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COMPETENCE TO STAND TRIAL ASSESSMENT: PRACTICE-BASED VIEWS ON THE ROLE OF NEUROSCIENCE

JOHN T. PHILIPSBORN* & MELISSA HAMILTON**

INTRODUCTION

What follows is a discussion that is meant for judges, forensic mental health experts, and lawyers whose involvement in criminal cases means, when necessary, accessing the tools and knowledge to address, analyze, and respond to evidence of the accused's alleged incompetence to stand trial. There is here a discussion of practice guidelines, caselaw, competence-related orders, commentaries, and recommendations that should be pertinent when the accused's competence to stand trial is questionable. Courts, and the lawyers who appear in such cases, should be aware of the information that can be offered by neuroscientists from the various fields involved in researching, assessing, and documenting brain structure and function. This writing, a combination of a literature review and a commentary that includes illustrative court orders, is offered by the combination of a practicing lawyer with more than forty years of criminal case litigation experience, some of it as counsel of record in competence adjudications and otherwise as a court qualified lawyer-expert on competence to stand trial, and by an academic who researches the use of forensic science in the law.

Readers will find here different perspectives on what are touted elsewhere as leading examples of cases demonstrating the utility of neuroimaging in competence adjudications. Also offered are examples of competence adjudications known mainly by practicing lawyers but not yet discussed in journals. These should be viewed as examples of litigation conducted by knowledgeable lawyers who effectively blended neuroimaging and neuroscience testimony with other wide-ranging forms of competence

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related evidence. These case studies are offered to explain how neuroscientists were called upon in one case to buttress and offer corroboration for the various psychiatric and neuropsychological assessments, and in another to detect a structural anomaly in the brain of the accused that helped provide more specific information about the cause of impairments detected through other techniques. These case examples support recently expressed views about the main uses of neuroimaging in criminal cases as further discussed here.

Two researchers with extensive expertise in the field of mental disabilities observed that: “there has been almost no consideration of the application of neuroimaging evidence in the area of criminal law in which mental status issues play the largest role: that of incompetency to stand trial.”¹ The observation may apply to the majority of competence assessments, but as will be confirmed in the casework reviewed here, neuroscience has at times been involved in competence assessments and adjudications particularly in cases in which lawyers have had the knowledge and resources to work with neuroscientists. This involvement also requires a judge willing to permit introduction of the evidence. Some examples of the involvement of neuroimaging in competence assessments can be found in proceedings from more than twenty years ago. And practice guidelines for forensic psychiatric evaluation of competence to stand trial have referenced the possible use of neuroimaging since 2007. The ‘lack of consideration’ seems to stem in part from the on-going lack of training of lawyers, and some forensic mental health professionals, in the breadth of methodologies that are available to help assess the many types of disorders, disabilities, injuries, and abnormalities that can be at the root of a competence question.

It has often been observed that competence assessments are part of the routine for those involved in the regular practice of forensic psychology and forensic psychiatry.² Yet routine assessments often are not conducted as thoroughly as recommended in the published competence assessment guidelines, and according to the processes recommended in some of the practice literature—both of which are discussed below. In most busy court

¹ Michael L. Perlin & Alison J. Lynch, *My Brain Is So Wired: Neuroimaging's Role in Competency Cases Involving Persons with Mental Disabilities*, 27 PUB. INT. L.J. 73, 95 (2018).

² Patricia A. Zapf et al., *Assessing Competency to Stand Trial*, in THE HANDBOOK OF FORENSIC PSYCHOLOGY 281, 281 (Irving B. Weiner & Randy K. Otto eds., 2013).

systems, a continuum of competence assessments and related discussions will involve what the outcome of a given case should be, based upon reports that submitted by the designated competence examiners. A contested competence-related evidentiary hearing or trial (where competence can be tried to a court or jury) is a less frequent occurrence. Indeed, even in jurisdictions where there are specialized mental health courts, contested hearings involving experts from several disciplines can be a rarity.³ Most competence-related questions are addressed without profound inquiry, and without attention to best professional practices.⁴ The evidence supporting the claim of incompetence, or undermining it, is often deemed sufficient based on the reports of one or two examiners to permit the matter to be resolved short of a prolonged set of hearings. It makes sense that knowledgeable commentators would describe neuroimaging as an endeavor which has been too little considered or discussed in competence assessment in general.

Some of the scholarly literature on neuroscience and law addresses the intersection of the subjects as though it is outside both the frame of reference of the ‘regular’ professional participants (judges, defense counsel, prosecutors) in the court systems in the United States.⁵ And that is all too often the case. It is likely that part of the reason for the lack of consultation with or involvement of neuroscientists in competence assessments is that lawyers who are raising competence questions, and asking for the appointment of examiners, may not have received advice or training about multidisciplinary competence-assessment processes. Lawyers who are current with the breadth of practice literature and training are aware of competence assessment as a multidisciplinary endeavor and may insist on approaching specific cases in that manner.⁶

³ *Id.* at 288.

⁴ *Id.* at 283 (noting that most states fail to require specific training for mental health professionals carrying out competence assessments).

⁵ David Collins, *Re-Evaluating Competence to Stand Trial*, 82 L. & CONTEMP. PROBS. 157, 176–80 (2019).

⁶ *United States v. Duhon*, 104 F.Supp.2d 663, 669 (W.D. La. 2000) (referencing the need for input from defense counsel as explained in Michael Burt & John Philipsborn, *Assessment of Client Competence: A Suggested Approach*, NACDL CHAMPION 18 (June 1998)); Richard Rogers & Jill Johansson-Love, *Evaluating Competence to Stand Trial with Evidence-Based Practice*, 37 J. AM. ACAD. PSYCHIATRY & L. 450, 459 (2009) (blaming both researchers and practitioners for polarization that is incompatible with multidisciplinary approaches to competence

I.

COMPETENCE TO STAND TRIAL – A CONSTITUTIONAL REQUIREMENT

The constitutionally-required definition of competence to stand trial is found in two decisions of the United States Supreme Court. As the Court explained in *Indiana v. Edwards* (2008):⁷ “The two cases that set forth the Constitution’s ‘mental competence’ standard...” are *Dusky v. United States* (1960) and *Drope v. Missouri* (1975).⁸ *Dusky* specified that the inquiry regarding competence includes the questions of (1) whether he has “a rational as well as factual understanding of the proceedings against him...,” and (2) whether he “has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding.”⁹ *Drope* has been referenced as either adding or clarifying that a person is incompetent if he “lacks the capacity to understand the nature and object of the proceedings against him, to consult with counsel, and to assist in preparing his defense.”¹⁰

In a later ruling, *Godinez v. Moran* (1993), the Supreme Court ruled that there is one set of required abilities and capacities that must be established to exist in a particular person to allow a court to determine that she, or he, is competent to stand trial.¹¹ The *Godinez* Court reiterated earlier requirements set out by the Court that individuals who face criminal charges are required to have a factual and rational understanding of the criminal charges at issue and of the court-related proceedings, and they must be able to make decisions to exercise or give up the rights that the Constitution has reserved to them in criminal cases.

assessment); The American Academy of Psychiatry and Law (AAPL) makes reference to jurisdictions that may use multidisciplinary teams as part of a psychiatric assessment in Section 5.3.1 of the AAPL’s *Practice Guideline for the Forensic Assessment*, 43 J. AM. ACAD. PSYCHIATRY & L. S3, S9 (2015). Many different professional organizations provide training for practicing lawyers. Prosecutors and defense counsel can attend sessions given by national regional state and local organizations and offices. There are also practice-related periodicals that carry articles on a wide variety of topics, including competence assessment. Examples include the NACDL *Champion* and ABA Criminal Justice Section’s *Criminal Justice*.

⁷ *Indiana v. Edwards*, 554 U.S. 164, 170–71 (2008).

⁸ *Dusky v. United States*, 362 U.S. 402 (1960) (*per curiam*); *Drope v. Missouri*, 420 U.S. 162 (1975).

⁹ *Dusky*, 362 U.S. at 402.

¹⁰ *Drope*, 420 U.S. at 171 (emphasis added).

¹¹ *Godinez v. Moran*, 509 U.S. 389 (1993).

These basic, constitutionally-rooted rights include the accused's right to contest the charges in a trial, or to decide to give up the right to go to trial and plead guilty. Any accused must have a rational understanding of the right to trial as well as the right to confront witnesses by being present in court and cross-examining those witnesses through counsel. These rights also involve the right to testify, to contest or respond to the charges, or to remain silent.¹² The decision of whether or not to exercise these rights or not rests exclusively with the accused.

The Supreme Court recognized that individuals who go to trial will need to make "other strategic choices," including "whether (and how) to put on a defense and whether to raise one or more affirmative defenses."¹³ While the Court explained that the fundamental definition of competence "seeks to ensure that he has the capacity to understand the proceedings and to assist counsel," it went on to state that "[w]hile psychiatrists and scholars may find it useful to classify the various kinds and degrees of competence, and while States are free to adopt competency standards that are more elaborate than the *Dusky* formulation, the Due Process Clause does not impose these additional requirements."¹⁴

Operationally, the designated experts try to arrive at their opinions on a defendant's competence through a combination of evaluations—or, where only one or two evaluators have been involved, by seeking to assess particular abilities and capacities, and then tying these to the requirements of competence. Components of a competence evaluation may involve the assessment of whether the accused manifests symptoms and hallmarks of a major mental illness or of an evident intellectual or developmental disability. The evaluators may then refine the inquiry into the individual's mental condition, cognitive abilities, decision-making capacities, learning abilities, and abilities to communicate. Evaluators may then use standardized competence tools that could include a semi-structured interview or use of various competence assessment devices. Next, knowledgeable experts write a report linking their findings to the legal standards set forth by statutes and the courts.

The 'consumers' of competence evaluations (courts and lawyers) are interested in information on the validity of performance during assessments and of symptoms reported. At the same time, these consumers may have an

¹² *Id.* at 397–98.

¹³ *Id.* at 398–99.

