earning capacity. The major focus of worker's compensation is to assist the injured worker to return to gainful employment.

The first modern law protecting the worker was established in 1911. At present all states in the United States have a worker's compensation law. However, as Merrikin, et al. (1982) suggest, the laws have been oriented towards physical injury. These authors indicate that either the cause or the effect could be either physical or mental resulting in four different hypothetical categories of injuries; physical-physical, physical-mental, mental-mental, and mental-physical. Of these, the latter three have been of greatest interest and application to psychologists.

The possibility of mental variables causing physical disorders or physical variables causing nervous disorders has been well accepted for some time (Larson, 1970). However, in numerous states mental injuries have not been favorably considered (Schwartz, 1987). Most jurisdictions prefer objectively measurable deficits

and focus on causation (often more so than on the residual level of dysfunction). Presumably, this is why mental disorders have not been well accepted in compensation cases.

The Relevance of Objective Data

The issue of measurable deficits is of great concern to both referral sources as well as to insurance companies in large part due to intrinsic difficulties in assessing the validity of "psychological" symptoms and, in turn, of subjective symptoms. However, the question of validity according to Larsen (1970) is intrinsically linked to the question of malingering. Specifically, "the issue comes down to the presence of responsible conscious volition on the part of the patient to invent, protract, misinterpret, or exaggerate his complaint". This situation is exacerbated by two potentially contradicatory assumptions of the medical and legal professions. According to Mussoff (1981) the medical and health professions find it more acceptable to label a healthy person sick than the opposite. In contrast, the legal profession operates on the assumption that it is better to acquit a guilty person than to convict an innocent one. Thus, these contradictory positions provide the foundation for the perception of malingering. Considering the subjectivity of most psychological or mental symptoms, it should come as no surprise to note that malingering is perceived to be such a critical issue in compensation cases. (A review of malingering is found later in this chapter.)

To avoid the issue of potential malingering, the health care professional needs to

rely primarily on objective data (Satz, 1988) which can be supported by clinical and behavioral observations. Thus, a composite picture is developed using a variety of information. It is important to note that the role of neuropsychology is not to decide disability or compensation but to provide data to increase the likelihood of the most accurate administrative judgement possible. Medical experts have generally heeded the warning to avoid becoming involved with the adjudicative process (Ziporyn, 1983). Neuropsychology should similarly realize its limitations with regards to adjudication.

Legal Prospective

There are many areas in which the expertise of a neuropsychologist could be of great advantage to the Court, to the attorneys who are trying to make sense out of people's seemingly unreasonable behaviour, and often to the parties themselves who do not understand what is happening to them.

The most highly publicized and, thus, the most visible area of neuropsychology (as it relates to the legal field) is in the area of personal injury. Numerous cases throughout the country have demonstrated the value of psychologists and neuropsychologists in presenting and portraying severe damage done to an injured party by events which have left little in the way of physical residual scars (Waldman, 1987). As neuropsychology has progressed from the mid 70's through the 80's it is increasingly apparent that injured parties suffer as greatly from the harm done to their higher cognitive skills as to the more grossly defined injuries traditionally dealt with in

court. The victim of an automobile accident whose leg is severed at the knee and who must forego playing baseball or jogging is a sympathetic figure, and one which typically brings judgment from juries against the wrongdoer with substantial compensation awarded. Far more sympathetic, however, would be a victim of the same accident who is knocked unconscious for several hours, but who recovers with no permanent scar or visible motor dysfunction. As time passes that individual's home life deteriorates, his/her relationship with a spouse ends in divorce, personality dysfunction keeps him/her from promotion or terminates employment altogether, and retraining is difficult because he/she can't seem to "remember" or "learn". It then falls to the neuropsychologist and attorney, working together, to try and link the trauma to this seemingly amorphous residue of dysfunction.

A second major legal area for neuropsychology is disability in the work place. As the population grows older, and as technology changes, it is less likely that an injured employee who in the past might have been retained by a beneficent company in an "inspector" position will be held on and given a secure nominal position until he can retire at 65. Injured workers are increasingly being turned back into the job market by terminations, plant closings, and technological advancement. As these workers realize that they cannot obtain employment due to previous injuries or residual impairments, they are turning to the workman's compensation programs of the state and federal governments for compensation for their actual incapacity. Further, they are

calling on the safety net of Social Security to provide disability benefits for them and their families. Again the neuropsychologist, working with the lawyer, is a vital link in assessment and the determination of disability.

ROLE OF CLINICAL NEUROPSYCHOLOGY IN WORKER'S COMPENSATION

There is little question that a considerable amount of money can hinge on the outcome of a worker's compensation case: financially, some clients can potentially benefit (or lose) hundreds of thousands of dollars - essentially their anticipated future earning capacity minus their residual capacity. From a different perspective, such outcomes affect the insurance carrier losses. Further, the company purchasing such insurance may be faced with higher rates. Thus, the future of both individuals and organizations are intrinsically bound to be both directly and indirectly affected. Possible due to such high stakes, compensation cases often deteriorate into highly antagonistic encounters.

Medical experts have carved a comprehensive niche in the world of disability evaluation. To date, the following organizations have been formed to date to specifically address disability issues in medical cases: American Disability Evaluation Research Institute; National Association of Disability Evaluating Physicians; American Academy of Compensation Medicine; the American Academy of Occupational Medicine; and the American Occupational Medicine Association. There are, however,

no organized groups similar to these in psychology (Puente, 1989). Considering that historically most clinical neuropsychologists have focused on assessment issues (e.g., Seretny, Dean, Gray, & Hartlage, 1986) and that a large percentage of referrals have legal and work-related implications, this situation is indeed perplexing.

