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WHY ARE UNIVERSITIES PLAYING RUSSIAN ROULETTE WITH THEIR STUDENTS? THE IGNORED LEGAL AND ETHICAL DUTY

By: David E. Missirian[*]

This paper examines why colleges and universities sacrifice a group of gifted individuals, student athletes, all for the sake of money and prestige. These universities pay little or no attention to the horrific fate which they are bestowing on their sporting participants. These students are a group who have been promised an elite university education all in return for simply playing the sport that the students enjoy. Yet, despite the blessings the universities purportedly bestow on these athletes, there is a significant price to be paid. The sports they love and for which they are recruited subjects the student athletes to injuries which will not become apparent for many years after leaving college. The real cost of attending college and giving their university a winning season is traumatic brain injury brought about by multiple concussive and sub-concussive blows to the head and body.

We will look at the history of the university and its original purpose. Then, we will examine how the financial allure of sports has co-opted that once noble purpose to one of a money-making machine. We will ponder why schools turn a blind eye to the realities of concussive injury suffered by the student athlete and if there might be a way for these once honored institutions to regain their lost footing.

We will examine the new protections for athletes which could be employed if universities and colleges chose to alter their course. But, for this to be a reality, the schools must change their priorities and make the students and their education once again their focus. It means foregoing school adulation and the prospect of monetary gain for maintaining the original purpose of the institution. It is something which must be done now, or we, as a nation, face losing our most valuable resource—that of our students—who will be the future of our country.

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I. INTRODUCTION

Why are colleges and universities jeopardizing the lives of students? Are university sports a benefit to society or a detriment? And is there a legal and moral duty to protect students even if they are over the age of 18?

Now, before you dismiss these questions as apparent and self-evident, you might want to take the time to examine your answers against the realities of university life today. Many colleges and universities, either knowingly or unknowingly are destroying their students with little or no care for the student's future well-being. Colleges are causing students serious long-term injury in no less a lethal way than if they gave the student a loaded gun to play with. The gun which the universities allow the students to play with is college athletics, all done in the name of school prestige and financial opportunity. The bullet potentially loaded in that gun are concussive and sub-concussive blows suffered by the athletes which may lead them down the path of injury known as Chronic Traumatic Encephalopathy ("CTE"). Despite the overwhelming data which supports protecting these students from harm, most universities and colleges only take marginal precautions at best to save their charges from a life of potential misery and suffering. The universities' current actions are perpetuated by their unique status in today's society and the morass of our legal system.

II. IS RUNNING A UNIVERSITY A BUSINESS OR AN HONORED PROFESSION?

For some, the university's role has changed historically from one of nurturing and protection to one of a money-making machine where students are simply an expendable means to a lucrative end. There are benefits to being a teaching institution, but as with anything where money is involved nobility can sometimes give way to greed.

A. The History of the University

The exact beginning of the university is unknown.[1] However, there are records of the University of Cambridge in England dating back to the early thirteenth century.[2] Early universities sprang up as a result of people, called

[1] Thomas E. Woods, Jr., *The Catholic Church and the Creation of the University*, CATH. EDUC. RES. CTR. (May 16, 2015), https://www.catholiceducation.org/en/education/catholic-contributions/the-catholic-church-and-the-creation-of-the-university.html.

[2] *Early Records*, UNIV. OF CAMBRIDGE, https://www.cam.ac.uk/about-the-university/history/early-records (last visited Mar. 15, 2018).

Masters, gathering together, who then took on students, educating them in a variety of areas.[3] The students courses of study were wide and varied, taught by Masters who themselves had been versed in the areas of arts, music, geometry, astronomy, civil law, and canon law.[4] Much as it is today, university students of the thirteenth century, who came from all over England, were viewed as a significant source of revenue for a town where the university was located.[5] As a result of the large influx of students attending the university local merchants and innkeepers overcharged students and masters for food and lodging.[6] This exploitation of students became so rampant that King Henry III took the scholars under his protection as early as 1231 and arranged for them to be sheltered from exploitation by their landlords.[7] At the same time he tried to ensure that they had a monopoly on teaching, by an order that only those enrolled under the tuition of a recognized master were to be allowed to remain in the town. Even in 1231 AD a university apparently was a place where learning could be acquired by a recognized master, but at a monetary cost.[8]

B. Universities Move Across the Pond

The first university established in the United States is one of speculation, though Harvard claims to be the "oldest institution of higher education in the United States, established in 1636 by vote of the Great and General Court of the Massachusetts Bay Colony."[9] The College of William and Mary was established in 1693.[10] Named for the British co-monarchs who were reigning at the time and who gave the university its royal charter (the first for any university in the United States) the College of William and Mary is the oldest university in the American South and was the first school of higher education in the United States to install an honor code of conduct for students.[11] Yale, the third oldest university, was established in 1701, and was originally founded as 'Collegiate School.'[12] It was renamed Yale in 1718 in recognition of a gift from Elihu Yale, a

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[3] *The Medieval University*, UNIV. OF CAMBRIDGE, https://www.cam.ac.uk/about-the-university/history/the-medieval-university (last visited Mar. 15, 2018).
[4] *Id.*
[5] *See Early Records*, *supra* note 2.
[6] *The Medieval University*, *supra* note 3.
[7] *Id.*
[8] *Id.*
[9] *History*, HARV. UNIV., https://www.harvard.edu/about-harvard/harvard-glance/history (last visited Mar. 15, 2018).
[10] *10 of the Oldest Universities in the US*, TOPUNIVERSITIES (Oct. 7, 2015, 10:00 AM), https://www.topuniversities.com/blog/10-oldest-universities-us.
[11] *Id.*
[12] *Id.*

governor of the British East India Company.[13] Fourth on the list of the oldest universities in the U.S., established in 1740, the University of Pennsylvania (commonly referred to as Penn) was founded by Benjamin Franklin and was the first U.S. university to offer both undergraduate and postgraduate studies.[14]

By 1740 one hundred years of formal university education became firmly entrenched in the United States, with there being four major institutions of learning, and with Penn having both graduate and undergraduate classes.

As can be true of things which years ago were more a luxury than a necessity, higher education enrollment in the colonies was largely limited to the well-to-do.[15] This situation prevailed through the late nineteenth and early twentieth century.[16] In 1869–70, only 63,000 students were attending higher education institutions throughout the country, which amounted to only about one percent of the eighteen to twenty-four year-old population.[17] This number of students was divided among 563 campuses, giving an average enrollment size of only 112 students.[18] Today, almost 200 years later there are over 14,000,000 students in the U.S. attending some 3,600 institutions, for an average enrollment of 3,931 students.[19] About thirty-three percent of all eighteen to twenty year-olds are enrolled in college today, half of which are women.[20]

Revenue sources for the operation of schools have remained relatively stable through the period of university development.[21] Universities' revenue come from endowments, Federal funds, State Funds, hospitals, Federal and State research grants, and auxiliary enterprises (included in this are sports tickets, merchandizing and media rights) and tuitions.[22] On average student tuitions account for twenty-eight percent of university revenue.[23]

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[13] *Id.*
[14] *Id.*
[15] U.S. DEP'T OF EDUC. OFFICE OF EDUC. RESEARCH AND IMPROVEMENT, 120 YEARS OF AMERICAN EDUCATION: A STATISTICAL PORTRAIT 64 (Thomas D. Snyder ed. 1993), https://nces.ed.gov/pubs93/93442.pdf [hereinafter 120 YEARS OF AMERICAN EDUCATION].
[16] *Id.*
[17] *Id.*
[18] *Id.*
[19] *Id.* at 64.
[20] *Id.*
[21] *See id* at 71.
[22] *See id.* at 89.
[23] *See id.* at 72.

Overall, expenditures have increased with the increased number of schools.[24] From 1930-1990, the cost expenditure for universities has risen 250 percent.[25] Thus, the demand and necessity for alternative revenue streams have become vitally important to schools.

