

Neuropsychiatric Reflections on *Madison v. Alabama*

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In *Madison v. Alabama* (2019),¹ the U.S. Supreme Court addressed two questions in the context of Vernon Madison's diagnosis of vascular dementia. The court majority ruled that Mr. Madison's inability to remember his crime secondary to vascular dementia does not prevent him from forming a rational understanding of the reasons for his death sentence. The court also ruled that the Eighth Amendment applies similarly to a prisoner experiencing dementia as it does to a prisoner experiencing psychotic delusions. Finally, the court ruled that the district court of Alabama had incorrectly applied standards from *Ford v. Wainwright* (1986)² and *Panetti v. Quarterman* (2007)³ to their decision and remanded the case for further review.

The entire syllabus of *Madison v. Alabama* is a fascinating read from a neuropsychiatric perspective. The dissenting opinion led by Judge Alito starts with the statement: "What the Court has done in this case makes a mockery of our Rules" (Ref. 1, p 731). The dissent is almost entirely predicated on what the dissenters believed to be wrong reasoning by the majority. I will not focus nor elaborate on these disagreements. I will make an earnest attempt to analyze the court's argument from the neuropsychiatric perspective and then discuss its potential implications for future cases involving neuropsychiatric disorders.

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The Court's Reasoning

The Court explains the Eighth Amendment's underlying tenets that preclude executing a prisoner who has "lost his sanity" after sentencing. Citing a uniform practice by surveying the common law and state statutes, the Court notes that killing such a person offends humanity and lacks retributive value. Further citing the *Panetti* Court, it emphasizes that the question is whether the prisoner's concept of reality is so impaired that he cannot grasp the execution's meaning and purpose or the link between his crime and its punishment.

The prosecutors for the state of Alabama had argued that Mr. Madison did not experience delusions or psychosis, and hence he was competent to be executed. The Court thoroughly rejected that notion and reasoned that what matters is whether a person has the "rational understanding" as *Panetti* requires, not whether he has any particular memory or any particular mental illness.

The Court did not get lost in the maze of arbitrary and counterproductive diagnostic labeling of mental illness. Two expert psychologists who evaluated Mr. Madison's competency, John Goff, PhD, and Karl Kirkland, PhD, arrived at different conclusions. Dr. Goff opined that Mr. Madison had a "major vascular neurological disorder" (i.e., vascular dementia) that affected his ability to comprehend the state's reasoning to execute him. Dr. Kirkland opined that Mr. Madison was able to discuss his case and understand his legal situation. He did not make any mention of vascular dementia while acknowledging that Mr. Madison's strokes did cause cognitive decline. Dr. Kirkland emphasized that Mr. Madison showed no evidence of delusion, psychosis, or paranoia. The state of Alabama argued, based on Dr. Kirkland's report, that Mr. Madison did not have the requisite psychosis or

delusions or paranoia that would impair his ability to comprehend the punishment of execution.¹

The Supreme Court explained how Mr. Madison's cognitive deficits should be interpreted and applied in different legal contexts. The court opined that Mr. Madison's memory loss for the crime committed was not relevant to the determination of his competency to be executed. It noted that memory loss could be reconstructed for Mr. Madison just as the events of the Civil War can be learned to shape an informed opinion without having an independent recollection of the war. The Court then stated that such memory loss may still factor into the rational understanding analysis as required by *Panetti* when combined with other cognitive deficits. It opined, "That may be so when a person has difficulty preserving any memories, so that even newly gained knowledge (about, say, the crime and punishment) will be quickly forgotten. Or it may be so when cognitive deficits prevent the acquisition of such knowledge at all, so that memory gaps go forever uncompensated" (Ref. 1, p 728). The court made it clear that the *Panetti* test requires lack of comprehension irrespective of the cause of such deficit; psychosis or dementia, delusions, or overall cognitive decline are all the same under *Panetti*.