Statistics are not readily available for worker's compensation due to state government rules and to the fact that private insurance companies usually administer these programs. However, according to Bowe (1980) approximately 15% of the population of the U.S. experience physical and/or mental disability. Furthermore, the U.S. Bureau of the Census (1983) reported that work related disability (which would be covered by worker's compensation) ranges between 3% (16-25 years of age) to 24% (55-64 years of age).

Clinical Neuropsychological Assessment Issues

The clinical neuropsychological evaluation can be critical to a worker compensation case whenever the injury involves the brain. More preparation and effort is involved in these medical-legal evaluations than in standard clinical psychological evaluations. Moreover, worker compensation cases are oriented towards and involve issues that distinguish them from other legal cases. The following aspects of these evaluations: referral, evaluation, and court presentation will be specifically addressed.

Referral. Clients may be referred from one or more sources, sometimes placing the neuropsychologist in a potentially adversarial position. An evaluation may be

requested by an attorney or legal representative of the client to support the claimant's position. The referral question is typically concerned with determining what percentage of impairment exists. A focus on strengths and an interest in potentially confounding factors is rarely encouraged by this type of referral source. The neuropsychologist is quickly placed in an adversarial position since most clients do not request legal advice or representation until a negative situation has developed, i.e., when an undesirable offer has been made to the client by the insurance carrier.

Another source of referrals is worker's compensation insurance companies or their representatives. While these referrals may be prompted by the recommendation of the primary treating or consulting physician, they are usually generated by the insurance carrier because of doubts about the validity of the patient's complaints. In contrast to patient-initiated referrals, those from insurers tend to focus on the clarification of functional strengths rather than deficits of the client.

Less "antagonistic" referrals can come from physicians or other health care professional or attorneys who are genuinely interested in the welfare of the client. Thus, the goals of referral source reflect the motivation for the evaluation so that in all cases, the specific purpose of the referral needs to be clarified at the outset. However, while it is important to clarify the goal of the referring agent, the task of the clinical neuropsychologist should remain the same: to provide accurate, scientific data about the patient's neurobehavioral functioning at the time of the evaluation. For the

neuropsychologist to actually take an adversarial role not only negatively affects the welfare of the client but of the discipline. Such positions should be considered unethical.

Persons outside of the legal field probably misunderstand this aspect of the expert witness as much as any other area of law. While it is true that some experts may usually testify on behalf of plaintiffs, and others testify more often on behalf of defendants (or on behalf of the state in criminal proceedings, or in defense of doctors in malpractice actions, etc.), no expert should ever present evidence without fully and independently arriving at his/her own conclusion. It is important to recognize that attorneys do shop around for expert witnesses. With this in mind, a neuropsychologist who becomes involved with a patient who may have, based on the outcome of the evaluation, a claim for compensation, is to establish the objectivity of the process and make the report and the ultimate assessment as professional and objective as possible to avoid the appearance of being only a hired gun for one side or the other.

Pragmatic Issues. Most referral sources have little appreciation of the time and expense involved in a comprehensive neuropsychological evaluation. This is especially true in most compensation cases which include record review, testing and scoring time, dictation, discussion with attorneys, depositions and court appearances. It is important to provide an estimate of the time needed to review records and complete the evaluation with the less predictable time factors involving such issues as court

appearances to be decided upon at a later date. Another time issue involves the time taken to schedule the client to complete the evaluation, and submit a final report. This issue should be discussed prior to initiating the evaluation since court dates may affect the procedure.

Just as critical as time is the issue of payment. As stated earlier, worker compensation cases can have a significant impact on the financial status of both the individual and the employer and this financial concern carries over into the evaluation process. In order to minimize potential ethical complications, it is advisable to provide initial cost estimates with conditions for later adjustments clearly set forth.

A final pragmatic issue revolves around interested third parties. These could include defense attorneys, insurance companies, and even other health care professionals. These relationships should be clarified from the outset. Clear channels of communication, with emphasis on written communication, and specific roles for all parties must be clarified. This may be difficult with issues of payment of services since in most cases insurance companies fall into one of two categories: health or compensation. To maintain objectivity, the neuropsychologist should consider him/herself as a consultant in these cases, delegating primary care to other health care professionals. For example, the evaluating neuropsychologist should refer the client to another professional for therapy in order to maintain the objectivity of the initial evaluation.

Evaluation. Educating the patient is a preliminary step often ignored in any evaluation process, especially in compensation evaluations where the possibility of malingering, as well as lack of knowledge, makes the gathering of useful data a difficult task. The patient, and possibly the family, should be provided with a brief introduction to the field of clinical neuropsychology. Emphasis should be placed on the evaluation and procedures as well as their relationship to the legal questions.

When patients enter the legal sphere they may have already undergone significant testing, evaluation, and treatment by professionals in the fields of medicine, psychiatry, psychology, and neuropsychology and will arrive at the office of the lawyer with reams of documentation; alternatively they may come to the attorney's office with a smattering of medical data but presenting with physical and emotional problems which render them disabled, without knowing the reason for their dysfunction. The first of these circumstances provides an easy entry into the legal-neuropsychological realm. The treating professionals, at that point, usually have communicated among themselves, arrived at a reasonably clear picture of not only what has happened to the patient but what the manifestation and functional limitations of the injury or disease are, and thus can reasonably predict the implications for the client. The attorney's function in such a situation is to become fully conversant with all of the types of treatment, the expertise which has gone into the patient's evaluation, and to place that medical history - with the conclusions of the treating professionals - in the context of

the appropriate legal setting.

