

IF WE ALLOW FOOTBALL PLAYERS AND BOXERS TO BE PAID FOR ENTERTAINING THE PUBLIC, WHY DON'T WE ALLOW KIDNEY DONORS TO BE PAID FOR SAVING LIVES?

PHILIP J. COOK & KIMBERLY D. KRAWIEC*

I

INTRODUCTION

The law regulates and sometimes prohibits activities that harm others. In addition, the law occasionally regulates or prohibits activities primarily because they create health and safety risks to the participants themselves. Such paternalistic regulations are readily justified when applied to children, adults who are mentally ill or cognitively limited, or those who are temporarily incapacitated (for example, due to intoxication). When applied to adults of sound mind, however, purely paternalistic laws can be challenged as an over reach of government, an imposition on individual autonomy and liberty.¹

Nonetheless, a variety of paternalistic laws are on the books.² These laws regulate, tax, or prohibit risky activities. We are particularly interested in one of these risky activities, namely kidney donation by living donors. Although living kidney donation is a common medical procedure and donors usually enjoy a full recovery, the loss of a kidney poses long-term health risks, in particular that of renal failure should the donor's remaining kidney fail.³ In the United States and most every other country (with the notable exception of Iran), kidney donation

Copyright © 2018 by Philip J. Cook and Kimberly D. Krawiec.

This article is also available online at <http://lcp.law.duke.edu/>.

* Terry Sanford Professor Emeritus of Public Policy, Sanford School of Public Policy, Professor Emeritus of Economics and Sociology, Duke University; Kathrine Robinson Everett Professor of Law, Duke University School of Law, Senior Fellow, Kenan Institute for Ethics, Duke University. We thank Mathilde Cohen, Julia Mahoney, Chris Walker and audiences at Ohio State University, The University of Connecticut, and the symposium on *Altruism, Community, and Markets* at the American Enterprise Institute for helpful comments on drafts of this article. We also thank Eric Knapp, Aishwarya Masrani, Bo Stewart, and the Duke Law Library, particularly Jane Bahnson, for outstanding research assistance.

1. JIM LEITZEL, *REGULATING VICE: MISGUIDED PROHIBITIONS AND REALISTIC CONTROLS* 18 (2008); JOHN STUART MILL, *ON LIBERTY* 74 (Elizabeth Rapaport ed., 1978) (1859); Gerald Dworkin, *Paternalism*, in *MORALITY AND THE LAW* 125 (Richard A. Wasserstrom ed., 1971).

2. Common examples of laws considered paternalistic include legal requirements to wear seat belts and motorcycle helmets, and laws prohibiting the use of certain drugs. Dworkin, *supra* note 1, at 108–10.

3. Umberto Maggiore et al., *Long-Term Risks of Kidney Living Donation: Review and Position Paper by The ERA-EDTA DESCARTES Working Group*, 32 *NEPHROLOGY DIALYSIS TRANSPLANTATION* 216, 218 (2017).

is permitted but financial compensation for donors is prohibited.⁴ Not only is there no legal market for kidneys, donors in the United States are often not even reimbursed for their full out-of-pocket costs.⁵ The ban on compensation may protect potential donors from the temptation of easing their financial situation by giving up a kidney, a choice they may regret in later years.

At the same time, the need for transplantable kidneys is great, far exceeding current availability from deceased and living donations. The official waiting list of Americans with renal failure is now approximately 100,000, with a typical wait time of five years or more.⁶ Those on the waiting list are kept alive on dialysis, which is both costly to taxpayers (since Medicare pays for a large percentage of the costs⁷) and debilitating to the patients.⁸ Even with dialysis, thousands of renal-failure patients die each year for want of a suitable kidney.⁹ The wait could be largely eliminated by easing the current ban on compensation for donors. An adequate supply of living donors would be especially valuable because living donors tend to provide higher quality kidneys with greater opportunity for developing a close tissue match, thus reducing the chance of rejection.¹⁰ Current estimates suggest that if compensation were permitted, the cost of payments for recruiting an adequate number of donors would be substantially less than the savings from reducing the number of renal patients on dialysis at government expense.¹¹

4. RANDOLPH T. BEARD ET AL., *THE GLOBAL ORGAN SHORTAGE: ECONOMIC CAUSES, HUMAN CONSEQUENCES, POLICY RESPONSES* 45 (2013).

5. Although federal law permits reimbursement for the “expenses of travel, housing, and lost wages,” 42 U.S.C. § 274e (2012), neither Medicare nor most insurance policies pay these expenses. As a result, the majority of donors must pay out of pocket some portion of their donation-related expenses. D. R. Salomon et al., *AST/ASTS Workshop on Increasing Organ Donation in the United States: Creating an “Arc of Change” From Removing Disincentives to Testing Incentives*, 15 AM. J. TRANSPLANTATION 1173, 1175 (2015). The average out-of-pocket cost to living donors in the United States is \$5,000. James R. Rodrigue et al., *The Decline in Living Kidney Donation in The United States: Random Variation or Cause For Concern?*, 96 TRANSPLANTATION 767, 771 (2013).

6. The Organ Procurement & Transplantation Network keeps a waiting list of candidates for kidney transplantation (including those who also need a pancreas), which included 98,272 distinct individuals when accessed on November 9, 2017. ORGAN PROCUREMENT AND TRANSPLANTATION NETWORK, <https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/> [https://perma.cc/LX4W-8CYP] (last visited Jan. 16, 2018). That count underestimates the need, since many renal patients who would benefit from a quick transplant are currently kept off the waiting list. K.C. Abbott & R.S. Gaston, *Counseling Patients for Kidney Transplantation: Awkward Conversations?*, 12 AM. J. TRANSPLANTATION 273, 273 (2012).

7. Ron Shinkman, *The Big Business of Dialysis Care*, NEJM CATALYST (June 9, 2016), <https://catalyst.nejm.org/the-big-business-of-dialysis-care/> [https://perma.cc/8849-ZCXH].

8. Herwig-Ulf Meier-Kriesche & Bruce Kaplan, *Waiting Time on Dialysis as the Strongest Modifiable Risk Factor for Renal Transplant Outcomes*, 74 TRANSPLANTATION 1377, 1379 (2002).

9. Philip J. Cook & Kimberly Krawiec, *A Primer on Kidney Transplantation: Anatomy of the Shortage*, 77 LAW & CONTEMP. PROBS., no. 3, 2014, at 1, 1.

10. Alope K. Mandal et al., *Does Cadaveric Donor Renal Transplantation Ever Provide Better Outcomes than Live-Donor Renal Transplantation?*, 75 TRANSPLANTATION 494, 494 (2003).

11. P.J. Held et al., *A Cost-Benefit Analysis of Government Compensation of Kidney Donors*, 16 AM. J. TRANSPLANTATION 877, 884 (2016).