C. Schools Cling to a Golden Goose

The National Collegiate Athletics Association ("NCAA") and its affiliated members negotiated media contracts with various networks due to the advent of televised university sporting events.[26] The percentage of revenue generated by media contracts as a proportion of NCAA total revenue has increased steadily over the last thirty years.[27] The proportion of media revenue to total revenue is about eighty percent.[28] In 2010, the NCAA signed a fourteen-year, $10.8 billion contract with Turner Broadcasting.[29]

As a result of its sporting activities, the NCAA generates large sums of money which it distributes to its member universities.[30]

> The most recent estimate from the NCAA research staff is that college athletics programs annually generate about $6.1 billion from ticket sales, radio and television receipts, alumni contributions, guarantees, royalties and NCAA distributions. Another $5.3 billion is considered allocated revenue, which comes from student fees allocated to athletics, direct and indirect institutional support, and direct government support.[31]

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[24] *See id.* at 90.
[25] *See id.*
[26] Linda O'Brien, *Former College Athletes' Right of Publicity Claims Fail*, INTELL. PROP. L. DAILY (June 5, 2015), http://www.dailyreportingsuite.com/ip/news/former_college_athletes_right_of_publicity_claims_fail.
[27] *Revenue,* INTERNET ARCHIVE, http://web.archive.org/web/20180304184513/http://www.ncaa.org/about/resources/finances/revenue (last visited April 23, 2018).
[28] *Id.*
[29] *Id.*
[30] *Id.*
[31] *Id.*

Of the 231 NCAA Division 1 schools eighty-five percent operate at a positive cash flow as a result of their participation in the NCAA.[32] Many schools are making tens of millions of dollars based on their athletic participation.[33] As an example of the financial incentive to having an active division 1 athletic program, Connecticut University generated a $35 million surplus from its athletic program.[34] Rutgers University generated $28 million in revenue surplus from its sporting programs.[35] These monies come from ticket sales, student fees, and merchandizing and from NCAA distributions.[36] While it is true the larger schools receive the lion's share of the NCAA distributions, it is also true that all schools receive monies through their participation in the NCAA.[37] The fact that these distributions can be in the millions of dollars makes continuation of active winning sports programs a vital revenue stream.[38]

D. Universities and a Lapse of Memory?

As we enter the twenty-first century, what is the university's purpose and where in that purpose do athletics fit? In their early days, schools were purely places of learning with no athletic component at all.[39] As more places of learning developed and private schools emerged, where students would stay as residents of the school, the doctrine of *In loco parentis* became a reality.[40]

The doctrine of *In loco parentis* is an old English common law doctrine which was adopted in this country and states that the school is charged with the duties of the parent or to put it another way, "in the place of a parent".[41] In the case of *Gott v. Berea College* in 1913, the courts expanded what had previously been primarily a doctrine applicable only to boarding schools, to apply to colleges as well.[42]

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[32] *See* Steve Berkowitz et al., *2015-2016 Finances: Top School Revenue*, USA TODAY: SPORTS: NCAA, http://sports.usatoday.com/ncaa/finances/ (last visited Mar. 15, 2018).
[33] *Id.*
[34] *Id.*
[35] *Id.*
[36] *Revenue*, *supra* note 27.
[37] *Id.*
[38] *See* Steve Berkowitz et al., *supra* note 32.
[39] *See Early Records*, *supra* note 2.
[40] *See* State v. Pendergrass, 19 N.C. 365, 365-66 (2 Dev. & Bat. 1837).
[41] *In loco parentis*, BLACK'S LAW DICTIONARY (2d. ed. 1910).
[42] Gott v. Berea Coll., 161 S.W. 204 (Ky. 1913); Theodore C. Stamatakos, Note, *The Doctrine of In loco parentis, Tort Liability and the Student-College Relationship,* 65 IND. L.J. 471, 474 (1990).

In *Gott*, the court found that college authorities stood *In loco parentis* concerning the physical and moral welfare and mental training of their students.[43] The breadth of the rules and regulations promulgated by the school regarding their charges was equivalent to those which could be exercised by the parent and were only bounded by the law and that of public policy.[44] The court would give the school the same parental latitude that it would give a parent.[45]

In 1924, the sanctity of the authority of colleges over the welfare of their students was reiterated by the Supreme Court of Florida.[46]

> As to mental training, moral and *physical discipline*, and welfare of the pupils, college authorities stand in loco parentis and in their discretion may make any regulation for their government which a parent could make for the same purpose, and so long as such regulations do not violate divine or human law, courts have no more authority to interfere than they have to control the domestic discipline of a father in his family.[47]

As time passed, the parent-school relationship grew and with this growth emerged the schools' responsibility for the physical welfare of the child. "In its fullest form the doctrine of *In loco parentis* permits colleges to devise, implement and administer student discipline and to *foster the physical* and moral *welfare of students*."[48]

Given that school now had as part of its duty to protect the physical welfare of its students the full array of potential tort suits had to be considered. In 1941 the Supreme Court of Utah found a non-profit charitable university liable for a chemistry experiment gone awry.

> It is enough to say that in our opinion the Supreme Court of Utah, after much difficulty and contrariety of opinion has definitely and conclusively for the present repudiated the doctrine of immunity generally accorded charitable

[43] Gott, 161 S.W. at 206.
[44] *Id.*
[45] *Id.* at 207.
[46] John B. Stetson Univ. v. Hunt, 102 So. 637 (Fla. 1924).
[47] *Id.* at 640.
[48] Stamatakos, Note, *supra* note 42, at 474 (emphasis added).

> institutions not operating for profit, especially if the tort be against a paid patient, or in this instance, a student.[49]

The door now swung wide open, the courts began to see that universities stood in a unique place where they served both as a substitute parent, with a parent's duties of protection, as well as one of a merchant who must protect a paying customer.[50]

E. Forget about In Loco Parentis it's the Sixties

Despite generations of students and a long history of teachers and universities acting as the caretakers of the next generation, the Sixties was a new age.[51] Democratic pollster Geoff Garin, who was born in 1953 and came of age in the Sixties, said that "everything changed" from the Fifties.[52] "He points to the movement for women's rights, civil rights for blacks, an increase in tolerance for differences and diversity, and technological breakthroughs among the most important trends of the decade."[53] Students no longer wanted the status quo, nor to be sheltered, herded and protected based on their dissatisfaction with society and its norms.[54] This dissatisfaction was exhibited through how they dressed, their hairstyles, their music, and their views on how they should be treated.[55]

With this movement of rebellion came a similar movement in the courts to reject *In loco parentis* and the protections which it afforded our university students. In a 1968 lawsuit against the actions of the University of Colorado, the court said: "We agree with the students that the doctrine of 'In loco parentis' is no longer tenable in a university community."[56] Similarly in California in 1967 the California Appeals Court stated: "For constitutional purposes, the better approach, as indicated

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[49] Brigham Young Univ. v. Lillywhite, 118 F.2d 836, 842 (10th Cir. 1941).
[50] *See id.*
[51] *See generally* Kenneth T. Walsh, *The 1960s: A Decade of Promise and Heartbreak*, U.S. NEWS & WORLD REPORT (Mar. 9, 2010, 4:00 PM), http://www.usnews.com/news/articles/2010/03/09/the-1960s-a-decade-of-promise-and-heartbreak?page=2.
[52] *Id.*
[53] *Id.*
[54] Linda Churney, *Student Protest in the 1960s*, YALE-NEW HAVEN TEACHERS INSTITUTE, http://www.yale.edu/ynhti/curriculum/units/1979/2/79.02.03.x.html (last visited Mar. 15, 2018).
[55] *Id.*
[56] Buttny v. Smiley, 281 F.Supp. 280, 286 (D. Colo. 1968).

in Dixon, recognizes that state universities should no longer stand in loco parentis in relation to their students."[57]

Thus, as a direct result of the demands for freedom made by college students in the Sixties, the courts gave them their freedom from *In loco parentis.* With each successive year the notions espoused by *In loco parentis*, that of building, nurturing and protecting students gave way to the more "enlightened view" of students as persons of majority and members of society who should be afforded the same freedoms.

A 1979 Federal Appeals court succinctly puts the tenor of the late Seventies:

> Our beginning point is recognition that the modern American college is not an insurer of the safety of its students. Whatever may have been its responsibility in an earlier era, the authoritarian role of today's college administrations has been notably diluted in recent decades. There was a time when college administrators and faculties assumed a role In loco parentis . . . The campus revolutions of the late sixties and early seventies were a direct attack by the students on rigid controls by the colleges and were an all-pervasive affirmative demand for more student rights.[58]

The rights of students and the new relationship of universities to their students was again trumpeted in a case where a student of the University of Utah was injured when she fell on a university-sponsored trip.[59] As a result of her fall she became a quadriplegic.[60] Despite her extreme injuries and the fact that the trip was sponsored by the university, the court reiterated the obligations of a university to its students.

