The practice of forensic neuropsychology has experienced tremendous growth over the past two decades, becoming perhaps the most rapidly expanding area of practice within the field of clinical neuropsychology. Indeed, there have been many important advancements in the field that have helped to position neuropsychologists as instrumental participants within the forensic arena. Yet, there is currently no consensus in our field regarding what constitutes competency in forensic neuropsychology and also no specific guidelines or standards of practice to inform neuropsychologists about how to operate in the forensic arena. There are even fewer safeguards to protect the public from questionable methods of practice. This article provides a status report on the practice of forensic neuropsychology. It employs a framework emphasized by Otto and Heilbrun (2002) in their assessment of the field of forensic psychology. Emphasis is directed toward identifying recent advances in the field and documenting some of the inherent flaws and weaknesses in forensic practice to help advance the practice of forensic neuropsychology toward a more established specialty area.

Neuropsychologists are also utilized in cases involving workers’ compensation, disability determination, educational due process within public school systems, personal injury, criminal, child custody, impaired professional and “fitness for duty”, competency, and other cases in which adversarial administrative and judicial determinations are involved (Sweet, 1999).

Why are clinical neuropsychologists being called upon more frequently to consult and testify in adversarial proceedings? Sweet (1999) felt that this was a natural outcome of the success of a strong scientist-practitioner orientation. As scientist-practitioners, clinical
neuropsychologists are familiar with disciplined scrutiny (i.e., peer review), clinical procedures emphasizing data-based decision-making (i.e., accountability), and a hypothesis-testing approach (i.e., objective differential diagnosis) to answer questions. Thus, neuropsychologists are seemingly well-suited to operate in the forensic arena. It is reasonable to assume that there are probably thousands of IME’s and forensic neuropsychological evaluations conducted annually by neuropsychologists. Thus, it appears that we have established our worth to attorneys and insurance carriers, two of the most common sources of neuropsychological referrals. But, we cannot be complacent. In order to maintain our success and facilitate our growth in the forensic arena now and into the future, we must continue to work toward establishing and maintaining the credibility of forensic neuropsychology specifically and clinical neuropsychology generally, especially in the context of changing evidentiary standards, such as resulted from Daubert v. Merrill Dow Pharmaceuticals, Inc. (1993), which toughens the criterion for admissibility of evidence (Dixon & Gill, 2002).

DEFINITION OF FORENSIC NEUROPSYCHOLOGY

This article is not meant to serve as a review of the relevant literature on the practice of forensic neuropsychology. For that, the reader is referred to any of a number of articles (Bush, 2003; Heilbronner & Pliskin, 2002; Larrabee 2000b); special issues of journals (Heilbronner, 1992; Larrabee, 2000a); and books (Larrabee, in press; Sweet, 1999; McAffrey et al., 1997). Rather, the goal is to help the reader understand how far forensic neuropsychology has come and how far it must yet go to achieve a level of practice that reasonably ensures that consumers (i.e., attorneys, judges, plaintiffs, defendants, etc.) are receiving a product of value.

Forensic is derived from the Latin *forensis*, meaning public. Although it is commonly used when talking about formal forensic activities, this definition includes all activities related to public discussion and debate (Sweet, 1999). As it relates to neuropsychology, forensic neuropsychology involves the “application of neuropsychology to civil and criminal legal proceedings” (Larrabee, 2000a). It includes those “...activities of neuropsychologists that involve rendering an opinion that will be ‘argued’ or, in some manner, adjudicated by others (Sweet, Grote, & van Gorp, 2002). From a practical standpoint, the following may help to define the topic even more clearly: clinical neuropsychology can be described as integration between psychology and neurology. Similarly, forensic neuropsychology can be regarded as a hybrid, combining neuropsychological science and practice with forensic science and practice.

Who is qualified to practice forensic neuropsychology? For the most part, individual practitioners have had to decide for themselves if they possess the necessary education, skills, and experience to practice in the forensic arena. This is a chancy proposition, as psychologists are not always the best judge of their abilities. In forensic practice, psychologists may be more likely to overestimate their skills and abilities. Those who underestimate their skills probably would not be inclined to offer their services as an expert. A neuropsychologist’s overestimation of his/her ability to function competently in court (no matter how well-intentioned) can have significant implications for the rest of us. I am not suggesting that someone needs to become an “expert in forensic neuropsychology” in order to operate in the forensic arena. In fact, Rule 702 of the Federal Rules of Evidence (1997) allows a witness qualified as an expert by “...knowledge, skill, experience, training, or education to testify if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact in issue.” At present, courts do not require that a neuropsychologist who opines about relevant issues that are to be applied in legal proceedings to be board-certified or even to have
completed a postdoctoral residency in clinical neuropsychology. In fact, courts may not be all that familiar (Redding, Floyd, & Hawk, 2001) with the guidelines for education and training in clinical neuropsychology that have been developed (Hannay et al., 1998) or definitions of a clinical neuropsychologist (International Neuropsychological Society/Division 40 of the American Psychological Association 1989; National Academy of Neuropsychology, 2003).