Unfortunately, all too frequently the presenting client does not come in with a full evaluation by a neuropsychologist in combination with the more traditional fields of neurology, psychiatry, psychology, or neurosurgery. The typical client approaching an attorney brings a problem ("I can't work because...", "I was hit on the head when I fell at the supermarket and now I can't remember...," "After the car accident just can't control myself and now I am in trouble for hitting a policeman..."). If the client has had any psychological workup prior to seeing the attorney, it will likely have been discounted by the more conventional areas of medicine, or will have been done in order to screen for possible psychological problems, not to detect neuropsychological dysfunction. In those circumstances, the attorney representing the client should not only recognize and evaluate the full medical and psychological history of the client, he/she has to be conversant with the tests and evaluations already performed, the limitations of those evaluations, and understand what additional evaluations are needed to document injury and correlate it to dysfunction. At the same time, the attorney must establish a nexus or causality between the dysfunction and the legal issue(s) at stake.

From a neuropsychologist's perspective, an evaluation should not be initiated until sufficient information is available. It is not unusual for a client to be accompanied by little or no prior records. Since neuropsychologists rarely are the first

health professional to evaluate a client, records are usually available and should be consulted. These records are critical to the full appreciation of the many variables impinging on the client's current level of functioning. Though not as common, but just as disruptive, is the situation where too much information is sent or the records are not coherently organized. When this occurs, records must be organized chronologically, according to discipline (e.g., neurology, neurosurgery, etc.) and according to tests or findings. Themes or patterns should be developed and hypotheses about deficits and strengths considered. This preliminary investigation allows for the development of a purposeful and directive interview, testing, and general evaluation.

Of particular importance in worker's compensation cases are work histories and related premorbid data. This information can often be obtained from job descriptions, annual evaluations, and co-worker interviews. Additional data can be obtained from the Armed Services as well as school or university records. As one might anticipate, such records are often difficult to locate. However, this type of information is critical to the development of an accurate and comprehensive picture of the client's premorbid level of functioning.

A word of caution regarding record keeping: Records used in evaluation or entered as testimony can be legally requested by the courts. If taken to the stand during testimony records will certainly be reviewed. While some forensic experts suggest that notes and evaluation materials should not be reviewed by others, the

possibility of review does exist. Thus, careful record keeping is a must. The problems that arise from illegibly written notes, incompletely filled out test forms and poorly or incompletely recorded test responses can be avoided.

As with any other neuropsychological evaluation, the interview is the foundation for clinical data gathering. Excellent interview formats or protocols can be found elsewhere and will not be dealt with here. However, variations are applicable. For example, interviews should be completed not only with the client and significant others but (if possible) with co-workers and employers (e.g., immediate supervisor). Additionally, several evaluations may help in addressing issues of validity. Similarities should be noted and discrepancies should be further explored.

Regarding test batteries, neither industrial commissions nor Social Security Administration have expressed a preference for flexible or standardized approaches. The merits and shortcomings of each approach have been presented in several chapters of Incagnoli, Goldstein, and Golden's (1986) Clinical Application of Neuropsychological Test Batteries. The type of problem and the issue in question may help determine the approach. Tailoring the evaluation both to the complaints or the residual effects of the trauma, as well as to the specific vocational tasks may be helpful. Work potential may be similarly considered by using appropriate tests. While this approach implies the merits of a flexible or non-standardized approach, testimony based upon standardized criteria is less susceptible to attack.

One method to deal with this issue is to use tests accepted by other governmental agencies such as the Social Security Administration. Well accepted tests such as the WAIS-R, Halstead-Reitan and Luria-Nebraska Neuropsychological-Batteries should form the foundation for compensation evaluation. If non-standardized, experimental, or new assessment strategies or tests are used, these can be anchored to the basic tests (e.g., WAIS-R), both in terms of the logic or rationale for doing the test and with respect to enhancing or expanding the original data. If one prefers non-standardized or more flexible approaches, care must be taken to carefully explain the rationale for test selection and to limit the inferences about the obtained data.

Care should also be taken to deal with such standard testing issues as the use of a technician. While considered an acceptable and common practice by such groups such as Division 40 (Clinical Neuropsychology) of the American Psychological Association, and by many neuropsychologists (e.g. Seretny, Dean, Gray & Hartlage, 1986), attorneys question the credibility of test results not directly obtained by the neuropsychologist. The credibility of the technician and the lack of direct observation are presented as confounds by opposing attorneys. Some of these problems can be avoided with proper testimony of the neuropsychologist in regard to training and use of the technician. Variables such as fatigue, time of day of testing, and medications, take on an important role in determining the residual functional capacity of the worker. Thus, careful pre-test planning may not only increase the scientific validity of the

results, but also reduce complications in later deposition or testimony.

Malingering. In any compensation case, the issue of secondary gain becomes a primary concern and thus needs to be addressed. Malingering may be defined as "the fabrication or gross exaggeration of physical and/or psychological symptoms" (Rogers, 1985). This exaggeration may include, but not be limited to the presentation of new symptoms that could be related to the trauma (e.g., personality changes in mild head injury), exaggeration of symptoms already present or fabrication of clinical symptoms quite unrelated to the trauma in question. All pose serious difficulties to the clinician. This is especially the case since the symptoms of mild head injury often present as psychiatric problems (Binder, 1986; Kelly, 1980; Miller, 1961) and the potential for secondary gain (e.g., financial settlement) is often present (Derebbery, & Tullis, 1983; Johnson, 1987).