> *Colleges and universities are educational institutions, not custodial.* Their purpose is to educate in a manner which will assist the graduate to perform well in the civic, community, family, and professional positions he or she may undertake in the future. It would be unrealistic to impose upon an institution of higher education the additional role of custodian over its *adult students* . . . with

[57] Goldberg v. Regents of Univ. of Cal., 57 Cal. Rptr. 463, 470 (Cal. Ct. App. 1967) (citing Dixon v. Alabama State Bd. of Ed., 294 F.2d 150 (5th Cir. 1961)).
[58] Bradshaw v. Rawlings, 612 F.2d 135, 138-39 (3d Cir. 1979).
[59] Beach v. Univ. of Utah, 726 P.2d 413, 414-15 (Utah 1986).
[60] *Id.*

> responsibility for assuring their safety and the safety of others. Fulfilling this charge would require the institution to babysit each student, a task beyond the resources of any school.[61]

III. A SEED PLANTED AND A NEW BUSINESS AS USUAL

The Eighties and Nineties brought new revenue stream to universities. Television broadcasting has increased dramatically over the last fifty years. "By 1960, there were 52 million television sets in American homes, which is one in almost nine out of ten households. This figure soared to 219 million in 1997."[62] In 2015, there were approximately 106 million people who watched sports on television.[63]

A. Can We Have a Piece of the Pie?

The effect of television rights, and marketing of sports paraphernalia was such an important revenue stream for colleges that, in 1982, the NCAA was sued by the University of Oklahoma over the NCAA's requirement that college home games not be televised as that caused a reduction in game attendance.[64] The U.S. Supreme Court ruled against the NCAA and stated that its restrictions on televising the games was a restraint of trade.[65] It has been estimated that the amount of money potentially lost by the association of schools is as high as $73.6 million.[66] College revenue generated by sports media rights has climbed steadily every year.[67] In 1982, a three-year contract with CBS for media rights generated $49.9 million.[68] Six years later, that same media deal was worth $166 million, a 300 percent increase in revenue.[69] Another three years later the media rights paid for by CBS jumped another 300

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[61] *Id.* at 419 (emphasis added) (citations omitted).
[62] *Number of Televisions in the U.S.*, THE PHYSICS FACTBOOK, https://hypertextbook.com/facts/2007/TamaraTamazashvili.shtml (last visited Mar. 15, 2018).
[63] *Sports on TV in the U.S. – Statista Dossier*, STATISTA DOSSIER, https://comm3357spring17.files.wordpress.com/2017/01/study_id23358_sports-on-tv-in-the-us-statista-dossier.pdf (last visited Mar. 15, 2018).
[64] NCAA v. Board of Regents of Univ. Okla., 468 U.S. 85, 120 (1984).
[65] *See id.*
[66] *See* John Rohde, *NCAA lost TV Case in '84, Giving College Football an Open Market*, NEWSOK (Aug. 29, 2004, 12:00 AM), http://newsok.com/article/2864174.
[67] *See generally Revenue*, *supra* note 27.
[68] *Id.*
[69] *Id.*

percent.[70] As of today those media rights for a three-year contract are worth $2.3 billion.[71] These sums do not take into account monies paid by students for student activity fees, ticket fees or merchandizing. Given the cash cow sports have become for some schools, where is the incentive to reduce the cash flow? The cost to run a school has only gone up over the years, not down, which forces to schools to not only to keep but to promote those things which generate revenue.[72] Given the money to be made and the need for a winning team, having the best players is a necessity. And, in order to win games, you need to put those players on the field. As the saying goes, "If you are going to ride in the Kentucky derby don't leave your prize stallion in the stable."[73]

B. The Cost of Pie Can be Very High

So, what is the cost to the university for engaging in this high stakes sporting contest? Are there some potentially hidden costs that might take some of the luster off the golden goose, which is our athletes? The answer lies in two places: one in the expansion of old tort theory and the other in newly discovered medical science.

First as to torts. Under Restatement of Torts landowners, *i.e.*, universities, owe a reasonable duty of care to invitees.[74] An invitee is "a person who has express or implied invitation to enter or use another's premises, such as a business visitor or member of the public to whom the premises are held open. The occupier has a duty to inspect the premises and warn the invitee of dangerous conditions."[75] A university student is clearly on the premises at the behest of the institution and in fact, the school actively prohibits those non-matriculated students from attending class or participating in activities sponsored by the university, such as sporting activities.

> A possessor of land is subject to liability to his invitees [students] for physical harm caused to them by his failure to carry on his activities with reasonable care for their safety if, but only if, he should expect that they will not discover

[70] *Id.*
[71] *Id.*
[72] *See generally* 120 YEARS OF AMERICAN EDUCATION, *supra* note 15, at 90.
[73] *If You're Gonna Ride in the Kentucky Derby...* , ARCHIVE OF OUR OWN, http://archiveofourown.org/works/616887/chapters/1112753 (last visited Mar. 15, 2018).
[74] RESTATEMENT (THIRD) OF TORTS: PHYS. & EMOT. HARM § 51 (2012).
[75] *Invitee*, BLACK'S LAW DICTIONARY (9th ed. 2009).

> or realize the danger or will fail to protect themselves against it.[76]

Given that a university must protect a student from physical harm the question arises: what is the harm in playing sports? We all played sports and we are fine. Aren't we?

The answer is not what most people expect. College sports have not always been as beloved as they are today. "Early in the games' history in 1905 the sport of football was considered so dangerous, regularly killing participants, that President Theodore Roosevelt summoned the coaches of Harvard, Yale, and Princeton to Washington D.C. for a summit on how to make the game safer and threatened to take action in the absence of significant reform."[77] Public outcry also forced the creation of the NCAA in 1910 who added in a rule-making component to the game.[78]

The violence of the game has hardly decreased and the injuries sustained are in a form not easily recognized. That injury is concussive and sub-concussive blows taken by student athletes. The perception of most when they think of college sports is that they are safer than professional sports and that people are bound to get a bit banged up. A recent study by Harvard and Boston University found that the number of hits and resulting trauma is far higher than what we as a general populace suspected. Despite years of education and growing public awareness about head injuries, college football players report having six suspected concussions and twenty-one so-called "dings" for every diagnosed concussion, with offensive linemen being the least forthcoming to trainers and team personnel.[79]

The Harvard/Boston University report broke down the statistical analysis by position and found that offensive linemen reported significantly higher numbers of post impact symptoms than other positions.[80] These symptoms, which were reported as dings, included dizziness, headache, and seeing stars.[81] Despite these symptoms:

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[76] RESTATEMENT (SECOND) OF TORTS § 341A (1965).
[77] *The Impact of Concussions on High School Athletes: Hearing Before the H. Comm. on Educ. & Labor*, 111th Cong. 24.1 (2010) (statement of George Miller, Chairman, Committee of Education and Labor).
[78] *Id.*
[79] Tom Farrey, *Study: 1 in 27 Head Injuries Reported*, ESPN (Oct. 3, 2014), http://espn.go.com/espn/otl/story/_/id/11631357/study-says-26-27-potential-concussions-unreported-college-football.
[80] Christina M. Baugh et al., *Frequency of Head-Impact-Related Outcomes by Position in NCAA Division I Collegiate Football Players*, 32 J. NEUROTRAUMA 314 (2015).
[81] *Id.* at 314.

> Offensive linemen reported having returned to play while experiencing symptoms more frequently and participating in more full-contact practices than other groups. These findings suggest that offensive linemen, a position group that experiences frequent, but low-magnitude, head impacts, develop more post-impact symptoms than other playing positions, but do not report these symptoms as a concussion.[82]

"An undiagnosed concussion is problematic because athletes who sustain additional brain trauma while recovering from a previous injury are at risk of more severe neurologic consequences."[83]

And what is this severe trauma? It is known as Chronic Traumatic Encephalopathy ("CTE").[84] CTE is a progressive degenerative brain disease found in people exposed to brain trauma over many years, including concussive and sub-concussive blows.[85] It is presently unknown exactly how many blows to the head it takes to induce CTE, but we do know that it currently can only be diagnosed conclusively after death with a brain dissection.[86] The illness itself may not manifest its symptoms outwardly for many years and is not one that only exhibits itself in old athletes; however, it can show up in young adults as well.[87]

The symptomology falls into four major categories: (1) somatic (headaches, nausea, vomiting, dizzy spells); (2) emotional (sadness to the point of depression even suicide, nervousness, irritability); (3) sleep disturbances (sleeping more of less than usual or trouble falling asleep); and (4) cognitive (difficulty concentrating, troubles with memory, feeling mentally slow or as if they are in a fog that will not lift).[88]

What most people do not realize is that concussive and sub-concussive blows do not require the athlete to have been rendered unconscious.[89] The vast majority of athletes who have suffered a significant brain impact are in

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[82] *Id.*
[83] *Id.* at 315.
[84] *See* ROBERT CANTU & MARK HYMAN, CONCUSSIONS AND OUR KIDS: AMERICA'S LEADING EXPERT ON HOW TO PROTECT YOUNG ATHLETES AND KEEP SPORTS SAFE 13 (Mariner Books ed. 2013).
[85] *Id.* at 90.
[86] *Id.* at 13.
[87] *Id.* at 90.
[88] *Id.* at 8.
[89] *Id.* at 106.