At present, there are no established criteria related to the use of the term “forensic neuropsychologist.” There are also no laws or regulations to prohibit one from using this term, just as in 49 of 50 states (Louisiana being the exception) anyone can call themselves a clinical neuropsychologist. There are only a few individuals in the United States who are board-certified (through ardent peer review and examination) in clinical neuropsychology and forensic psychology. These individuals could justifiably call themselves forensic neuropsychologists if the majority of what they do is clinical neuropsychology activities for forensic purposes. Until there are recognized guidelines for training and practice in forensic neuropsychology, the phrase, clinical neuropsychologist specializing in forensic practice would help to distinguish those whose work is primarily forensic in nature (especially when identified a priori) from those who engage primarily in more traditional, non-forensic clinical neuropsychological endeavors. Yet, there are currently no restrictions prohibiting either individual from referring to himself or herself as a forensic neuropsychologist, if they so desire.

MEASURES OF PROGRESS AND DEVELOPMENT IN THE FIELD

According to Otto and Heilbrun (2002), the growth of a profession and specialty area in psychology can be measured in a number of ways, including the development of professional organizations, outlets for dissemination of research and practice findings, practice standards, and processes that certify competence and advanced abilities. Using these benchmarks, one can see that the practice of forensic neuropsychology has developed substantially over the past 20 years. But, much development remains before it can be considered a formal psychological specialty, at least according to APA’s specialty guidelines. As a component of the science and practice of clinical neuropsychology, this course of action may or may not be considered desirable. That determination is something left for future discussion/debate.

Professional Organizations

At present, there are a number of neuropsychological organizations in the United States, but none exclusively devoted to the science and practice of forensic neuropsychology. The most well established neuropsychology organizations include: The National Academy of Neuropsychology (NAN), The International Neuropsychological Society (INS), Division 40 of the American Psychological Association (INS), Division 40 of The American Psychological Association (APA), and The American Academy of Clinical Neuropsychology (AACN).

In forensic psychology, the primary professional organizations include the American Psychology-Law Society (Division 41 of APA), and the American Academy of Forensic Psychology – AAFP (comprised of psychologists who are board-certified in forensic psychology by the American Board of Professional Psychology: ABPP), and the American College of Forensic Psychology. Neuropsychologists who aspire to practice in the forensic arena may want to consider belonging to these kinds of organizations or at least taking advantage of the continuing education activities that they offer.

Publications

One of the best indicators of growth in forensic psychology is the proliferation of books and periodicals devoted to psychology and the law and to forensic psychology more specifically. The same can be said of forensic neuropsychology, where the number and
percent of peer-reviewed publications related to forensic practice has grown considerably over the past 10–15 years (Sweet et al., 2002b). At present, there is one journal exclusively devoted towards issues in forensic neuropsychology (The Journal of Forensic Neuropsychology) which began publication in 1999. The editorial board consists of clinical psychologists, neuropsychologists, and other neuroscientists who engage in forensic practice as a substantial component part of their overall activities. Several other journals also routinely include articles and special issues devoted to forensic neuropsychology. The Clinical Neuropsychologist has a section entitled “Forensic Applications” (formerly called Courting the Clinician), which deals with issues related to law and neuropsychology. The Journal of Head Trauma Rehabilitation has also had at least two special issues devoted to forensics, particularly as it relates to traumatic brain injury and litigation.

In the 1970s and 80s, there were only a few books devoted to forensic psychology that had relevance to the practice of forensic neuropsychology, most notably Ziskin (1975) and Blau (1984). In the 1990s and early 2000s, several books (Doerr & Carlin, 1991; McAffrey, Williams, Fisher, & Laing, 1997; Sweet, 1999), and special issues of journals (Heilbronner, 1992; Larrabee, 2000b) appeared that were specifically directed toward the topic of forensic neuropsychology in general and associated ethical issues (Binder & Thompson, 1995; Guilmette & Hagen, 1997; Grote, Lewin, Sweet, & van Gorp, 2000) more specifically. Also important to the practice of forensic neuropsychology was the publication of Melton, Petrila, Poythress, and Slo bogin’s 1997 book, Psychological Evaluations for the Courts, a must reading for anyone interested in entering into forensic practice.