Kidney donation is thus what is sometimes referred to as a “contested commodity” or “taboo trade.”¹² Kidney donation is permitted only insofar as the profit motive has no part in the donors’ decision. To an extent, the ban on compensation for kidney donation is motivated by a paternalistic concern for the potential donors. People who opt to donate a kidney to save the life of a relative or friend, or out of pure altruism, are welcome in this scheme, but those who would donate primarily for the money are excluded. As it turns out, most kidneys are donated after death. In 2016, there were almost 10,000 deceased donors (with 13,431 transplants) and 6,000 living donors (with 5,629 transplants).¹³

This article contrasts the compensation ban on organ donation with the legal treatment of football and other violent sports where both acute and chronic injuries to participants are common. Although there is some debate about how best to regulate these sports to reduce the risks, there appears to be no debate about whether participants should be paid. For the best adult football players, college scholarships and multi-million-dollar professional contracts are possible. Indeed, the National Football League (NFL) is the highest grossing sports league in the world; the NFL collected \$13 billion in revenue in 2016¹⁴ and the thirty-two teams have a market value of anywhere from \$1.6 billion to \$4.8 billion.¹⁵ Although the recent evidence on the long-term medical damage from concussion has caused widespread concern, there is no prominent voice calling for a ban on professional football. Indeed, the stakes are so high at this point that a ban is almost unthinkable in the foreseeable future.¹⁶ That observation illustrates how history, custom, and established interests have shaped the debate over regulating risky activity.

It is nonetheless an interesting thought experiment to consider a principled position for regulating both violent sports and kidney donation—independent of history, the resulting array of stakeholders, and the sense of normalcy from long experience. Starting *de novo*, behind a veil of historical ignorance, where would logic take us? Our main conclusion is the form of an inequality, $A > B$; violent sports (A) are more problematic than kidney donation (B). The logical implications are twofold: first, if ethical concerns persuade thoughtful people that the right answer is to ban compensation for kidney donation, then the same logic would suggest that compensation should also be banned for participation in

12. Kimberly D. Krawiec, *Foreword: Show Me the Money: Making Markets in Forbidden Exchange*, 72 LAW & CONTEMP. PROBS., no. 3, 2009, at i, ii.

13. ORGAN PROCUREMENT AND TRANSPLANTATION NETWORK, <https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/#> [<https://perma.cc/753J-CQS6>] (last visited Jan. 16, 2018).

14. *Id.*

15. FORBES, SPORTS MONEY: 2017 NFL VALUATIONS, <https://www.forbes.com/nfl-valuations/list/#tab:overall> [<https://perma.cc/2RH3-S2HF>] (last visited Jan. 16, 2018).

16. On the other hand, there appears to be the beginning of a grass roots movement to ban football for children. See, e.g., Lewis H. Margolis et al., *Should School Boards Discontinue Support for High School Football?*, 139 PEDIATRICS, no. 1, 2017, at 1, 1–6 (discussing three doctors’ reviews of the risks and ethics of high school football).

violent sports. Second, if the right answer is to permit compensation for participation in violent sports, then compensation for kidney donation should also be permitted. We see no logical basis for the current combination of banning compensation for kidney donors while allowing compensation for football players and boxers.

We focus on the core argument for a ban on compensation for kidney donation, namely the paternalistic concern that even well-informed adults will sometimes be enticed by a financial reward to donate a kidney when in fact that is not in their true self-interest. In this view, the allure of money will overcome good sense, leading to exploitation and even coercion to which people with less income and education are particularly vulnerable. But the same concerns apply with still greater force to participation in violent sports. Whatever one concludes about the ethics of regulating risky choices and the problematic aspects of choices involving money and risk, the current circumstance—ban compensation for kidney donors, permit compensation for participation in violent sports—appears difficult to defend.

II

HISTORY AND LEGAL STATUS: ORGAN DONATION AND VIOLENT SPORTS

A. Organ Donation

With the notable exception of Iran, laws throughout the world prohibit markets in human organs.¹⁷ In the United States, the relevant law is the National Organ Transplant Act (NOTA), which prohibits the transfer of any human organ in exchange for “valuable consideration.”¹⁸ The term “valuable consideration” is not defined and its meaning is far from clear, but is generally assumed to include a wide range of monetary and in-kind payments that go beyond the reimbursement of reasonable expenses.¹⁹

The original purpose of the statute was merely to establish a national organ procurement and distribution system.²⁰ The valuable consideration language was added late in the legislative process in response to a Washington Post article about H. Barry Jacobs, a Virginia physician whose medical license had been revoked for Medicare fraud, who intended to establish a for-profit organ brokerage.²¹ Furthermore, careful reviews of NOTA’s legislative history suggest

17. Benjamin E. Hippen, *Organ Sales and Moral Travails: Lessons from the Living Kidney Vendor Program in Iran*, POL’Y ANALYSIS, no. 614, Mar. 20, 2008, at 1, 3–4 (discussing the Iranian system and its unique approach to compensated organ donation).

18. National Organ Transplant Act, 42 U.S.C. §§ 273–274e (2012).

19. Kimberly D. Krawiec & Michael A. Rees, *Reverse Transplant Tourism*, 77 LAW & CONTEMP. PROBS., no. 3, 2014, at 145, 160.

20. *Id.* at 159.

21. Sally Satel et al., *State Organ Donation Incentives Under the National Organ Transplant Act*, 77 LAW & CONTEMP. PROBS., no. 3, 2014 at 217, 226 (discussing the origination of NOTA’s ban on valuable compensation).

that Congress did not delve into the costs and benefits of a regulated system of compensated organ donation, whether such a system could be designed to protect donors and recipients, or what such a system might look like if it were to succeed.²² Instead, the historical record suggests that the ban against valuable consideration arose out of political expediency, and was unrelated to the statute's main goal—the development of a national procurement and distribution system.²³

Organ donation is today so widely accepted that it is difficult to recall the skepticism with which it was first greeted by religious leaders, the general public, and (in the case of living donation, at least) the medical community. Deceased donation violates taboos about death and desecration of the human body, and many religious tenets are in tension with deceased organ donation.²⁴ Moreover, the concept of brain death required a drastic rethinking of what it meant to be dead.²⁵ Controversies over the definition of death continue to this day, as scientific and medical advances continue to shed new light on the human body and its operation.²⁶ Given these hurdles, the high rates of deceased organ donation in many countries, including the United States, are an astonishing testament to transplant professionals' success in transforming the once macabre act of deceased donation into a celebrated “gift of life.”²⁷

The ethical, moral, and practical controversies surrounding living donation are even more pronounced. Because living organ donors are healthy, living donation appears to violate a central tenet of medicine—*primum non nocere*, or first do no harm.²⁸ Organ donation does harm to the donor. There are the immediate risks of the surgery itself, as well as potential long-term effects, with no corresponding physical benefits.²⁹ The procedure is justified by the psychological benefits that accrue to the donor from helping another, usually a close family member.³⁰

Yet these psychic benefits pose their own ethical concerns. When a kidney is donated to an immediate family member, ethicists naturally worry that donors

22. Krawiec & Rees, *supra* note 19, at 159–62.

23. *Id.* at 162.