According to Rogers (1985) malingerers can easily fake unusual symptoms as well as general degree of impairment. What is most difficult to fake is subtle (or less understood) negative, and combined symptoms. In an interview situation, malingering of mental illness tends to produce unusual attitudes towards the clinician (Resnick, 1984). This includes unusual presentation and a willingness to discuss symptoms. The focus is typically on form rather than content. With regards to organic symptoms, malingers may also tend to over present their "problem". Malingerers exaggerate organic symptoms even when compared to patients actually suffering from diffuse

brain damage. Other issues considered by Rogers includes deliberateness and carefulness as evidenced by stalling and hedging. This may be reflected in slower response times, repetition of questions, and tendency to provide complex responses to simple questions. Finally, consistency is a key factor in determining valid symptoms. Thus, brief interviews conducted over several days rather than a single, lengthy interview, may provide measures of self-report reliability.

With regards to testing, the neuropsychologist can focus both on direct and indirect measures of faking. For example, Gynther (1961) indicated that the F and K scales of the MMPI may be useful for the detection of faking. Specifically, the F scale is rarely endorsed by psychiatric patients while the K scale may provide a barometer of symptom presentation. More recently, Osborne, Collegan, and Offord (1986) have provided support for the use of the F-K value (raw score) as a robust dissimulation index. According to Heaton, Smith, Lehman, and Vogt (1978) a score of $\geq$+5 could be considered useful for detecting faking bad even in those with neurological impairment.

Benton and Spreen (1961) indicated that faking was evident on the Visual Memory Test using quantitative measures alone (i.e., malingerers did worse than brain damaged patients). Faking can also be detected by observing patterns of responses rather than simple quantitative analyses of the responses to the Halstead-Reitan Neuropsychological Battery (Heaton, et al., 1978). Similar findings have been noted with the Luria-Nebraska Neuropsychological Battery. Mensch and Woods (1986)

reported that items on the Motor, Rhythm, and Tactile (the first three clinical scales) were most often faked by those who wished to present themselves as impaired.

The evaluation of the validity of memory impairments can also be addressed using the method developed by Pankratz and colleagues. Using the Symptom Validity Test, Binder and Pankratz (1987) assessed the probability of faking bad by presenting 100 (or more) trials of a simple visual or auditory memory discrimination task. Malingerers will most likely exhibit significantly more errors than would be expected by chance.

Although such clues may lead to a suspicion of malingering, there is no clear and easy way to detect fabrication or exaggeration of symptoms. Even if an individual produces an atypical pattern of scores, one cannot assume on this basis alone that they are faking. Careful review of records, extensive and multiple interviews and a pattern analysis of structured and unstructured instruments must all be considered in making such determinations.

Interpretation of Results. By far the greatest error in worker's compensation cases, and probably in most neuropsychological evaluations, is the tendency to make unwarranted inferences or to ignore information that is incongruent with the general conclusions that have been reached. While overinterpretation or oversimplification may be encouraged by pressure within the legal system for certainty, they pose clear problems on both scientific and ethical grounds. For pragmatic reasons as well, it is

preferable to arrive at a tentative conclusion and to address inconsistencies than have to defend invalid inferences when facing a knowledgeable cross examining attorney, or a competent neuropsychologist hired by the opposing counsel to review and critique the evaluation and report. Even if the substance of the report is correct, it may not be accepted once credibility has been lost.

Criticism can also arise when neuropsychologists attempt to address dysfunction from an anatomical perspective. This criticism is not valid. Neuropsychologists inevitably do have to address the relationship between the presenting symptoms and the alleged accident. The question is whether the observed symptoms are most probably caused by the injury in question. If the injury is related in any way to the symptoms, then the data should be considered useful and credible. This includes the issues of confounding variables. Indeed a head injury could exacerbate the residual effects of other damage. If any change in the behavior is noted and the change could reasonably be attributed to the injury, then it should be considered by the Industrial Commission.

Report. Reports for worker's compensation cases differ somewhat from standard clinical reports. Beyond the usual identifying information, reason of referral, evaluation procedure, history, clinical findings, test results, summary and conclusion, there should also be an especially comprehensive report on premorbid functioning. As well, a clear description of current abilities as well as residual dysfunction, must be

provided, especially as these pertain to work related activities. For example, if the individual's position requires attending for brief periods of time to alternating auditory stimuli, one could relate the findings of the Paced Auditory Serial Task to the requirements of the vocational task. Unfortunately, there has been little research to date that relates neuropsychological test scores to performance on vocational tasks. Indeed, the absence of such data is seen as a major weakness with respect to the predictive validity of neuropsychological assessment. Nonetheless, the deficits found must be related to prior and future employment. This is often best achieved by examining this issue with a vocational expert who may be better able to equate neuropsychological deficits to job performance. With respect to the issue of employability, it is important to consider not only the most appropriate type of employment for which the client is now suited but also the availability of such employment and the likelihood of the client being hired in a competitive job market. Economists may also be involved to more accurately determine specific dollar figures with respect to total lost earning capacity coupled with anticipated costs for future medical and psychological care. Psychological treatment and rehabilitative potential and approaches can also be considered.

The neuropsychology report prepared for worker's compensation cases needs careful preparation to ensure that the required detail is presented in an organized and succinct fashion. Regardless of the length, the neuropsychologist should carefully

scrutinize their written presentation and possibly have the data reviewed by others, such as another neuropsychologist, prior to its submission.

The segment that most differentiates the worker's compensation report from others, is that of the "rating". This is a percentage of impairment based on guidelines published periodically by the American Medical Association and, sometimes by the state industrial agencies. As seen in Table 1, a composite percentage with rehabilitation potential is presented. As unempirical as such an approach might be, this percentage rating may be the most critical aspect of a neuropsychological report in worker's compensation cases. Surprisingly, however, it is also this portion of the report that is least contested by attorneys. In the final analyses, the outcome of the compensation hearing hinges on the actual rating. As Table 1 indicates, a specific rating is provided for each type of problem/behavior. In addition, the potential for rehabilitation is also assessed. These ratings are then compounded into a composite or overall rating. It is this rating that is used by the Commission to establish final compensation for the worker.