Goldstein’s (2003) book also promises to be a prerequisite for anyone interested in learning about forensic psychology principles. Ziskin’s book, Coping with Psychiatric and Psychological Testimony (1995) is a three volume tome that enjoyed a lot of success in its efforts to minimize (even discredit) the science of psychiatry and psychology. Ziskin and Faust’s book Coping with Brain Damage Claims: Coping with Neuropsychological Evidence (1991) was targeted specifically at explaining the limits at that time of the science and practice of neuropsychology. These texts were widely used by attorneys to undermine the testimony of psychologists and psychiatrists by attacking the scientific basis of these disciplines. The points made by Ziskin and Faust, although not necessarily current to present scientific literature, are worth noting and continue to serve as a catalyst to promote research efforts to support our opinions and the scientific credibility of our field even further. This will be especially important for meeting evolving evidentiary standards such as Daubert v. Merrell Dow (1993).

In 1999, Sweet edited a text entitled, Forensic Neuropsychology: Fundamentals in Practice, representing a watershed moment in the practice of forensic neuropsychology. The chapters were authored by some of the finest thinkers in clinical neuropsychology who emphasized the scientific nature of forensic neuropsychology, something that will help to lead it away from the perception of it being a “soft science” or even worse, “junk science.” Three recent book chapters worth reading include: Bush (2003), who describes a solo neuropsychology practice that includes a significant component of forensic referrals; Heilbronner and Pliskin (2002), who discuss the clinical utility and cost-effectiveness of neuropsychology in the forensic arena; and Sweet, Grote, et al. (2002) who emphasize ethical issues in forensic neuropsychology. More detailed information about specific aspects of forensic practice can also be found in any number of other articles related to: disability determination (Puente, 1987); traumatic brain injury litigation (Heilbronner & Karavidas, 1997); competency issues (Marson, Cody, Ingram, & Harrell, 1995); and criminal law (Denney & Wynkoop, 2000; Martell, 1992). Of course, the topic of malingering assessment has become
somewhat of a “cottage industry” unto itself and is one area in which neuropsychologists have already proven their worth and value to those in the legal arena (Gouvier, Lees-Haley, Hayes-Hammer, 2002; Reynolds, 1998).

Practice Standards
Another hallmark of a substantive specialty area in psychology is the development of a consensus regarding acceptable practice. As Otto and Heilbrun (2002) state, “... standards and guidelines can prove valuable to (forensic) psychologists and legal consumers alike, to the extent that they identify a valid and defensible approach to practice.” Practice guidelines and standards are something lacking in forensic neuropsychology at this time. Yet, there are those who regard the absence of such guidelines as essentially being good for the field as if to suggest that the work product of lesser-trained neuropsychologists, creates more work for those who are well-trained and experienced. Whereas this may be true, it also may create a situation whereby the public can be harmed from the results of substandard approaches to practice including misdiagnosis, misinterpretation of data, or other more unseemly methods of practice.

What are practice guidelines? According to APA, guidelines are “pronouncements, statements, or declarations that suggest or recommend specific professional behavior, endeavors, or conduct for psychologists...” (Grossman, 2000). They are aspirational and designed to facilitate the continued systematic development of the profession and support a high level of professional practice. APA presently recognizes two types of guidelines: treatment and practice guidelines. However, there are some who believe that a third type, training guidelines, are also warranted. Treatment guidelines are relatively self-explanatory in that they provide specific recommendations about treatments offered to clients. Practice guidelines, as they relate to the present discussion, consist of recommendations to professionals concerning their conduct and issues to be considered in particular areas of clinical practice (e.g., forensic neuropsychology). Practice guidelines are based upon expert and professional consensus as well as empirical literature (e.g., Record Keeping Guidelines, APA, 1993).