fact not rendered unconscious.[90] Concussive and sub-concussive injury does not necessarily occur due to a blow to the head but rather as a result of the head experiencing rotational forces which impact the brain inside the skull or via accelerational forces which whip the head around bruising the brain inside the skull.[91] The result of CTE can be loss of critical brain functions such as memory, impulse control, and a decline in their general ability to think and reason.[92]

While it is true that helmets can protect athletes from certain brain bleeds and skull fractures, they do not protect from rotational and accelerational concussive blows that cause bruising of the brain and therefore concussive injury.[93]

According to Dr. Cantu, a world renowned neurologist and specialist in the field of concussive therapy and research, most concussions resolve in seven to ten days and athletes return to their normal activities in two weeks.[94] Unfortunately, twenty percent of concussions are post-concussion syndrome cases.[95] These are cases where the injury can last at least one month and persists, with the patient experiencing unusually intense symptoms.[96] According to Dr. Cantu, rest is the only effective therapy and sports should stop completely until the patient is symptom free.[97]

Recent studies have found that the sideline observers be they coaches or athletic trainers miss six out of seven concussive impacts to their players during games and practices.[98] Couple this lack of observation by coaching staff with the fact that most athletes are hesitant to self-report due to parental pressure or a feeling that to be an athlete you needed to be tough and that playing hurt is just part of the game leaves us with a group of students which are extremely vulnerable.[99]

Are these student lives which may be ruined forever just a means to an end? Are they simply the cost of business of running an effective sports program? There is a lot of money at stake here.

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[90] *Id.*
[91] *Id.* at 106.
[92] *Id.* at 92.
[93] *Id.* at 96.
[94] *Id.* at 71.
[95] *Id.* at 71.
[96] CANTU & HYMAN, *supra* note 84, at 72.
[97] *Id.*
[98] *Id.* at 16.
[99] *Id.* at 132.

IV. POTENTIAL SOLUTIONS, THE GOOD, THE BAD, AND THE BLASPHEMOUS

A quote from a conference of Asian-European educators is appropriate: "Students are the future of our society. They need not only be trained for gainful employment, rather, they should be prepared to lead."[100] Given that our student populations are our future leaders and caretakers of society, it seems to go without saying that protecting them is in our collective best interest. So why then is it so hard to put practices in place to protect our student population? Like any discovery in its early stages, diagnosis, treatment and changing of our collective thought about normal behavior takes time. Concussive illness is very much like injury from smoking in that it can be easily ignored but the reality of engaging in the reckless behavior which promotes the injury cannot.

A. The Gold Standard of Care

The solutions to treating concussive illness come down to five steps, which need to be pursued with the same vigor with which we pursue a cure or treatment for any pandemic. These steps are detection, treatment, mitigation, reporting, and commitment to honesty.[101] There are several different methods for concussion detection, ranging from direct observation of concussive blows, to indirect observation using mechanical means or electronic modalities which track changes in acceleration and direction.[102]

Let's consider direct observation first. While constantly watching an athlete in play to determine whether they have suffered a concussive or sub-concussive blow may seem the most direct method of monitoring an athletes' condition, it has two significant criteria which are not easily satisfied. The first issue is who is qualified to do the observation of the athletes who may be suffering concussive injury? The second issue being what exactly are we looking for, visa vie a significant concussive event?

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[100] *Students: Our Future Leaders*, ASIA-EUROPE FOUNDATION, (Nov. 26, 2012), http://www.asef.org/projects/themes/education/2357-3rd-asem-rectors-conference/2816-students-our-future-leaders.

[101] World Health Organization [WHO], *Infection Prevention and Control of Epidemic-and-Pandemic-Prone Acute Respiratory Diseases in Health Care*, WHO Interim Guidelines, at 16 (June 2007), http://www.who.int/csr/resources/publications/WHO_CDS_EPR_2007_6c.pdf.

[102] Joseph Bien-Kahn, *Accelerometers Could Finally Fix the NFL's Concussion Crisis*, WIRED: SCIENCE (Feb. 3, 2017, 8:00 AM), https://www.wired.com/2017/02/nfl-concussions-accelerometer/.

A physician, such as a neurologist who specializes in the area of concussive illness or sports medicine, might be a good choice for someone to be observing athletic play.[103] "Neurologists are physicians who specialize in neurological functioning and are trained in the diagnosis and treatment of neurological disorders."[104] Thus after observing someone who has incurred a potential brain trauma or head injury during athletic play, the neurologist would immediately be in a position to perform a thorough neurological exam to test for any effects of that injury on the brain, spine, or nerves.[105] Thus instead of bringing the patient to the doctor for examination, we will bring the doctor to the patient. A simple elegant solution of observation, analysis, and testing then appropriate treatment modality.

Problematically, this immediate assessment and expertise does come at a significant cost. The yearly base salary for a physician who specializes in sports medicine ranges from a low of approximately $160,000 per year to a high of $337,000 per year, with the median salary approximately $221,000 per year.[106] It is not unreasonable to assume that at any given time there may be multiple sporting events being played which would necessitate hiring of multiple full time physicians whose sole job it would be to keep track of what is happening on the playing field. This brings up the question of how many physicians should we employ per sporting event? If we look at a football game or a practice, there will be a minimum of 22 athletes on the field practicing simultaneously. Any one of these athletes could suffer a concussive blow at any time. It seems unlikely that any one person could keep track of the actions of 22 people all at once. This potential for injury and the heightened need for observation would be moot if the incidence of injury were low, but the truth is far from that fact.

The number of reported concussions in athletics versus those actually suffered is staggering.[107] In collegiate football, among offensive linemen, the rate of diagnosed concussions to suspected concussions and dings was thirty-two to one.[108] In a 2010 study conducted of hockey players, the researchers found that the occurrence of concussions was seven times that as observed by coaches, reported by athletes or caught by physician

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[103] *Neurology*, WEILL CORNELL MEDICINE: CONCUSSION AND BRAIN INJURY CLINIC, https://concussion.weillcornell.org/our-services/neurology (last visited Mar. 15, 2018).
[104] *Id.*
[105] *Id.*
[106] *Physician – Sports Medicine Salaries*, SALARY.COM, https://www1.salary.com/sports-medicine-physician-salary.html (last visited Mar. 15, 2018) [https://perma.cc/WCB4-2652].
[107] Farrey, *supra* note 79.
[108] *Id.*

observers.[109] So the question arises: what is the appropriate number of people who should be watching the field of play/practice? The NCAA may be able to give us some guidance.

Based on NCAA rules, in a college football game there are at least seven referees who keep track of football rule violations.[110] In 2013, the NCAA granted the Big 12 a request to increase of the number of officials from seven to eight.[111]The Big 12 cited player safety, improved coverage of the action, and overall management of the game as the reasons for moving to eight officials.[112] Given that the NCAA has acknowledged that insuring player safety requires having multiple eyes on the field of play to detect potential rule violations and potential player injury, certainly that same numeric logic should be followed when attempting to detect injuries which might cause catastrophic brain trauma to the players.

Thus, from a viewpoint of parity, eight physician's specialists would be needed for each game and practice. The total cost per team would be approximately $1.68 million per year. Keep in mind this is for one sport. If there are other contact sporting events or practices occurring simultaneously more trained specialists would be needed. It is not unreasonable for there to be a soccer practice, a football practice, and a lacrosse practice to be happening simultaneously. This would then necessitate over five million dollars in physician observer costs per year.

Is this overkill, no pun intended, it depends on what you feel is the value of a student's life. I do not state this as an academic question but rather one which underpins a harsh reality. Engaging in athletic play which contributes to concussive brain injury can kill a student or worse leave them in a state of mental degradation which will burden them and their families for decades.[113]

So, what is the going rate to kill a person? In the wrongful death of a twenty-year-old college student, the court awarded the student's family 6 million

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[109] CANTU & HYMAN, *supra* note 84, at 16.
[110] *How Many Officials Does it Take for a College Game?*, NAT'L FOOTBALL FOUND., (July 7, 2014, 1:47 PM), http://www.footballfoundation.org/News/Blog/tabid/521/entryid/72/Default.aspx [https://perma.cc/8JET-X9NW].
[111] *Id.*
[112] *Id.*
[113] CANTU & HYMAN, *supra* note 84, at 90–92.

dollars in damages.[114] In another wrongful death suit against Massachusetts Institute of Technology ("MIT") the initial complaint asked for $26.7 million. [115] This case was ultimately confidentially settled.[116] Assuming the MIT settlement was 30 percent of what was asked for we arrive at $8.9 million. These two settlements alone make a yearly cost of $1.69 million seem almost reasonable.