¹⁴ *Id.* at 401–02.

interest in being informed about the likely cause(s) of reported impairments, particularly where the combination of interviewing, record review, psychometric testing, and competence assessment 'testing' leaves some questions about the basis for the reported impairments unaddressed.

One additional explanation of the legally defined contours of the competence requirement bears discussion – particularly because the reference here is to a matter that was recently reexamined by the United States Supreme Court. This additional matter underscores the relationship between the legal condition of competence to stand trial and the legally discussed autonomy that the accused, who is competent, is recognized to have. This autonomy was discussed again recently in a case that originated in Louisiana—a death penalty case—*McCoy v. Louisiana* (2018).¹⁵ Justice Ruth Bader Ginsburg wrote the majority opinion and explained the following:

Autonomy to decide that the objective of the defense is to assert innocence belongs in this latter category [of decisions reserved for the accused]. Just as a defendant may steadfastly refused to plead guilty in the face of overwhelming evidence against her, or reject the assistance of legal counsel despite the defendant's own inexperience and lack of professional qualifications, so may she insist on maintaining her innocence at the guilt phase of a capital trial. These are not strategic choices about how best to *achieve* a client's objectives; they are choices about what the client's objectives in fact *are*.¹⁶

The *McCoy* Court further explained that: “[w]hen a client expressly asserts that the objective of ‘his defense’ is to maintain innocence of the charged criminal acts, his lawyer must abide by that objective and may not override it by conceding guilt.”¹⁷

McCoy makes it clear that the consequences of a ruling that the accused is competent can be highly significant. As with the patient in a hospital setting who is deemed competent to refuse treatment, the accused who decides to stake out a position in a criminal case against the advice of a lawyer may well live (or die) as a consequence of that decision. For lawyers

¹⁵ *McCoy v. Louisiana*, 138 S.Ct. 1500 (2018).

¹⁶ *Id.* at 1508–09 (emphasis in original).

¹⁷ *Id.* at 1509–10 (citing the Sixth Amendment and the 2016 ABA Model Rule of Professional Conduct 1.2(a) (a “lawyer shall abide by a client’s decisions concerning the objectives of the representation....”)).

in capital cases, or in other cases that may result in lengthy sentences, where there is a doubt about the accused's competence, due diligence will militate in favor of at least getting advice about the best competence evaluation practices applicable to the client and case—which may result in a recommendation of consultation with a neuroscientist resulting in neuroimaging or other procedures.

In competence cases, courts seek information and guidance on how a particular disorder, deficit, or symptom is related to one of the elements of the competence definitions in Supreme Court precedent and in the jurisdiction in question.¹⁸ In addition, the question of concern to a court is to assess 'how real' the problem described is and the extent to which it has been verified.¹⁹ Those are matters on which neuroscientists of various kinds may be consulted not because only they have the most persuasive information available, but because they may add some additional case-related data and general information for consideration in addressing the legal decisions that a court will make.

II.

THE HEARTLAND OF COMPETENCE ASSESSMENT PRACTICE

The output of a routine competence to stand trial assessment is likely to take the form of a report that may have been prepared by an examiner, a few reports, or perhaps a composite report from a group of examiners if the accused has been evaluated in a hospital setting. The examiner(s) are likely to include a psychiatrist or a psychologist. In a few jurisdictions, the examiner could be a social worker or a doctoral-level trainee. The report may reflect an interview process conducted over a period of some hours or, in the instance of more thorough evaluations, over a period of days or weeks (particularly if the accused is ordered to be evaluated in a state hospital or locked ward setting). The report is likely to cover: the charges; some aspect of the background of the case; aspects of the accused's personal, social, medical, psychiatric, and psychological history; descriptions of prior hospitalizations and courses of psychotropic medications; and history of head

¹⁸ Andrew D. Reisner & Jennifer L. Piel, *Mental Condition Requirement in Competency to Stand Trial Requirements*, 44 J. AM. ACAD. PSYCHIATRY & L. 86, 88–89 (2018).

¹⁹ Barry W. Wall et al., *AAPL Practice Resource for the Forensic Psychiatric Evaluation of Competence to Stand Trial*, 46 J. AM. ACAD. PSYCHIATRY & L. S4, S21 (Supp. 2018).

injuries.²⁰ The report is also likely to contain some information about diagnostic impressions or, in some jurisdictions, a statement of the diagnosis with reference to *DSM-5* or another commonly referenced authoritative publication.²¹ Competence assessments will often reference the examiners' attention to performance and symptom validity issues, and may either conclude with a specific opinion about the accused's competence or incompetence to stand trial.²² Where the opinion is in favor of incompetence, the findings may be accompanied in some reports by recommendations for further treatment, medication, or remedial support.²³ If the opinion is in favor of competence, there may be cautionary notes about circumstances under which the accused may decompensate.

Publications covering forensic assessment in criminal cases describe competence-related assessment as "arguably the most common type of involvement of forensic mental health professionals in the justice system."²⁴ The assessment of the accused in a criminal case whose competence was in question was, for a number of years, usually performed in a state hospital or another in-patient setting until laws and procedures were changed:

Beginning in the mid-twentieth century, bolstered by research indicating that competence evaluations conducted by psychiatrists are no better than evaluations conducted by other mental health professionals, states increasingly authorized psychologists and social workers to perform competence examinations – a trend that facilitated the decentralization of forensic systems by expanding locally available forensic resources.²⁵

Depending on the training, licensure, qualifications, and experience of the examiner, competence evaluations may combine the examiner's inquiry into: (1) present symptoms of mental disorder and any diagnosis (2)

²⁰ Carla A. Lourenco, *Evaluating Competence to Stand Trial*, in PSYCHOLOGISTS' DESK REFERENCE 609, 610 (Gerald P. Koocher et al. eds., 2013).

²¹ CHARLES SCOTT, *DSM-5 AND THE LAW: CHANGES AND CHALLENGES*, 110–11 (2015).

²² Lourenco, *supra* note 20, at 611.

²³ *Id.*

²⁴ PATRICIA A. ZAPF & RONALD ROESCH, *EVALUATION OF COMPETENCE TO STAND TRIAL* 3 (2009).

²⁵ GARY B. MELTON ET AL., *PSYCHOLOGICAL EVALUATIONS FOR THE COURTS: A HANDBOOK FOR MENTAL HEALTH PROFESSIONALS AND LAWYERS* 130 (4th ed. 2018).

standardized psychological testing to assess aspects of functioning, and (3) competence-specific inquiry. Publications aimed at forensic psychiatric assessment (by psychiatrists) will establish “a baseline regarding a defendant’s general abilities and functioning...[and] ask questions specifically related to trial competency.”²⁶

For a considerable time, competence assessment was an unstandardized endeavor, guided mainly by the individualized practices of the examiner.²⁷ The initially ‘systematized’ inquiries may, or may not, have used checklists.²⁸ By 1965, at least one checklist “intended for use by psychiatrists in providing a brief, convenient review of areas for investigation in evaluating whether a patient can be considered competent to stand trial or must be considered incompetent by reason of intellectual or mental defect” had been published.²⁹ Shortly thereafter, however, a series of well-known publications told courts, lawyers, and mental health professionals that “despite the ever-increasing utilization of psychiatric and psychological evidence in the legal process, such evidence frequently does not meet reasonable criteria of admissibility, and should not be admitted in a court of law, and if admitted, should be given little or no weight.”³⁰ And, beginning in the 1970s, interested psychiatrists and psychologists organized and advanced the field of forensic mental health evaluation.

Those who led the efforts were motivated by various critiques of the then-current system: few thoughtfully developed standardized practices in forensic assessment; vague professional standards; a field unmoored from the questions at issue in the legal system; and little available ongoing and specialized training.³¹ Neither the mental health professionals conducting

²⁶ THE AMERICAN PSYCHIATRIC ASSOCIATION PUBLISHING TEXTBOOK OF FORENSIC PSYCHIATRY 266 (Liza H. Gold & Richard L. Frierson eds., 3rd ed. 2018).

²⁷ Loren E. Mallory & Michelle R. Guyton, *Competency to Stand Trial and Criminal Responsibility in Forensic Neuropsychology Practice*, in APA HANDBOOK OF FORENSIC NEUROPSYCHOLOGY 341, 347 (Shane S. Bush ed., 2017).

²⁸ Patricia A. Zapf & Jodi L. Viljoen, *Issues and Considerations Regarding the Use of Assessment Instruments in the Evaluation of Competency to Stand Trial*, 21 BEHAV. SCI. & L. 351, 353 (2003).

²⁹ Ames Robey, *Criteria for Competency to Stand Trial: A Checklist for Psychiatrists*, 122 AM. J. PSYCHIATRY 616, 617 (1965).

³⁰ JAY ZISKIN, COPING WITH PSYCHIATRIC AND PSYCHOLOGICAL TESTIMONY 1 (5th ed. 1995) (citing Ziskin’s 1970 First Edition).

³¹ Jennifer L. Skeem & Stephen L. Golding, *Community Examiners’ Evaluations of Competence to Stand Trial: Common Problems and Suggestions for Improvement*, 29 PROF. PSYCHOL. 357, 364 (1998).

examinations nor the lawyers offering mental health evidence had sufficient knowledge of one another's fields to ensure that the courts were being provided with legally relevant and useful mental health assessment information.³² There were increasing calls for improvements, such as: specialized training and education; the creation of professional organizations devoted to the endeavor; the need for further research and development of specialized tools; and standardized methodologies.³³ These developments resonated with groups of researchers, academics, and mental health professionals who had been concerned about the need for a research-based, empirically validated approach to forensic assessment. In part because the assessment of competence to stand trial was recognized to be the most frequently called upon form of forensic mental health assessment in state and federal criminal courts, in the 1990s a cadre of psychologists, social scientists, and law school faculty researched the theoretical framework for some of the competence assessment tools that are in common use today.³⁴

One of the contributions to the advancement of forensic mental health assessment as a field was the development of the MacArthur Competence Assessment Tool – Criminal Adjudication (“MacCAT-CA”). Others added to the development of standardized assessment tools that focused on the assessment of abilities, capacities, and basic knowledge of legal processes that are discussed in decisions where the United States Supreme Court set forth the requirement of competence to stand trial.³⁵ The more elaborate and well-developed competency assessment tools take the form of structured or semi-structured interviews that may use differing approaches to provide examiners data on the accused's competence.