In contrast to practice guidelines, which are aspirational in intent, standards are mandatory and accompanied by an enforcement mechanism (e.g., the APA Ethical Code). From a forensic neuropsychological perspective, it is probably unrealistic to attempt practice standards at present, given that we have not yet reached a consensus about guidelines. The development of practice standards is only appropriate when a professional consensus, based on scientific knowledge and clinical experience, can be reached. Surveys of clinical neuropsychologists (Putnam & DeLuca, 1990, 1991; Sweet, Moberg, & Suchy, 2000) reveal a fair amount of variability in methods and approaches to practice. Thus far, only one or two formal surveys of neuropsychologists have been conducted, most recently the NAN/Division 40 Survey (Sweet, Peck, Abramowitz, & Ettweiler, 2002, 2003) that asked about issues related to forensic practice. Such surveys could help to ascertain how members of the neuropsychology community view certain aspects of forensic practice; they might also serve as an initial step toward reaching a consensus on some of the critical issues in the field. Given the multiple theoretical and practical approaches to neuropsychological assessment (and the disparate views about what constitutes competent clinical neuropsychological practice), we may ultimately be unable to gain a consensus on standards of practice in forensic neuropsychology. It probably makes more sense to develop practice guidelines for clinical neuropsychology in general before we go ahead and develop them for a more demanding subspecialty like forensic neuropsychology. However, some have already forged ahead to apply recently derived principles of forensic mental health assessment (FMHA) to neuropsychological assessment in forensic cases (Heilbrun,
Marczyk, Dematteo, Zillmer, Harris, & Jennings, 2003).

**APA Ethical Principles of Psychologists and Code of Conduct**

At present, anyone who engages in the practice of forensic neuropsychology is required only to follow the laws pertaining to the practice of psychology in the state where they practice. They are not necessarily required to adhere to the APA’s Ethical Principles and Code of Conduct if they are not members of APA. But, nearly all states incorporate the APA principles in their standards of practice. The Ethical Principles from 1992 included a specific section devoted to forensic activities (Section 7). But, of course, there are many other principles that are relevant to forensic issues (e.g., test security, assessment, records and data, etc.). In 2002, the APA Ethics Code was revised and the new code does not include specific standards devoted to forensic activities. But, given that psychologists in general have ventured into the forensic arena in greater numbers than ever before, it is quite clear that the revised Principles have a lot to say about how psychologists should conduct themselves in the forensic arena.

**Specialty Guidelines for Forensic Psychologists**

Neuropsychologists who engage in forensic practice should be familiar with the American Academy of Forensic Psychology and the American-Law Society’s Specialty Guidelines for Forensic Psychologists (SGFP; Committee on Ethical Guidelines for Forensic Psychologists, 1991). The primary goal of the SGFP is to improve the quality of forensic psychological services by providing guidance to psychologists delivering services to courts, members of the bar, litigants, and persons housed in forensic, delinquency, or correctional facilities (Otto & Heilbrun, 2002). The SGFP are general in nature and scope but provide psychologists with direction in: (a) identifying competent forensic practice; (b) practicing responsibly; (c) establishing relationships with parties involved in assessment, treatment, or consultation; and (d) identifying issues related to privacy, confidentiality, and privilege of services and communications. For forensic neuropsychological purposes, we may not necessarily need to develop our own specialty guidelines. Following the APA Ethical Code of Conduct and the SGFP may be adequate enough, although again this topic should be discussed and debated.

**APA Practice Guidelines**

In the 1990s, APA promulgated two sets of guidelines specifically related to forensic practice: the Guidelines for Child Custody Evaluations in Divorce Proceedings (APA, 1994) and the Guidelines for Psychological Evaluations in Child Protection Matters (APA, 1998). These guidelines focused on the format and process of these kinds of evaluations. They are regarded as aspirational and their goal is to “facilitate the continued systematic development of the professional and help to assure a high level of practice by psychologists” (APACOPPP, 1998). The guidelines do not provide specific recommendations regarding how to conduct these kinds of evaluations, but rather discuss such issues as evaluator competence, informed consent, confidentiality, and the structure of the evaluation. According to Otto and Heilbrun (2002), these APA guidelines provide needed directions for psychologists who conduct these types of evaluations, but do not necessarily set a standard of care. The goal is to promote proficiency and expertise in specific areas of practice. Perhaps, specific Guidelines for Neuropsychological Evaluations in Personal Injury Cases or Guidelines for Neuropsychological Evaluations in Criminal Cases will be developed someday after practice guidelines for clinical neuropsychology have been established.

**Certification and Recognition of Advanced Practice**

Further evidence of the maturation of forensic psychology as a specialty is exemplified by two recent developments: certification for forensic practice and recognition of advanced
forensic competence. At present, the field of clinical neuropsychology lags behind forensic psychology in the former area, but we have certainly made our mark in the latter area, to the point whereby other specialities in psychology have started to follow our lead in terms of the methods and procedures employed for demonstrating advanced competence.

**State-Sponsored Credentialing**

In an effort to provide some quality assurance in criminal forensic evaluations, nine states have adopted credentialing or certification programs for psychologists and other mental health professionals who assess criminal defendants to determine their competence to stand trial or their mental state at the time of the offense. As noted, Louisiana is the only state that presently grants a license to practice clinical neuropsychology. No state has specific credentialing, certification, or licensing programs for the practice of forensic neuropsychology. Thus, this subspecialty area is not regulated by local or state governments. This may be the most important reason that it is incumbent on our profession to work toward establishing guidelines that can be agreed upon and adopted before others (who are certainly less knowledgeable about what we do and the value we provide) attempt to set them for us.