These sums may be even higher for a student who did not die but rather has been rendered vegetative for the remainder of their life as the result of the concussive blows sustained during athletic play.[117] So what is a university to do? Even if we reduce the number of trained physicians to two, one to watch the ball in play and another to scan the field in general, that still would cost close to a $442,000 per year.[118] Given that number, it seems unlikely that universities would be inclined to do this based on sheer cost alone.[119] A 2013 USA Today article has some interesting statistics: "Division I schools with football spent $91,936 per athlete in 2010, seven times the spending per student of $13,628. Division I universities without football spent $39,201 per athlete, more than triple the average student spending."[120]

Quoting Rogers Redding, the National Coordinator of College Football Officiating: "Typically, money is an important issue whenever there is a proposal for increasing the number (of referees). The question always arises: given all the competing interests vying for the football dollar, how much should be invested in officiating."[121] Given the reluctance to spend money on a referee, how much enthusiasm can we image would be garnered for multiple physician salaries?

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[114] *$6 Million Settlement – Drunk Driving "Wrongful Death,"* MARTINEZ MANGLARDI ATTORNEYS: CASES, https://attorneystrialgroup.com/cases/drunk-driving-wrongful-death/ [https://perma.cc/3XWA-93FS].

[115] Rob Capriccioso, *Settlement in MIT Suicide Suit*, INSIDE HIGHER ED: NEWS (Apr. 4, 2006), https://www.insidehighered.com/news/2006/04/04/shin. [https://perma.cc/E7VH-DBVX].

[116] *Id.*

[117] CANTU & HYMAN, *supra* note 84, at 90–92.

[118] *Physician – Sports Medicine Salaries*, *supra* note 6.

[119] *See id.*

[120] Cliff Peale, *Athletics Cost Colleges, Students Millions*, USA TODAY (Sept. 15, 2013, 12:02 AM), https://www.usatoday.com/story/news/nation/2013/09/15/athletics-cost-colleges-students-millions/2814455/.

[121] *How Many Officials Does it Take for a College Game?*, *supra* note 110.

B. The Silver Standard of Care

If we assume that salary paid is indicative of value, then clearly a physician specializing in sports medicine would be the gold standard. Which begs the question: is there someone else who would be at least generally qualified to identify a potential concussive injury but not quite so expensive? Athletic trainers seem to be alternative whose qualifications set fit our need.

> As licensed medical professionals, athletic trainers ("ATs") receive comprehensive didactic and clinical training in concussion management. They are typically the first providers to identify and evaluate injured persons and are integral in the post injury management and return-to-play (RTP) decision-making process. Without exception, ATs should be present at all organized sporting events at all levels of play and should work closely with a physician or designate who has specific training and experience in concussion management to develop and implement a concussion-management plan. . .[122]

The average yearly salary of an athletic trainer is much less than not a physician.[123] Their average yearly salary is approximately $44,000.[124] Thus for that same $442,000 a university could hire ten athletic trainers as opposed to two physicians. If we stick to that same logic of two persons with eyes on the field of play at all times we now have a cost of $88,000 per year per sport. Roughly $264,000 per year to cover, football, soccer, and lacrosse. Not a small sum but an incremental increase to what is already being spent per student athlete and de minimus when compared to a $6 million wrongful death payout.[125]

As stated earlier, the athletic trainer may be the first medical professional on the scene of an injury.[126] "Athletic trainers (ATs) are highly qualified, multi-skilled health care professionals who collaborate with physicians to provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical

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[122] Steven P. Broglio et al., *National Athletic Trainers' Association Position Statement: Management of Sport Concussion*, 49 J. ATHLETIC TRAINING 245 (2014).
[123] *See Athletic Trainer Salaries*, SALARY.COM, https://www1.salary.com/Athletic-Trainer-Salary.html (last visited Mar. 15, 2018).
[124] *Id.*
[125] Peale, *supra* note 120; *$6 Million Settlement – Drunk Driving "Wrongful Death," supra* note 114.
[126] Broglio et al., *supra* note 122, at 245.

conditions. Athletic trainers work under the direction of a physician as prescribed by state licensure statutes."[127] They hold at least a bachelor's degree and must pass a state licensing examination in forty-nine states to call themselves athletic trainers. [128] They are not personal trainers.[129] Rightfully taken umbrage with whomever makes that mistake. In implementation of the Medicare system, the United States Government classifies athletic trainers as mid-level health care professionals. [130] Given their training and specialization it would seem that they would be a good fit for the role of concussion watchdog. In 2014, The National Athletic Trainers Association ("NATA") put out a position paper on proper concussion treatment protocols, entitled: National Athletic Trainers' Association Position Statement: Management of Sport Concussion.[131] The purpose of the associations' position paper was "to provide athletic trainers, physicians, and other health care professionals with best-practice guidelines for the management of sport-related concussions." [132] The guidelines and best-practices themselves were vetted by four persons with PhD's in the sports medicine field, two holders of master's degrees in sports medicine and a world known neurosurgeon who specializes in concussions, Dr. Robert Cantu.[133]

The report outlines procedures which can be followed at universities to enhance concussion detection as well as move in the direction of student athlete protection.[134] Best-practices include: disseminating appropriate education on concussive illness, prevention of concussive and sub-concussive blows, maintenance of documentation regarding injuries suffered by athletes, awareness of legal obligations as they are applicable from various governing bodies, appropriate evaluation of athletes and maintenance of records and reports of those evaluations, return to play decision making methodology and lastly equipment options for minimizing concussive blows.[135]

The listing of best practices on first blush seem quite comprehensive. But it should be remembered that these are merely suggested guidelines for athletic trainers to follow and are by no means legally required. Despite

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[127] *Athletic Training*, NAT'L ATHLETIC TRAINERS' ASS'N, https://www.nata.org/about/athletic-training (last visited Mar. 15, 2018).
[128] *Id.*
[129] *See id.*
[130] *See id.*
[131] *See generally,* Broglio et al., *supra* note 122, at 245.
[132] *Id.*
[133] *See generally id.*
[134] *See id.* at 246.
[135] *See id.*

the athletic trainers' medical expertise, the guidelines make it clear that a physician should be involved in making the ultimate decision to allow a return to play.[136] "Once an athlete has been diagnosed with a concussion, he or she should be removed from the sport and not allowed to return to physical activity *until cleared by a physician or designate*, no sooner than the next day"[137] Additionally, "after an athlete is diagnosed with a concussion, the RTP [Return-to-Play] progression should not start until he or she no longer reports concussion-related symptoms, has a normal clinical examination, and performs at or above preinjury levels of functioning on all objective concussion assessments."[138]

It is interesting to note that even in this best practice proposal, with detailed and intensive guidelines, there is verbiage used that may allow for a school to skirt their ethical and legal duty. The word designate is followed by the following: "who has specific training and experience in concussion management to develop and implement a concussion-management plan based on the recommendations outlined here".[139] A problematic word search for further fleshing out of the specific qualifications of the designate are limited to the verbiage quoted above. It is clear that a neurologist is qualified based on their medical training.[140] Athletic trainers are considered by the government to be mid-level medical personnel who, based on this best practice document, are appropriate to evaluate return to play criteria.[141] Yet if these are the only two qualified persons to make the decision one wonders why they did not simply state physicians and athletic trainers. This word choice was meant to include other medical professionals, and potentially other individuals. The Weill Cornell Spine and Brian Center, a center for research, detection and treatment of brain disease states, "coaches, athletic trainers and parents of athletes should also be trained to look for signs of concussion, so that they can make an immediate sideline assessment."[142] The observation and detection phase of concussion analysis seems to include and realize that at least preliminary detection might be done by persons other than physicians and athletic trainers. Yet with a lowering of the standard of observation by lowering the specific training of

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[136] *Id.* at 248.
[137] *Id.* (emphasis added).
[138] *Id.*
[139] *Id.*
[140] *Neurology*, *supra* note 103.
[141] *Athletic Training, supra* note 127.
[142] *Reviewed by* Kenneth Perrine, *Diagnosing and Treating Concussion*, WEILL CORNELL BRAIN & SPINE CTR., http://weillcornellbrainandspine.org/condition/concussion/diagnosing-and-treating-concussion (last visited Mar. 15, 2018).

the observer, are we opening up the door to improper diagnosis and, therefore, risk to the athlete?

C. The Bronze Standard of Care

Another possibility for detection is to substitute the human element for technology which does not require a yearly salary. This mode of detection and observation uses sensors on the athlete to detect a pre-determined level of G force or lateral acceleration. Current technology is either sport specific to football like the ones developed by the Riddell Sports Group (Riddell) best known for their manufacture of football helmets or that which can be adapted to be used in a slightly wider sports setting.