Finally, the Court's most relevant statement for forensic psychiatrists is that a judge, in evaluating competency to be executed, must look beyond any given diagnosis to a downstream consequence. It further discusses that both dementia and delusions come in many shapes and sizes, and the mere presence of either does not make one incompetent to be executed.

Analysis

The U.S. Supreme Court ruling in *Madison v. Alabama* raises many important topics relevant to the practice of forensic psychiatry:

Looking beyond diagnostic labeling and understanding the phenomenology of the disease process and its application to a medicolegal situation;

In-depth analysis of a person's clinical symptoms outside of the conventional disease classification system and how it may inform the forensic evaluator's opinions;

Integration of recent neuroscience advances in understanding various psychiatric and neuro-

psychiatric disorders with the evidence-based practice of forensic psychiatry;

The need for systemic and research-based efforts to reduce the disparity of opinions between opposing experts when presented with the same set of data;⁴ and

Informing the legal community of the newly gained insights into brain functioning.⁴

The discussion below explores some of the neuropsychiatric and neuroscience concepts discussed above in the *Madison* case.

If a dementia is advanced to a stage where the person cannot recall a remote significant event that took place many years ago (i.e., retrograde amnesia), then it is quite likely that the person may also have considerable anterograde amnesia, or deficits in storing or retrieving newly learned information. Such memory deficits by themselves, irrespective of cognitive deficits in other domains, can bear enormous significance for a particular question to be addressed in a medicolegal case. In-depth characterization of memory deficits should be performed with a combination of skilled diagnostic interviewing and neuropsychological testing.

In general, memory deficits in Alzheimer-type dementia are characterized by anterograde episodic memory deficits due to hippocampal involvement, which results in the failure of newly learned information to convert into long-term memory.⁵ This process affects both the recall and recognition of memory. In contrast, people with subcortical vascular dementia show a pattern of memory deficits characterized by difficulty recalling information, and they perform better with recognition tests. Such differences in memory deficit patterns play a role when evaluating forensic cases. For example, a person with Alzheimer's disease may not be able to assist counsel due to an inability to learn new information and store that information in a manner that allows it to be reproduced consistently. A person with vascular dementia, however, may have difficulty spontaneously retrieving the newly learned information but still may be able to assist counsel when memory recall is aided by recognition techniques such as pictures, written material, videos, and cue cards.

Recent advances in dementia research have revealed that Alzheimer's disease neuropathology coexists with vascular dementia neuropathology in a substantial number of cases.⁵ Their coexistence may exacerbate

the development of dementia more than either condition alone. Psychiatric symptoms, such as delusions and hallucinations, are common in Alzheimer's disease and can occur in the earlier stages of the disease.

Dementias such as Alzheimer's disease and vascular dementia impair many other cognitive domains, such as attention and concentration, language, executive functioning (e.g., planning, organization, social comportment, and response modulation), visuospatial functions, insight, and judgment.⁵ The severity of these deficits may correlate with the disease stage. Characterization of these deficits, as well as establishing their severity, must be a priority of the forensic psychiatric evaluator before concluding any role they may play in a given medicolegal case. In other words, an evaluator is not given *carte blanche* once the diagnosis of dementia is established.

Royall *et al.*⁶ cogently discuss this vital concern in their paper published on behalf of the Committee on Research of the American Neuropsychiatric Association. The authors focused on the extant literature regarding the cognitive correlates of functional impairments in a neuropsychiatric case. How well do any given cognitive deficits predict functional impairment? Their findings are relevant and crucial for the practice of forensic psychiatry. They conclude that there is only a modest correlation between cognition and functional status, and some cognitive domains are more relevant to functional capacity than others. For example, executive function deficits correlate strongly with functional capacities such as medical and financial decision-making. A forensic psychiatrist should keep in mind that physical or cognitive impairment does not always result in disability.