**Board Certification**

Certification of competence in clinical neuropsychology is accomplished on a national level through specialized board certification or diplomate status granted by two professional boards: The American Board of Clinical Neuropsychology, an affiliate of the American Board of Professional Psychology (ABCN/ABPP) and The American Board of Professional Neuropsychology (ABPN). The “board issue” has been, and remains one of the more contentious issues in the field of clinical neuropsychology and there is likely nothing I can say that will dilute the longstanding debate. Nonetheless, I concur with Larrabee’s (2000a) sentiment that, although board certification in clinical neuropsychology is not held as a prerequisite to engage in the clinical or forensic practice of neuropsychology, it is the “clearest evidence” of the type of expertise expected of a neuropsychologist wishing to provide forensic neuropsychology services. This view was also expressed as far back as the late 1980s by Division 40 of APA and the American Board of Clinical Neuropsychology (ABCN).

The criteria used by the various boards to grant credentials or titles vary dramatically. Some boards appear to be little more than “vanity boards” that offer board certification or “diplomate” status without rigorous peer review, whereas other boards (e.g., The American Board of Forensic Psychology of ABPP) make attempts to verify the applicant’s education, training, skills, knowledge, and practice abilities. Vanity boards in forensic psychology have been strongly criticized and condemned in the scientific (Golding, 1999), legal (Hansen, 2000) and popular (MacDonald, 1999) press. Such articles raise legitimate concerns about the impact of the credentials offered by these boards on the quality of expert psychological testimony and, more importantly, the reliability and validity of forensic psychology and psychology in general.

There is a board Board of Forensic Neuropsychology, part of the American Board of Psychological Specialties (ABPS) and affiliated with the American College and Board of Forensic Examiners, that purports to identify a credential holder as having advanced knowledge, competence, skills, and abilities in forensic neuropsychology simply by demonstrating interest and experience in forensic neuropsychology and by paying a fee. Further, the Prescribing Psychologists Register, a group that offers continuing education and board certification in psychopharmacology and other areas, offers the title, “board-certified, diplomate fellow in forensic sciences.” It is not certain that judges, attorneys, and juries (let alone the general public) can distinguish between legitimate and vanity boards. Moreover, there are those who believe that there is no empirical support for the
claim that board-certified psychologists are more competent or knowledgeable than their non-board-certified counterparts (Lees-Haley & Fox, 2001; Ziskin, 1995). In actuality, evidence is lacking to support the position that persons in any profession who hold credentials from legitimate boards have knowledge, skills, or abilities that those without the credentials do not. However, the intent of legitimate peer-review is to protect the public. Perhaps the best way to protect consumers from misleading credentials and faulty practice is through education, as legislative or professional initiatives against such enterprises are less likely to have an impact.

At present, there are no boards in forensic neuropsychology that require written or oral examinations on forensic neuropsychological issues. I do not anticipate that clinical neuropsychology, as a field, will subspecialize to the point whereby a separate board granting diplomate status in forensic neuropsychology will be necessary. For now, those who are interested in demonstrating the “clearest evidence” of the type of expertise expected of a neuropsychologist specializing in forensic practice should consider pursuing board certification in clinical neuropsychology and then advanced education and training in forensic psychology. From my perspective, it makes greater sense for one to be educated and trained in clinical neuropsychology and then to be supervised and gain experience in the forensic arena. An alternative, although less optimal, approach is to have a background in clinical psychology, become board-certified in forensic psychology, and then obtain continuing education in clinical neuropsychology. This will, at best, allow one to perform competent neuropsychological screenings and to know when to refer to a more experienced clinical neuropsychologist for a more comprehensive assessment. In fact, the American Academy of Forensic Psychology offered a continuing education workshop in clinical neuropsychology (e.g., van Gorp, 1999); the goal of which was to educate clinicians and help them to “know their limits” so as to not practice outside the bounds of their competency.

CONTEMPORARY DEVELOPMENTS OF SIGNIFICANCE

Using Otto and Heilbrun’s (2002) article as a point of reference, I will discuss a few recent developments and their implications for the practice of forensic neuropsychology.