The Riddell Company has developed two system for concussive blow detection.[143] One system is called the SRS system and the other system is their Riddell InSite system.[144] Both systems detect concussive blows to the player as well as changes in spatial position.[145] The Riddell InSite system is based on a sensor system which is retrofitted into Riddell player helmets.[146] The cost of each helmet sensor setup is $125 per helmet with a yearly reconditioning fee of $25.[147] Riddell's InSite "is designed to alert team staff of high risk single and multiple head impacts, and enable improved identification and management of concussion[s]."[148] Riddell's SRS system uses the internal helmet sensing system in InSite coupled with a sideline computer system.[149] When the SRS system detects a suspect impact profile, it immediately notifies via wireless network the medical or training staff.[150] The use of the sideline computer gives a team athletic trainer or other professional the ability to have immediate access to a player's concussion history over time as well as multiple player information.[151] The cost of the SRS system, though, is more expensive that the InSite system.[152] It also requires someone to access the information gathered by the technology.[153]

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[143] RIDDELL, http://www.riddell.com/riddell-iq (last visited Mar. 15, 2018).
[144] *Id.*
[145] *Id.*
[146] Telephone Interview with K. Donoghue Riddell (Jan. 22, 2018) (on file with author).
[147] *Id.*
[148] RIDDELL, *supra* note 143.
[149] *Id.*
[150] *Id.*
[151] *See id.*
[152] Telephone Interview with K. Donoghue Riddell, *supra* note 146.
[153] RIDDELL, *supra* note 143.

D. Is There an Aluminum Standard of Care?

As with all things, there are some less expensive alternatives for concussion detection. What these systems have in common is that they rely on predetermined categories for concussion notification. One example is the GForceTracker, developed by GForceTracker Inc.[154]

> [GForceTracker Inc.'s] head impact monitoring system is now available in a football chin guard. Utilizing the same GFT athlete monitoring technology that is already proven and widely used in helmeted sports, the chin guard measures both linear acceleration and rotational velocity. It simply attaches to helmets using the same strap and clip features found on chin guards in the market place today.[155]

The sensor technology can also be used in sports like lacrosse, hockey and soccer. [156] The cost per sensing Unit is $150 each with a $96 per year maintenance fee, tracking software is free. The system monitors the athlete for physical activity which exceeds the notification threshold and then notifies the sideline personnel or athletic trainers that a significant impact has occurred.[157] The threshold settings are based on a study done by Virginia Tech and outlined in a paper which summarized those findings.[158]

There is also a product called FITGuard, produced by Force Impact Technologies, which is a mouth guard that lights up when the player wearing the guard has suffered a severe head impact.[159] The product is currently under development and close to market.[160] The initial projected cost of the guard, in 2016, was $129.99 per Unit.[161] This Unit also relies on the coach or sports professional on the sideline to notice the glowing

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[154] *See generally* GFORCE TRACKER, http://gforcetracker.com/ (last visited Mar. 15, 2018).
[155] *Football Chin Guards Go High Tech*, PRLOG (Mar. 23, 2015), https://www.prlog.org/12431747-football-chin-guards-go-high-tech.html.
[156] *Schutt Sports Introduces High Tech Sensors to Chin Straps*, CISION: PR NEWSWIRE (Mar. 2, 2016, 6:12 PM), https://www.prnewswire.com/news-releases/schutt-sports-introduces-high-tech-sensors-to-chin-straps-300230014.html (last visited Mar. 15, 2018).
[157] GFORCE TRACKER, *supra* note 154.
[158] *See generally* Ray W. Daniel et al., *Head Impact Exposure in Youth Football*, 40 ANNALS OF BIOMEDICAL ENGINEERING 976 (2012).
[159] FORCE IMPACT TECHNOLOGIES, https://www.fitguard.me/ (last visited Mar. 15, 2018).
[160] *See id.*
[161] Paul Szoldra, *This device is being touted as the 'check engine light for the brain'*, BUSINESS INSIDER (Jan. 15, 2016, 10:58 PM), http://www.businessinsider.com/fitguard-mouthguard-2016-1.

mouth guard and to remove the player from play.[162] The FITGuard technology records various levels of hits and displays either a green OK symbol, a blue, evaluate symbol or a red severe symbol.[163] To be effective the system still requires professional assessment of the athlete after the Unit triggers an alarm.[164] From a per player price point the FITGuard is significantly higher in price than the GForceTracker. The FITGuard has the benefit of being relatively simple to conduct an immediate assessment of the type of impact sustained, *i.e.*, minor (green), significant (blue), or severe (red).[165] The product literature available at present does not indicate what significance to change of color has to G force sustained be it lateral or axial or otherwise.[166] The product touts its efficacy but seems to rely at present on its visual appeal and simplicity of use as a selling point to parents of youth athletes to which it is marketed.

The difficulty with all of these systems which rely on technology as a substitute for a human is that each of these modalities, ultimately needs a physician or at least a medical professional such as an athletic trainer to evaluate the data and the incident which has occurred.[167] The final protection of the athlete is only as good as the person evaluating the data and making the player sit out. That means that the player's welfare must be put first, so that when injury or potential injury is detected the professional errs on protecting the player. Yet based on the way each of the aforementioned products is constructed and marketed each of them possesses the ability to customize the alarm setting so that each purchaser or school can set the desired trigger point or notification point wherever they choose.[168] One would hope that the purchasers, schools, colleges, and universities would err on the side of caution, making the Units more sensitive rather than less. It would seem from a standpoint of protecting our athletes that schools would rather have the Units report false positives for concussive injury, rather than false negatives, i.e. sitting out too many players than not enough. Unfortunately, that relies on the schools' motivation being the protection of the student's health and lifelong wellbeing as opposed to protecting the universities' pocketbooks from liability for student injury or from sacrificing a student in order to win a championship.

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[162] *See* Anthony Gonzales, *Force Impact Technologies presents the FITGuard*, YOUTUBE (Oct. 17, 2014), https://www.youtube.com/watch?v=2qGyg2teC_4.
[163] Telephone Interview with G-Force Technologies (Jan. 25, 2018 (on file with author).
[164] *Id.*
[165] *Id.*; *see* FORCE IMPACT TECHNOLOGIES, *supra* note 159.
[166] *See id.*
[167] *See generally* Broglio et al., *supra* note 122.
[168] Telephone Interview with K. Donoghue Riddell, *supra* note 146.

Thus, a decision needs to be made about a school's priorities as they apply to sports. Do we win at all costs even when that cost is to a student's life and future? Do we win with a later potential cost to a few students down the pike as long as we can reasonably protect the university from suit? Or do we protect our students from known risks and even potentially unknown risks given that it is only a game?

The answer to the following survey question given to the Top 100 Division I football coaches is illustrative. Out of one hundred surveyed, twenty responded to the following question: If your star player suffered a concussion during the final playoff game, would you bench him or put them in to play? The coaches questioned knew the survey was for developing a concussion policy for universities. Nineteen of the twenty coaches who responded said they would bench the student even though it was a playoff game. One coach said they would send them in to play. What is troubling about the one coach who would send the student in to play is that there is a possibility of the student suffering secondary impact syndrome once a concussion has occurred.[169]

> A controversial term first described by Saunders and Harbaugh in 1984, Second Impact Syndrome (SIS) consists of two events. Typically, it involves an athlete suffering post-concussive symptoms following a head injury. If, within several weeks, the athlete returns to play and sustains a second head injury, diffuse cerebral swelling, brain herniation, and death can occur.[170]

The above syndrome is well known thirty years after its proposal in 1984, yet we have an elite Top 100 Division I football coach who is willing to risk the life of one of his players for the sake of a win. And if this one coach admitted to be willing to act in this fashion, how many of the other nineteen who said they would bench him, would actually do so? To every person I have posed this last question, everyone answered that they believed at least one other would do the same if not more. That translates to at least ten percent of all coaches acting in a way which in any other circumstance would be considered grossly unethical if not illegal.