MacCAT-CA uses a vignette describing a hypothetical crime as the

³² Robert A. Nicholson et al., *A Comparison of Instruments Competency to Stand Trial*, 12 LAW & HUM. BEV. 313, 313 (1988), https://idp.springer.com/authorize/casa?redirect_uri=https://link.springer.com/content/pdf/10.1007/BF01044387.pdf&casa_token=Cuo13pjopAwAAAAA:Y5zIIVDftMV5DDbbv-1ZmUnDls5AKIAiT5eCmxn3v1ScZIUOhOPCeqwr4ge9cPbhs-xpcctXaw1oNUTi.

³³ Richard Rogers & Jill Johansson-Love, *Evaluating Competence to Stand Trial with Evidence-Based Practice*, 37 J. AM. ACAD. PSYCHIATRY & L. 450, 453 (2009).

³⁴ See generally Richard J. Bonnie, *The Competence of Criminal Defendants: A Theoretical Reformulation*, 10 BEHAV. SCI. & L. 291 (1992); Steven K. Hoge et al., *The MacArthur Adjudicative Competence Study: Development and Validation of a Research Instrument*, 21 LAW & HUM. BEV. 141 (1997).

³⁵ Deborah K. Cooper & Thomas Grisso, *Five Year Research Update (1991-1995): Evaluations for Competence to Stand Trial*, 15 BEHAV. SCI. & L. 347 (1997).

platform to assess what the coauthors of the tool describe as, three competence-related abilities: understanding, reasoning, and appreciation.³⁶ The Evaluation of Competency to Stand Trial – Revised (“ECST-R”) has a different structure and underlying methodology, built around what the authors have described as separate dimensions of competence to stand trial, with included items and scales for atypical presentation, as well as some inquiry into case-specific information.³⁷

The competence assessment tools just mentioned are only two among many tools, inventories, and devices used by forensic examiners during competence assessments. A basic orientation to the subject of competence assessment mentions twelve different competence-related tools,³⁸ though this represents only a small fraction of the various competence assessment questionnaires, interviews, and tools in use today.

As this piece is written, the combination of forensic examiners in private practice throughout the United States; local and county forensic mental health components; state hospitals; locked mental health facilities, and the like, have developed their own ‘packages’ of competence assessment-related materials which may include some of the published inventories/structured interviews as well as inventories that emphasize local or state approaches to competence evaluation. Some large facilities have been involved in the competence assessment endeavor for years. For example, the California State Hospital system and the Federal Bureau of Prisons medical facilities disseminate policy statements concerning forensic examinations; have procedure manuals covering competence evaluations; training circulars covering the same topic; and, in certain areas, administrative regulations and other legal requirements for the level of training of competence examiners and for the need for some level of systematized competence assessment process.³⁹

³⁶ STEVEN K. HOGE ET AL., *THE MACARTHUR COMPETENCE ASSESSMENT TOOL – CRIMINAL ADJUDICATION* (1999).

³⁷ RICHARD ROGERS ET AL., *EVALUATION OF COMPETENCY TO STAND TRIAL – REVISED* (2004).

³⁸ Melton et al., *supra* note 25, at 141–51.

³⁹ For example, California Penal Code § 1369(h)(1) (West 2019) provides that California’s State Department of State Hospitals “...shall adopt guidelines for education and training standards for a psychiatrist or licensed psychologist to be considered for appointment by the court pursuant to this section [pertinent to ‘mental

Currently, a wide variety of materials - from book-length treatments, to journal articles, to practice guides of various kinds - offer guidance to psychiatrists and psychologists who are regularly involved in the assessment of competence to stand trial. Many of these guides used models that were developed during the 1990s and now provide nuanced discussions of assessment approaches.⁴⁰

III.

THE ROLE OF COUNSEL IN ADDRESSING QUESTIONS OF THE ACCUSED'S INCOMPETENCE

Many of the statutes enacted to provide a mechanism for a court to address questions of the accused's competence to stand trial place the burden of raising the issue on the litigating attorneys and the presiding judge. As an illustration, 18 U.S.C. § 4241(a) specifies that:

[T]he defendant or the attorney for the Government may file a motion for a hearing to determine the mental competency of the defendant. The court shall grant the motion, or shall order such a hearing on its own motion, if there is reasonable cause to believe that the defendant may presently be suffering from a mental disease or defect rendering him mentally incompetent to the extent that he is unable to understand the nature and consequences of the proceedings against him or to assist properly in his defense.

There are various scenarios that result in the signaling of a concern to the attorneys/judge about the accused's possible incompetence to stand trial

competence'].” The same statute provides for the creation of a working group representing parts of the criminal court system, including judges, various lawyers, advocates for those with mental disabilities, psychologists, psychiatrists, and related professional associations.

⁴⁰ One example of a nuanced discussion is provided by a well-known contributor to the development of competence assessment approaches. THOMAS GRISSE, *COMPETENCE TO STAND TRIAL EVALUATIONS: JUST THE BASICS* (2014). In his introduction, Dr. Grisso explained that his aim with this guide, one of many publications that he has authored or coauthored, was that this publication might be considered a good starting place: “[b]ecause of its simplicity. It offers less detail and avoids many of the complexities that can arise across competence cases. So it allows you to see the forest before you start inspecting the trees.” *Id.* at iii. Another example of a practice guide is ZAPF & ROESCH, *supra* note 24.

(interactions with counsel, acting out in court, observations made by jail staff, reports from family members, etc.).

Defense lawyers often initiate competence litigation after interaction with their clients. According to prevailing practice standards, and the laws in some jurisdictions, counsel have an obligation to communicate with their clients about the case generally, and about the consequences of the case (in terms of outcomes, sentences, and collateral consequences). Defense lawyers are—assuming sufficient experience and knowledge—ideally placed to begin the evaluation of the accused’s level of factual and rational understanding of the proceedings, and of the case. Lawyers will often be the first, and sometimes the only, person who communicates the breadth of decisions that the accused has available, and what strategies may be employed to achieve the desired outcomes (as well as assessing the probabilities of possible outcomes). These communications should (assuming informed and invested lawyers) yield an initial database on how the accused matches up with the legal requirements of competence.

Indeed, several courts have concluded that where defense counsel is on notice that a client may be incompetent, he or she has a duty to raise the question of the accused’s competence so that it can be addressed by the court. Then, once counsel raises the competence issue, the defense counsel has a unique role to play. The United States Supreme Court has explained that: “judges must depend to some extent on counsel to bring [competence] issues into focus”⁴¹ and “defense counsel will often have the best-informed view of the defendant’s ability to participate in his defense.”⁴²

Consequently, these types of criminal cases thrust lawyers into a field involving the intersection of law and mental health. As noted, defense counsel spend time with the accused during the pendency of the case. While prosecutors are not likely to speak directly with the accused, experienced prosecutors will have collected information about the defendant, and will tap information from witnesses, investigators, jailers, and others about the accused. These scenarios entail challenges where lawyers are not trained in the basics of mental health assessment. And they also explain why some lawyers with extensive training and experience in forensic mental health issues are more likely to reach out to neuroscientists (in addition to other forensic mental health professionals) when the accused manifests certain disabilities or impairments.

⁴¹ *Drope*, 420 U.S. at 176–77.

⁴² *Medina v. California*, 505 U.S. 437, 449–50 (1992).

So, how might legal practitioners become sufficiently knowledgeable to effectively litigate competency issues, particularly in terms of both the law and science? The question is particularly salient for defense counsel because of their ethical burden to provide the accused effective representation according to prevailing professional practices.⁴³ Attorneys may now look to several sources for guidance on competency assessment litigation, including sources written more from the legal perspective. Notably, the professional training models for competency targeted to the legal professional are not at the same level of practical information and guidance as those that have long been provided to forensic mental health professionals. In 2016, the ABA adopted its fourth set of *Criminal Justice Standards on Mental Health*.⁴⁴ These standards reference current literature, like the *DSM-5*, and set forth a combination of aspirational and practice-related standards and guidelines, including approaches to the assessment of competence to stand trial. There is an entire set of standards covering “competence to proceed.”⁴⁵ Judges may access state or local bench books, which may have basic information on competence proceedings.⁴⁶

Criminal lawyers who wish to obtain further education and training may seek specialized training—and some defense offices, bar programs, prosecutors’ offices, or courts may require that lawyers working with them obtain relevant, advanced skills. For example, in the past thirty years, a combination of national organizations (including the National District Attorneys Association, the American Bar Association, the National Association of Criminal Defense Lawyers, and others) have presented a wide variety of continuing education programs on forensic mental health issues.⁴⁷ The American Psychiatric Association, the American Psychological Association, and their forensic psychiatry and psychology sections, offer

⁴³ *Strickland v. Washington*, 466 U.S. 668 (1984).

⁴⁴ ABA, *CRIMINAL JUSTICE STANDARDS ON MENTAL HEALTH* (2016), https://www.americanbar.org/content/dam/aba/publications/criminal_justice_standards/mental_health_standards_2016.authcheckdam.pdf.

⁴⁵ ABA CRIM. JUST. MENTAL HEALTH STANDARD 7-4.1 (2016).

⁴⁶ *See, e.g.*, UNC SCHOOL OF GOVERNMENT, *SUPERIOR COURT JUDGES’ BENCHBOOK* (2015), <https://benchbook.sog.unc.edu/criminal/capacity-proceed>; FEDERAL JUDICIAL CENTER, *BENCHBOOK FOR U.S. DISTRICT COURT JUDGES* (6th ed. 2013).