24. See KIERAN HEALY, LAST BEST GIFTS: ALTRUISM AND THE MARKET FOR HUMAN BLOOD AND ORGANS 31–32 (2006) (discussing the difficulties deceased donation poses for various religious traditions).

25. *Id.*

26. Richard J. Howard et al., *History of Deceased Organ Donation, Transplantation, and Organ Procurement Organizations*, 22 PROGRESS TRANSPLANTATION, no. 1, Mar. 2012, at 6, 10.

27. HEALY, *supra* note 24, at 23–42 (detailing this transformation).

28. NAT'L. ACADS. SCIS., ENG'G. & MED., ORGAN DONATION: OPPORTUNITIES FOR ACTION 263 (James F. Childress & Catharyn T. Liverman eds., 2006).

29. *Id.* at 268–70.

30. E.g., THE PRESIDENT'S COUNCIL ON BIOETHICS, LIVING DONORS: PROCESS, OUTCOMES, AND ETHICAL QUESTIONS Part III.A (2006), https://bioethicsarchive.georgetown.edu/pcbe/background/ginger_gruters.html [<https://perma.cc/RH4P-B2JZ>].

may feel coerced or compelled to donate.³¹ Some ethicists have even gone so far as to question whether such a donation can ever be truly voluntary, given the emotional attachments involved.³² Organ donation to a stranger, very rare in practice, raises different concerns. As one leading ethicist put it: “The radical altruism that motivates a person to make a potentially life-threatening sacrifice for a stranger calls for careful scrutiny.”³³

In any event, although there remain some matters for concern, the bottom line is that both living and deceased kidney donation has become commonplace and widely accepted under the current regime. At this point, opening the door to donor compensation seems like a reasonable and urgent next step.

B. Violent Sports

1. Fighting Sports

As is the case with organ donation, risky sports, such as boxing, mixed martial arts (MMA), and football, are so widely accepted today that it is difficult to imagine the once-precarious legal status of these endeavors. But at various points in history, both fighting sports and football were under serious threat of extinction, saved only through regulatory (or self-regulatory) changes designed to enhance safety, and public relations campaigns from well-placed advocates. Were it not for these interventions, each might well have gone the way of dueling—outlawed, as public opinion regarding the risk-benefit trade off evolved.³⁴

The law has always and inevitably had an uneasy relationship with violent sports, and that is particularly the case with boxing and other fighting sports. An activity whose principle object is the infliction of serious physical injury on participants is at odds with the criminal law of assault, which provides no general exemption for such consensual violence.³⁵ Unlike other dangerous sports like football, absent disqualification or failure to appear, a boxing match is won only through the infliction of harm on an opponent.³⁶

31. Giuliano Testa, *Ethical Issues Regarding Related and Nonrelated Living Organ Donors*, 28 *WORLD J. SURGERY* 1658, 1659 (2014).

32. *Id.*

33. Robert D. Truog, *The Ethics of Organ Donation by Living Donors*, 353 *NEW ENG. J. MED.* 444, 445 (2005).

34. Dueling, of course, served many functions beyond just sport, including dispute resolution, defending honor, and furthering political interests. *See, e.g.*, STEPHEN BANKS, *A POLITE EXCHANGE OF BULLETS: THE DUEL AND THE ENGLISH GENTLEMAN 1750–1850*, at 234 (2010) (describing the purposes of dueling); BARBARA HOLLAND, *GENTLEMEN’S BLOOD: A HISTORY OF DUELING FROM SWORDS AT DAWN TO PISTOLS AT DUSK* 83 (2003) (explaining that Alexander Hamilton dueling Aaron Burr to preserve his political influence).

35. *Infra* note 137 and accompanying text.

36. *See* USA BOXING, *NATIONAL RULEBOOK* 19–21 (2017), <https://www.teamusa.org/usa-boxing/usa-boxing-national-rule-book> [<https://perma.cc/Q2AE-XMHA>] (describing the methods by which a boxing match is won).

As a result, fighting sports have required an exception from the general criminal law to avoid the violation of statutes against assault and, in some cases, homicide.³⁷ Over time, the law of consent developed exceptions for fighting sports, although the exact contours of that exception were often unclear and shifted over time. A classic articulation of the distinction comes from Foster's Crown Law:

Here is the appearance of combat, but it is in reality no more than a friendly exertion of strength and dexterity. They are manly diversions. They tend to give strength, skill and activity, and make fit people for [sic] defence . . . I would not be understood to speak of prize-fighting and public boxing matches, or any other exertions . . . of the like kind . . . which are exhibited for lucre, and can serve no valuable purpose; but on the contrary encourage a spirit of idleness and debauchery.³⁸

The difficulty for the common law, both in England and the United States, was how to distinguish permitted “manly diversions” from prohibited activities that served “no valuable purpose.”³⁹ One mechanism at early common law was the attempt to distinguish legal sparring from illegal prize fighting.⁴⁰ The distinction was simple enough in theory, and prize fighting was argued to pose a number of harms not posed by legitimate sports: (1) public disruption, stemming from disorderly fans, (2) gambling, and (3) injury to the participants.⁴¹

Interestingly for our purposes, compensation, or the offering of a “prize,” was related to these dangers,⁴² creating a connection between compensation and illegality that closely parallels debates about compensated organ donation. As typified by the previously quoted Foster's excerpt, the belief was that those fighting for money were not simply engaged in a demonstration of skill or seeking to build character or agility. Early cases, especially in England, thus sought to draw distinctions based on whether a reward, or prize money, was offered to the combatants,⁴³ and whether the fighters used gloves, on the rationale that sparring with gloves was not inherently dangerous, despite the occasional death.⁴⁴ Other important facts included whether the fight was held in private (legal sparring)⁴⁵ or in public (illegal prize fighting),⁴⁶ and whether the fight was conducted pursuant to the Queensbury rules.⁴⁷ But the cases were inconsistent, with some declaring illegal even fights waged with gloves,⁴⁸ or conducted according to the

37. See MARK JAMES, *SPORTS LAW* 148 (3d ed. 2017) (describing one exception to criminal law for boxing).

38. *Id.* (quoting FOSTER, *CROWN LAW* (1762)).

39. *Id.*

40. *Id.* at 149.

41. Ian Forman, *Boxing in the Legal Arena*, 3 *SPORTS LAW. J.* 75, 76 (1996).

42. *People v. Taylor*, 56 N.W. 27, 28 (Mich. 1893).

43. *Id.*

44. *R v. Young* (1866) 10 Cox C.C. 371, 372.