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[169] *See generally* Tareg Bey & Brian Ostick, *Second Impact Syndrome*, 10 WESTERN J. EMERGENCY MED. 6 (2009).
[170] *Id.*

E. Could the Simplest Solution be the Best or Blasphemy?

Thus far our solutions for protecting our student populations from potential concussive illness have ranged from spending several million dollars to spending several hundred thousand dollars. Some institutions "spent $91,936 per athlete in 2010, seven times the spending per student of $13,628. Division I universities without football spent $39,201 per athlete, more than triple the average student spending."[171]

Why is the amount universities spend on sports in Division I schools seven times the amount spent on the average student? Is the purpose of going to a university or college to play sports or to get an education? According to the American Association of Colleges and Universities:

> . . . getting a college education serves a purpose far beyond getting a job. What families and students themselves are paying for is much more than an accumulation of credits and a degree. It is more than knowledge of a particular field, training in a discipline, or even achievement of certain learning outcomes and critical skills . . . [it is] focusing not on the strictly defined goal of employment, but on the more humane and capacious goals of a better life, better communities, and a better society.[172]

Given the ferocity with which people cling to and revere athletics in colleges, one would think that the number of participants in sports would be a relatively high number, but the reality is actually very different. University of Pennsylvania has an undergraduate population of around 40,000 students, while the number of undergraduate student athletes was only 810 students as of 2014.[173] That amounts to the athletic population being a mere two percent of the total population. Purportedly fifteen out of the twenty-eight college sports at University of Pennsylvania pay for themselves, leaving thirteen of these sports as "lost leaders," *i.e.*, sports not making money but rather there as a student draw.[174] Calculating the exact

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[171] Peale, *supra* note 120.

[172] Bethany Zecher Sutton, *Higher Education's Public Purpose*, ASSOC. AM. COLLS. & UNIVS. (June 20, 2016), https://www.aacu.org/leap/liberal-education-nation-blog/higher-educations-public-purpose.

[173] Megan Fleming, *Perks of Being a Student Athlete at Penn State*, ONWARD STATE (Oct. 31, 2014, 4:15 AM), http://onwardstate.com/2014/10/31/perks-of-being-a-student-athlete-at-penn-state/.

[174] *See generally University of Pennsylvania Athletics Information*, COLL. FACTUAL, https://www.collegefactual.com/colleges/university-of-pennsylvania/student-life/sports/ (last visited Mar. 15, 2018).

amount spent on a university's sporting program is difficult given the various revenue streams and expenditures. According to one source though, University of Pennsylvania lists its sporting expenses at $37,669,540. It also lists its revenue from sports as $37,669,540.[175]

So where does much of the needed revenue come from? The answer for many of Americas largest public universities is "from surging television contracts, luxury suite sales and endorsements."[176] Unfortunately for other schools that do not have the benefits of television contracts and luxury suites, the burden falls onto the student population.[177] These student fees range from just a few tens of dollars to a few hundred.[178] At Rutgers University, the student fees that went to sports generated about $10.3 million.[179] At Florida State University, student fees of $237 per student generate about $8 million.[180]

The costs of sports and the small percentage of participation seem to call the question: Why are non-athletes footing the bill for student athletes? Could not Rutgers spend that $10 million per year on that which the American Association of Colleges and Universities suggested i.e. that of helping students attain the goals of a better life, better communities, and a better society.[181]

Additionally, given that leaving sports at the status quo, i.e. with no regard or concern for potential long term significant injury to players engaged in these sporting endeavors is untenable why engage in them at all? Does sports at the university level actually have a tangible benefit which outweighs the potential injury to its players? If on average less that 2 percent of the student players actually play in sports where is its value?

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[175] *Id.*
[176] Will Hobson & Steven Rich, *Why Students Foot the Bill for College Sports, and How Some are Fighting Back*, WASH. POST (Nov. 30, 2015), https://www.washingtonpost.com/sports/why-students-foot-the-bill-for-college-sports-and-how-some-are-fighting-back/2015/11/30/7ca47476-8d3e-11e5-ae1f-af46b7df8483_story.html?utm_term=.da67d92352dd.
[177] *See id.*
[178] *Id.*
[179] *Id.*
[180] *Id.*
[181] Sutton, *supra* note 172.

V. EVERY COIN HAS TWO SIDES AND POTENTIALLY SOME VALUE

Despite its low number of participants and potentially skyrocketing costs, is it possible that sports do contribute something to the university experience that should not be lost? Is value determined by numbers of participants or by revenue generated? The Rosetta Stone is a single artifact of tremendous historical, and social relevance. The number of archeologists employed in the US is roughly 7600.[182] The number of accountants is 1.23 million.[183] Yet the value of those archeologists in deciphering the Rosetta Stone is invaluable. Maybe sports have a value beyond its professional monetary allure.

A. Is the Baby Being Thrown Out with the Bathwater?

Given the number of professional player law suits revolving around concussions and the possibility of significant injury being ever present, there is a tendency to simply abolish the activity as a whole without trying to mitigate the harm. There are many people who believe that sports have value beyond winning championships.[184]

> When managed with the right priorities in mind, collegiate athletics are good for student athletes . . . and for the student body as a whole. Our students come here first to learn, but intellectual growth is only part of what forms a well-rounded, contributing, mentally and physically healthy individual. Participation in athletics, from Division I to intramural, teaches students' critical life skills like leadership, teamwork, loyalty, commitment, perseverance, and time management. It fosters healthy habits and provides stress release. It forges friendships, inspires connections, and sparks school spirit that can last a lifetime.[185]

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[182] U.S. DEP'T LABOR: BUREAU OF LABOR STATISTICS, ANTHROPOLOGISTS AND ARCHEOLOGISTS, https://www.bls.gov/ooh/life-physical-and-social-science/anthropologists-and-archeologists.htm (last visited Mar. 15, 2018).
[183] *Number of Accountants and Auditors Employed in the United States from 2012 to 2022 (in Millions)*, STATISTA, https://www.statista.com/statistics/317587/number-of-accountants-and-auditors-employed-us/ (last visited Mar. 15, 2018).
[184] Ricardo Azziz, *The Value of Collegiate Athletics: Let's Not Throw the Baby Out with the Bathwater*, HUFFPOST: THE BLOG (Nov. 11, 2014, 11:23 AM), https://www.huffingtonpost.com/dr-ricardo-azziz/the-value-of-collegiate-a_b_6108674.html.
[185] *Id.*

> Well-run collegiate sports programs enhance faculty, student, alumni, and community engagement and alignment; they increase the value of the university brand; they drive enrollment and academic excellence; and they drive revenue for other auxiliaries (e.g., athletic paraphernalia sales). Multiple studies have shown alumni athletes donate more often and more dollars than non-athletes.[186]

Given the intangibles like leadership, teamwork, loyalty, and commitment, are these not the same types of activities and things which the American Academy of Colleges and Universities is striving for in order to make for a better society? Does a better life, community, and society not blossom from those who engage in charitable acts, teamwork, leadership, and perseverance?

Robert J. Sternberg, former Provost at Oklahoma State University, has some unique perspective on the topic given his various roles at institutions in his career. He started his career as a professor then as a Dean at Tufts University.[187] He has gone from academic to administrator to Provost and as such has viewed the interplay of sports and academic life from varying vantage points.[188] On the topic of the value of college sports he makes the following points:

> What leadership characteristics are important for an undergraduate education to develop? These might include traits and skills such as strategic and tactical planning, persistence, sensible risk-taking, resilience, self-discipline, time management, a sense of fairness, teamwork, an understanding of one's adversaries, and sportsmanship (being both a good winner and a good loser). If we now consider which characteristics competitive athletics help develop, the lists would track pretty well. That is, done right, participation in competitive athletics *is* leadership development.[189]

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[186] *Id.*

[187] Robert J. Sternberg, *Biography*, http://www.robertjsternberg.com/about-main-page/ (last visited Apr. 20, 2018).

[188] *See* Robert J. Sternberg, *College Athletics: Necessary, Not Just Nice to Have*, OVERBOARDER, http://www.overboarder.com/en/blog/college-athletics-necessary-not-just-nice-to-have/ (last visited Mar. 15, 2018).

[189] *Id.*

It would appear then that even academicians see a value in sports aside from the win-lose aspect of the game. Do some athletes feel privileged and on occasion behave as such by missing tests or not focusing on their studies? Of course, the numbers of athletes who are in fact doing well academically is more the rule than the exception.[190] Additionally, many employers and recruiters prefer that their employee candidates have some competitive experience because these individuals generally possess a certain drive and leadership skill.[191] That does not mean that sports is the only place to develop these abilities it simply shows that there is more than one type of classroom.[192]

If sports have an intrinsic value as a different type of classroom or learning venue, then how can we make use of both this unique setting and protect them at the same time?

B. How do we Save the Baby?

The answer is in reminding schools that protecting ones' most valuable asset, our students, requires changing our priorities as they apply to the sporting programs they offer. It means spending time and money first on protecting the athletes from concussive injury so prevalent in their field of play and by protecting our students from their own short-sighted views of their invincibility. It means changing the mindset of the universities from winning is everything to winning is important but not at the expense of the students.