Accompanying the report may be an introductory letter briefly explaining such issues as purpose, procedure, and overall results of the evaluation which can be incorporated into the report itself. Attached to the letter should be a detailed (and easily understood) billing statement. This statement will also be reviewed by others and may become part of the case record.

Court-Related Issues

Preparation. The key to any forensic case presentation or court appearance is preparation. The first person to prepare for a court- or court-related appearance, such as a deposition, is the author of the report. Editorial scrutiny similar to that of a journal review of an experimental manuscript is needed. A preliminary consultation, with a review of potential questions with the attorney, should help in clarifying the issues. The client should be advised of potential procedures and complications.

Statement or Affidavit. Some attorneys prefer a signed written statement that may clarify the issue at hand. Although not extensively used in neuropsychological cases of worker's compensation, legal representatives may prefer to draft questions to be answered. Response can be by affidavit, letter, or other format.

Deposition. This is an examination conducted by one or both attorneys in the presence of a court reporter. This may be preliminary to later in-court testimony, or may be in lieu of testimony. As with any form of data presentation, extreme care should be taken not to incorrectly present the issues or the intended inferences or conclusions.

Court Appearance. While some neuropsychologists prefer not to appear in court, the likelihood of such an appearance in a worker's compensation case is relatively high. The first test in any legal proceeding involving the testimony of a neuropsychologist is going to be whether the testimony itself, or the person offering the testimony, is

competent to sit upon the witness stand and talk about the client. Competence is a term of legal art and is an all or nothing decision, generally made by the judge or whoever will decide the case. If a witness is ruled incompetent, then the testimony will not be heard by the jury and will be excluded in its entirety.

Throughout legal history there have been an impressive number of persons who were deemed incompetent to testify, including spouses, infidels, and felons. Those absolute bars to testimony have generally been stricken from the rules of evidence of the states, various commissions and the federal courts. The term competency, now, as it is more generally used, is an issue of relevance in regard to the qualification of the individual who is going to testify, or the admissibility of the underlying tests on which opinions are to be given.

In order to prevent the exclusion of the test results, the neuropsychologist and counsel should work carefully to research the validity and reliability of the particular tests and methods. They must ensure that the methods used are generally accepted in the scientific community or professional community out of which the expert is testifying, and that the person who administered the specific test or performed the analysis had the appropriate background qualifications. With the qualifications of the expert and tests established, the foundation is laid. It is then appropriate to discuss the test results and clinical analysis as part of the professional opinion of the neuropsychologist. Care should be taken, however, to make certain that the elements

for validity of conclusions are presented in direct examination of the expert, so that the results are not successfully objected to as incompetent, thereby undermining the foundation on which the neuropsychologist's ultimate opinion rests.

One of the issues which has arisen in the areas of psychology and neuropsychology is the competency to give a "medical opinion" as to a mental disorder or dysfunction. In these cases it is important to note that "medical" can include psychological. Total disqualification - complete exclusion - on the basis of competence was earlier ruled upon by the federal courts when the Court of Appeals for the District of Columbia noted that "The general rule is that anyone who is shown to have special knowledge and skill in diagnosing and treating human ailments is qualified to testify as an expert, if his learning and training show that he is qualified to give an opinion on a particular question and issue." Jenkins vs. United States, 307 F.2d 637, 643 (D.C. Cir. 1962).

A neuropsychologist can expect virtually every question addressed to him/her to obtain the expert testimony in the courtroom to meet with objection from counsel for the other side. The objections will be to the effect that a neuropsychologist, while possible an expert of sorts, is not a competent person to render a medical opinion. While the weight of authority is in favor of allowing neuropsychologists to testify and give expert opinion, litigants regularly will find judges at the trial court level who will rule adversely unless carefully instructed. Judges are obviously not health care

professionals and, thus, they often lack expertise in numerous health-related areas, especially in new and emerging subdisciplines. Judges need to be educated as to how the neuropsychologist may aid in the adjudication process. It is thus critical, if the neuropsychologist is to not have their ultimate opinion ruled incompetent during direct examination, to fully and completely set out how the client was interviewed, what considerations were taken in coming to a decision, and how the opinion was derived, relating it with specificity to the expert's field of neuropsychology. This could include extensive explanation of the field of clinical neuropsychology, the training and expertise of the neuropsychologist as well as of the evaluation procedures. Specifically, information about data gathering, types of tests, and limitations, or confounds would be appropriate.

The Expert's Opinion

Historically courts have been reluctant to allow an expert's opinions as to what may be considered the "ultimate facts" to be decided. This is due to the perceived prejudicial impact of an expert's opinion on the jury outweighing any assistance it might otherwise give to the trier of fact. Courts historically don't want to allow experts to come into a courtroom and decide the case for the jury. Someone recognized and qualified as an expert is entitled to give opinions from the witness stand, and have those opinions accepted as facts, whereas a non-expert can only testify

as to what he or she has personally observed and may not offer opinions. Thus by the recognition of a neuropsychologist as an expert, the Court is giving permission for them to draw inferences from facts - including tests, clinical evaluations, and third party communications (which would be labelled hearsay if presented by a non-expert witness) - therefore achieving such recognition a major tactical victory.