⁴⁷ One example is the 1994 ABA symposium on psychological expertise and criminal justice, described in the three-volume syllabus as: “A conference for psychologists and lawyers jointly sponsored by the American Psychological Association and the Criminal Justice Section, American Bar Association.”

training provided by the combination of experienced professionals in various fields, including psychology, psychiatry, and neuroscience, as well as from experienced lawyers who have addressed matters involved in the assessment and determination of a person's competence to stand trial. One explanation for the rise of these types of specialist education and training generally derives from the role that mental health issues have played in capital cases specifically since the death penalty was revived in the 1970s with significant due process protections.

This background is relevant to understanding lawyers' (and judges') interest, particularly those already knowledgeable about mental health issues in the law, in learning where neuroscience may inform a determination (and assessment) of competence to stand trial. What has been lacking in the current commentary on neuroscience and law, particularly that written by full-time academics, is an understanding of how case work is actually done by lawyers who have varying degrees of expertise and training on matters like forensic mental health assessment. While a small proportion of licensed lawyers attend law school after having received training and a terminal degree in medicine or psychology, the vast majority are dependent on a variety of *ad hoc* training and continuing education programs, as well as both experiential learning and advice from colleagues, in developing their approaches to clients (or for prosecutors, to defendants) with mental health issues. In established public defender offices, lawyers may shadow their more experienced colleagues to learn how specific issues are addressed in that jurisdiction. As lawyers acquire experience and information through case work, they will face varying challenges that may include an accused who appears incompetent or who may have a history of psychiatric treatment and hospitalizations. These situations often lead to interaction with forensic mental health experts from various professions, and concurrent review of pertinent literature. It is not unusual for experienced lawyers who have worked with a wide variety of medical and mental health experts to have been introduced to neuroscientists and the tools of neuroscience used by researchers and clinicians.

At the same time, some of the lawyers involved in sophisticated litigation have shared their expertise with their colleagues in training sessions and in publications such that there is now a small cadre of lawyers who have been recognized in the profession as having an understanding of the available best practices in competence litigation. This has also led to the development of a select group of lawyers who, at times, are called upon (and permitted) to

testify as experts in courtroom proceedings on various aspects of competence issues.⁴⁸ It is also one of the factors that has led to an expanded role for neuroscientists in cases that call for a multidisciplinary assessment framework. At the same time, however, as is true in any number of professions—lawyers who do not pursue available information and training or happen to practice in jurisdictions that do not emphasize attention to professional development will often fail to consider the basic tools necessary to adequately represent their clients in addressing competence issues.

IV.

MULTI-DISCIPLINARY ASSESSMENT APPROACHES IN EVALUATIONS OF COMPETENCE TO STAND TRIAL

A federal judge observed in a ruling in a competence adjudication, “that a multi-disciplinary approach is often critical in resolving competency issues.”⁴⁹ Knowledgeable experts and lawyers concur with this observation. Some of the reasoning for courts and lawyers to seek and obtain information beyond that offered by a routine competence evaluation conducted by a psychiatrist or a psychologist (or even pairings of such experts) can be found in some of the literature that discusses research into competence adjudications in criminal courts. Researchers have noted that “the majority

⁴⁸ See, e.g., the discussion in *Duhon*, where one of the operative questions was whether there was reliable expert opinion available through examiners at the Federal Bureau of Prisons that the accused had been restored to competence. 104 F.Supp.2d 663. The ruling is one of the few that dissects in some detail the legal structure of the concept of competence and the analytical framework for deciding whether examining experts have actually addressed the issues that are asked as a result of the law. The court in that case cited an example of practice literature written for lawyers that is not the focus of this article, in which the court referenced the writings of two defense lawyers, noting that where the focus of the court’s determination is on a defendant’s ability to assist counsel “one of the most evident issues is whether the assessing professional, usually a psychiatrist or psychologist, really knows what would normally go into the defense of the case.” *Id.* at 669 n.21 (citing Burt & Philipsborn, *supra* note 6). Another example of practice literature that has been referenced by lawyers is John Philipsborn, *Competently Lawyering Competence: The Role and Duties of a Lawyer in Addressing Competence to Stand Trial Where the Questions Are Focused on Client Communication and Capacity to Assist*, CRIM. JUST. 34 (Fall 2017), https://www.academia.edu/37881121/The_Role_and_Duties_of_a_Lawyer_in_Addressing_Competence_to_Stand_Trial_Where_the_Questions_Are_Focused_on_Client_Communication_and_Capacity_to_Assist.

⁴⁹ *Duhon*, 104 F.Supp.2d at 699.

of hearings [on competence questions] last only a few minutes and are held simply to confirm the findings of evaluators...[and in most cases] the court accepts the recommendations of the evaluators.”⁵⁰ According to published research, well-trained forensic mental-health evaluators using the same semi-structured competence assessment tools and standardized instruments have high rates of agreement on whether given subjects are competent or not. However, other researchers have revealed that evaluators at times do disagree on the deficits that have been uncovered or described by a competency assessment process.⁵¹ “It is the more difficult decisions, involving cases where competency is truly a serious question, that are of concern. How reliable are decisions about these cases? To date, no study has accumulated enough of these cases to answer this question.”⁵²

In light of potentially conflicting expert opinions, as well as in the more difficult or complicated cases, lawyers and mental health experts who are able to follow best practices (which can be an aspiration limited by the financial realities attending a case) will push for multidisciplinary involvement in cases where there is a need to provide the court with a wider spectrum of information on competency than is typical. The lawyer might seek to consult with a neuropsychiatrist who has extensive experience in competence assessment, a behavioral neurologist, or an expert on neuroimaging and the aging brain.⁵³ One example of a situation in which an experienced judge may raise the need for further evaluations or may suggest the need for a greater breadth of expertise is where existing reports indicate that the accused’s competence may ‘come and go’ – particularly where the accused has been medicated and there are questions raised about her/his

⁵⁰ Patricia A. Zapf & Ronald Roesch, *Mental Competency Evaluations: Guidelines for Judges and Attorneys*, CT. REV. 28, 29 (Summer 2000).

⁵¹ On the first of the points made, see Zapf & Roesch, *supra* note 50, at 29; on the second point, dealing with research demonstrating the lack of agreement between evaluators on deficits uncovered by competency evaluation procedures, see Jennifer Skeem et al., *The Logic and Reliability of Evaluations of Competence to Stand Trial*, 22 LAW & HUM. BEHAV. 519 (1998).

⁵² Zapf & Roesch, *supra* note 50, at 30.

⁵³ James H. Cole et al., *Brain Age and Other Bodily ‘Ages’: Implication for Neuropsychiatry*, 24 MOLECULAR PSYCHIATRY 266 (2019); Mia Anthony & Feng Lin, *A Systematic Review for Functional Imaging Studies of Cognitive Reserve Across the Cognitive Aging Spectrum*, 33 ARCHIVES CLINICAL NEUROPSYCH. 937 (2017).

response to medication.⁵⁴ Such cases will often be 'staffed' by examining forensic psychiatrists and forensic psychologists, together with neuropsychologists and neuroscientists whose involvement may result in the use of one or more types of neuroimaging studies.

Still, the multi-disciplinary approach requires even more care toward properly educating the litigators and judges on the expanded nature of the assessment and on the more complicated forensic sciences involved. Expanding the circle of experts may also signal that extensive record collection has occurred along with more extensive than routine investigation of the accused's history: family; education; medical; social; institutional; behavioral; and legal. The increased complexity of a competence evaluation may raise questions about the extent to which judges and lawyers are able, in their capacity as consumers, to appreciate and understand the strengths and weaknesses of particular competence assessment paradigms.⁵⁵ Knowledgeable judges have expressed concern in certain instances that the experts' reports submitted on the issue of competence are not providing sufficient methodological information or supporting data for the judge to be satisfied that an appropriate ruling can be entered. Lawyers may be concerned to anticipate the view that 'interview and testing' methods are not convincing to a particular court.

V.

THE WIDE ARRAY OF LAW AND NEUROSCIENCE DISCUSSIONS

The role of neuroscience to help answer legal issues is novel and brings unique challenges. The Federal Judicial Center's *Reference Manual on Scientific Evidence* (3d ed.), published in 2011, covers a wide range of subjects that arise in litigation, including neuroscience.⁵⁶ The preface to the *Reference Manual* notes that the introduction of such sophisticated scientific methods, such as neuroscience, requires judges to improve their knowledge bases as a result:

⁵⁴ Sheldon H. Preskorn, *Prediction of Individual Response to Antidepressants and Antipsychotics: An Integral Concept*, 16 DIALOGUES CLINICAL NEUROSCIENCE 545 (2014).

⁵⁵ Authors have written about these concerns over a period of time. *See, e.g.*, Jennifer L. Skeem, Stephen L. Golding, Nancy B. Cohen, & Gerald Berge, *Logic and Reliability of Evaluations of Competence to Stand Trial*, 22 L. & HUM. BEHAV. 519, 540-47 (1998).

⁵⁶ Federal Judicial Center, *supra* note 46, at xvii.

Supreme Court decisions during the last decade of the twentieth century mandated that federal courts examined the scientific basis of expert testimony to ensure that it meets the same rigorous standard employed by scientific researchers and practitioners outside the courtroom. Needless to say, this requirement places a demand on judges not only to comprehend the complexities of modern science but to adjudicate between parties' differing interpretations of scientific evidence. Science, meanwhile, advances. Methods change, new fields are born, new tests are introduced, the lexicon expands, and fresh approaches to the interpretation of causal relations evolve. Familiar terms such as enzymes and molecules are replaced by microarray expression and nanotubes; single-author research studies have now become multi-institutional, multi-author, international collaborative efforts.⁵⁷

The MacArthur Foundation Research Network on Law and Neuroscience website publishes a graph on the same page as the 'Law and Neuroscience Bibliography,' showing a rise in the number of publications on law and neuroscience from 1984 to 2019. The number arcs upwards beginning around 2004, when there were around 100 publications, to more than 1,800 in 2019.⁵⁸ By 2015, a combination of journalism, scholarship, commentary, and case law helped explain that brain imaging studies, brain-related metabolic and genetic studies, and explanations of brain structure and function coming from professionals whose credentials link them to the various disciplines in the neurosciences had all made appearances in courts in the United States.⁵⁹

At this point in time, neuroscience and law have a relationship. There

⁵⁷ *Id.* at xiii.

