

Duquesne Law Review

Volume 56
Number 1 *Athletes, Veterans, and
Neuroscience: A Symposium on Traumatic
Brain Injury and Law*

Article 2

2018

Foreword: Athletes, Veterans, and Neuroscience : A Symposium on Traumatic Brain Injury and Law

Jane Campbell Moriarty

Follow this and additional works at: <https://dsc.duq.edu/dlr>



Part of the [Medical Jurisprudence Commons](#)

Recommended Citation

Jane C. Moriarty, *Foreword: Athletes, Veterans, and Neuroscience : A Symposium on Traumatic Brain Injury and Law*, 56 Duq. L. Rev. 1 (2018).

Available at: <https://dsc.duq.edu/dlr/vol56/iss1/2>

This Front Matter is brought to you for free and open access by Duquesne Scholarship Collection. It has been accepted for inclusion in Duquesne Law Review by an authorized editor of Duquesne Scholarship Collection.

Foreword

Athletes, Veterans, and Neuroscience: A Symposium on Traumatic Brain Injury and Law

*Jane Campbell Moriarty**

The last several years have educated us about the multiple causes and effects of traumatic brain injury (TBI). We have learned about concussions and brain injuries that many athletes suffer and the possibility of long term damage that such injuries may cause. The public is now sadly aware that many veterans are returning from Afghanistan and Iraq with combat-related brain injuries. And many citizens have learned first-hand that serious accidents can cause concussions and other forms of serious brain injuries.

In fact, TBI occurs in the United States with alarming frequency: Between 1.7 and 2.5 million TBIs occur *every year*, and some estimate that 5 million of those injured individuals will suffer from permanent disability.¹ Scholars have described the rate of TBIs as an “epidemic of concussive brain injuries.”² One study tracking data concluded that from 2002-2006, approximately 275,000 hospitalizations and 52,000 deaths from TBI were related to accidents, assaults, and sports-related injuries.³ Data compiled by the United

* Carol Los Mansmann Chair of Faculty Scholarship and Professor, Duquesne University School of Law. Many thanks to The Honorable Maureen Lally-Green, Dean of Duquesne University School of Law, for suggesting and supporting this Symposium, and to Jacob H. Rooksby, Associate Dean of Administration and Associate Professor, Duquesne University School of Law, for co-chairing this Symposium with me. Particular thanks to the firm of Quattrini Rafferty, Attorneys at Law, for its generous support of this Symposium. And finally, thanks to the editors and staff of the *Duquesne Law Review* for their capable and hard work on this Symposium.

1. See Jane Campbell Moriarty, *Seeing Voices: Potential Neuroscience Contributions to a Reconstruction of Legal Insanity*, 85 *FORDHAM L. REV.* 599, 614 n.98 (2016) (citing MARK FAUL ET AL., U.S. DEPT OF HEALTH & HUMAN SERVS., *TRAUMATIC BRAIN INJURY IN THE UNITED STATES: EMERGENCY DEPARTMENT VISITS, HOSPITALIZATIONS AND DEATHS 2002-2006* 13 (2010), http://www.cdc.gov/traumaticbraininjury/pdf/blue_book.pdf [<https://perma.cc/M5W5-5B69>] (estimating 1.7 million)). A more recent study puts the number at 2.5 million per year in the United States, with 5 million of those people living with long-term disability due to such injury. Jennifer Hay et al., *Chronic Traumatic Encephalopathy: The Neuropathological Legacy of Traumatic Brain Injury*, 11 *ANN. REV. PATHOLOGY* 21, 22 (2016).

2. Betsy J. Grey & Gary E. Marchant, *Biomarkers, Concussions, and the Duty of Care*, 2015 *MICH. ST. L. REV.* 1911, 1912 (2015).