45. *Id.*

46. *R v. Orton* (1878) 14 Cox C.C. 226, 228. See also *R v. Coney* (1882) 8 QBD 534, 534 (a bare knuckle fight in front of spectators who bet on the outcome was an illegal prize fight).

47. *R v. Roberts* (unreported, 1901).

48. *Commonwealth v. McGovern*, 75 S.W. 261, 264 (Ky. 1903); *State v. Burnhum*, 56 Vt. 445, 448

Queensbury rules,⁴⁹ or conducted in a private gymnasium or club, or in which no prize was awarded.⁵⁰ In any event, the continuing popularity of boxing made convictions difficult and enforcement inconsistent.⁵¹ In the 1920's New York became the first state to legalize boxing, provided that it was supervised by a permanent state regulatory commission, a model still followed in a majority of states today.⁵²

Today, boxing's popularity is being challenged by MMA.⁵³ Although the violence of the sport initially led to controversy and public outcry, it also increased MMA's visibility and popularity, turning what was intended to be a one-time event into a regular competition.⁵⁴ One of the most vocal critics was Arizona senator John McCain, who called MMA "human cockfighting" and called for a complete ban.⁵⁵ As a result, MMA was banned in forty states,⁵⁶ television networks refused to air it, and even pay-per-view became reluctant to televise events.⁵⁷ As stated by one commentator: "[w]ith political bans and pay-per-view revenue drying up, the UFC nearly became bankrupt and began looking to sell. MMA in America was essentially dead."⁵⁸

In 2001, a group of investors, including boxing promoter Dana White, bought the UFC for \$2 million and began working with state legislatures and regulatory bodies across the country to legalize MMA.⁵⁹ That same year the state of New Jersey became the first state to adopt what eventually became the Mixed Martial Arts Uniform Rules of Conduct (the "Unified Rules").⁶⁰ The Unified Rules are comprehensive and cover all aspects of MMA fights, including scoring, round length, fighter attire, and fouls.⁶¹ Today MMA is legal and regulated in every U.S.

(1884).

49. *E.g.*, *State v. Olympic Club*, 15 So. 190, 198 (La. 1894); *Seville v. State*, 30 N.E. 621, 624 (Ohio 1892); *In re Athletic Clubs*, 5 Ohio Dec. 696, 696–97 (Ohio Ct. C.P. 1896).

50. *Commonwealth v. Barrett*, 108 Mass. 302, 303–04 (1871); *Commonwealth v. Welsh*, 73 Mass. 324, 324, 327 (1856).

51. Elmer M. Million, *The Enforceability of Prize Fight Statutes*, 27 KY. L.J. 152, 160 (1939).

52. Forman, *supra* note 41, at 76–77.

53. *UFC vs Boxing: How UFC is Edging Ahead in the Popularity Stakes*, SPORTS.BWIN.COM (June 19, 2017), <https://sports.bwin.com/en/news/infographics/ufc-vs-boxing-graphic,116485.html> [<https://perma.cc/Q3X4-JPVR>].

54. Adam Hill, *A Timeline of UFC Rules: From No-Holds-Barred to Highly Regulated*, BLEACHER REP. (Apr. 24, 2013), <http://bleacherreport.com/articles/1614213-a-timeline-of-ufc-rules-from-no-holds-barred-to-highly-regulated> [<https://perma.cc/E6BC-QZTF>].

55. Reidar P. Lystad et al., *The Epidemiology of Injuries in Mixed Martial Arts*, 2 ORTHOPAEDIC J. SPORTS MED., no.1, 2014, at 1, 2.

56. *Id.*

57. Jordan T. Smith, *Fighting for Regulation: Mixed Martial Arts Legislation in the United States*, 58 DRAKE L. REV. 617, 622 (2010).

58. *Id.*

59. *Id.*

60. Lystad, *supra* note 55.

61. UFC, UNIFIED RULES AND OTHER REGULATIONS OF THE UFC, <http://www.ufc.com/discover/sport/rules-and-regulations> [<https://perma.cc/E7HU-LQR2>] (last visited Jan. 17, 2018).

state and is one of the fastest growing sports in America.⁶²

2. Football

From the very start, the violence of American football contributed to its appeal while fueling public outrage. Newspapers of the era proclaimed the danger (and, thus, the excitement) of the sport. For example, the New York Times reported: “The present Rugby game of football as played in this country is a very risky pastime. . . carrying nearly the same risk that a soldier [assumes] on the battle field.”⁶³ Said another article: “The bold students risk life and limb to gain football honors for their colleges.”⁶⁴ Some colleges, most notably Harvard, banned football amid rising controversy.⁶⁵

At the same time that football had to fight elite college administrators and faculties for its existence, it also came under serious threat in a number of southern states. Ironically, given football’s popularity in the South and Midwest today, football was at that time still associated with elite Northern colleges, and thus many Southerners, particularly evangelicals, were skeptical of the sport.⁶⁶ Much like the Northern progressives who opposed football, Southern evangelicals also viewed sports such as prize fighting and football as venues for drinking and gambling, which incited immoral crowds, and distracted from colleges’ educational mission.⁶⁷ In the wake of highly-publicized deaths, bills were introduced in a number of Southern state legislatures to outlaw football, including Georgia, whose governor ultimately vetoed the legislation.⁶⁸ In other words, as was the case with fighting sports, resistance to football sprang from a number of sources, only some of which were related to the riskiness of the sport.

Before gaining full acceptance, football faced a number of challenges, which were met with public relations campaigns and rules changes designed to increase safety (or the appearance of safety).⁶⁹ The most celebrated of these challenges was the 1905 crisis, which prompted rule changes, the creation of the Intercollegiate Athletic Association of the United States (IAAUS, the precursor to the NCAA), and a famous intervention by Teddy Roosevelt.⁷⁰

62. Lydia DePillis, *The Battle to Protect Fighters in the Fastest-Growing, Least-Regulated Sport in America*, WASH. POST (Apr. 23, 2016), https://www.washingtonpost.com/business/economy/the-battle-to-protect-fighters-in-the-fastest-growing-least-regulated-sport-in-america/2016/04/22/b9484fe0-fc21-11e5-886f-a037dba38301_story.html?utm_term=.8c6d7d567592 [<https://perma.cc/YE4H-E4KY>].

63. Emily A. Harrison, *The First Concussion Crisis: Head Injury and Evidence in Early American Football*, 104 AM. J. PUB. HEALTH 822, 824 (quoting *Change the Football Rules: The Rugby Game as Played Now is a Dangerous Pastime*, N.Y. TIMES, Dec. 2, 1893, at 2).

64. *Id.* (quoting *Ready for the Great Struggle*, N.Y. TIMES, Nov. 30, 1893, at 3).

65. *Id.*

66. Christopher C. Meyers, “Unrelenting War on Football”: *The Death of Richard Von Gammon and the Attempt to Ban Football in Georgia*, 93 GA. HIST. Q. 388, 400 (2009).

