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Have Your Cake and Eat It Too: Cognitive Neurology and Negligence Law in North Carolina

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ABSTRACT

Sometimes a new solution is the best way to fix an old problem. Currently, relying on a case from the early nineteenth century, North Carolina courts refuse to consider an individual's cognitive disability when determining whether she acted reasonably in a negligence case. In other words, juries are instructed to hold a mentally disabled individual to the same duty of care they would use to judge an able-minded individual. Litigants are not allowed to discuss their clients' mental disabilities. This puts a great perspective strain on mentally disabled individuals who are already among the most disenfranchised groups in America.

This Comment discusses using modern neurological mapping technology to present mental disabilities as physical disabilities, which advocates are permitted to submit to a jury. Therefore, the jury is not judging a cognitively disabled individual against an unobtainable standard. Instead, it is considering the effects of differing neural anatomy and judging a defendant against a similar person in a similar situation.

INTRODUCTION

There has been a terrible accident. The specific nature of the accident is immaterial and, accordingly, the reader should feel free to include any specific details that she feels are fitting or entertaining. The crucial factual basis is simply that, in court, the plaintiff claims that she has been injured as a direct result of the negligence of the defendant. As a result of this negligence, the plaintiff's attorney argues in her opening statement, her client is owed a large sum of money. However, in the defense's opening statement, the issue becomes confused. As it turns out, the plaintiff was also negligent. "Now," thinks the judge, "we have a ballgame."

In North Carolina, if the plaintiff in a negligence case assists in creating the harm, he is not able to recover in court.[1] As such, argues the defense attorney, the plaintiff is owed nothing. In the minds of the jury members, it is as simple as that.[2] However, it only appears simple because an important part of the story has not been told. The defendant and the plaintiff suffer from cognitive disabilities that directly affect their abilities to avoid such negligence. Accordingly, neither party had control over the situation, and to hold them to the standard of an individual lacking their disorder would be inherently unfair.

However, this information is not brought before the jury because North Carolina does not allow the finder of fact to consider an individual's cognitive or mental disabilities.[3] The case would be different if either party had a physical disability, such as a visual impairment, as the jury would compare his actions to those of a reasonably prudent blind person.[4] It is evident how these considerations could change the outcome of the case: by taking the parties' limitations into account—limitations that were in no way caused by the parties—the jury would be more able to produce a just and fair outcome. The parties could introduce witnesses explaining the specific challenges caused by their disabilities and the jury, taking these into account, would be able to make its determinations accordingly.

What if the jury were able to consider these conditions not as a cognitive disability, but as a side effect of a physical condition? What if a witness could present a scan of a human brain, point to places or patterns that are unusual, and explain that an individual with these particular differences can suffer symptoms associated with the negligence case? Granted, the jury members might not believe the witness—it is fully within their right to give

1. Clark v. Roberts, 139 S.E.2d 593, 597 (N.C. 1965).

2. For the purposes of this hypothetical, the author respectfully requests that the reader disregard the doctrine of last clear chance.

3. RESTATEMENT (THIRD) OF TORTS § 11(c) (AM. LAW INST. 2010).

4. Roberts v. State, 396 So. 2d 566, 567 (La. Ct. App. 1981).

this evidence as much weight as they see fit. But at least they would be able to talk about the evidence and possibly give attention to the differing experiences and capabilities of persons with cognitive disabilities. This would allow the jury to better determine whether to soften the standard for the plaintiffs, as well as to determine whether the defendant was truly and fairly at fault.

This Comment will explain the great benefits associated with using cognitive neurology in North Carolina negligence cases. Part I will explain the intertwined history of negligence law and disability law, with a particular emphasis on North Carolina-specific implications. Part II will explain the issues with the law as it is currently applied, as well as provide responses to the most popular arguments for keeping evidence of cognitive disability from the jury in negligence cases. A brief primer on cognitive neurology is set forth in Part III, with a focus on acceptance and use in court. Finally, Part IV will demonstrate how using cognitive neurology in the courtroom solves the presented problems with the status quo while mollifying the concerns voiced by critics. By examining the interplay of these ideas, advocates can work towards protecting the legal rights of persons with disabilities while respecting both the needs of aggrieved parties and the centuries of common law doctrine: a conflict which has frustrated advocates and scholars alike for decades.[5]

I. THE PAST: THE RELATIONSHIP BETWEEN NEGLIGENCE LAW AND THE DISABLED

A. The History of Negligence Law in America

Since the mid-nineteenth century, American negligence law has been inescapably linked to the standard of objective reasonableness.[6] Simply put, this standard requires that every person "avoid or minimize risks of harm to others" by acting as "a reasonably prudent person under the same or similar circumstances."[7] The reasonably prudent person standard can be traced back to the early English intentional battery case of *Weaver v. Ward,* which noted that "in trespass, which tends only to give damages according to hurt or loss. . . . no [lunatic] shall be excused . . . except it may be judged utterly without his fault." [8] Initially, this standard categorically refused to grant exceptions to individuals with different needs and experiences, preferring

5. *See infra* notes 51–55.

6. DAN B. DOBBS, THE LAW OF TORTS § 117 (2008).

7. *Id.*

8. Weaver v. Ward, 80 Eng. Rep. 284, 284 (K.B. 1616).

instead a one-size-fits-all approach.[9] For example, early cases held that children[10] and persons with physical[11] and cognitive[12] disabilities were held to the standard of a "normal" adult.