⁵⁸ Vanderbilt University hosts the MacArthur Foundation Research Network on Law and Neuroscience, whose publications and publication graph can be found at <https://www.lawneuro.org/bibliography.php>.

⁵⁹ See, e.g., Nita A. Farahany, *Neuroscience and Behavioral Genetics in U.S. Criminal Law: An Empirical Analysis*, 2 J.L. & BIOSCIENCES 485 (2015) (illustrating academic research on the use of neuroscience evidence in courts); see also KEVIN DAVIS, *THE BRAIN DEFENSE: MURDER IN MANHATTAN AND THE DAWN OF NEUROSCIENCE IN AMERICA'S COURTROOM* (2017) (showing an example of a journalist's review of neuroscience and the law).

is a body of literature on the subject. An informal search of academic programs in the United States and Canada reveals more than sixty universities and colleges that house departments, institutes, or courses addressing some variation of neuroscience and law. There are now senior academics involved in researching, teaching, and publishing on the subject. Students at the undergraduate and graduate level can study the subjects conjunctively.

In 2018, the National Academy of Sciences published a report titled *Neuroforensics: Exploring the Legal Implications of Emerging Neurotechnologies*. The report, in the form of a short book, discussed the many subjects related to legal issues addressed by courts in which courts have allowed neuroscience-related evidence, and the potential for such evidence in the future. At this point, there have been a number of publications that have reiterated information about the proliferation – the noticeable, exponential growth – of law and neuroscience writing, and an almost equally impressive proliferation in the United States of university departments, graduate studies, certificates, and degrees in law and neuroscience.

Interdisciplinary groups of writers have lent their knowledge to discussions of neuroscience in courts, explaining the strengths and weaknesses of the various imaging technologies that were the subject of discussion in court settings. In 2013, one such group summed up the state of affairs by explaining:

The ability of neuroscientific techniques to shed light on important aspects of human cognition has generated hope that neuroscience can help to answer some perennial questions in courts of law. However, one should keep in mind that it is easier to misunderstand or misapply neuroscience data than it is to understand and apply them correctly, and this is crucially important when lives and livelihoods depend on it. Whether courts can successfully navigate these challenging waters will depend on the level of engagement by neuroscientists.⁶⁰

This language is particularly interesting given that the Dean of one prominent law school and a faculty member who teaches neuroscience and law at another school coauthored the article. Their suggestion seems to ignore

⁶⁰ Owen D. Jones et al., *Neuroscientists in Court*, 14 NATURE 730, 735 (2013), <https://scholarship.law.vanderbilt.edu/cgi/viewcontent.cgi?article=2093&context=faculty-publications>.

that developing bodies of knowledge and the advent of new technologies are inevitable in the business of the courts. Cautionary notes about not allowing speculative theories and unreliable methodologies are a concern in court proceedings. Case law, along with statutes and rules, discuss these concerns and address them in varying ways that allow courts to exclude irrelevant or unreliable evidence.

Periodically, some major development reminds the legal community of the need to give attention to the quality and utility of science and technical knowledge in courts. That was part of what prompted and has accompanied the publication of the 2009 report of the National Research Council entitled *Strengthening Forensic Science in the United States: A Path Forward*. That report, covering a number of areas of the forensic bench sciences, identification sciences, and death investigations, has been associated with a wide variety of efforts to improve training for forensic scientists (and members of the legal profession) and to underscore the need for attention to the use of valid and reliable methods in a number of areas of scientific and technical crime-related endeavors. Judges and lawyers on both sides are generally aware that any number of half-baked bits of ‘science’ have crept into court proceedings and are aware as well that members of the legal profession have aided and abetted the use of nonsense and ‘bad science’ in courts, with some of the ‘experts’ willing to peddle this bad science.

VI.

NEUROIMAGING AS PART OF A COMPETENCE ASSESSMENT HAS BEEN DISCUSSED FOR YEARS

While some of the more recent scholarship on neuroscience in the courtroom (cited above) has managed to refer to the consideration of neuroimaging in an assessment process, the reality is that the encouragement for practitioners considering neuroimaging studies as potentially informative in competence inquiries has been available for years.

In her overview of neuroscience evidence in reported (and unreported) cases in the United States, Professor Nita Farahany explained that ‘neurobiological’ evidence on the question of competence to stand trial has been introduced in court proceedings over a period of years. The subject of competence to stand trial surfaced in twenty percent of the non-capital cases and nine percent of the capital cases reported by a study that she

reviewed.⁶¹ Dr. John Meixner focused on the subject at hand in a relatively recent article, titled *Neuroscience and Mental Competency: Current Uses and Future Potential*.⁶² Professor Farahany and Dr. Meixner are mentioned by name here because their scholarship is among the rare publications that, along with the writings of Professor Michael Perlin, have examined the relationship between neuroscience and the adjudication of competence to stand trial. Professor Perlin, who is quoted above as underscoring the lack of consideration of neuroimaging evidence in competence to stand trial inquiries, stands alone in this small group as having researched and written on competence issues over a period of years, having addressed mental disabilities and related legal issues as a practitioner and scholar for years.⁶³

In 2007, the predominant professional organization for forensic psychiatrists affiliated with the American Psychiatric Association, the American Academy of Psychiatry and Law (“AAPL”), published its *Practice Guideline for the Forensic Psychiatric Evaluation of Competence to Stand Trial*.⁶⁴ The coauthors of this *Practice Guideline* (twelve physicians and psychiatrists, many with academic affiliations) explain the potential for a multi-disciplinary assessment, including neuroscience: “If psychological consultation, *imaging studies*, or laboratory tests are needed to support an opinion, the psychiatrist should discuss the need for the examinations with the retaining attorney before arranging for them to be performed.”⁶⁵ The same guideline covers the background material that should be explained in a report on competence assessment and the guideline specifies: “[f]indings from a physical examination, *imaging studies*, or laboratory tests should be included

⁶¹ Farahany, *supra* note 59, at 496 n.2 (including the illustration and data summarized in graph number 6). Professor Farahany distinguished between cases focused on competence to stand trial as distinguished from those involving competence to plead guilty. This distinction, according to the United States Supreme Court in *Godinez*, 509 U.S. 389, does not exist under the Due Process-related competence standard. The comment here is not intended to indicate that Professor Farahany erred in her discussion, since it appears that she distinguished between competence to stand trial and competence to plead guilty for the purposes of giving differing examples of neuroscience evidence in proceedings.

⁶² John B. Meixner Jr., *Neuroscience and Mental Competency: Current Uses and Future Potential*, 81 ALBANY L. REV. 995 (2018).

⁶³ See Perlin & Lynch, *supra* note 1, at 73, n.1; MICHAEL L. PERLIN ET AL., *COMPETENCE IN THE LAW: FROM LEGAL THEORY TO CLINICAL APPLICATION* (2008).

⁶⁴ See generally Douglas Mossman et al., *AAPL Practice Guidelines for the Forensic Psychiatric Evaluation of Competence to Stand Trial*, 35 J. AM. ACAD. PSYCHIATRY & L. S3 (Supp. 2007).

⁶⁵ *Id.* at S28 (emphasis added).

when they play a role in guiding the psychiatrist's opinion."⁶⁶

In 2018, the AAPL issued a 'Practice Resource' for the evaluation of competence to stand trial by psychiatrists. In it, attention to imaging studies, as specified in the 2007 Practice Guideline, was restated.⁶⁷ The AAPL's *Practice Guideline* with the 2018 *Practice Resource* is clearly intended to provide guidance on practices related to the assessment of competence to stand trial. The introduction in the 2007 *Practice Guideline* and the 2018 *Practice Resource* are similar: "it reflects a consensus among members and experts about the principles and practice applicable to the conduct of evaluations of competence to stand trial."⁶⁸ Neither of these published resources appears to have been mentioned to date in the scholarship that purports to discuss competence assessments as part of a neuroscience and law overview.

The American Psychiatric Association Publishing *Textbook of Forensic Psychiatry* (3d ed.) contains an entire chapter on "Neuroimaging and Forensic Psychiatry." Pertinent to the discussion that follows here, the coauthors of the chapter, Drs. Judith Edersheim and Marlynn Wei, specifically cover the subject of 'neuroimaging and criminal competencies.' In discussing the subject, these coauthors explain: "[n]euroimaging techniques, particularly when combined with collateral psychological and neuropsychological testing, can help identify the existence of structural or functional brain abnormalities that might cause deficits in the fundamental abilities associated with competence to stand trial."⁶⁹

While this type of fine print might be lost on individuals whose focus is on panoramic scholarly research about neuroscience and law, it is not lost on knowledgeable psychiatrists, neurologists, or neuropsychologists who are conducting assessments of competence, or on lawyers who are either presenting that expert or preparing to cross-examine an expert who is familiar with the practice literature and with contemporary best practices.

⁶⁶ *Id.* at S48.

⁶⁷ Wall et al., *supra* note 19, at S29 ("Findings from a physical examination, imaging studies, or laboratory tests should be included [in a report] when they play a role in guiding the psychiatrist's opinion.").

⁶⁸ *Id.* at S4.

⁶⁹ Judith Edersheim & Marlynn Wei, *Neuroimaging and Forensic Psychiatry*, in *TEXTBOOK OF FORENSIC PSYCHIATRY* 94 (3d ed. 2018).

VII.