The modern definition of expert varies considerably. Supported by hundreds of appellate decisions, an expert is now considered an individual who is better qualified than the jury to draw appropriate inferences from a factual situation based upon skill, education, background, training, or simple observational capacity. As discussed earlier, judges at the trial level continue to be reluctant to allow expert status of a witness. On a frequent basis either the witness's entire testimony - or the testimony or opinions as to specific issues will be denied competency by a judge who will rule that the jury is equally as well able to determine an issue as the testifying witness. When challenged for competency as an expert witness at the outset, or when an opinion is challenged, it is critical that the attorney establish a clear foundation of education, training, experience, and expertise higher than any which could be reasonably expected to exist in the jury. Whether a witness qualifies as an expert is a question of fact and is considered to be within the exclusive province of the trial judge. The significance of this cannot be over emphasized from a litigant's point of view: If the trial judge rules the witness incompetent at hearing, the ruling will likely be sustained on appeal and

the entire testimony of the neuropsychologist - or perhaps a crucial opinion - may be excluded.

Establishing Relevance and Credibility

Two terms that the neuropsychologist may hear in a courtroom, with overlapping meanings, are "relevance" and "credibility". These mean similar things in a legal proceeding, but they do have different consequences. For a working definition the term relevance can be considered to answer the question, "If this fact is introduced, does it have any bearing on what is to be decided by the Judge or the jury?". Credibility answers the question, "If this fact is introduced, does it support the testimony of the expert?". For the litigating attorney the differentiation of relevance and credibility is significant, since the court, whether it be a judge, hearing officer, or other, is required to assess every question and answer as to its applicability or relevance to the proceedings. Thus, an objection by a party as to relevance of testimony of a neuropsychologist puts at issue whether the testimony will be heard. Credibility of the evidence, i.e., whether the fact to be placed into evidence supports the opinion of the expert, is for the jury or fact finder to determine but the testimony itself is not barred.

Assume a case of an injured worker who has received a blow to the head: a testing instrument documents severe brain damage evidencing itself in some basic cognitive dysfunction. When the neuropsychologist is placed on the witness stand the

first objection will be to his competency as an expert; the second will be to his competency to describe the result of tests in to the hearing testimony; the third objection will be to the competency of the neuropsychologist to render an opinion; the next will be to the relevance of the testimony to prove anything of legal significance to the case; the following objection will be to the relevance of the tests to the dysfunction and disability exhibited by the claimant, then (assuming all other objections are overruled and the testimony is allowed) the final objection will be that the credibility of the entire testimony is so low as to be inadmissible or to undercut it to such an extent as to be unbelievable. Stated another way, the final objection is that assuming all of the evidence was appropriate to be heard by the jury, they shouldn't believe that the information actually means what the neuropsychologist said it meant.

It is helpful to understand that the testimony of a neuropsychologist, like the testimony of physicians and other professionals who deal with an injured, disabled, or damaged human being does not in and of itself "prove" a case for the client. To visualize this, imagine two islands in a body of water, separated by an inlet, one island being the client, the other island the legal goal which is being sought by the client, whether it is recovery of money, disability benefits, revocation of a contract or will, nullification of a divorce, etc. The neuropsychologist, as well as the other professionals, is essentially called upon to define the condition of the first island, the patient. They have to chart its contour, determine whether there has been an injury,

determine how severe that injury is, and determine if anything can be done to repair the injury, make it well, or put the island back in the condition that it was originally.

On the second island, complete with all of the goals sought in the legal proceeding, is an amalgamation of problems the patient says that he is having, difficulties they have doing their job, getting work, relating to other people, learning, or understanding things about themselves. The function of the neuropsychologist is to construct a bridge from one island to the next, categorize those difficulties which are being experienced by the patient and identify for the legal system which of the functional restrictions are related to the damage. A second aspect of the linking of the patient to the symptoms and subjective problems, is the opinion, as an expert, as to whether the actual dysfunction is reasonably to be expected in the individual given the degree of pathology evident in their evaluation. It is not the role of the expert to testify as to whether the patient <u>was</u> hit on the head, nor how much force was exerted in the blow, nor how long he was unconscious. The proof of those issues is for the attorney and client to establish. The role of the neuropsychologist, in litigation, is to identify for the attorney the major operative factors, accept and assume the testimony as offered by the client and developed at trial, and then to define, for the judge and a jury the extent or degree to which the client has been damaged by the trauma received.

A neuropsychologist is, therefore required to construct a bridge of understanding for the court from the damaged client to the disabilities experienced. It is reasonable

to assume that not all symptoms displayed by a brain damaged individual will correlate directly to the findings, and it is equally true that most people who are evaluated come to their accident, injury, or period of incapacity already ladened with a lifetime of events which have contributed to their overall condition. The neuropsychologist is called upon as an expert to try and differentiate those limitations which do seem, with a reasonable degree of probability, to be related to the trauma.

The issues of degree of impairment, compensability, inability to work, or future prognosis and expected course of the condition are all areas in which it may be appropriate for the neuropsychologist to render an informed, expert opinion. These are also areas in which opposing counsel will object strenuously on the basis of competency, relevance, and credibility. For example, a blow to the head which might restrict short term memory and the learning of new material may be related to a patient's inability to succeed in a retraining environment at work. The bridge having been established from the trauma to the reported symptoms can then be used to clearly define the damage, with statements of possible treatment, further decline in condition, and effect on life situations not yet experienced by the patient.

The role of the neuropsychologist has ended when damage is fully defined. It is the lawyer's function to argue the proof to the judge and jury and to provide the materials from which the neuropsychologist can construct the bridge. While the patient, and third party observations and circumstantial evidence can provide the raw

material, it lies within the particular realm of the neuropsychologist to shape and define the boundaries of the dysfunction. The attorney then can work with professional opinions offered as to the degree of injury and can place them in their proper legal context. Assuming all evidence is allowed to get to the fact finder, (whether that be judge or jury) the final question is whether the definition of the "first island", the construction of the bridge, and the elaboration the difficulties to the patient, of the "second island" are sufficient to allow for compensation or recompense.