However, slowly but surely, the negligence standard began to shift, and expectations were crafted for different groups. For example, courts began carving out exceptions for children of "tender years" who were incapable of forming the requisite intent due to their age and cognitive status.[13] In *Kunz v. City of Troy*, liability was attributed to the city of Troy for failing to address the danger caused by a saloon counter placed in the middle of a sidewalk.[14] This liability was assessed even though the counter would not have fallen, but for the fact that three young children were "running against [and] climbing on it."[15] The court noted that the law did not require "an infant before reaching the age of discretion to exercise discretion."[16]

An altered level of care was also eventually afforded to physically disabled persons. For example, the court compared the actions of a blind man against those of a reasonably prudent blind person when determining whether the state was negligent in permitting him to travel to the restroom without his cane in the government building where he worked.[17] However, the legal community continues to categorically refuse to alter the level of care expected from adults with cognitive disabilities.[18] Thus the problem persists: in negligence, an individual with a cognitive disability will be held to the same standard as her mentally-able peers.

B. The History of Disability Rights in America.

The evolving standard of the duty of care closely mirrors the historical shifts in public opinion and protections for persons with disabilities. At the

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9. RESTATEMENT (FIRST) OF TORTS §283 (AM. LAW INST. 1934).

10. Bullock v. Babcock, 3 Wend. 391, 393–94 (N.Y. Sup. Ct. 1829).

11. Roberts v. Ring, 173 N.W. 437, 438 (Minn. 1919).

12. Williams v. Hays, 38 N.E. 449, 450 (N.Y. 1894).

13. Kunz v. City of Troy, 10 N.E. 442, 444 (N.Y. 1887); Hous. & T.C. Ry. Co. v. Boozer, 8 S.W. 119, 121 (Tex. 1888).

14. *Kunz*, 10 N.E. at 443–44.

15. *Id.*

16. *Id.* at 444.

17. Roberts v. State, 396 So. 2d 566, 566–69 (La. Ct. App. 1981).

18. RESTATEMENT (FIRST) OF TORTS § 283 (AM. LAW INST. 1934) (recognizing the reasonably prudent person standard and refusing to comment on application to mentally disabled persons); RESTATEMENT (SECOND) OF TORTS § 283 (AM. LAW INST. 1965) (making no exception for cognitive disability); RESTATEMENT (THIRD) OF TORTS § 11(c) (AM. LAW INST. 2010) (affirmatively stating that cognitive disability cannot be a factor in the examination of the duty element under negligence).

beginning of the twentieth century, many prominent thinkers advocated for the forced sterilization, and societal separation, of persons with disabilities.[19] This preference was endorsed by the United States Supreme Court when Justice Oliver Wendell Holmes noted that society had an interest in preventing persons with disabilities from "continuing their kind" because "[t]hree generations of imbeciles [were] enough."[20] The Supreme Court's decision allowed state courts and legislatures to permit the forced sterilization of over 30,000 persons with disabilities over the following forty years.[21] This school of thought remained prevalent for decades and only became confined to the corners of society by a concerted multilateral push from lawmakers, academic scholars, and disability advocates.[22] For example, North Carolina did not overturn its forced sterilization laws until 2003.[23] In fact, *In re Sterilization of Moore*, a North Carolina Supreme Court case which held that forced sterilization was not a violation of North Carolinian citizens' constitutional rights, has never been explicitly overturned.[24]

Even with the passage of the Americans with Disabilities Act (ADA),[25] persons with disabilities continued to experience barriers to employment and public life.[26] The hope for better treatment was primarily dashed by the legal restrictions placed upon Title I of the ADA.[27] This section, which established anti-employment discrimination, took a body blow from the Supreme Court in *Sutton v. United Air Lines*,[28] which attempted to limit assistance under the ADA to only those who were disabled enough.[29] In other words, the Court found that an action under the ADA would only succeed if the disabled person could demonstrate that she was substantially precluded from a variety of professional experiences, even after corrective measures and technologies were provided.[30]

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19. Henry H. Goddard, *Who is a Moron?*, 24 SCI. MONTHLY 41, 45 (1927).

20. Buck v. Bell, 274 U.S. 200, 207 (1927).

21. Alfred L. Brophy & Elizabeth Troutman, *The Eugenics Movement in North Carolina*, 94 N.C. L. REV. 1871, 1871 (2016).

22. Paul A. Lombardo, *Disability, Eugenics, and the Culture Wars*, 2 ST. LOUIS U. J. HEALTH L. & POL'Y 57, 57 (2008).

23. Act of Apr. 17, 2003, ch. 13, sec. 1, 2003 N.C. Sess. Laws 13 (codified at N.C. GEN. STAT. § 35A-1245).

24. *In re* Sterilization of Moore, 221 S.E.2d 307, 314 (1976).

25. Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 (2012).

26. Lia S. Davis & Brian East, *The ADA at 25*, 78 TEX. B.J. 534, 534 (2015).

27. *See* 42 U.S.C. § 12112(a) (2012).

28. Sutton v. United Air Lines, Inc., 527 U.S. 471 (1999).

29. *Id.* at 483.

30. *Id.*

The Supreme Court further limited the class of persons protected under the ADA in *Toyota Motor Manufacturing, Kentucky, Inc. v. Williams*, where it found that the definition of disability must be strictly interpreted.[31] Under *Toyota* and *Sutton*, people suffering from diabetes, epilepsy, cancer, and other diseases were left without the protections of the ADA.[32] This decision created what MSNBC anchor John Hockenberry called a "revelation."[33] "By this definition," noted Hockenberry, "the fact that I use a wheelchair to mitigate my paraplegia suggests I am not disabled. Someone should tell the doctors working on a cure for spinal cord injury they are wasting their time. The Supreme Court just beat them to it."[34] During this period, though employment discrimination claims increased, claims involving disability discrimination drastically decreased.[35] This suggests that, by limiting coverage of the ADA, the Court had inadvertently taken the teeth out of a statute designed to assist disabled Americans.