A REVIEW OF SOME COMPETENCE-RELATED LITIGATION INVOLVING
DISCUSSION OF NEUROIMAGING

Disappointingly, some of the discussion of the use of neuroimaging in competence assessment cases has not centered on an understanding of what courts made of the evidence or on the reasoning that lawyers may have had for presenting neuroimaging evidence.⁷⁰ We review four relevant cases here to provide examples of the varying ways that neuroscience and neuroimaging evidence has been received in competence adjudications. Two of the cases have been cited and discussed elsewhere, though in one instance commentators have failed to discuss the full history of the litigation—which, if fully reviewed, provides an example of a judge deciding for, and later against, the accused's claim of incompetence based largely on contradictory evidence about the implications of neuroimaging studies. The two other cases selected have not been discussed elsewhere, and they were chosen in part because of the adherence to best practices in competence litigation by the defense counsel involved, as well as because of the amount of time that was devoted to the overall competence litigation involved.

The first of our chosen cases that has been singled out by commentators as informative about neuroscience in competence assessment is one in which a well-known senior federal district court judge considered the breadth of information on the accused's competence yet found insufficient evidence to support the defense's claim of incompetence attributed to dementia. The case in point is well known in lawyering and forensic mental health training circles now because the accused Vincent 'The Chin' Gigante challenged his conviction by offering opinions from eight or more mental health experts attempting to show his incompetence at the time of trial and afterward. Eventually, he admitted falsifying his mental state, with a salient news headline reporting the final result: "[a]fter nearly a quarter-century of public craziness, Gigante calmly pleaded guilty to obstruction of justice for his deception."⁷¹

⁷⁰ *Id.* (offering useful observations on neuroimaging and competencies in criminal cases and incomplete discussions of *United States v. Gigante* and *United States v. Kasim* as explained here).

⁷¹ Richard Pyle, *Vincent 'The Chin' Gigante, 77: Mob Chief Faked Mental Illness in Bid to Avoid Prison*, L.A. TIMES (Dec. 20, 2005), <https://www.latimes.com/archives/la-xpm-2005-dec-20-me-gigante20-story.html>.

The case, involving Vincent Gigante's prosecution by federal authorities in the Eastern District of New York, is one in which there were charges (and eventual convictions) of racketeering and conspiracy.⁷² Both during the course of the pre-verdict development of the case, and then after the jury rendered a verdict, the defense sought to establish Mr. Gigante's incompetence to stand trial. The defense had placed before the judge multiple evaluation reports and expert opinions that Mr. Gigante suffered "from dementia, paranoia, and perhaps Alzheimer's Disease and that he has been mentally incompetent since the mid-1980s."⁷³ The Government argued that the evidence was not persuasive and raised concerns about symptom validity and diagnostic error. The final reiterations of the claims of incompetence resulted in two published orders that discussed the evidence in detail. The first order described the showing of incompetence and listed eight experts for the defense, most of whom were board certified psychiatrists. The roster of government experts consisted of two physicians with multiple degrees and a psychologist. Medical and psychological examiners from the Federal Bureau of Prisons who had examined Mr. Gigante in an authorized setting also submitted competence reports. Two lay witnesses also testified about their observations of Mr. Gigante.⁷⁴ Neuroimaging studies were introduced as part of the effort to substantiate a diagnosis of dementia.

The *Gigante* competence hearings are still referenced as examples of instances in which well-known mental health professionals, including established medical school faculty members considered to be leading psychiatrists, together with a pioneer in neuroimaging research, left the judge unpersuaded by the claim of incompetence given the weight of evidence undermining the claim—a development later buttressed by Mr. Gigante's admission of having engaged in deception concerning his mental condition.⁷⁵

One of the rulings notes that some of the evidence offered by the

⁷² *United States v. Gigante*, 982 F.Supp. 140 (E.D.N.Y. 1997), *aff'd*, 166 F.3d 75 (2d Cir. 1999).

⁷³ *Id.* at 173–74.

⁷⁴ In addition to the December 1997 Order cited above, Judge Weinstein also decided *Gigante*, 982 F.Supp. 140 (E.D.N.Y. 1997), at the end of October 1997. In sum, in the space of approximately two months, Judge Weinstein had written two extensive memoranda discussing the competence-related evidence and litigation in the *Gigante* case.

⁷⁵ Nathan J. Kolla & Jonathan D. Brodie, *Application of Neuroimaging in Relationship to Competence to Stand Trial and Insanity*, in *NEUROIMAGING IN FORENSIC PSYCHIATRY: FROM THE CLINIC TO THE COURTROOM* 147, 151 (Joseph R. Simpson ed., 2012).

defense was based on PET (Positron Emission Tomography), SPECT scans (Single-Photon Emission Computerized Tomography) and CT scans (Computerized Tomography).⁷⁶ Judge Weinstein sided with the opinion(s) that the imaging studies “were not consistent with vascular dementia....”⁷⁷ Far from supporting an assumption by some critics that judges and lawyers will mistakenly be seduced by brain imaging evidence, the outcome of the *Gigante* litigation supports the recognition that judges with experience in addressing scientific methodology, who are willing to listen to a breadth of testimony on competence issues, will be skeptical of claims of incompetence that are not supported by persuasive evidence.

Some commentators cite the case mainly because, in the end, Mr. Gigante admitted to obstructing the proceedings by ‘faking’ his level of mental disorder, thus demonstrating that even well-credentialed and celebrated mental health experts can be mistaken where evidence undermining the incompetence claim has not been addressed.⁷⁸ Others, however, cite the case as an example of litigation in which the defense knew the judge and government were skeptical because of the notoriety of the case and the claim of incompetence, so the defense sought to introduce evidence from several different evaluators, including a neuroimaging expert, in an effort to solidify the defense’s case. In retrospect, it is clear that the neuroimaging evidence was not unequivocally supportive of the claim of dementia.

Clearly, part of the reason the judge did not credit the expert testimony offered by the defense was because the government’s evidence rebutting the showing of Mr. Gigante’s incompetence involved observations of lay witnesses (nurses and guards), as well as chronicles about Mr. Gigante’s behaviors and interactions while under observation in locked ward settings.⁷⁹ As a teaching tool and cautionary tale, the case is discussed as one that demonstrates the need for attention to the ecological validity of testing-based assessments, including third party and other extensive information (nursing notes, videos of meetings, recordings of conversations, etc.) that

⁷⁶ *United States v. Gigante*, 996 F.Supp. 194, 220–21 (E.D.N.Y. 1997), *as amended* (1998).

⁷⁷ *Id.*

⁷⁸ Kolla, *supra* note 75, at 151.

⁷⁹ *Id.* at 230–38 (noting inconsistencies between certain testing results and everyday behavior observations and results on imaging studies and psychological testing results viewed as “inconsistent with other results” and “inadequate and misleading.”).

provide corroborating (or contradictory) evidence.

Another case referenced in the literature on neuroimaging and competence assessment resulted in two differing, successive rulings.⁸⁰ These rulings were entered in *United States v. Dr. Jihad Kasim*, a criminal case prosecuted in the Northern District of Indiana. The first of the *Kasim* rulings (2008) has been cited in several writings as supportive of the utility of imaging studies where the defense argues that the accused suffers from dementia.⁸¹ The case involved charges of Medicare fraud by a board-certified pediatrician (Dr. Kasim) who allegedly engaged in the fraud to help cover gambling losses. Dr. Kasim's personal medical history included documented treatment for a myocardial infarction during the time period of the alleged fraud and a resulting coma with what was initially found to be anoxic brain damage. A series of medical assessments and interventions resulted in several diagnoses that were brought to the judge's attention to explain that Dr. Kasim's erratic behavior and described deficits rendered him incompetent. While various imaging and other diagnostic procedures raised questions about the accused's condition, the judge was presented with evidence from a SPECT scan that he found "demonstrated a marked decrease in the blood flow in the front temporal lobes of Kasim's brain."⁸²

On its face, the 2008 ruling indicates that evidence from varying sources persuaded the judge that the reported deficits were sufficiently established. The judge noted the involvement of clinical psychology, neuroradiology, nuclear medicine, neurology, psychiatry, neuropsychology,

⁸⁰ See Edersheim & Wei, *supra* note 69, at 96 (citing *United States v. Kasim* and the order from 2008). What is missing is a citation to the 2010 order from the same court that arrived at a different conclusion (finding the accused competent to stand trial). As noted above, Dr. Kasim's litigation did not end there either. Similarly, Dr. John Meixner cites the 2008 ruling in *Kasim* in his highly informative above-cited article. Meixner, *supra* note 62, at 1013, n.100. It does not appear that the further 2010 order is cited. These observations are not meant to criticize either of the works just cited, though they are intended to point out that the utility of looking at the dockets of rulings made in competence cases now that such dockets are more generally available to lawyers, scholars, and members of the public online allow an understanding in certain cases, such as *Gigante* and *Kasim* of the reason that competence issues once raised in a complex case tend to be revisited.

⁸¹ See, e.g., Owen D. Jones & Frances X. Shen, *Law and Neuroscience in the United States*, in *INTERNATIONAL NEUROLAW* 349, 355 (Tade M. Spranger ed., 2012).

⁸² *United States v. Kasim*, No. 2:07 CR 56, 2008 U.S. Dist. LEXIS 89137, at *17 (N.D. Ind. Nov. 3, 2008).

and neurosurgery in the evidence before the Court.⁸³ The judge concluded in 2008 that: “Kasim’s poor judgment and lack of cooperation with defense counsel are the result of progressive debilitating disease of dementia.”⁸⁴ The judge found Kasim incompetent to stand trial.

The 2008 order referred Dr. Kasim to a Federal Bureau of Prisons Medical Facility where staff conducted an independent review and concluded that Dr. Kasim appeared to them to be competent to stand trial. This development is not unprecedented, in the sense that not infrequently an accused initially ruled incompetent and then referred to a state facility may either be found to be competent during further evaluations or restored to competence during the hospital stay.