67. *Id.* at 398.

68. *Id.* at 400–04.

69. Harrison, *supra* note 63, at 824–25.

70. See generally John S. Watterson, *The Gridiron Crisis of 1905: Was it Really a Crisis?*, 27 J. SPORT

In the end, football survived these early threats to its existence, not because it solved the safety issues, but because promoters and advocates succeeded in painting the virtues of football as exceeding the costs.⁷¹ Football, even at this early stage, brought real financial benefits to schools and teams.⁷² But more importantly, football played into a “culture of manliness” prevalent at the turn of the twentieth century.⁷³ Risk taking, physical exertion, loyalty, and athletic skill were all a part of that cultural ideal.⁷⁴ Meanwhile, periodic rule changes and improvements in safety equipment reduced the incidence of acute injuries and deaths on the field.

III

RISKS TO PARTICIPANTS

Each year in the United States, 6,000 people donate a kidney, voluntarily assuming the medical risks attendant to surgery and living with just one kidney.⁷⁵ These risks have been quantified and will be documented below. Our interest is in comparing these risks with those stemming from participation in violent sports where there is no ban on inducements for participation at the highest level. Indeed, the average annual compensation for a player in the NFL is between \$2 and \$3 million (depending on the team),⁷⁶ with one player making over \$50 million this year.⁷⁷ Injuries are common, and retired players are very often disabled by the long-term effects of these injuries as well the cumulative effect of thousands of blows to the body. Although it is difficult to quantify these effects in a way that provides a natural comparison with kidney donation, we provide some statistics that suggest that, for example, a man who signs a contract to play in the NFL for a year is consenting to be exposed to far greater medical risks than someone who volunteers to donate a kidney.

This article focuses on football, because the epidemiology of injury and disability is better developed than for the fighting sports. It is worth noting, however, that there have long been concerns about the risk posed by fighting sports. That concern has accelerated in recent years, due to a better understanding of the long-term effects of head trauma. As a result of these risks, medical associations around the world have long called for limitations or bans on

HIST. 291 (1981) (discussing the 1905 crisis).

71. Harrison, *supra* note 63, at 828–29.

72. *Id.*

73. *Id.*

74. *Id.* at 829.

75. Cook & Krawiec, *supra* note 9, at 16.

76. *Average Annual Player Salary in The National Football League by Team in 2017/18 (in Million U.S. Dollars)*, STATISTA, <https://www.statista.com/statistics/675385/average-nfl-salary-by-team/> [https://perma.cc/R2YA-BYKR] (last visited Jan. 18, 2018).

77. *Players with the Highest Salaries* in the NFL in 2017 (in Million U.S. dollars)*, STATISTA, <https://www.statista.com/statistics/240098/players-with-the-highest-salary-in-the-national-football-league/> [https://perma.cc/J452-EKZ5] (last visited Feb. 18, 2018).

boxing, including the American Medical Association and various state medical associations.⁷⁸ The Australian Medical Association,⁷⁹ Canadian Medical Association,⁸⁰ and British Medical Association⁸¹ oppose fighting sports, including boxing and MMA, at both the professional and amateur level. Professional boxing is already banned in Sweden and Norway and there have been calls for bans in other countries.⁸²

Because MMA is a relatively new sport, the state of empirical research on the incidence of injuries is still less extensive than in more established sports like boxing. Yet, there has already been a strong response from the medical community against MMA. The American Medical Association,⁸³ Canadian Medical Association,⁸⁴ British Medical Association⁸⁵ and Australian Medical Association⁸⁶ have all called for a ban on MMA and for increased investment in research to assess the extent and frequency of injuries suffered in MMA fights. Despite the relative scarcity of empirical research, a recent systematic review of the epidemiology of MMA injuries concluded that MMA posed high injury rates—higher than most or, possibly, all other full contact combat sports—with patterns and frequency similar to professional boxing.⁸⁷

78. AM. MED. ASS'N, PROCEEDINGS OF THE HOUSE OF DELEGATES, 38TH INTERIM MEETING 371 (Dec 2–5, 1984); Robert Glenn Morrison, *Medical and Public Health Aspects of Boxing*, 255 JAMA 2475, 2579 (1986); Robert Trumbull, *A.M.A., Citing Danger, Asks Abolition of Boxing*, N.Y. TIMES (Dec. 6, 1984), <http://www.nytimes.com/1984/12/06/sports/ama-citing-danger-asks-abolition-of-boxing.html?page-wanted=print> [<https://perma.cc/N6KM-K7HU>].

79. *AMA Position Statement, Combat Sport 2015*, AUSTL. MED. ASS'N (Sept. 4, 2015), https://ama.com.au/system/tdf/documents/Combat_Sport_2015_AMA_Position_Statement.pdf?file=1&type=node&id=42629 [<https://perma.cc/F5GR-Y85N>].

80. CAN. MED. ASS'N, BOXING UPDATE (2001), available at <http://policybase.cma.ca/dbtw-wpd/PolicyPDF/PD01-13.pdf> [<https://perma.cc/68ER-K88R>]; *Canadian Medical Association Submission on Bill S-209, An Act to Amend the Criminal Code (prize fights)*, CAN. MED. ASS'N (Apr. 15, 2013), https://www.cma.ca/Assets/assets-library/document/en/advocacy/Bills-209_en.pdf#search=combat%20sports [<https://perma.cc/V3S5-T865>].

81. *Ban Ultimate Fighting as Well as Boxing, Says BMA*, BRITISH MED. ASS'N (Sept. 5, 2007), <https://web.bma.org.uk/pressrel.nsf/wlu/SGOY-76QEY8?OpenDocument> [<https://perma.cc/Y5LP-ERW3>] (“In a new report released today . . . the BMA extends its call for a complete ban on amateur and professional boxing to include mixed martial arts (MMA) competitions”); Fraser Ryan, *British Medical Association Condemns Mixed Martial Arts*, EDINBURG NAPIER NEWS (Nov. 20, 2013), <https://edinburghnapiernews.com/2013/11/20/british-medical-association-condemns-mixed-martial-arts/> [<https://perma.cc/B8VC-GJ66>] (“A spokesperson for the British Medical Association said: ‘The BMA is opposed to mixed martial arts, cage fighting, and boxing.’”).

82. Morrison, *supra* note 78, at 2479.

83. AM. MED. ASS'N, H-470.965 ULTIMATE AND EXTREME FIGHTING (2016), <https://policysearch.ama-assn.org/policyfinder/detail/%20H-470.965%20ultimate%20and%20extreme%20fighting.%20sort%3A?uri=%2FAMADoc%2FHOD.xml-0-4281.xml> [<https://perma.cc/LX2L-RGT8>] (last visited Jan. 18, 2018) (“Our AMA: (1) opposes ultimate fighting and extreme fighting events; and (2) encourages states which have not banned these events to pass a law doing so.”).