Many of these issues were addressed in 2008 with the passing of the ADA Amendments Act (ADAAA).[36] The ADAAA addressed the results of *Toyota* and *Sutton* by requiring that disability be construed broadly and without regard to mitigating factors.[37] Despite these legal advances, persons with disabilities still face a drastically higher unemployment rate today.[38] In 2016, only 17.9% of persons with disabilities were employed.[39] Therefore, there is still vast distance between the status quo and the "chance [for disabled persons] to prove themselves" that was articulated by President George H. W. Bush over a quarter-century ago.[40]

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31. Toyota Motor Mfg., Ky., Inc. v. Williams, 534 US. 184, 197 (2002).

32. Greenburg v. Bellsouth Telecomms., Inc., 498 F.3d 1258, 1264 (11th Cir. 2007); Todd v. Acad. Corp., 57 F. Supp. 2d 448, 454 (S.D. Tex. 1999); Garrett v. Univ. of Ala., 507 F.3d 1306, 1315 (11th Cir. 2007), *superseded by statute*, ADA Amendments Act of 2008, Pub L. No. 110–325, 122 Stat. 35553, *as recognized in* Moore v. Jackson Cty. Bd. of Educ., 979 F. Supp. 2d 1251 (2013).

33. John Hockenberry, *Disability Games*, N.Y. TIMES (June 29, 1999).

34. *Id.*

35. *Americans with Disabilities Act of 1990 (ADA) Charges*, U.S. EQUAL EMP'T OPPORTUNITY COMM'N, https://perma.cc/RQ6N-S6EC (last visited December 10, 2018).

36. 42 U.S.C. § 12101 (2012).

37. *Id.* § 12102(4).

38. Economic News Release, U.S. Dep't of Labor: Bureau of Labor Statistics, Persons with a Disability: Labor Force Characteristics Summary (June 21, 2018), https://perma.cc/P3UR-HFLD (indicating that approximately 80% of those with disabilities are considered outside the labor force).

39. *Id.*

40. *Remarks of President George Bush at the Signing of the Americans with Disabilities Act*, EEOC, https://perma.cc/4K5W-8E3T (last visited December 10, 2018).

C. *Contributory Negligence and Disability in North Carolina*

The disenfranchisement of persons with disabilities, though problematic and pernicious on a national scale, sees particularly devastating results in states like North Carolina, which still utilize the contributory negligence doctrine. Contributory negligence simply means that, if both parties are in any way at fault, neither may recover in an action for negligence.[41] Contributory negligence has been around in some form since the early 1800s,[42] and was adopted by American courts in 1824.[43] North Carolina courts first adopted the doctrine in 1849 when the state supreme court held that the plaintiff in a railroad collision case could not recover in damages for harm done to his slaves who had fallen asleep on the tracks.[44] Thus contributory negligence in North Carolina stands firm and is commonly summarized by quoting *Clark v. Roberts*:

> Every person having the capacity to exercise ordinary care for his own safety against injury is required by law to do so, and if he fails to exercise such care, and such failure, concurring and cooperating with the actionable negligence of defendant, contributes to the injury complained of, he is guilty of contributory negligence.[45]

In other words, if a plaintiff's actions are a proximate or primary cause of her injuries, regardless of the severity of the defendant's conduct, the plaintiff cannot recover under negligence.[46] This rule creates "an all-or-nothing proposition roundly criticized for its harshness and unfairness."[47] North Carolina is one of only five American jurisdictions which still utilize the doctrine of contributory negligence.[48]

North Carolinian contributory negligence makes no allowance for persons with cognitive disabilities. The rule places members of one of the most disenfranchised subsets of the population in a position where they are

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41. *See generally* W. PAGE KEETON ET AL., PROSSER AND KEETON ON TORTS (5th ed. 1984).

42. Butterfield v. Forrester, 103 Eng. Rep. 926 (K.B. 1809).

43. Smith v. Smith, 19 Mass. (1 Pick.) 621 (1824).

44. Herring v. Wilmington & Raleigh R.R. Co., 32 N.C. (10 Ired.) 402 (1849).

45. Clark v. Roberts, 139 S.E.2d 593, 597 (N.C. 1965).

46. *See, e.g.*, Bigelow v. Johnson, 277 S.E.2d 347, 351 (N.C. 1981) ("Negligence bars recovery only if it is a proximate cause of the injuries complained of; otherwise, it is of no legal significance.").

47. Steven Gardner, *Contributory Negligence, Comparative Negligence, and* Stare Decisis *in North Carolina*, 18 CAMPBELL L. REV. 1, 3 (1996).

48. *See, e.g.*, Creel v. Brown, 508 So.2d 684 (Ala. 1987) (Alabama); Harrison v. Montgomery Cty. Bd. of Educ., 456 A.2d 894 (Md. 1983) (Maryland); Hoar v. Great E. Resort Mgmt., Inc., 506 S.E.2d 777 (Va. 1998) (Virginia); Gober v. Yellow Cab Co., 173 A.2d 915 (D.C. 1961) (Washington, D.C.).

held to a higher, and often unobtainable, standard.[49] Further, due to the draconian limits of contributory negligence, many disabled persons are unable to recover under the law.[50] Persons with disabilities are effectively held to a strict liability standard in cases of negligence,[51] as they are medically, physically, or developmentally unable to meet the duty of care expected of persons without these disabilities. The historical treatment of persons with disabilities remains pertinent.

II. THE PRESENT: ISSUES WITH THE MODERN DOCTRINE

The reasonably prudent person standard, though relatively well-established, presents several persistent problems. For over a century, legal scholars have continuously noted the heavy weight placed upon the shoulders of cognitively disabled persons by jurisdictions who use this standard to determine contributory liability.[52] Simply put, by refusing to adopt a subjective test for mentally ill persons—like the tests used for the physically disabled and children—North Carolina courts continue to create financial hardships, as well as to "perpetuat[e] stereotypes and misunderstanding about the mentally ill population."[53] Though the rejection of this subjective standard has been strongly supported by courts[54] and sparsely supported by academic scholarship,[55] each of these arguments has

49. *See* Gardner, *supra* note 47, at 25–32.