What would some say about school tradition? Sports have been played at the university level for over one hundred years. Doesn't this traditions' longevity demonstrate its benefit? After all, traditions survive as a result of promoting a benefit not a negative outcome.[193] Yet, despite this long beneficial tradition, we now know that playing contact sports produces a very tangible, long-lasting injury that can have debilitating long term effects.[194]

Given the undeniability of the results, why are we so hesitant to change? There are many reasons why people resist change but here are a few from

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[190] *Benefits to College Student-Athletes*, NCAA, http://www.ncaa.org/student-athletes/benefits-college-student-athletes.
[191] Sternberg, *supra* note 188.
[192] *See id.*
[193] *Tradition*, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/tradition.
[194] CANTU & HYMAN, *supra* note 84, at 92.

the perspective of business management which do relate to sporting programs and their use of people, in part, as a money-making enterprise. People resist change because of a feeling of loss of control, uncertainty, loss of face, concerns about competence, more work, and a potential ripple effect.[195] People associated with sports for many decades are likely to be defensive about admitting that they may have been doing something wrong, even harmful all these years, i.e. a loss of face.[196] No one wants to be associated with an activity that may have caused long term harm or damage to someone, thus denying that there is a potential risk or turning a blind eye to the risk allows people to avoid the potential problem. This lack of acknowledgement occurring even though the injury itself was only recently linked to sporting activities in general.[197] The desire to change may be perpetuated by a feeling of lack of competence because the injury sustained to the brain is hidden from view and not easily diagnosed, unless by a professional.[198] Coaching staff may feel ill equipped to make the call especially when the stakes of making a mistake are so high. There is also the ripple effect which may mean that if a comprehensive system is implemented, it will need to be done in all sports.[199] This is a type of flood gate argument popular with those who want to derail the corrective measure because of its magnitude.[200] This flood may be in terms of dollars, persons involved, complexity, or all three. In our situation, there are elements of all three but in no way is the cost, complexity, or outcome not worth the result. The result is no more and no less than the preservation of our society as a whole. The disease is real and not imaginary, the cure available and the cost within reach.

C. A Better Way to Bathe

The first step is to acknowledge that there is a potential problem is simultaneously educating our sporting staff and our athletes about the risks they face by competitive play. The next step is to understand and embrace the idea that it will take an initial investment of capital to adequately protect our students while they participate in sports and for universities to demonstrate that they are willing to make the commitment. We must be

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[195] Rosabeth Ross Canter, *Ten Reasons Why People Resist Change*, HARV. BUS. REV. (Sept. 25, 2012), https://hbr.org/2012/09/ten-reasons-people-resist-chang [https://perma.cc/T9BE-C7EQ].

[196] *Id.*

[197] CANTU & HYMAN, *supra* note 84, at 92.

[198] *Id.*

[199] Canter, *supra* note 195.

[200] *See* Truthfinder, *What is a Floodgates Argument in Tort Law*, QUORA, https://www.quora.com/What-is-a-floodgates-argument-in-Tort-Law (last visited Mar. 15, 2018).

proactive, rather than reactive, to the possibility of injury. We should not wait for the first multimillion dollar lawsuit to be filed, but rather implement protection ahead of that oncoming train.

Protecting athletes begins with detection and an appropriate remedial protocol. For football, that detection can be accomplished by utilizing Riddell's SRS and InSight detection systems. The sensor technology costs roughly $150 per player and can detect changes in lateral acceleration and G force. The threshold for detection and therefore removal from play being adjustable and should be set by a competent physician according to a written protocol which errs on the side of safety. Riddell's system is specifically setup for use in football helmets. For other sports, something like the GForceTracker might be utilized. GForce sensor technology can be used in sports like lacrosse, hockey, and soccer. [201] The cost per sensing Unit is $150 per Unit with a ninety-six dollar per year maintenance fee; tracking software is free. The system monitors the athlete for physical activity which exceeds the notification threshold and then notifies sideline personnel or athletic trainers that a significant impact has occurred.[202]

Both of these technologies require monitoring by qualified personnel. That personnel should be athletic trainers who have graduated with a degree in athletic training and are licensed by the state. The minimum number of athletic trainers at each practice or game should be at least three. This number, though less than the number of referees participating in most sports, would at least give three people watching the field of play at all times, not counting the coaching staff whose job it would be to pull players from play when concussive or sub-concussive blows are detected.

Baseline testing of each player should be done at the beginning of each season. The test would be an objective test, where an athlete cannot artificially lower their score to anticipate a concussive injury. Thereafter, monthly testing should occur. Eye-Sync is a product developed by Syncthink Inc. which detects eye movement as a way of quantifying an athletes' brain trauma.[203] The product has the ability to calculate a baseline reading for each student and therefore make it less possible for an athlete to artificially lower the baseline in preparation for a head injury.[204] These

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[201] *Schutt Sports Introduces High Tech Sensors to Chin Straps*, CISION: PR NEWSWIRE (Mar. 2, 2016, 6:12 PM), https://www.prnewswire.com/news-releases/schutt-sports-introduces-high-tech-sensors-to-chin-straps-300230014.html.
[202] GFORCE TRACKER, *supra* note 154.
[203] Telephone Interview with Jay Stevens, Vice President of Sales at Synvthink Inc. (on file with author).
[204] *Id.*

systems cost roughly $6,000. Each university would only need one or two Units.

For approximately $250,000 a school could equip 500 athletes with monitoring devices, purchase two Eye-Sync testing Units, and hire four athletic trainers. That cost is roughly five percent of the cost of one jury verdict against a school involving injury to a student athlete. From an income perspective, increasing enrollment in the institution by just five students would completely cover the cost of these programs.

Though these financial arguments are compelling, there is a more important reason why action needs to be taken regardless of the cost benefit analysis. Protecting our students must be done because it is the ethically right thing to do. Many ethical theorists point to the same conclusion. Jeremy Bentham and David Hume, proponents of Utilitarianism, say that societies' duty is to promote the most amount of good or benefit and to avoid activities which caused suffering.[205] Kant would say that people should act in a way which promotes good will.[206]

"A person acts from a good will when they do what they do because they think it is their duty: when they act from a sense of moral obligation."[207] Judeo Christian ethic would say do unto others as they would do unto you.

All these ethical theories point to doing the right thing that of protecting our students from harm. A thought reminiscent of *In loco parentis*, where institutions step into the shoes of parents. None of these theories concern themselves with the financial cost of doing the right thing. None of them require a cost benefit analysis to prove that the course of action proposed is good because it is cost effective. It is true that the numbers do bear out that in this case protecting our student athletes is both cost effective in the long run as well as socially beneficial; however, this is not why we should do it.

VI. CONCLUSION

We should act to protect our students because it is the right thing to do. A parent does not protect their child because of financial gain or fiscal balance.

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[205] Emrys Westacott, *Kantian Ethics in a Nutshell: The Moral Philosophy of Immanuel Kant*, THOUGHTCO. (Jan. 17, 2018), https://www.thoughtco.com/kantian-ethics-moral-philosophy-immanuel-kant-4045398.
[206] *Id.*
[207] *Id.*

They do so out of love. Are we our brother's keeper?[208] The answer historically has been yes we are.[209]

"Love your neighbor as yourself. There is no commandment greater than these."[210]

Throughout history from philosophers to the Bible to legal theories of *In loco parentis*, schools have been reminded to treat their students like parents. To do them no harm. To quote the court from 1837:

> One of the most sacred duties of parents is to train up and qualify their children, for becoming useful and virtuous members of society; . . . The teacher is the substitute of the parent; . . . and in the exercise of these delegated duties, is invested with his power.[211]

How can we effectively do our sacred duty if we fail to protect those with whom we are entrusted? The course we must take is clear. What is unclear is who will lead the path to virtuous action.

Jiminy Cricket had the following opinion of societies' moral conscience when asked what a conscience was by Pinocchio:

"What's a conscience! I'll tell ya! A conscience is that still small voice that people won't listen to. That's the trouble with the world."[212]

We can only hope that Jiminy's lack of faith in society is wrong and that universities and colleges will boldly go forward as leaders and protectors of our students and society as opposed to being ostriches with their heads buried in the sand.

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[208] Genesis 4.9 (King James).
[209] *See What is "My Brother's Keeper"?*, INNOVATEUS, http://www.innovateus.net/innopedia/what-my-brothers-keeper (last visited Mar. 15, 2018).
[210] Mark 12:30-31 (New Life Version).
[211] Morse v. Frederick, 551 U.S. 393, 414 (2007) (quoting State v. Pendergrass, 19 N.C. 365, 365–66 (1837).
[212] *Pinocchio*, IMDB, http://www.imdb.com/title/tt0032910/quotes (last visited Mar. 15, 2018).