84. *See supra* note 80.

85. Caroline White, *Mixed Martial Arts and Boxing Should be Banned, Says BMA*, 335 BRIT. MED. J. 469, 469 (2007).

86. AUSTL. MED. ASS'N, *supra* note 79.

87. Lystad, *supra* note 55, at 4. The authors urge caution in interpreting their results, due to possible

A. Kidney Donation

The immediate risks attendant on the surgery can be briefly summarized. A systematic review and meta-analysis of the literature found that there were post-operative complications in 7.3% of cases, which the authors deemed a “low complication rate.”⁸⁸ Complications included wound infection (1.6%) and bleeding (1.0%).⁸⁹ A questionnaire study of donors three months after their operation found that 18.5% of donors rated their overall health as “somewhat worse” and .4% rated their health as “much worse” than before, suggesting that over 80% had fully recovered in a subjective sense.⁹⁰ The most serious outcome, death, is quite rare. Segev and colleagues, in a study of 80,347 donors over the period 1994–2009, determined that there had been twenty-five deaths, for a rate of 3.1/10,000 operations⁹¹—about twice as high as the annual chance of being killed in a motor vehicle accident for the most relevant age group (45–64) during that period.⁹²

Following recovery, donors typically do not suffer disability related to the loss of their remaining kidney, since one functioning kidney does everything required for normal functioning of the body. Segev and colleagues compared kidney donors with a sample of non-donors taken from one of the large longitudinal health surveys (NHANES III).⁹³ The latter sample was matched on age and health status, which is important since donors are a relatively healthy group as a result of the selection process, and in the absence of donation would be expected to live longer and healthier lives than a representative cross-section of the U.S. population with the same age and sex distribution. The authors concluded that the “Long-term risk of death was no higher for live donors than for age- and comorbidity-matched NHANES III participants.”⁹⁴ Similarly, an analysis of 3,368 donors age fifty-five and over showed no difference in all-cause mortality in

methodological differences in the way that injuries are calculated and recorded across sports. *Id.* at 8–9. Nonetheless, these differences arguably suggest that MMA is even more dangerous, as compared to other fighting sports, than the studies suggest. *Id.* at 4–6.

88. Kirsten Kortram et al., *Perioperative Events and Complications in Minimally Invasive Live Donor Nephrectomy: A Systematic Review and Meta-Analysis*, 100 *TRANSPLANTATION* 2264, 2264 (2016).

89. *Id.*

90. See Kossar Hosseini et al., *Nephrectomy Complication is a Risk Factor of Clinically Meaningful Decrease in Health Utility among Living Kidney Donors*, 20 *VALUE HEALTH* 1376, 1378 (2017) (stating that three months after surgery 18.5% of donors rated their overall health as “somewhat worse” and .4% rated their health as “much worse” than before the surgery).

91. Dorry L. Segev et al., *Perioperative Mortality and Long-Term Survival Following Live Kidney Donation*, 303 *JAMA* 959, 960 (2010).

92. See *CTRS. FOR DISEASE CONTROL AND PREVENTION, FATAL INJURY REPORTS, NATIONAL, REGIONAL AND STATE, 1981–2016*, <https://webappa.cdc.gov/sasweb/ncipc/mortrate.html> [<https://perma.cc/9E8T-BTM6>] (last visited Jan. 18, 2018) (showing that the traffic fatality rate in the United States during 1999–2009 for people aged 45–64 was 1.36/10,000).

93. Segev et al., *supra* note 91, at 965.

94. *Id.* at 959.

comparison with a matched sample from the Health in Retirement Survey.⁹⁵ The only exception to this null conclusion is a study of Norwegian donors that found a divergence in the mortality rates after ten years, so that by twenty-five years 18% of the donors had died, compared with 13% of the matched controls.⁹⁶ A recent review article that included these studies and a handful of others confirms that there is no difference in death rates for at least the first ten years, and that the Norwegian study's conclusion of divergence after that has not been replicated.⁹⁷

What about the particular threat for donors that their single kidney may fail, which in the absence of an immediate transplant would mean that they go on dialysis? The best study of donors in the United States found a higher cumulative incidence of failure and end stage renal disease (ESRD) for donors than nondonors—0.31% versus 0.04%.⁹⁸ Although the risk is significantly elevated for donors, it remains very low in an absolute sense, representing an increased chance of about 1 in 400.⁹⁹

Finally, a questionnaire study of 2,455 donors who were between five and forty-eight years from their surgery found that 84% were satisfied with their lives.¹⁰⁰ The likelihood of satisfaction was enhanced by the donors' feeling that their gift had positive effects on their relationships.¹⁰¹

It should be noted that the growing body of research on the medical and health consequences of kidney donation discussed in Section A is in part motivated by an interest in providing potential donors with the information they need in order to make a well-informed decision. In comparison, the epidemiological evidence on participation in violent sports is meager, and in any event few youths (or their parents) are exposed to a systematic account of the injuries and chronic disabilities entailed in a decision to pursue one of these sports as a career.

B. Football

One challenge in making a meaningful comparison between the risks entailed in kidney donation and the risks entailed in participation in contact sports is that the latter may stretch out for many years and involve not one choice (donate or not) but rather a series of choices regarding participation. In particular, the young

95. P.P. Reese et al., *Mortality and Cardiovascular Disease among Older Live Kidney Donors*, 14 AM. J. TRANSPLANTATION 1853, 1855 (2014).

96. Geir Mjoen et al., *Long-Term Risks for Kidney Donors*, 86 KIDNEY INT. 162, 165 (2014).

97. Ngan N. Lam et al., *Long-Term Medical Risks to the Living Kidney Donor*, 11 NATURE REV. NEPHROLOGY 411, 414 (2015).

98. Abimereki D. Muzaale et al., *Risk of End-Stage Renal Disease Following Live Kidney Donation*, 311 JAMA 579, 580 (2014).

99. *Id.*

100. Emily E. Messersmith et al., *Satisfaction with Life among Living Kidney Donors: A RELIVE Study of Long-Term Donor Outcomes*, 98 TRANSPLANTATION 1294, 1298 (2014).

101. *Id.* at 1295.

men who are drafted into the NFL each year have almost all played organized football for a number of years and have been exposed to the risk of injury throughout grade school, high school and college. Various comparisons of football with the single act of donation may be possible, such as playing in one game or playing for one season. But given that the emphasis of this article is on inducements, the analysis will focus on the risks associated with a professional career. If NOTA's ban on inducements were applied to football, then the NFL, and the possibility of a post-collegiate career playing football, would presumably disappear.

The risks of an NFL career are illustrated by statistics on acute injuries during practices and games kept by each team. In addition, data are becoming available on the health status and causes of death for former players. What is not clear from the available epidemiology is how much of the disability observed in former pros is the result of their professional career, as opposed to injuries sustained playing in college, high school, and even before. To put the professional experience in context, then, a thorough analysis begins with injuries to youths.