50. *See id.*

51. Elizabeth J. Goldstein, *Asking the Impossible: The Negligence Liability of the Mentally Ill*, 12 J. CONTEMP. HEALTH L. & POL'Y 67, 67 (1995).

52. *See, e.g.*, James Barr Ames, *Law and Morals*, 22 HARV. L. REV. 97 (1908); Johnny Chriscoe & Lisa Lukasik, *Re-Examining Reasonableness: Negligence Liability in Adult Defendants with Cognitive Disabilities*, 6 ALA. C.R. & C.L. L. REV. 1, 80 (2015); W.G.H. Cook, *Mental Deficiency in Relation to Tort*, 21 COLUM. L. REV. 333 (1921); William J. Curran, *Tort Liability of the Mentally Ill and Mentally Deficient*, 21 OHIO ST. L.J. 52 (1960); Okianer Christian Dark, *Tort Liability and the "Unquiet Mind": A Proposal to Incorporate Mental Disabilities into the Standard of Care*, 30 T. MARSHALL L. REV. 169 (2004); Goldstein, *supra* note 51; John V. Jacobi, *Fakers, Nuts, and Federalism: Common Law in the Shadow of the ADA*, 33 U.C. DAVIS L. REV. 95 (1999); Harry J.F. Korrell, *The Liability of Mentally Disabled Tort Defendants*, 19 L. & PSYCHOL. REV. 1 (1995); David E. Seidelson, *Reasonable Expectations and Subjective Standards in Negligence Law: The Minor, the Mentally Impaired, and the Mentally Incompetent*, 50 GEO. WASH. L. REV. 17 (1981); Kristin Harlow, Note, *Applying the Reasonable Person Standard to Psychosis: How Tort Law Unfairly Burdens Adults with Mental Illness*, 68 OHIO ST. L.J. 1733 (2007).

53. Harlow, *supra* note 52, at 1735.

54. Korrell, *supra* note 52, at 36–37.

55. *See, e.g.*, George J. Alexander & Thomas S. Szasz, *Mental Illness as an Excuse for Civil Wrongs*, 43 NOTRE DAME L. 24 (1967); Eli K. Best, *Atypical Actors and Tort Law's*

been refuted in modern academic scholarship.[56] The Restatement Second of Torts presented four primary reasons for maintaining the status quo,[57] and the Restatement Third added a fifth explanation.[58]

The first issue that the Restatement Second lists is the difficulty in drawing lines based off mental disabilities.[59] Because mental disabilities are difficult to identify, designate, and differentiate, it might be challenging for the court to know which disabilities require a subjective standard.[60] The proposed risk here is clear: if the court were to get it wrong—if a subjective standard were presented to an individual for whom it was not needed—then the integrity of the negligence trial, and any associated verdict, would be put in jeopardy.[61]

However, it is unarguably the purview and the duty of judges, with assistance from clerks and advocates, to answer the hard questions.[62] Further, North Carolina has established several specialized courts in order to deal with particularly complex and in-depth issues, including the North Carolina Business Court[63] and the Veterans Court.[64] It is the duty of the courts to address legal issues, regardless of their complexity, and particularly when the apparatus for solution is available.

The Restatement's second issue with creating a subjective standard primarily involves the perceived risk of fakery.[65] It is the concern of the drafters of the Restatement that, due to the scientific uncertainty of evidence involving mental disability, it would be possible for individuals to falsify their mental illness and receive an accordingly "easier" comparative duty of care.[66] However, it should be noted that the Restatement Second, being published in 1965, fails to reflect the substantial accuracy of modern technology and diagnostic procedures.[67] Further, it is unlikely that an

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Expressive Function, 96 MARQ. L. REV. 461 (2012); Stephanie I. Splane, Note, *Tort Liability of the Mentally Ill in Negligence Actions*, 93 YALE L.J. 153 (1983).

56. *See supra* note 52.

57. RESTATEMENT (SECOND) OF TORTS § 283B cmt. b(1)–b(3) (AM. LAW INST. 1965).

58. RESTATEMENT (THIRD) OF TORTS § 11 cmt. e (AM. LAW INST. 2010).

59. RESTATEMENT (SECOND) OF TORTS § 283B cmt. b(1) (AM. LAW INST. 1965).

60. *Id.*; Best, *supra* note 55, at 467–68.

61. *Cf.*, *id.* at 468 (explaining that "there is a risk of people faking disabilities to avoid liability").

62. *See* Jacobi, *supra* note 52, at 112–13.

63. N.C. GEN. STAT. § 7A-45.3 (2017).

64. Jamie Markham, *Veterans Treatment Court*, UNC SCH. OF GOV'T: N.C. CRIM. LAW (Nov. 12, 2014), https://perma.cc/L6XC-7W8K.

65. RESTATEMENT (SECOND) OF TORTS § 283B cmt. b(2) (AM. LAW INST. 1965).

66. *Id.*

67. Korrell, *supra* note 52, at 35–36.

individual would willingly submit herself to the stigma and possibility of diminished legal rights associated with establishing, under oath, a severe personal mental disability, let alone the legal penalties of lying under oath.[68] Upon the publication of the Restatement Third, this explanation for the objective standard was left out altogether.[69]

The third issue presented by the Restatement involves the compensation of victims.[70] If an individual is indeed harmed, and one party causes that harm, then the aggrieved party should receive some sort of compensation from the initiator of the harm.[71] This argument completely disregards one of the core tenants of tort law: that there should be no prescription of damages without fault.[72] In a search for a culprit, North Carolina courts should not take pride in finding a person to blame; it is their duty to find the person deserving of blame. Though assuredly a victim is entitled to damages for her pain and suffering, the basic tenants of the law of torts suggest that those damages should come from an individual who has been found liable under all of the facts.[73] A jury should be able to consider an individual's capabilities when determining whether that individual acted reasonably.[74] Though a person with a cognitive disability should not be given a "pass" because of her disability, neither should the victim be provided a blank check because of their adversary's disability.