Conversely, cognitive deficits in circumscribed areas, such as memory or executive functioning, may affect a person's competency substantially. Let's take an example of a person who develops herpes simplex encephalitis, resulting in significant bilateral temporal lobes damage (i.e., medial temporal lobes including hippocampus) and severe deficits of anterograde memory formation and consolidation. This person will have significant deficits in learning and retaining newly learned information.⁷ Such a deficit, often the only prominent cognitive deficit in cases with bilateral temporal lobes damage, can have a totally different bearing on civil and criminal forensic psychiatric cases than generalized mild to moderate cognitive deficits.

The Supreme Court's opinion in *Madison v. Alabama* illustrates clearly the neuroscience principles of dementia in general and memory in particular. It gives direction to triers of fact to weigh the "downstream consequences" of the disease process because dementias, just like delusions, come in many shapes, sizes, and forms.

Lay people and most professionals alike have used the word "dementia" as an all-encompassing term to describe the cognitive decline of a previously well-functioning individual. Dementia is a complex disease with neuropathological and phenotypic heterogeneity that we have only begun to explore.⁸ Forensic psychiatrists are very likely to encounter evaluatees with dementia during their careers, considering the increasing prevalence of the disease in the aging population.

An enduring legacy of the *Madison v. Alabama* decision will be the recognition by the Court that dementia, like delusions, paranoia, and psychosis, is a major mental disorder and should be considered as such. A person with dementia may meet the insanity standard as set forth in *Ford* by Justice Marshall and the plurality opinion, which equated insanity with a mental condition that "prevents a person from comprehending the reasons for the penalty or its implications" (Ref. 2, p 417).

I must declare my bias here that the word "mental disorder" is archaic and an egregious injustice to the neuroscientific advances of the last four decades. It is time for us to free ourselves from the shackles of mind-brain dichotomy and the nomenclature that signifies such antiquated concepts. It is time for forensic psychiatrists to write narratives that support their opinions with reasoning and analysis based on pathophysiology, neuropathology, and phenomenology of a particular disease process and not reduce it to a mere diagnostic label.

Finally, I would like to illustrate that the same underlying disease process may lead to several different phenomenological presentations in a given person. Therefore, a unifying diagnosis or disease description is more appropriate in those settings than giving two or three different diagnoses. The evaluator also must be familiar with the interplay between various symptoms.

For example, a person with Alzheimer's dementia may present with symptoms of psychosis such as paranoia, delusions, and hallucinations.⁹ Forensic psychiatrists who are evaluating persons with

Alzheimer's dementia should familiarize themselves with the characteristics of delusions and other psychotic features as well as the clinical course of Alzheimer's disease because it may have significant impact on the final opinion. If psychosis appears early in the disease process, it is linked to rapid cognitive deterioration and more functional impairment. When evaluating a death-row inmate with such a clinical picture, for example, one may need to perform serial evaluations at six- to 12-month intervals to assess the progress of potential cognitive decline. If cognitive decline is assessed, then the original opinions may need to be amended.

Discussion

The U.S. Supreme Court decision in *Madison v. Alabama* challenges us to advance the frontiers of forensic psychiatric practice. It is time to incorporate the well-researched and widely accepted scientific advances of various brain disorders (as opposed to mental disorders) into our daily forensic psychiatry practice, education, and research. Doing so strengthens our ethics and moral standing with a backbone of scientific clarity. Opining that significant cognitive decline due to dementia does not have the same relevance as delusions, psychosis, or hallucinations is simply inconsistent with evidence-based science and conformity to the legal standard required in this case.

I am also mindful of concerns about “neuroexuberance” and “brain overclaim syndrome.”¹⁰ Morse defined the latter as making “claims about the implications of neuroscience for criminal responsibility that cannot be conceptually or empirically sustained” (Ref. 11, p 397).

We should be at the forefront to prevent the misuse of neuroscientific testimony, e.g., blaming a criminal act on an abnormality seen on a computed tomography scan or magnetic resonance image of the brain that may have no correlation to the behavior in question. In other words, concepts of free will versus determinism must be weighed rigorously when proffering such testimony. Collaboration between various stakeholders, including forensic psychiatrists and psychologists, legal scholars, and the judiciary, is needed more than ever to encourage progress in the right direction.

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