3. Moriarty, *Seeing Voices*, *supra* note 1, at 614 (citing data).

States government suggest that 12% of Iraq and Afghanistan veterans are diagnosed with TBI from blast exposure, but there is evidence that this number is vastly underreported.⁴ Evaluations of veterans returning from Iraq and Afghanistan conclude that TBI is a “pre-eminent injury” of those wars.⁵ Sports-related concussions in young athletes and the discovery of chronic traumatic encephalopathy (CTE) in former NFL players have prompted much concern in the public generally⁶ and in legal/medical fields specifically.⁷

The medical and psychological implications of TBI are profound for individuals with such brain injuries. Over the last decade, TBI has become part a more prevalent aspect of cases moving through the legal system. TBIs are often an element of damage in accident cases, are raised as defenses or mitigation by defendants in criminal cases, and are litigated in both veterans benefit claims and workers disability hearings. State legislatures are grappling with concussion statutes designed to protect young athletes,⁸ and the NFL has been involved in a massive concussion settlement program.⁹ The criminal and civil litigation issues include how to prove mild TBIs (mTBIs),¹⁰ what types of expertise and imaging is appropriate for court,¹¹ and whether TBIs can excuse or mitigate a defendant’s liability in criminal cases.¹²

4. Valerie Gray Hardcastle, *Traumatic Brain Injury, Neuroscience, and the Legal System*, 8 NEUROETHICS 55, 56 (2014).

5. Susan L. Eskridge et al., *Injuries from Combat Explosions in Iraq: Injury Type, Location, and Severity*, 43 INJURY, INT. J. CARE INJURED 1678, 1681 (2012) (evaluating a cohort of roughly 4600 injured veterans).

6. Most recently, the *New York Times* published a recent article based upon a disturbing new study suggesting that blows to the head that do not even rise to the level of concussions may result in immediate brain damage. See Gretchen Reynolds, *Hits to the Head May Result in Immediate Brain Damage*, N.Y. TIMES (Jan. 31, 2018), <https://nyti.ms/2GwObMf>. The underlying study is Chad A. Tagge et al., *Concussion, Microvascular Injury, and Early Tauopathy in Young Athletes After Impact Head Injury and an Impact Concussion Mouse Model*, 141 BRAIN 422 (2018).

7. See, e.g., Grey & Marchant, *supra* note 2. For a comprehensive discussion on CTE, see Christopher R. Deubert, I. Glenn Cohen & Holly Fernandez Lynch, *Protecting and Promoting the Health of NFL Players: Legal and Ethical Analysis and Recommendations*, 7 HARV. J. SPORTS & ENT. L. 1, 26-29 (2016) (summarizing the current state of knowledge about CTE).

8. See generally Francis X. Shen, *Are Youth Sports Concussion Statutes Working?*, 56 DUQ. L. REV. 7 (2018).

9. See NFL CONCUSSION SETTLEMENT, <https://www.nflconcussionsettlement.com/> (last visited Feb. 20, 2018).

10. See Grey & Marchant, *supra* note 2, at 1918 (noting the difficulties of diagnosing mTBI).

11. See generally Jane Campbell Moriarty, Daniel D. Langleben & James M. Provenzale, *Brain Trauma, PET Scans, and Forensic Complexity*, 31 BEHAV. SCI. & L. 702 (2013) (discussing imaging and expertise related to TBI).

12. See, e.g., Stephen J. Morse, *Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note*, 3 OHIO STATE J. CRIM. L. 397 (2006) (discussing neuroscience and criminal

These pressing concerns prompted the idea for a Symposium at Duquesne University School of Law in April 2017 to address the myriad legal implications of traumatic brain injury. Focusing on TBIs arising from both combat exposure and sports-related injuries, the Symposium aimed to educate lawyers and members of the public about the legal, medical, psychological, and ethical issues related to TBI. Speakers for the Symposium included distinguished members of the judiciary, a renowned neuroradiologist, a highly regarded clinical neuropsychologist, and well-known members of the legal academy and the practicing bar. The Symposium was designed to provide multiple perspectives on the implications of TBI in the law.

In addition to the Keynote Speaker, Francis X. Shen,¹³ who addressed *The Future of Brain Injury and the Law*, the Symposium included honored participants Debra McCloskey Todd, Justice of the Supreme Court of Pennsylvania, and Dwayne D. Woodruff, Judge of the Court of Common Pleas of Allegheny County (and a former player for the Pittsburgh Steelers).