Finally, the Restatement notes that it is the responsibility of the cognitively disabled person's caretaker to more carefully look after her charges.[75] This point is problematic in several ways. First, it presumes that persons with disabilities need, or should have, a caretaker. While caretakers and medical assistants are important, and occasionally necessary, it is the purview of the disability rights movement to promote independence, whenever possible.[76] While there is no requirement that an individual go without needed assistance, that decision should be made entirely on the preferences and needs of the disabled individual, rather than out of fear of legal retribution. This Restatement argument, like the risk of fakery, was removed from the Restatement Third in 2010.[77]

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68. Goldstein, *supra* note 51, at 76.

69. Best, *supra* note 55, at 468.

70. RESTATEMENT (SECOND) OF TORTS § 283B cmt. b(3) (AM. LAW INST. 1965).

71. Best, *supra* note 55, at 468.

72. *See* Jacobi, *supra* note 52, at 112–13.

73. *Id.* at 114 n.117.

74. Best, *supra* note 55, at 500.

75. *Id.* at 468.

76. *See* Faye Ginsburg & Rayna Rapp, *Making Accessible Futures: From the Capitol Crawl to #cripthevote*, 39 CARDOZO L. REV. 699, 714–18 (2017).

77. Best, *supra* note 55, at 468.

The Restatement Third introduced a new argument: that persons with cognitive disabilities are unable to modulate their own behavior in order to avoid risk or reduce harm.[78] During the drafting process, the editors of the Restatement also noted concern that, with deinstitutionalization (the movement by which independence was favored over use of mental hospitals and institutional wards), the public needed to be "protected from people with mental illness."[79] Though behavior moderation is challenging, multiple programs are put in place to assist with the creation of society-safe norms and behaviors.[80] Further, the presumption that individuals with mental disabilities are "unsafe" propels a pernicious stereotype against which the disabled community has been actively fighting for decades.[81] This argument, though perhaps sufficiently stable on the surface, fails to hold water.

These arguments apply equally to both cognitively disabled plaintiffs and defendants in comparative negligence cases. At least for defendants, the answer appears clear: no subjective standard will be created.[82] However, some states have created a slightly altered standard for mentally disabled plaintiffs.[83] North Carolina has already proven open to making allowances for certain types of plaintiffs, including children[84] and rescuers.[85] In each of these cases, North Carolina has barred any contributory negligence claims against the plaintiffs absent a rebuttable presumption.[86] However, when given the opportunity to make a similar prohibition against alleging contributory negligence against the mentally disabled, North Carolina took a different route.

In *Stacy v. Jedco Construction, Inc.*, the North Carolina Court of Appeals held, as a matter of first impression, that a mentally ill plaintiff in a contributory negligence case should be held to "the standard of care of a person of like mental capacity under similar circumstances."[87] In the case,

78. RESTATEMENT (THIRD) OF TORTS § 11 cmt. e (AM. LAW INST. 2010).

79. RESTATEMENT (THIRD) OF TORTS § 11 cmt. e (AM. LAW INST., Proposed Final Draft No. 1, 2005); Best, *supra* note 55, at 479; Harlow, *supra* note 52, at 1735.

80. Best, *supra* note 55, at 479.

81. Harlow, *supra* note 52, at 1735.

82. RESTATEMENT (THIRD) OF TORTS § 11 cmt. e (AM. LAW INST. 2010).

83. *See* Noel v. McCaig, 258 P.2d 234, 240 (Kan. 1953); Feldman v. Howard, 214 N.E.2d 235, 237–38 (Ohio Ct. App. 1966), *rev'd*, 226 N.E.2d 564 (Ohio 1967); Snider v. Callahan, 250 F. Supp. 1022 (W.D. Mo. 1966); Cowan v. Doering, 545 A.2d 159, 162–63 (N.J. 1988).

84. Hoots v. Beeson, 159 S.E.2d 16, 19 (N.C. 1968); Weeks v. Barnard, 143 S.E.2d 809, 810 (N.C. 1965) (per curiam).

85. *See* Caldwell v. Deese, 218 S.E.2d 379, 382–83 (N.C. 1975); Alford v. Washington, 78 S.E.2d 915, 920 (N.C. 1953).

86. *See* Adams v. State Bd. of Educ., 103 S.E.2d 854, 857–58 (N.C. 1958).

87. Stacy v. Jedco Constr., Inc., 457 S.E.2d 875, 879 (N.C. Ct. App. 1995).

John Purser suffered a fractured hip as a result of the negligently prepared and maintained construction site in his retirement home.[88] Purser had been warned several times to avoid the construction site but, as a result of his poor short-term memory (an effect of his senile dementia), he returned time and again.[89] The Court of Appeals held that Purser's actions should be compared to those of a person with his same condition in his same situation.[90] The Court of Appeals remanded for a new trial, instructing the trial court that it should determine whether Purser did, in fact "exercise . . . such care as he was capable of exercising."[91]

This case was simple because short-term memory loss is relatively understandable to a trier of fact, so the average juror should, after hearing evidence, be able to perform this balancing test. The issue becomes more challenging with less defined mental disabilities or conditions, which less directly affect the suffered harm, such as depression, autism, and post-traumatic stress disorder. Simply put, the finder of fact needs reliable facts in order to avoid the possible pitfalls explored and endorsed by the Restatement. Luckily, with modern neuro-technology, those facts are within reach.