Rough physical contact is part of the game in football, and injuries are common from an early age. For boys less than twenty years old, football, among all sports and other types of recreational activities, is the most common cause of injury requiring a trip to the emergency department.¹⁰² An analysis of emergency room visits for 2001–2009 estimated there were 350,000 youths per year treated for football injuries.¹⁰³

Of these, 25,000 were treated for non-fatal traumatic brain injuries (TBI), typically concussion, of which over half (13,667) were males age 15–19.¹⁰⁴ About 1.5 million males in this age group played organized tackle football in 2009, and if we can assume that most of the injuries affected those rather than youths playing pick-up games, the *treated* TBI injury rate was close to 1%. The *overall* rate is thought to be much higher, since most concussions are not treated.¹⁰⁵

An alternative set of national estimates link concussion risk to game exposure for school football teams.¹⁰⁶ The authors' estimates suggest that over the course of a ten game season, a high school player would have a 1.55% chance of being

102. Ctrs for Disease Control and Prevention, *Nonfatal Traumatic Brain Injuries Related to Sports and Recreation Activities among Persons Aged <=19 Years — United States, 2001-2009*, 60 MORBIDITY & MORTALITY WKLY. REP. 1337, 1341 (2011).

103. *Id.* at 1340.

104. *Id.* at 1341.

105. Daniel H. Daneshvar et al., *The Epidemiology of Sport-Related Concussion*, 30 CLIN. SPORTS MED. 1, 3 (2011); *see also* Victor G. Coronado et al., *Trends in Sports- and Recreation-Related Traumatic Brain Injuries Treated in US Emergency Departments: The National Electronic Injury Surveillance System — All Injury Program (NEISS-AIP) 2001-2012*, 30 J. HEAD TRAUMA REHABIL. 185, 187 (2015) (updating some of the statistics through 2012); Blair J. Smart et al., *Tackling Causes and Costs of ED Presentation for American Football Injuries: A Population-Level Study*, 34 AMER. J. EMERGENCY MED. 1198, 1201 (2016) (reporting that half of football injuries treated in an emergency department in 2010 and 2011 were orthopedic, including sprains and fractures).

106. Daneshvar, *supra* note 105, at 3.

concussed, and a college player a 3.0% chance.¹⁰⁷ These statistics are somewhat out of date, and there has been a strong upward trend in reported concussions in organized football, in part due to the national “Heads Up” campaign initiated by the Centers for Disease Control in 2004, increased media attention, and the passage of youth sports concussion laws in all fifty states.¹⁰⁸ These laws specify that young players with possible concussions must be removed from the game and cleared for return by a set protocol.¹⁰⁹

About 1.5% of college players are ultimately drafted into the NFL,¹¹⁰ and for those professional players more precise information is available on acute injury rates. A recent report by the Harvard Law School found that in 2015, the 2,251 active players in the NFL experienced 2066 injuries during the preseason and regular season, where “injury” is defined as an event recorded by the team trainer that would typically require time lost from practice or game.¹¹¹ Of these injuries, 272 were concussions, which works out to .071 concussions per player-season. At 7.1%,¹¹² this is over twice the rate for college players, and about equal to the rate of surgical complications in kidney donation.¹¹³

A recent study of “life after football” brings together the official injury reports and survey information to paint a grim picture. The authors report that 93% of former players missed at least one game due to injury, and half had three or more major injuries, often requiring surgery.¹¹⁴ For a substantial majority, injuries ended their career or contributed to the decision to end their career.¹¹⁵ Nine of ten former players have nagging aches and pains from football when they wake up, and for most the pain lasts all day.¹¹⁶ For those ages 30–49, the ability to work is impaired by injury.¹¹⁷

107. *Id.* at 5.

108. Coronado, *supra* note 105, at 191.

109. *See, e.g., Sports Concussion Policies and Laws*, CTRS FOR DISEASE CONTROL AND PREVENTION (Feb. 16, 2015), <https://www.cdc.gov/headsup/policy/index.html> [<https://perma.cc/6VY4-PCMX>] (providing an overview of the state concussion laws).

110. *Estimated Probability of Competing in Professional Athletics*, NCAA (Mar. 10, 2017), <http://www.ncaa.org/about/resources/research/estimated-probability-competing-professional-athletics> [<https://perma.cc/8Q5F-DW8X>].

111. CHRISTOPHER R. DEUBERT ET AL., *PROTECTING AND PROMOTING THE HEALTH OF NFL PLAYERS: LEGAL AND ETHICAL ANALYSIS AND RECOMMENDATIONS* 62–65 (2016), https://footballplayershealth.harvard.edu/wp-content/uploads/2016/11/01_Full_Report.pdf [<https://perma.cc/4YY3-ST44>].

112. *Id.* at 64.

113. Kortram, *supra* note 88.

114. *Id.* at 106.

115. *Id.*

116. *Id.*

117. *Id.* *But see* Everett J. Lehman et al., *Suicide Mortality among Retired National Football League Players Who Played 5 or More Seasons*, 44 AM. J. SPORTS MED. 2486, 2488 (2016) (finding that NFL players who play at least five years before retirement have a lower death rate, including a lower suicide rate, than the population at large). In response, it should be noted that NFL players as a group are more highly educated than average, and are extraordinary physical specimens, so that the national average is not an apt comparison if the goal is to determine how their football careers affected their mortality rate.

But what has garnered considerable attention and concern is the fact that a high percentage of former players have chronic traumatic encephalopathy (CTE) by the time they die. CTE is a progressive neurodegeneration associated with repetitive head trauma, with a variety of symptoms: impulsivity, depression, apathy, anxiety, explosivity, episodic memory loss, and attention and executive function problems.¹¹⁸ A recent postmortem study of a sample of donated brains of former NFL players found that 110 of 111 indicated either mild or (more commonly) severe CTE.¹¹⁹ Interviews with family members found that behavior, mood, and cognitive symptoms were common among this group.¹²⁰

These findings do not imply that 99% of former NFL players will have CTE. The brains in this study were voluntarily submitted for examination by family members who were often motivated by a desire to know the cause of their loved ones dementia or other neurological problems, which is to say, the brains of those who died without such problems may be largely missing from the sample. But the 111 brains do represent 8.5% of the 1300 former NFL players who died during the period that these brains were donated.¹²¹ That places something of a logical lower bound on the prevalence of CTE. Presumably the true prevalence is much higher than 8.5%.

The other problem with these remarkable findings is that they do not provide a direct indication of the cause or causes of the CTE and associated disabilities. Repetitive head trauma is recognized as a necessary but not sufficient condition for CTE.¹²² The subjects had been exposed to repetitive head trauma throughout their careers as football players, which typically would have started in high school or well before. In fact, there is some evidence that age at first exposure to football may be related to the likelihood of impaired cognitive performance by former football players.¹²³ Elite players who choose to go professional following college likely increase their chances of neurological problems in later life, which are already high because of their exposure up until that point. Unfortunately, the science does not provide a basis for sorting out the additional contribution of an NFL career to this health burden.