Content of Testimony

Most neuropsychologists are closely allied with the medical profession, many are involved in academics, and most all have had a significant relationship with the practices of psychiatry and clinical psychology. None of these professions is given to making definitive statements about patients, and, like medical students, most neuropsychologists are nurtured in the belief that what they present as an opinion is best propounded in the conditional: may have caused, might have caused, could have been caused, will probably be, etc. The legal system, on the other hand, looks for definitives and punishes those who do not express themselves in absolute terms. Neuropsychologists will often be called upon to testify in situations where they will be given a fairly free rein to describe their methodology. It is imperative that the expert witness know what questions counsel can and cannot ask and the direction these

questions can take. The basic rule is that a witness called by a client's lawyer can be asked only questions which do not suggest a correct answer. Thus, when plaintiff's counsel asks a neuropsychologist "When did you first see the client and what did you do?" the field is open. There is very little the attorney should do other than keep the testimony running in the proper direction. It is appropriate for the neuropsychologist to testify about all of their observations of the patient, to testify about all of the testing methodologies used to detect brain damage and to give an opinion as to the relationship between the clinical evaluation and permanent damage, as well as any permanent damage and incapacity or disability of the patient.

In most jurisdictions, it is proper at the end of the expert's testimony for counsel to present a question either based on an actual set of facts, or a set of hypothetical statements. Older laws required an expert witness to offer an opinion only in response to a hypothetical propounded (now assume the following facts, a 35 year old male with a ninth grade education...), which gave a bizarre aspect to courtroom proceedings. The expert often testified for days about a specific patient, only to conclude testimony with response to a "hypothetical" set of facts. The more modern rule, in effect in most jurisdictions, is to pose the question as to whether the expert has, to a reasonable degree of certainty within their field of expertise, an opinion as to diagnosis, damage, impairment, or whatever. Although the terminology varies from jurisdiction to jurisdiction, the neuropsychologist should be aware that the response to a hypothetical

question or a question concerning the actual patient - or even a spontaneous statement which gives an opinion - should express an opinion to a reasonable degree of certainly, or high degree of probability, consistent with the field of expertise. Conditional words such as "may", "might", or "it is possible..." which may sound fine in conversation or in the course of testifying, stand out when the testimony is reduced to writing and an appeals court is looking for error. While the academic and even the medical professions allow for probabilistic models, the judicial system is harsh to the point of punitiveness for what is perceived as uncertainty. The last thing a neuropsychologist wishes to hear, listening to the jury summation by opposing counsel, are words quoted back: "And you heard their own witness say that the blow to the head may have caused his memory problems. Even their own expert didn't know the blow caused any injury, he was only guessing."

Conclusions and Legal Proceedings

From the position of the counsel for a client for whom a neuropsychologist is testifying, there are three major and distinct stages in the course of the neuropsychological/legal relationship. They are:

1. Evaluation to determine, whether the client has brain damage.
2. Assessment of the damage to determine causation and extent.
3. If damage is present, and causation and extent identified, what affect do

they have on the client's functional capabilities?

With a proper initial consultation the first question, the presence of brain damage, should be answered so that the claim can either proceed or be dropped. This could include clear neuroradiological findings or patterns of behavioral dysfunction highly similar to patterns observed in specific syndromes (e.g., post-concussive syndrome). If the matter proceeds, the attorney knows that he is going to be called upon to prove legal causation of the injury, as well as the relationship between the injury and the full extent of the impairments.

The rule used by courts to define just how far an expert can go in testifying is that the expert may express an opinion to whatever extent and to whatever degree his expertise will allow him to do so, but he should not "invade the province" of the jury as the ultimate determiner of fact. Just how close a judge will allow the expert neuropsychologist to go in concluding the "ultimate" facts in a case depends on how well the judge understands the science of neuropsychology, how well the initial factual background is laid prior to the neuropsychologist's testimony, and how well the neuropsychologist conveyed his professionalism to the court. As happens over and over again, in cases in which physicians testify, by the time the "opinions" of experts has ceased, there is nothing left for the jury to do but decide a dollar amount: the experts will have completely defined the two islands, of injury and damage, constructed a bridge of causation, and predicted the future course of the patient. Such

completeness should be the testimonial goal of the neuropsychologist and counsel for the injured party. By the conclusion of the testimony the judge and jury should be convinced of the validity of the practice of neuropsychology as a distinct area of the expertise and should be comfortable with the conclusions which can be reasonably drawn from a competent professional in the field.

The Relevance of Neuropsychological Data

The question of the validity of symptoms has made it difficult for psychologists to become involved in compensation cases. This problem is magnified in the field of clinical neuropsychology. While the efficacy of clinical neuropsychological assessment of the delineation of a higher-order deficits is well documented and generally accepted by both psychological and medical professions, it has received less than enthusiastic acceptance from significant segments of the legal profession (e.g., judges) and even weaker reception from insurance and compensation companies.

An excellent example of the situation is the Horne vs. Goodson (Marvin L. Goodson Logging Co. v. Edward Horne, (N.C. App. 3-6-85)) case in which both chapter authors were involved, Antonio E. Puente as clinical neuropsychologist and James B. Gillespie as attorney. In this case, Edward Horne was injured at his job in a lumber camp when a 1,000 lb pine tree/log fell 14 feet on his head driving him several inches into the ground and injuring several of his teeth and vertebrae. Initial

emergency room evaluations did not reveal specific brain injury, but Mr. Horne's wife requested additional medical assistance since her husband had begun to act "very differently". A cursory examination long after the accident by a neurosurgeon, a skull x-ray, and a non-contrast CT scan (approximately one year post injury) did not reveal the existence of "brain damage". The patient was discharged from the neurosurgeon's care with a suggestion to take aspirin to relieve his pain.