III. THE SOLUTION: A BRIEF ANALYSIS OF NEURO-MAPPING IN THE LAW

Though the idea of a legal revolution seems inherently oxymoronic, there appears to be no better way to describe the current impending crash between neuroscience and law.[92] In order to have some success predicting the outcome of this coming-together, it is necessary to provide the basic background behind cognitive neuroscience and, more specifically, neuro-mapping.

Cognitive neuroscience, or "the field of scientific endeavor that is trying to understand how the brain enables the mind,"[93] has only come about relatively recently. Its primary goal: to understand why and how we think, as well as to examine influencing factors on our thought processes.[94] The

88. *Id.* at 878.

89. *Id.* at 877.

90. *Id.* at 879.

91. *Id.* at 881, 879. This case was examined, and rejected, as persuasive authority in Jankee v. Clark Cty., 612 N.W.2d 297 (Wis. 2000).

92. Jean Macchiaroli Eggen & Eric J. Laury, *Toward a Neuroscience Model of Tort Law: How Functional Neuroimaging Will Transform Tort Doctrine*, 13 COLUM. SCI. & TECH. L. REV. 235 (2012).

93. *See* Michael S. Gazzaniga, *What is Cognitive Neuroscience?*, in A JUDGE'S GUIDE TO NEUROSCIENCE: A CONCISE INTRODUCTION 2 (2010), https://perma.cc/G75Z-G84J.

94. *Id.*

importance of this science cannot be overstated. It may be possible to introduce objective scientific evidence to expose the murkiest, but most often at issue, aspects of an individual. For example, researchers have successfully identified physical traits in the human brain connected to dementia[95] and post-traumatic stress disorder.[96] Modern tests also make it possible to identify the parts and processes of the brain which are utilized in high-level ethical decision making.[97]

It may even be possible to identify an uncontrollable biological response caused by personal bias. This research could be used in the context of employment discrimination cases through the introduction of anatomical evidence to identify biological responses, rather than arguing over rebuttable presumptions. [98] For example, a racist person's brain may recognizably change when confronted with a person against whom the individual holds a private bias.[99] Though some criticize the research in this area as premature and underdeveloped,[100] even its most ardent critics note that these issues may be solved as efficient peer-reviewed research continues.[101]

Out of the several options available, attorneys involved in advocacy and litigation will likely be most interested in PET scans and fMRI (functional magnetic resonance imaging). PET scans (positron emission tomography scans) involve the observation of movements of "small quantities of radioactive chemicals" which are introduced via injection.[102] By observing the movement and connections between these chemicals, technicians can determine which aspects of the brain are active while the participant completes tasks.[103]

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95. *See* Li Wang et al., *Performance-Based Physical Function and Future Dementia in Older People*, 166 ARCHIVES INTERNAL MED. 1115 (2006).

96. Lisa Shin et al., *Regional Cerebral Blood Flow in the Amygdala and Medial Prefrontal Cortex During Traumatic Imagery in Male and Female Vietnam Veterans with PTSD*, 61 ARCHIVES GEN. PSYCHIATRY 168 (2004).

97. Gazzaniga, *supra* note 93.

98. Henry T. Greely, *Law and the Revolution in Neuroscience: An Early Look at the Field*, 42 AKRON L. REV. 687, 698 (2009) [hereinafter Greely, *Law and the Revolution*].

99. Elizabeth A. Phelps et al., *Performance on Indirect Measures of Race Evaluation Predicts Amygdala Activation*, 12 J. COGNITIVE NEUROSCIENCE 729 (2000).

100. Guy Kahane & Nicholas Shackel, *Methodological Issues in the Neuroscience of Moral Judgment*, 25 MIND & LANGUAGE 561, 565–72 (2010).

101. *See generally* Gazzaniga, supra note 93.

102. Eggen & Laury, *supra* note 92, at 240; *see also PET Scan*, CLEVELAND CLINIC, http://perma.cc/ YB2D-QXHC (last visited December 10, 2018).

103. Eggen & Laury, *supra* note 92, at 240.

fMRI involves the use magnet and radio waves to develop a detailed representation of the structures of the brain.[104] The fMRI provides a clearer and accurate depiction of the anatomical differences in the participant's brain and, due to its advanced technology, represents brain activity by examining blood-oxygen levels,[105] and the dilation of small blood vessels in operating portions of the brain.[106] Simply put, the fMRI allows a technician to see differences in the brain, as well as the ways in which the brain operates and responds to specific stimuli.

Even as the scientific community works to further develop and establish this novel field, courts have already shown great interest in the expanded possibilities offered by research. Many courts across the world have actively permitted, and even relied upon, neuroscience.[107] Several criminal cases, for example, have made use of cognitive neurology in various phases of trial.[108] Brain scans have been permitted during sentencing to demonstrate the defendant's incompetence.[109] In fact, the United States Supreme Court made use of cognitive neurology in *Roper v. Simmons*.[110] Relying heavily on an amicus brief, which used brain scans to demonstrate the lack of cognitive development in children, the Court held that it was a violation of the Eighth and Fourteenth Amendments to sentence an individual to the death penalty when the crime was committed before the defendant reached age eighteen.[111]

The Supreme Court again made use of brain scan information in 2011 when, in a civil case, it wrote on the difference between causal and correlating cognitive evidence.[112] The majority in *Brown v. Entertainment Merchants Association* noted that the legislature's passing reference to the effect of violent video games on the development of children's frontal lobes

104. *Id.* at 240–41; *see also What is fMRI?*, U.C. SAN DIEGO SCH. OF MED., https://perma.cc/V7PN-DNV7 (last visited December 10, 2018).

105. Eggen & Laury, *supra* note 92, at 241.

106. *Id.*; *see* Daniel D. Langleben et al., *True Lies: Delusions and Lie-Detection Technology*, 34 J. PSYCHIATRY & L. 351, 358–61 (2006) (giving a more thorough discussion of fMRI testing).