Development of Specialty Training Programs

At present, there are no formal training programs in forensic neuropsychology. Consequently, predoctoral interns and post-doctoral students who are interested in forensic neuropsychology obtain their experience largely through didactics or via experiences with supervisors who engage in forensic work as part of their clinical practice. Occasionally, a predoctoral student may land a practicum in a private practice that focuses on forensic psychology activities or even one that focuses on forensic neuropsychological activities, but this is rather rare (and for all we know, ill-advised at that early level). One reason for this may be that those who engage predominantly in forensic practice often do not want to have students test for them, write their reports, etc. As it may make them vulnerable on cross-examination by an attorney accusing them of using inexperienced assistants or “not spending sufficient time” with the client. Others may simply not want to spend the time educating and/or training a student because it takes time away from the “real business” of forensic work. But, it is our students who will carry on our legacy. It is they who will likely reap the rewards of our growing pains as we work toward establishing the science and credibility of forensic neuropsychology.

The Houston Guidelines for Education and Training in Neuropsychology (Hannay et al, 1998) do not mention forensic issues. For this reason, they may be somewhat antiquated already. Any future practice...
guidelines devoted to education and training in clinical neuropsychology should take into consideration the fact that our field is becoming more and more involved in forensic activities. Now that clinical neuropsychology has been recognized by APA as a specialty practice, we must be even more committed to the idea that our students keep current with the relevant body of knowledge and practice standards of our field. To remain current, this would mandate that they be educated and supervised in the practice of forensic neuropsychology as well.

Types of Assessment Instruments Used in Forensic Settings

Aside from some pure effort tests, there are no clinical neuropsychological instruments specifically designed for and used in forensic evaluations. Most often, clinical neuropsychologists who do forensic work rely on measures that have traditionally been developed for clinical purposes (e.g., to assist in differential diagnosis, characterize an individual’s neurocognitive strengths and weaknesses, detect invalid responding, and to assist in treatment recommendations). They may employ other more traditional psychodiagnostic tests if they are attempting to answer specific questions about a person’s reality testing, mental state at the time of the offense, competency to stand trial, and so forth. But, these too, are tests that have been developed largely for clinical purposes.

Heilbrun, Rogers, and Otto (2003) proposed a typology of assessment instruments used in forensic evaluations. Forensic assessment instruments are measures assessing capacities, abilities, or knowledge that are embodied by the law. Tests designed to assess a defendant’s competence to stand trial or an older person’s ability to manage legal, financial, and health care matters are examples of such instruments. Forensically relevant instruments do not assess or focus on specific legal standards and the associated functional capacities of the examinee; they address clinical constructs that are often pertinent to evaluating persons in the legal system. Examples include measures used to assess malingering and response style more generally, recidivism, or violence risk, and psychopathy. Well-validated, forensically relevant instruments provide a good balance between clinical confidence and legal relevance; the constructs they assess can be rigorously tested; and their applicability and relevance to forensic assessment and decision-making can also be examined.

Most commonly used in forensic evaluations, are clinical measures and assessment techniques. These are psychological and neuropsychological tests and measures developed for assessment, diagnosis, and treatment planning with clinical populations. According to Heilbrun et al (2003b), “…although these measures assist in understanding the examinee in the context of a particular legal issue, they typically assess constructs (e.g., intelligence, depression, academic abilities, anxiety level) that are considerably removed from the specific question before the legal decision maker.” As such, they require the examiner to exercise a greater level of inference to move from the construct assessed to the legal issue before the court (Otto, Edens, & Barcus, 2000). For example, a clinical neuropsychologist may employ tests of intelligence and executive functions to assist in making a statement about a criminal defendant’s capacity to understand his/her Miranda rights at the time of the offense. Notwithstanding the fact that there are already specific forensic instruments designed to assess this issue (Grisso, 2003), the neuropsychologist will likely be hard-pressed to relate the defendant’s scores on intelligence measures or tests of executive function to this particular psycholegal issue before the court. Indeed, proper caution would need to be expressed by the examiner about his or her level of confidence in inferring from the construct being assessed to the legal issue at hand. Then question is, are clinical neuropsychologists routinely expressing such cautions/reservations in their inferences?

The field of clinical neuropsychology has experienced an explosion of instruments,
with new ones designed to assess a particular neuropsychological function seemingly appearing almost monthly. Do we need to develop forensic neuropsychological assessment instruments? Are our clinical neuropsychological measures sufficient to address the issues and matters that we are asked to assess during the course of forensic neuropsychological activities? For now, it appears that emphasis should continue to be directed toward the development of forensically-relevant instruments which address clinical constructs that are pertinent to evaluating persons in the legal system. Perhaps one of the best examples of neuropsychological research that is forensically relevant in its devotion to a particular forensic issue is the work of Marson and his colleagues (1995) who have studied the capacity of clinicians (using largely clinical instruments) to render decisions about competency and decision-making in older adults. Theirs is a model that we can begin to follow as we try to make our clinical instruments more forensically salient and meaningful. Such an effort may help to increase the likelihood that judges and juries will understand how we extrapolate from our test findings to the legal issue at hand, thereby helping to insure that legal consumers will continue to value our services.