Daniel Kunz, the Supervising Attorney and Adjunct Clinical Professor in Duquesne Law's Veterans Clinic, spoke movingly about his work with veterans. Another academic speaker, Professor Paul Litton,¹⁴ addressed the complicated theoretical concerns that TBI poses for questions of legal responsibility, while I addressed the myriad, complex questions surrounding the admissibility of neuroscience evidence. Professor Mark Yochum kept the audience rapt with his legal ethics performance over the lunch hour, aptly titled *The Bonehead Play*.

Both Vincent J. Quatrini, Jr. and Michael V. Quatrini, highly regarded practicing lawyers, provided insights into the complexity of representing individuals with TBI in the areas of civil litigation, workers compensation, and veterans disability benefits.¹⁵

Duke University School of Medicine neuroradiologist James M. Provenzale, M.D., F.A.C.R., provided clinical insight into neuroim-

responsibility); Nicole A. Vincent, *A Compatibilist Theory of Legal Responsibility*, 9 CRIM. L. & PHIL. 477 (2015).

13. Francis X. Shen is Associate Professor of Law & McKnight Presidential Fellow, University of Minnesota; Director, Shen Neurolaw Lab; Senior Fellow in Law and Neuroscience, Harvard Law School Petrie-Flom Center and Affiliated Faculty Member, MGH Center for Law, Brain and Behavior; Executive Director of Education & Outreach, MacArthur Research Network on Law and Neuroscience.

14. Paul J. Litton is the Associate Dean for Research and Faculty Development, R.B. Price Professor of Law, University of Missouri School of Law.

15. The Law School is grateful for the sponsorship of the April 2017 Symposium by Quatrini Rafferty, Attorneys at Law.

aging and brain trauma, while Glen E. Getz, Ph.D., A.B.N., a clinical neuropsychologist, explained the complicated definition of neurocognitive impairment from the NFL's Concussion Settlement. Other speakers included Attorney Alan C. Milstein, who addressed the ethics of being a sports fan, and Ralph Cindrich, an attorney, sports agent, and former NFL player, who provided a unique outlook on concussions and CTE based upon his multiple roles over the years. It was a fascinating day with multiple perspectives from the academy, the medical and psychological professions, the practice of law, the judiciary, and former athletes.

This written Symposium sponsored by the *Duquesne Law Review* features two articles by academic participants Francis X. Shen and Paul J. Litton. One article discusses concussion statutes and preliminary data about whether the statutes are working, and the other examines moral philosophy's intersection with criminal responsibility in those individuals with TBIs. The articles capture the importance of both empirical work and theory in the intersection of law and neuroscience.

Professor Shen's article, *Are Youth Sports Concussion Statutes Working?*,¹⁶ provides a multi-dimensional investigation and evaluation of existing sports concussion statutes. His article also details an empirical project that his Neurolaw Lab, housed at the University of Minnesota School of Law, is engaged in to determine whether Minnesota's Concussion Statute is working and is well-understood by parents and athletes.

Currently, every state in the union has a concussion statute,¹⁷ and while there is divergence among them, they are all intended to: educate athletes, parents, and coaches; remove players immediately who suffer concussions; and require medical clearance before athletes return to play.¹⁸ Many of these statutes are being amended to address additional matters such as preventing concussions and improving early detection of concussed athletes. But as many stress, the current laws may not be sufficient to address public health concerns.¹⁹

Professor Shen notes that there are generally no provisions for private legal action for athletes who are injured in these state statutes, and without a "vehicle for accountability"—and few provisions

16. Shen, *supra* note 8.

17. *Id.* at 10.

18. *Id.* (citing Kerri McGowan Lowery & Stephanie R. Morain, *State Experiences Implementing Youth Sports Concussion Laws: Challenges, Successes, and Lessons for Evaluating Impact*, 42 J.L. MED. & ETHICS 290, 291 (2014)).