107. *See* Dominique J. Church, Note, *Neuroscience in the Courtroom: An International Concern*, 53 WM. & MARY L. REV. 1825 (2012).

108. *See* Scott T. Grafton, *Has Neuroscience Already Appeared in the Courtroom?*, *in* A JUDGE'S GUIDE TO NEUROSCIENCE: A CONCISE INTRODUCTION 54, 54–55 (2010).

109. *See* United States v. Hammer, 404 F.Supp. 2d 676, 723 (M.D. Pa. 2005), *reh'g denied*, 404 F. Supp. 2d 676 (2006); State v. Marshall, 27 P.3d 192, 199 (Wash. 2001).

110. Roper v. Simmons, 543 U.S. 551 (2005).

111. *Id.* at 578 ("The Eighth and Fourteenth Amendments forbid imposition of the death penalty on offenders who were under the age of 18 when their crimes were committed.").

112. Brown v. Entm't Merchs. Ass'n, 564 U.S. 786, 798–99 (2011).

was not persuasive.[113] However, in his dissent, Justice Breyer exhaustively discussed cognitive mapping technology.[114] One need look no further than the two extensive appendices that Justice Breyer attached to his opinion to note that even the highest court of the land is at least open to the idea of introducing this evidence.[115] Specifically, after making reference to "[c]utting-edge neuroscience,"[116] Justice Breyer listed just under one hundred and fifty peer-reviewed scientific articles discussing the effect of violent videogames on children's brain structures.[117]

As previously noted, there are some issues with the introduction of cognitive neuroscience. Some scholars argue that the introduction of brain scans could lead to the invasion of privacy and the erosion of ethical norms.[118] Others make note of the possible evidentiary concerns with the admissibility of the documents themselves,[119] as well as the expert testimony necessary to interpret and explain the documents for the finder of fact.[120] However, advocates and courts can largely diminish these challenges and limitations through guiding expert testimony-related jury instructions, adhering to *Daubert v. Merrell Dow Pharmaceuticals*,[121] and ruling on admissibility of evidence before the start of trial.[122] Judges and legal scholars alike note the inherent difference between scientific and legal

113. *Id.* at 799 ("[T]he State claims that it need not produce [proof of a causal link] because the legislature can make a predictive judgment that such a link exits, based on competing psychological studies.").

114. *Id.* at 840–57 (Breyer, J., dissenting).

115. *Id.* at 858–72.

116. *Id.* at 852.

117. *Id.* at 858–72.

118. *See* Henry T. Greely, *The Social Effects of Advances in Neuroscience: Legal Problems, Legal Perspectives, in* NEUROETHICS: DEFINING THE ISSUES IN THEORY, PRACTICE, AND POLICY 245, 253 (Judy Illes ed., 2006) [hereinafter Greely, *The Social Effects*]; Stacey A. Tovino, *Functional Neuroimaging and the Law: Trends and Directions for Future Scholarship*, 7 AM. J. BIOETHICS 44, 47 (2007).

119. *See* Jed S. Rakoff, *Science and the Law: Uncomfortable Bedfellows*, 38 SETON HALL L. REV. 1379, 1388 (2008).

120. Eggen & Laury, *supra* note 92; Christina T. Liu, Note, *Scanning the Evidence: The Evidentiary Admissibility of Expert Witness Testimony on MRI Brain Scans in Civil Cases in the Post*-Daubert *Era*, 70 N.Y.U. ANN. SURV. AM. L. 479 (2015). Though the evidentiary issues with this type of evidence are real, they have been discussed more exhaustively elsewhere. *See id.; see also* Eggen & Laury, *supra* note 92, at 279–84. Suffice to say that these issues are present but, with proper attention, may be successfully navigated by a competent attorney. Further, these issues will continue to diminish as modern neurological scans grow more accurate and efficient.

121. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 (1993).

122. *See* Liu, *supra* note 120, at 486. The specifics of the evidentiary concerns will not be discussed in full in this Comment.

standards best summarized in 1994: "[s]cientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly."[123]

However, even with the issues discussed above, cognitive neuroscience has the capability to provide great assistance in negligence cases.[124] The Supreme Court already made use of FMRI scans to abolish the death penalty for children,[125] so the opportunity to use modern technology to change an outdated system is unarguably before us.

IV. THE FUTURE: UTILIZING NEURAL MAPPING TO SOLVE PERSISTENT PROBLEMS

It is possible to make use of the FMRI and PET scan technology discussed above in order to avoid the prohibition against altering the reasonable standard for defendants and plaintiffs with cognitive disabilities. This possibility has been broadly discussed and advocated for by legal scholars,[126] but it has never been discussed in light of North Carolina's particular eccentricities. North Carolina's courts show great flexibility in some ways but refuse to budge in others.[127] However, by making use of modern technology, courts can have their cake and eat it too: they can maintain their preference for not considering mental disabilities, and they can avoid holding persons with disabilities to strict scrutiny in negligence cases.

Take, for example, the hypothetical which began this comment. There was an accident (whichever accident the reader prefers) involving two negligent and cognitively disabled individuals. With this approach, the jury is not being asked to hold the parties to unreasonably lofty standards. Neither is the court creating *ad hoc* precedent which will diminish the efficacy of civil tort law. Instead, the jury is presented with evidence regarding the litigants' altered brain structure and corresponding challenges.[128] This evidence is analogous to the use of an expert to demonstrate an individual's unusual eye anatomy, diminished vision, and accompanying challenges and

123. *Daubert*, 509 U.S. at 597.

124. Eggen & Laury, *supra* note 92, at 265.

125. Brown v. Entm't Merchs. Ass'n, 564 U.S. 786, 798–99 (2011).

126. Eggen & Laury, *supra* note 92; Greely, *The Social Effects, supra* note 118; Shaun Cassin, Comment, *Eggshell Minds and Invisible Injuries: Can Neuroscience Challenge Longstanding Treatment of Tort Injuries?*, 50 HOUS. L. REV. 929 (2013).