**IMPACT OF MANAGED CARE ON FORENSIC PRACTICE**

The growth of forensic practice in clinical neuropsychology is a by-product of changes that have taken place in the healthcare marketplace over the past 10–15 years. Several years ago, considerable efforts were expended on behalf of certain members of our profession (e.g., Antonio Puente) to help consumers and the insurance industry alike understand that clinical neuropsychologists are not simply mental health professionals, but health care professionals who often work with medical patients, not just psychiatric patients. The hope was that this distinction would result in an increase in reimbursement and increased recognition and respect from our medical colleagues and the public at large. These efforts have led to some success, although many insurance companies still regard us and reimburse us as “mental health professionals”.

Many neuropsychologists enter into forensic practice because of the fiscal rewards. On the surface, there is nothing inherently wrong with that, as long as they understand that their actions have significant implications for their colleagues. Those who actively seek to increase their forensic knowledge, skills, and abilities through continuing education, supervision, and other methods are to be commended and supported. But, those who enter unprepared into the forensic arena pose a potential problem for themselves and for the field at large. Like the study of brain-behavior relationships, expertise in the practice of forensic neuropsychology is not developed over the course of a weekend workshop or even over the course of a few weeks or months. The competent practitioner of forensic neuropsychology should commit him/herself to a rigorous course of study and practice and expend considerable time and effort to insure that he/she is meeting at least the minimal practice guidelines of the field. In the absence of minimal practice guidelines, following the APA Ethics Code and the laws of the state in which one practices is the recommended approach to take.

Given the increasing numbers of neuropsychologists entering into forensic practice, it would make sense for us as a profession to place emphasis on educating our students, attorneys and judges about forensic issues to an even greater degree than we already do. Making sure that our students know the critical issues involved in forensic practice and giving them the opportunity to observe depositions, courtroom testimony, etc. is one way to teach them some of the necessary skills they will need to be familiar with as they meet the challenges of a career in clinical neuropsychology and face the inevitability of having to be a participant in the forensic arena at some point in their career.
This might also help to promote the perception on the part of our legal colleagues that perhaps our profession has made efforts to minimize the substandard practice of a minority in our field.

PROFESSIONAL AND PRACTICAL ISSUES IN FORENSIC NEUROPSYCHOLOGY

Heilbronner and Pliskin (2002) suggest that the value of what neuropsychologists do is closely related to the quality of their work, which directly ties into the competency of the person who is writing the neuropsychological report, consulting with the attorney, testifying in court, and so forth. The majority of neuropsychologists who work in the forensic arena are historically trained as clinical neuropsychologists. Their forensic experiences often began as a treating clinical neuropsychologist, when they were asked to testify about a patient they evaluated or treated. After a number of years, they may have decided to expand their practice because they enjoyed the challenge of forensic work and/or its financial benefits. There are some neuropsychologists whose practices are almost exclusively forensic and certainly those who do forensic work well over 50% of the time. Previously, such an emphasis on forensics was looked upon with subtle disdain, as if that person was a “handmaiden to attorneys” or some other more derogatory term. Now, engaging in forensic practice may not be looked upon as negatively as before. On the contrary, those who spend a good deal of their time engaging in forensic neuropsychological practice have, at some level, demonstrated to themselves, to the legal community, and to the public at large, that they are able to withstand some of the pressures that are inherent in this type of work.

A clinical neuropsychologist who has years of experience consulting and testifying in civil cases involving traumatic brain injury may not be well prepared for the rigors and requirements associated with evaluating a criminal defendant. Likewise, a criminal forensic neuropsychologist may not be adequately trained in the evaluation of an older adult’s competency to consent to medical treatment. The competent criminal forensic neuropsychologist should have requisite training and experience in clinical neuropsychological assessment in the area pertinent to the particular case (e.g., TBI, dementia) and in the application of psychology to the pertinent area of criminal law (Denney & Wynkoop, 2000; Sullivan & Denney, in press). Working collaboratively with our forensic psychology colleagues is one recommended approach for neuropsychologists who aspire to be involved in criminal cases (Heilbronner & Frumkin, in press).