After a new hearing in 2009, the court ruled in 2010 that Dr. Kasim was competent to stand trial. This turn of events was significant since, in 2008, the judge had noted that it appeared that Dr. Kasim might never regain competence and that the evidence supported the view that Dr. Kasim had a chronic debilitating condition. During the course of the 2009 hearing, however, a board certified neurologist testified convincingly,⁸⁵ opining that “a SPECT scan had been considered an unreliable biological marker of dementia” since 2001, based on variabilities in the patient and given issues with the quality of the resolution of the imaging. This opinion, apparently uncontradicted by other evidence, convinced the judge to side with the opinion that the imaging studies “show no biological markers of frontal temporal lobe dementia, anoxic encephalopathy, or any other neurological brain disorder.”⁸⁶

Furthermore, the judge accepted the opinion of a neuropsychologist employed by the Federal Bureau of Prisons that Dr. Kasim’s observed behavior was inconsistent with dementia as were subsequent neurological examinations.⁸⁷ The Government also obtained recordings of phone calls which revealed that Dr. Kasim “...was coherent, lucid, capable of analytical thinking and planning, and able to communicate his concerns and ideas to others.”⁸⁸

Readers can certainly be excused for wondering why *Gigante* and

⁸³ *Id.* at *1–9.

⁸⁴ *Id.* at *51–53.

⁸⁵ *Id.* at *2–4.

⁸⁶ *Id.* at *3–4.

⁸⁷ *Id.* at *8–10.

⁸⁸ *Id.* at *11–12.

Kasim would be reviewed as examples of the use of neuroimaging in a competence assessment if the outcome in both cases was a finding by a judge that ultimately the neuroimaging evidence failed to support the opinion(s) about the accused's claimed incompetence. Here, it may be useful to underscore that the definition of competence to stand trial is not one specified by medical, psychiatric, or psychological diagnostic systems. The *Diagnostic and Statistical Manual* published by the American Psychiatric Association, or the International Classification of Diseases ("ICD") published by the World Health Organization – or other diagnostic systems used in the medical and mental health professions – do not determine who will be ruled to be legally competent or incompetent in a criminal case. A theme that is introduced in the review of the two cases examined above is that when a competence question becomes subject to a fulsome courtroom-based examination, and where the prosecution and defense each present 'competing' evidence on the question of competence, there are likely to be differing views presented—including differing views on the meaning of pertinent neuroimaging evidence. On occasion, the evidence that seems to be most incompatible with claims of the accused's incompetence was the evidence provided by reports from lay witnesses who had conversations with the accused, recordings of interviews, or of phone calls. That said, as discussed in the two further cases below, where the totality of evidence, including the imaging studies, supports the basis for the weight of evaluators' opinions, it also demonstrates the utility of the neuroimaging evidence in supporting claims of incompetence or disability.

Where a knowledgeable court and experienced lawyers (on both sides) are involved, there is an awareness that psychiatrists, psychologists, neuropsychologists, behavioral neurologists, neuroradiologists, and forensic mental health professionals of various kinds have a number of tools available to them to assist the courts (and lawyers) in the assessment of competence to stand trial. In the end, when the incompetence question is contested, it is a judicial ruling that will essentially spell out the legally required determination – and essentially will represent the judicial finding or judicially created 'diagnosis' of either competence or incompetence. Where the available neuroimaging evidence is subject to data-based criticism, as happened in the cases just discussed, a judge is likely to find that the evidence does not support the claim of incompetence.

Defense lawyers are well aware that the United States Supreme Court has explained that the right to counsel in criminal cases means the right

to effective assistance of counsel.⁸⁹ One appellate court provides a reminder of the role that counsel play in the decision-making that results in competence inquiries:

Trial counsel and the trial court each have important roles to play in ensuring that only competent defendants are tried.... But the court typically only has limited contact with criminal defendants; it is not in the best position to identify those in need of competency evaluations. Normally, it is defense counsel who has the most exposure to the defendant's behavior and (prior to any expert evaluation) "the best-informed view of the defendant's ability to participate in his defense."⁹⁰ Considering their ethical obligation to provide legal assistance according to the prevailing standard of practice, defense lawyers could reasonably seek advice from and consider – especially where budgeting permits it – the involvement of as many sources of useful and relevant information, as well as supporting or corroborating evidence, as possible to address a pending competence question. These efforts may well appropriately include inviting the involvement of neuroscientists and neuroimaging tools of various kinds.

The following two cases help illustrate situations in which multi-disciplinary assessments of competence conducted over a lengthy period of time, and involving neuroimaging evidence, resulted in findings that essentially concluded the proceedings—there was no trial of the charges in either case because of the accused's mental condition. One is a case litigated in the State of Hawaii in which the court's eventual determination was that the accused was incompetent to stand trial and was not likely to regain the competence to stand trial. The judge agreed that the criminal charges should be dismissed and that the accused should be subject to a guardianship, together with continuing confinement in a state hospital setting. The second ruling that we examine was entered in a California state court case in which imaging studies of the accused's brain conducted several years into the inquiry helped experts identify abnormal brain structure and specific compromised brain function that solidified the basis for a finding of incompetence and an eventual resolution of the case.

The Hawaii based adjudication involved a neuroimaging component and extensive testimony from a number of professional disciplines, which

⁸⁹ See generally *Strickland*, 466 U.S. 668.

⁹⁰ *Blakeney v. United States*, 77 A.3d 328, 342 (D.C. App. 2013) (citing *Medina*, 505 U.S. at 450).

resulted in a 124-page trial court ruling.⁹¹ This ruling, from 2018, emerged from an assessment process in which the combination of the State prosecutor, the defense, and a third entity – a state hospital system or a prison hospital system – each contributed diagnostic information, competence assessment reports, and a breadth of expertise, which included a review of historical imaging studies of the accused plus updated imaging studies conducted during the progress of the competence related assessments after the accused’s arrest.

Adam Mau was charged with violation of state law resulting from a home invasion, kidnapping, and robberies that had left three persons dead. Prior to the charged crimes, including the three criminal homicides, Mr. Mau had a history of hospitalizations and periods of psychiatric treatment. Once he was charged, the defense initiated a number of evaluations of Mr. Mau, one of which included the reexamination, with updated software packages, of MRI data (Magnetic Resonance Imaging data) that predated the *Mau* criminal case indictment. Mr. Mau then underwent further post-arrest structural and functional imaging studies, psychiatric assessment, psychological assessment, neuropsychological assessments, medication effect assessment, and competence-specific forensic assessment. In its review of some of the evidence, the Hawaii court noted that professionals in various disciplines generated a total of thirty-five reports between 2006 and 2016 – some through the Hawaii state hospital system, some as a result of requests by the defense, and some order by the court.

The *Mau* court order chronicles an unusually lengthy period of time devoted to the assessment of the accused Adam Mau’s competence, including periodic assessments and hearings held during the State’s efforts to restore Mr. Mau into competence to stand trial. The presiding judge’s detailed finding (entered more than ten years into the pendency of the case)

⁹¹ State of Hawai’i v. Adam Mau, No. 1PC0610013931 (Haw. Cir. Ct. Oct. 15, 2018) (order regarding Adam Mau’s competence to stand trial and granting defendant’s motion to dismiss indictments). The authors extend appreciation to attorney Brook Hart, Adam Mau’s lead counsel, for his courtesy in providing case materials. Mr. Hart had extensive experience in the defense of complex, notorious cases, at the time he defended Adam Mau. He was able to retain the services of examiners from Hawaii as well as the mainland, including some leading authorities on the forensic competence assessment process in preparing defense evidence. The court and the state involved a number of the state’s leading forensic examiners in the case as well. Coauthor John Philipsborn served as one of several consultants to Brook Hart during the litigation on the issue of Mr. Mau’s competence to stand trial.

demonstrates the care with which Mr. Mau's history was investigated so that a wide range of information was available for the judge to consider, such as treatment at birth for cyanosis (a brain blood oxygen deficiency) and a history of six separate head traumas, several of which resulted in contemporaneous medical treatment with resulting medical records. These matters were accompanied by a history of psychiatric hospitalizations and treatments, and pre-offense psychological and psychiatric assessments. Mr. Mau was given prescriptions for psychotropic medications and ordered to be managed under a formal guardianship even before his arrest in the murder case.

In part because of the extensive medical and psychiatric history, the existence of historical (meaning pre-murder charges) structural MRI studies led defense counsel to seek a court order permitting both Positron Emission Tomography and further MRI examination (motions that were opposed by the State). These were imaging studies aimed at buttressing (and further explaining) findings arrived at during periodic neuropsychological testing. As parties undertook litigation about the utility of further imaging studies following Hawaii's competence assessment procedures, a court-appointed panel of three mental health professionals periodically evaluated Mr. Mau and their opinions, as reflected in the court order, changed over time as further history emerged and they received information.

Treating medical and psychiatric staff at the detention facilities housing Mr. Mau had opportunities to observe Mr. Mau and interact with him extensively. Even outside consultants had such opportunities. For example, one outside evaluator was described as having spent fifty-seven hours interviewing Mr. Mau over twenty-four separate interviews conducted in the eight-year period between 2006 and 2014.⁹² That same examiner opined that after five years of treatment with Clozaril (an antipsychotic medication), Mr. Mau continued to produce results on competence assessment tools administered to him (including the MacCAT-CA and ECST-R) showing "...a substantial impairment of his rational understanding of his legal situation and ability to assist counsel."⁹³

The court's order explained that it continued to consider the periodic 'three-panel' evaluations conducted by the designated examiners, as well as evidence tendered in the form of nursing summaries, reports from custodial staff, progress notes, state hospital recovery plan related information, and the like. During one of several periodic hearings, the court heard testimony based

⁹² *Id.* at 31.