Eventually Mr. Horne's case was brought to the attention of Mr. Gillespie who referred the client to Antonio Puente. An exhaustive clinical neuropsychological examination was performed in the manner described above. This entailed extensive review of records, interviews with several family members, and a multi-session neuropsychological evaluation spanning a period of several months. A comprehensive report was submitted to counsel.

On March 6, 1985, the Industrial Commission of North Carolina ruled in favor of the employer and compensation carrier stating that the testimony provided by the clinical neuropsychologist was neither relevant nor credible. Neither the evaluation, the findings, nor the qualifications of the neuropsychologist were accepted. Instead, the neurosurgeon's testimony was accepted by the court because a medical background was considered necessary to comment on a complaint of an "organic" nature.

The North Carolina Psychological Association (including Ann Majestic, Attorney, Sally Cameron, Executive Director, and Landy Anderton, Legislative Affairs

Committee Chairperson) and the American Psychological Association (Bryant Welch, Director of the Practice Directorate, Anne Marie O'Keefe, and Donald Bersoff, Counselor) submitted a most comprehensive amicus brief to the North Carolina Court of Appeals in 1986. Based on a new and more comprehensive review of the case, the higher court reversed the lower court decision with respect to the issue of competency of psychologists to render testimony under the Worker's Compensation Act. The determination of credibility was left to the discretion of the lower courts. The neuropsychological evidence was then considered but rejected, this time on the grounds of credibility. On August 25, 1989, Lawrence Shuping, Deputy Commissioner, ruled that Mr. Horne "has not suffered any type of disabling permanent brain injury with associated adverse physical and/or behavioral manifestation".

The tragedy of this ruling is that it prevents Mr. Horne from collecting disability pension for job related injuries. Thus, in spite of the marked changes in personality and cognition noted since the accident by Mr. Horne's wife and family and documented through a comprehensive neuropsychological evaluation, Mr. Horne returned to his job with the logging company. He was subsequently involved in an accident while operating his logging truck. The accident resulted in the death of two young girls.

The legal tradition has nurtured the view that it is better to err on the side of a false negative decision. This is wise in most forensic situations whereby the cost of

false positive decision could cost innocent persons their freedom, or in some states, their lives. This may not be an appropriate model, however, in decisions regarding the neuropsychological consequences of brain damage where the "costs" of a false positive are far less serious than the risks of pressing cognitively impaired individuals back into positions that have the potential of putting them and others at risk.

Summary

There is a requirement that representatives from both professions learn enough about each other's perspective disciplines so as to facilitate the just settlement of legal decisions regarding the loss or diminution of cognitive function. In the legal system a client comes to an attorney with a specific goal; the attorney gathers information to obtain the desired result for the client; the goal is obtained or not obtained; and the attorney/client relationship is severed. The focus in litigation is apt, therefore, to be quite different from the focus in a treatment system, (or even an evaluation process) which has as its ultimate goal the long-term rendering of health care to a patient.

As a consequence, the testing, evaluations, and measurement of difficulty in the brain-damaged individual by the psychologist is traditionally going to be treatment oriented; the motivation of the legal system is to arrive at specific answers, tie them to legal criteria, resolve the legal issue, and dispose of the case with finality. These conflicting orientations of the two systems involved are often at the bottom of misunderstandings which may take place between neuropsychologist and attorney, even

when there is the best attempts at communication and understanding.

With the increasing interrelationship between neuropsychology and the law, it is vital that the neuropsychologist understand clearly the legal framework in which the patient is placed, the goals which will be sought by the attorney and the type of evidence which needs to be obtained to address the legal issues. It may be relatively easy to determine the presence of brain damage in order to make a diagnosis and to make recommendations for treatment on probation of a minor criminal offense. On the other hand, it is substantially more difficult to provide the full analysis - including the functional restrictions and limitations in the employment sector - of individuals who come to their injury often encumbered by a lifetime of experiences that render them more or less vulnerable to the injury for which they are claiming compensation.

Once the basic examination process is complete, it is not improper - and, in fact, is crucial - that the neuropsychologist work closely with the lawyer in developing and presenting the evidence which is necessary to substantiate the findings. Just as the expert must clearly understand what is being asked in a legal sense in terms of an opinion and the conclusions to be drawn from the opinion, so counsel needs to be appraised of what information to ask for from the neuropsychologist to establish a basis for the subsequent expert testimony.

The educational process is fourfold. First, neuropsychologists must be prepared to defend their qualifications, especially those pertaining to their training and

experience in assessing neuropsychological disorders. Secondly, neuropsychologists must provide information about clinical neuropsychology as a discipline and the evaluations performed. Thirdly, the neuropsychologist must provide a thorough description of the client, the accident, and the residuals of that accident. This must include an explanation of the degree to which historical, clinical, and psychometric analyses explain both premorbid, confounding factors as well as residual deficits.

After the neuropsychologist has made a determination, in the case, the goal is to present it in an understandable way to those who will see the information and make decisions: i.e., to achieve the goal that is being sought by the attorney and client. Just as the attorney cannot remain silent as to the purpose of the evaluations, the goals sought by the patient, or the methods or form which will be used to achieve those goals, neither should the neuropsychologist leave the attorney in the dark as to how his/her opinion was reached, what formed the basis of that opinion, and what challenges may be raised to those opinions. At all times, the attorney and the neuropsychologist must work together as a professional team, whose goal is the determination of whether there is objective evidence of dysfunction which can reasonably be attributable to brain damage.

While a team effort is required, it is essential that the neuropsychologist arrive at an independent decision as to the nature and consequences of the injury in question. An unbiased approach and presentation are critical to effective communication of

neuropsychological data to the court. To do otherwise would endanger potentially valuable information, the welfare of the client, and the worth of the discipline.

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