127. *See supra* notes 58–61.

128. Assuredly, not all such disabilities have neurological differences which can be noticed with current technology. However, many disabilities are observable through physical neural difference, and half a loaf is better than no loaf at all.

differing needs. This type of evidence was used in *Roberts v. State*,[129] where the defendant used an expert to illustrate the challenges, and best practices, of a person with a visual impairment.

If this sort of evidence is presented, the jury is not tasked with applying a cognitive disability. Instead, the members of the jury are comparing the actions of the defendant to those of a person with the same differentiated brain structure. Granted, all brains are different, and physical changes in neural anatomy can be different, depending on the individual.[130] However, it is the responsibility of the expert witness and the advocate to convince the finder of fact to believe the relevant testimony. Again, the jury is within its rights to disregard the evidence, but having access to the testimony, with the proper safeguards, can do no harm.

By allowing this evidence before the finder of fact, North Carolina courts will be able to overcome the *de facto* strict liability applied to defendants,[131] as well as bolster the possibility of arguing the subjective standard permitted to cognitively disabled plaintiffs. Further, by allowing this information to be presented through scientific data, courts will be able to completely avoid the five criticisms discussed in the Restatement Second and Third of Torts: (1) line drawing; (2) risk of fakery; (3) compensation; (4) caretaker liability; and (5) behavior modification.[132]

The issue of line drawing would be inherently fixed by the production of cognitive neurological evidence. If the concern is where to grant a legal reprieve, that concern would be mollified by the production of testimony regarding the person's capabilities. Granted, it is possible that even the most mundane differences could be trotted out before the jury. However, it is the job of the finders of fact to determine how much weight is given to any sort of evidence; if they find an argument regarding a diminished duty of care unpersuasive and accordingly disregard the evidence, they possess that right. This issue, if it exists, would come out in the wash.

The production of PET or FMRI scans would likewise almost eliminate the risk of fakery.[133] The jury would be able to see the scans, hear the testimony, and judge the results based on their own perception. Further, risk of fakery is a constant issue in trials, regardless of the specific law at issue.

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129. Roberts v. State, 396 So.2d 566, 568 (La. Ct. App. 1981).

130. *See* Jaymes V. Fairfax-Columbo & David DeMatteo, *Are Bioequivelants Really Equal?: Generic Substitution in the Context of Mental Illness*, 12 IND. HEALTH L. REV. 281 (2015).

131. Gardner, *supra* note 47.

132. RESTATEMENT (SECOND) OF TORTS § 283B cmt. b(1)–(3) (AM. LAW INST. 1965); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 11 cmt.. e (AM. LAW INST. 2010).

133. Eggen & Laury, *supra* note 92.

Even though witnesses are under oath, for example, it is not unheard of for half-truths or outright falsehoods to come from the witness stand. Further, though the bar of entry for expert witnesses is relatively high, it is a poorly kept secret that an expert witness can be found to support most any assertion. These issues, though present, are by no means specific to the presentation of cognitive neurological data. To refuse this data on these grounds, while continuing to allow other types of evidence, would be hypocritical to say the least.

The compensation issue remains unchanged. It is the duty of the finder of fact to determine from whom damages should be demanded.[134] Having more information can only assist the jury in this task. Further, the presentation of this evidence for defendants would stop the current practice of demanding compensation from individuals simply because they were held to an unobtainable standard.[135] If it is, indeed, the duty of the jury to examine all evidence and make a determination and if that determination is paramount to the successful dispensation of justice, then allowing this evidence would only assist finders of fact in their noble goal.

To the issue of caretaker liability, the presentation of neurological information would assist the growing population who possesses a cognitive disability and does not make use of a personal caretaker. Caretakers can be expensive, and to require that any individual with a cognitive disability make the choice between expensive and prospectively invasive personal care or strict liability in the event of an accident seems to be the height of poor planning.[136]

Finally, the presentation of this evidence would help the jury determine whether persons with cognitive disabilities are actually able to modify their behavior. It is problematic to say that a person with a proven visual disability should simply "learn to see better." It is a false assumption to assume that a person with a legitimate and proven cognitive disability could do the same. Therefore, by establishing actual metric data for invisible disabilities, advocates will be able to assist the finders of fact in making proper and fair decisions.

134. Dobbs, *supra* note 6.

135. Gardner, *supra* note 47.

136. While the neurological scans discussed in this Comment can be expensive, those expenses can be covered in attorneys and testing fees at the end of trial or can play a role in the negotiation phase of litigation. Further, many of these scans can be retrieved from diagnosing physicians' records for little to no cost.

CONCLUSION

If North Carolina is concerned about the inherent unfairness in holding cognitively disabled defendants to a strict liability standard (as it should be), and if North Carolina wishes to assist advocates in arguing for the use of a subjective standard for cognitively disabled plaintiffs in negligence cases (as it should), then North Carolina advocates should actively explore the possibilities offered by the introduction of cognitive neurological data. If advocates and courts are unable to use this neuroscience to prove their cases, then the risk of harm to cognitive disabled individuals (one of the most at-risk minorities in the state) is incredibly high. Though the only risk in civil cases is financial in nature, imposing such a burden onto a group which experiences exponentially higher unemployment rates is neither effective nor ethical.

Hesitation is understandable: the common law principle has stood strong for centuries. Advocates may not know that this technology is available, and courts may be unaware of how to safely implement the scans into trials. However, the technology does exist, and can allow the maintenance of the subjective test which North Carolina courts seem to prefer, while promoting the equitable treatment of cognitively disabled litigants. In other words, the implementation of the evidence explored in this Comment will allow the courts to have their cake and eat it too.

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