⁹³ *Id.*

on neuropsychological testing, imaging studies, competence specific assessment, response to medication, and hospital staff related observations. Counsel for Mr. Mau offered information about their problematic communications with him. The court also took into account contrary opinions, including opinions that were linked to assessment interviews that had been videotaped and shown to the court.⁹⁴

The court acknowledged the salience of the information provided by experts with extensive experience in imaging studies as to how this information intertwined with facts gleaned from the neuropsychological assessment sessions psychiatrists had performed over a period of years. The growing data base supported the view that it was unlikely that Mr. Mau could be restored to competence.⁹⁵

Admittedly, the trajectory of Adam Mau in the State of Hawaii's criminal court and mental health systems can be considered unusual in comparison to the level of care shown by many state trial courts in competence assessment situations. The *Mau* case generally fits the definition of a complex case involving allegations of serious crimes and the potential for an extended sentence, in which the claim of incompetence required extensive attempts at evaluation and restoration to competence before the final order dismissing the case and referring Mr. Mau to a mental health guardianship in a hospital setting was reached. The State of Hawaii does not employ the death penalty, but Mr. Mau was eligible for life sentence(s). This was a case with serious sentencing consequences. Mr. Mau, as have others who have been able to seek the services of a wide range of experts, had access to financial resources, and was in a state that has a well-developed procedure for competence assessments. The state court was also willing to conduct careful reviews of the case episodically, thanks in part to Mr. Mau's representation by a robust defense team, led by highly accomplished lead counsel with experience in complex case defense involving mental condition issues.

The final exemplar discussed here arose in California and was litigated in the San Francisco Superior Court.⁹⁶ Jihad Baqleh was a San

⁹⁴ *Id.* at 86 (reviewing the court's account of its viewing of video interviews).

⁹⁵ *Id.* at 48 (relating impairments found through neuropsychological assessment over a period of years to the left frontotemporal region of the brain).

⁹⁶ *See, e.g.,* *People v. Baqleh*, No. 183548 (Cal. Super. Ct.). The case resulted in

Francisco taxicab driver who was arrested and prosecuted for the rape, robbery, and murder of a young female passenger. As in the above-referenced *Mau* case, the inquiries into Mr. Baqleh's mental condition and competence occurred over a period of years. By the time the contested evidentiary hearings on competence took place for a second time - some ten years into the pendency of the case and following Mr. Baqleh's hospitalization in a state hospital - there were thirteen assessment reports and numerous interview records and considerable other materials descriptive of Mr. Baqleh's background, historical behavior, impairments, and diagnoses available for review by examiners.⁹⁷ The court heard evidence from various neuropsychological, psychiatric, and forensic competence examiners, including by court-appointed examiners who conducted examinations while the accused was in jail. Psychiatrists and psychologists also had examined Mr. Baqleh in state hospitals where he received treatment in an attempt to restore competence.

During the second set of hearings on competence, the trial court received a number of reports from individuals who were directly involved in the trial preparation, including a report from an experienced lawyer who had ceased practicing law to become a licensed private investigator and mitigation specialist. This person had an unusual blend of professional training and experience that allowed her to provide informed perspectives about the implications of Mr. Baqleh's deficits and limitations when defense team members attempted to confer with Mr. Baqleh to discuss the case and the prospects of trial. The deficits in question were tied directly to Mr. Baqleh's inadequate capacity for rational communication with his counsel, and to his inability to assist in his defense given his demonstrated impairments.

The defense offered evidence of incompetence linked to cognitive disorders, impairments in episodic memory, and difficulties in language

at least one published opinion from the California Court of Appeal which reviewed procedures under which a court ordered examination of Mr. Baqleh could take place. *Baqleh v. Super. Ct.*, 122 Cal. Rptr. 2d 673 (Cal. Ct. App. 2002). Lead counsel for Mr. Baqleh, Michael Burt, is a lawyer who has gained a national reputation for his knowledgeable and sophisticated lawyering of Federal and State capital cases. He has been involved in numerous cases involving novel questions about scientific and technical evidence. Mr. Burt is regularly involved in the training of lawyers who defend death penalty cases.

⁹⁷ One examiner listed ninety-seven different categories of records and materials made available for him to review prior to a 2008 hearing.

processing. Because of the disagreements between the state's experts and the defense's experts, several years into the competence litigation, it was recommended that Mr. Baqleh be sent for neuroimaging studies at a University of California hospital. Structural and functional imaging was performed using differing techniques, resulting in an unusual finding that appeared to correlate with a history of reported cognitive disorder and learning disabilities. Based on the imaging and additional evidence of areas of brain injury, doctors opined that Mr. Baqleh suffered from colpocephaly, a cephalic disorder causing brain structure malformations that are associated with a variety of neurological syndromes and disorders.⁹⁸ The imaging studies provided some explanation for the deficits that had been described through forensic psychiatric, neuropsychological, and psychological evaluations. The results of the imaging studies provided both the parties and a wide variety of state and defense physicians and mental health experts staffing the case for the State and defense with evidence that there were genuine, resident, and chronic issues with Mr. Baqleh's cognitive functions that warranted a mental health basis to resolve the case, resulting in a commitment of Mr. Baqleh to a state hospital.

VIII.

LAWYERING AND FORENSIC MENTAL HEALTH STANDARDS OF PRACTICE WILL CALL FOR PRACTITIONERS TO CONSIDER NEUROSCIENCE AND ITS TOOLS IN COMPETENCE ASSESSMENTS

A recent survey of literature on neuroscience evidence in the United States and other common law courts noted "the use of neuroscientific evidence as buttressing..., detecting..., or sorting devices...."⁹⁹ Neuroscience appears to most often be offered either as one of the methods of detecting a cause, or as an explanation of an otherwise observed, documented, and assessed deficit or injury. Also, such evidence, including

⁹⁸ Jacob Landman et al., *Radiological Colpocephaly: A Congenital Malformation or the Result of Intrauterine and Perinatal Brain Damage*, 11 BRAIN & DEV. 313 (1989).

⁹⁹ Darby Aono et al., *Neuroscientific Evidence in the Courtroom: A Review*, 4 COGNITIVE RSCH.: PRINCIPLES & IMPLICATIONS 1, 4 (2019), https://canlab.yale.edu/sites/default/files/Aono_2019_neuroscience_courtroom_review.pdf (referencing Owen Jones, *Seven Ways Neuroscience Aids Law*, in NEUROSCIENCES AND THE HUMAN PERSON: NEW PERSPECTIVES ON HUMAN ACTIVITIES 181 (Antonio Battro et al., ed. 2013)).

neuroimaging, is offered to buttress a claim of disorder, deficit, or, as pertinent here, of incompetence, which is also rooted in findings made through other means (neuropsychology, neuropsychiatry, forensic testing assessment, etc.).

For lawyers and courts, it is of some significance that claims of ineffective assistance of counsel have been tethered to allegations of inadequate consideration or presentation of neuroscience evidence. In other words, neuroscience and neuroimaging are sufficiently established as scientific and technical endeavors that may inform decision-making in U.S. courts that lawyers should address these areas of science in professionally adequate and legally defensible ways where such evidence may be warranted or is actually presented.¹⁰⁰

A review of the cases discussed above presents lawyers and judges with examples of competence adjudications in which several different types of evidence and expertise were presented. In three of the four examples, neuroimaging evidence was offered as a buttress. In the fourth of the cases (*Baqleh*), it was offered in the category of a 'detection' tool, which allowed "the use of neuroscience to gain otherwise elusive insights, such as the extent of brain injuries...."¹⁰¹

Neuroscientists and some legal scholars have sounded words of caution about mistaken and cynical uses of neuroscience evidence in courtrooms. There are varying viewpoints on the level of contribution that brain imaging and other techniques can make in informing judges and juries about a given individual's claimed disorders and deficits, particularly as a means of identifying the cause of specific behavior.¹⁰² It may be that lawyers can be faulted in specific litigation for 'overselling' the utility of particular neuroimaging or other neuroscience-based studies. But, at the present time, a combination of the working definition of professionally adequate lawyering of a competence to stand trial issue and the competence-related practice

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 4.

¹⁰² See, e.g., Joseph H. Baskin et al., *Is a Picture Worth a Thousand Words? Neuroimaging in the Courtroom*, 33 AM. J. L. & MED. 239, 240 (2007) (contrasting scientists to lawyers, explaining: "Lawyers, unlike scientists, are advocates, and therefore operate within a different paradigm."). On one hand, these coauthors make the useful point that lawyers are advocating for a client by marshaling available facts. On the other, as a variety of litigation has demonstrated, learned, accomplished, and celebrated scientists can have differing views of and claim different levels of support for what are claimed to be scientific methodologies, diagnoses, and research.

assessment guidelines, literature, and existing case law, supports the view that lawyers should seek consultation and advice on the tools and techniques associated with neuroscience from examiners involved in a competence assessment. If there is pre-existing imaging or other neuroscience related information in a case (as covered in the *AAPL Guidelines* (2007) and exemplified in the above-described *Mau* litigation, lawyers should obtain information about the utility of that information, and the advisability of obtaining additional imaging or related evidence. Whether to actually employ neuroimaging or other specialized neuroscience evidence will remain a matter of case-specific professional judgment.

CONCLUSION

The effort here has included a review of pertinent literature, some of which has yet to find its way into the discussion of neuroscience and law. Neuroimaging evidence has been considered in competence adjudications prior to the more recent attention to neuroscience and law literature over the past fifteen years. In part because it is the responsibility of courts to ensure that the accused in a criminal case is competent to stand trial, judges and lawyers should share information about competency. A review of published cases from federal and state reviewing courts demonstrates the acknowledgement that there can be a variety of reasons that a competence question is raised in a criminal case. Clearly, courts have an interest in attempting to sort out genuine, compelling claims of incompetence from those that are not supported by the evidence. Some courts – including those discussed above in the case studies – have shown an interest in permitting wide-ranging evidence on a claim of incompetence. It is clear from examples discussed here that judges do not necessarily credit the more prestigious experts or the side that happens to introduce neuroimaging or other neuroscience evidence. The incentive is for the parties in well-researched and litigated matters to present multiple sources of information to address the issue, and this may call for a neuroscientist's expertise, even where neuroimaging is not specifically informative.

It continues to be pointed out that courts and lawyers may lack the training and familiarity with the intersection between the neurosciences and law to even be aware of the utility of neuroscience. Efforts continue to remedy that deficit, and it may be that the increased proliferation of literature and training opportunities will serve to increase the quality and reliability of competence assessment going forward.