There are neuropsychologists who specialize in criminal forensic issues and who are experienced in traditional psychodiagnostics and able to render opinions about a defendant’s personality, reality testing, or mental state at the time of the offense. These professionals are also very familiar with the requisite definitions of terms such as competency, diminished capacity, and so forth and the associated laws and statutes of the state or province where they work. Neuropsychologists who do largely civil litigation (e.g., brain injury cases) may not know much about these kinds of issues. Thus, they put themselves, their clients, and the practice of forensic neuropsychology, at risk by attempting to answer questions that are beyond their purview or level of competency. Indeed, there are dramatic theoretical and practical differences between civil and criminal evaluations. There are also critical issues within different types of civil (e.g., competency vs. medical malpractice) and criminal (e.g., competency to stand trial vs. mitigation in capital cases) litigation. It is therefore critical for neuropsychologists who aspire to practice in the forensic arena to obtain appropriate training, supervision, and experience in civil and/or criminal litigation, and then become familiar with relevant literature and jurisdictional case law to ensure a higher level of competency in that particular forensic domain.
Like any other professional, neuropsychologists with a specialty in forensics need to know the territory in which they work. Indeed, the legal world is very different from the neuropsychology laboratory in a university medical center, hospital, or outpatient clinic. It is, by its very nature, adversarial and antagonistic. Moreover, the personalities of the people within it are often very different from the people we customarily interact with in the clinical setting. The courtroom is a unique environment without equal. Those who consciously choose to become an active participant in the forensic arena must also choose to devote the necessary time and effort to understand the rules of the justice system. It means knowing more than the science and practice of clinical neuropsychology. It also means knowing how to interact with attorneys and judges and how to behave during a deposition or at trial. This knowledge usually is obtained via direct experience or, at a less experiential level, by reading practical texts devoted toward “mastering” the role of an expert (Barsky & Gould, 2002; Brodsky, 1999; Lubet, 1998). Understanding the pertinent civil and criminal statutes, being familiar with relevant jurisdictional case law, knowing the standards of admissibility (e.g., Frye vs. Daubert) and The Federal Rules of Evidence (especially FRE 401–403 and 702–704) are just a few areas that forensic neuropsychologists should be familiar with if they are going to provide the trier-of-fact with well-informed opinions.

CONCLUSIONS AND FUTURE DIRECTIONS

Otto and Heilbrun (2002) proposed a three-part strategy to help forensic psychology become more mainstream over the next decade. The first part involves updating the Specialty Guidelines for Forensic Psychologists. Part two is conceptualizing the training of practicing psychologists on three levels: the legally informed clinician; the proficient clinician; and the specialist clinician (Bersoff et al., 1997). The third part is intensifying training efforts directed toward consumers of forensic psychology, including judges, attorneys, mental health administrators, and policy makers, and better informing the public about the nature of forensic psychology. Each of these areas should be accompanied by research efforts to determine their impact and effectiveness.

As a profession, clinical neuropsychology may want to follow the lead of our forensic colleagues to learn ways in which to increase our viability and excellence in the forensic arena. Indeed, leaders in the field of forensic psychology have thought about its future and have already considered a plan of action to help it grow and become more mainstream. We may want to consider the development of practice guidelines that are both broad and more specific, with the understanding that there may be obstacles and a resistance by some toward this effort. Such guidelines could serve as a useful marker of the field’s progress and a mechanism for shaping forensic (neuropsychological) practice generally. We might also want to consider developing different levels of practice (e.g., proficient vs. specialist) and clarify what is necessary to achieve competence at each level. Efforts should be made to disseminate this type of information to members of organized psychology, to clinical neuropsychologists in general, and to those practicing forensic neuropsychology more particularly. It should also be disseminated to our students and to consumers of forensic neuropsychology. Those of us practicing forensic neuropsychology need to be proactive in designing continuing education programs for ourselves, our students, legal colleagues and the public. Of course, we cannot control how others practice, but we can at least educate ourselves, legal consumers, and the public at large so that they have knowledge and an appreciation for what constitutes competent practice in forensic neuropsychology. Through these efforts, we might also be able to minimize detrimental effects of current substandard methods of practice that detract from the integrity of
the practice of forensic neuropsychology and clinical neuropsychology as a whole.

REFERENCES


Daubert vs. Merrell Dow Pharmaceuticals, Inc. 113 S Ct. 2786 (1993).


Frye v. United States, 293 F. 1013 (DC Cir. 1923).


Sweet, J.J., King, J.H., Malina, A.C., Bergman, M.A., & Simmons, A. (2002b). Documenting the prominence of forensic neuropsychology at national meetings and in relevant