19. Shen, *supra* note 8, at 11; *see also* Hosea H. Harvey, *Refereeing the Public Health*, 14 YALE J. HEALTH POL'Y L. & ETHICS 66, 113 (2014).

for reporting concussions—there is little data to determine whether these laws are effective or even whether the legal requirements are being implemented.²⁰

Explaining the details of multiple state statutes, Shen concludes there are several conclusions to be drawn about the implementation of these laws. Critically, he notes that both the public and the stakeholders approve of the statutes and that “most high schools have implemented a concussion protocol (roughly) consistent with” state laws to protect athletes in school sports.²¹ Nonetheless, despite these advances, important gaps in knowledge exist about whether these protocols are effective and whether they are implemented in non-school sports leagues.²² In an attempt to fill these gaps and to provide data about the efficacy of these statutes, Professor Shen presents several aspirational, foundational principles to better evaluate concussion laws that consider not only the feasibility of these policies, but the need to evaluate the data in a scientifically sound manner.²³

Attempting to determine how the policies are being carried out in practice, Professor Shen devised a study at the Minnesota State Fair: Researchers asked parents and student-athletes questions designed to gauge their knowledge about the current Minnesota law and to evaluate the way they thought the law was being followed. The preliminary data indicated that many responders did not fully understand the law, and a wide range of beliefs existed about how well the law was working.²⁴ Professor Shen thus concludes that the answer may not be more legislation but more creative research and strategies to make sure the laws about concussions are working for all involved.

Professor Litton’s article, by comparison, engages in a theoretical discussion about the potential relationships between TBI and responsibility and asks how TBI might affect one’s status as a legally-responsible agent.²⁵ In so doing, Professor Litton examines the multiple ways in which traumatic brain injury may (or may not) be relevant to assessing a person’s responsibility under the law. By discussing how TBI can cause changes to rationality, self-control, and personality, the article addresses both legal and moral responsibility.

20. Shen, *supra* note 8, at 13.

21. *Id.* at 25.

22. *Id.* at 26.

23. *Id.* at 27.

24. *Id.* at 30-31.

25. Paul Litton, *Traumatic Brain Injury and a Divergence Between Moral and Criminal Responsibility*, 56 DUQ. L. REV. 35, 40 (2018).

He argues that rationality is really the guiding force for evaluating responsibility, not simply a brain injury. Discussing legal conceptions of responsibility under the insanity defense, Litton argues that only if the TBI impairs rationality to a sufficiently severe degree might the individual's status as a responsible agent be undermined or diminished.²⁶ Moreover, in a jurisdiction in which volitional capacity is a permitted variant of legal insanity, Professor Litton argues that the actor must not only show that he lacked sufficient capacity to control his behavior but that he would have done so had the facts been altered slightly. Thus, the actor might argue he *could* not stop himself from shooting the decedent, but the critical inquiry is whether he *would have been able to* had he been standing in front of a police department at the time.²⁷

Legal insanity is rarely available and is a difficult test to meet. More typically, the inquiry will consider whether TBI has affected an actor's cognitive or volitional abilities such that it is relevant to a reduced, or diminished, criminal responsibility—generally only relevant at sentencing.²⁸

Finally, the article delves into an extended discussion of how a brain injury may change a personality so drastically that the person post-injury is no longer the same person.²⁹ That is to say, a given individual is no longer his “true self.” These marked behavioral changes—typified by the story of Phineas Gage—suggest a potential, although not certain, reason to excuse an agent from wrongdoing.³⁰ The difficulty with this concept, however, is that a change in personality to a different, less law-abiding personality does not actually provide a reason to excuse the person's behavior without proof of cognitive or volitional impairments. Simply because someone is no longer their “true self” may not provide a legal excuse for behavior.

The articles in this Symposium are both timely and thought-provoking discussions of a fascinating subject.

26. *Id.* at 42. The federal law and most states use “some variant of the mid-1800 ‘M’Naghten test,’ a cognitively focused standard that considers whether an individual knows or appreciates the wrongfulness of his conduct due to serious mental illness or injury.” Moriarty, *Seeing Voices*, *supra* note 1, at 607-08. Some states still permit the volitional prong of the insanity defense. For more on the differing tests for legal insanity, see *State v. Clark*, 548 U.S. 735 (2006) (collecting state laws).

27. Litton, *supra* note 25, at 43.

28. *Id.* at 44.

29. *Id.* at 48.

30. *Id.* at 51-52. For more on the story of Phineas Gage, see Hanna Damasio et al., *The Return of Phineas Gage: Clues About the Brain from the Skull of a Famous Patient*, 264 SCIENCE 1102 (1994).