Although it is not possible to do a precise apples to apples comparison of the medical risks associated with kidney donation and the risks associated with a professional football career, it seems clear that the acute risk of injury and of

118. Jesse Mez et al., *Clinicopathological Evaluation of Chronic Traumatic Encephalopathy in Players of American Football*, 318 JAMA 360, 361 (2017).

119. *Id.*

120. *Id.* at 362.

121. Joe Ward et al., *110 N.F.L. Brains*, N.Y. TIMES (July 25, 2017), <https://www.nytimes.com/interactive/2017/07/25/sports/football/nfl-cte.html> [https://perma.cc/9AJ7-DU3G].

122. Christine M. Baugh et al., *Current Understanding of Chronic Traumatic Encephalopathy*, 16 CURR. TREAT. OPTIONS NEUROL., no. 9, 2014, at 1, 6.

123. Julie M. Stamm et al., *Age of First Exposure to Football and Later Life Cognitive Impairment in Former NFL Players*, 84 NEUROLOGY 1114, 1115 (2015).

long-term disability are far higher for the football player. As discussed above, most NFL veterans live out their lives following retirement with serious physical and mental disabilities. The vast majority of kidney donors lead entirely normal lives following recovery from the initial operation.

The thought experiment here can be motivated by imagining a blank slate in regulating kidney donation and football, where the question is whether inducements should be allowed for either. If the discussion focused solely on the severity of risk of serious injury and disability, allowing substantial inducements for kidney donation is a more attractive proposition. The additional donors who are recruited by the inducement would have a small probability of death from the operation and a slightly elevated chance of kidney failure. In contrast, inducement to play professional football comes loaded with a large chance of orthopedic problems and mental disability in later life.

IV

THE LIMITS OF CONSENT

A. Living Kidney Donation as a Risky Choice

Whether and when competent, sober, well-informed, adults should be banned by government authority from choosing to engage in an activity that risks their own life and limb is an ancient point of contention.¹²⁴ There are a variety of hazardous activities that are permitted with no legal bar to receiving compensation.¹²⁵ Included on this list are such occupations as logging, roofing, commercial fishing, and military service.¹²⁶ Also included are violent sports such as football, boxing, and mixed martial arts (MMA). These examples illustrate a broad endorsement of the principle that consenting adults should be allowed to exchange (in a probabilistic sense) their physical health and safety for financial compensation, even in some instances where the ultimate product is simply providing a public entertainment.

One potentially distinguishing feature of kidney donation is that the harm is not the result of an accident, but rather of the deliberate action (of the surgeon and medical team). In that sense, kidney donation may be usefully related to other voluntary medical procedures that carry some risk. Here is a partial list, categorized by legal status:

- *Permitted and commonly compensated*: donate eggs, sperm, or blood plasma; participate in medical experiments; serve as a surrogate

124. See, e.g., H.L.A. HART, *LAW, LIBERTY, AND MORALITY* 30 (1963) (discussing paternalism and the enforcement of morality); LEITZEL, *supra* note 1, at 119 (discussing the role of paternalism in drug law); MILL, *supra* note 1, at 74 (discussing the role of societal authority over individuals); MICHAEL J. TREBILCOCK, *THE LIMITS OF FREEDOM OF CONTRACT* 147–63 (1993) (discussing the role of paternalism in the context of contracts).

125. W. Kip Viscusi, *The Value of Life: Estimates with Risks by Occupation and Industry*, 42 *ECON. INQUIRY* 29, 33 (2004).

126. *Id.*

mother (in some states).

- *Permitted but do not involve compensation*: sex change operation, cosmetic surgery
- *Permitted but payment is banned*: donation of a kidney, liver, whole blood for transfusion,¹²⁷ or bone marrow (depending on extraction method and jurisdiction).¹²⁸

It would be difficult to find a principled basis that would rationalize this pattern in legal status. Still, the public debate is, to some extent, informed by common themes, and a belief that the law should reflect a consistent application of relevant principles. Among the relevant themes are freedom from unwarranted government interference, respect for individual preferences and choices, and a concern for the interpersonal and societal effects of individual choices.¹²⁹

B. The Harm Principle and External Effects of Risky Choices

In the search for a principled basis for setting legal boundaries on self-hazardous choices, a natural starting point is the tenet that adult choices that do not hurt others should be allowed by government. This Harm Principle was developed by JS Mill in his classic treatise *On Liberty* (1859).¹³⁰ It provides a rationale for the view that adults in the possession of their faculties should be free to choose to engage in risky activities if that choice does not harm others who are not part of the bargain.¹³¹

JS Mill was a prominent adherent to the utilitarian school of philosophical thought, which defines the public good as the sum of individual utilities and endorses the view that rational individuals are best positioned to make the choices that will further their own interests. In other words, adults in possession of their full faculties are in the best position to construct their own lives, and, in particular, decide whether and when to engage in risky activities. In this view, paternalistic regulations—those imposed for the individual’s own good—should

127. Although NOTA does not address blood products, FDA labeling regulations require that whole blood for transfusion be labeled as “paid” if the donor received compensation and, as a practical matter, whole blood for transfusion in the United States is procured on an almost entirely voluntary basis. 21 C.F.R. § 606.121 (2018).

128. *But see* Flynn v. Holder, 684 F.3d 852, 862 (2012) (holding that NOTA does not ban bone marrow extracted through apheresis).

129. *See, e.g.*, T. Randolph Beard & Jim Leitzel, *Designing a Compensated-Kidney Donation System*, 77 LAW & CONTEMP. PROBS., no. 3, 2014, at 253, 255–58; Alexander M. Capron, *Six Decades of Organ Donation and the Challenges that Shifting the United States to a Market System Would Create Around the World*, 77 LAW & CONTEMP. PROBS., no. 3, 2014 at 25, 61 (discussing the possible societal impacts of allowing payment for organs); I. Glenn Cohen, *Regulating the Organ Market: Normative Foundations for Market Regulation*, 77 LAW & CONTEMP. PROBS., no. 3, 2014, at 71, 27 (2014) (discussing the protection of individuals).

130. MILL, *supra* note 1, at 9.

131. *Id.* While Mill derives an argument for liberty from government interference by utilitarian logic, other philosophers have asserted a direct claim based on individual autonomy. *See, e.g.*, ISAIAH BERLIN, TWO CONCEPTS OF LIBERTY 16 (1958); Dworkin, *supra* note 1, at 112.

be limited to restrictions on children or on adults who are not in a position to make free and in some sense well-informed choices.¹³² A slightly different version of this argument is to assert that, although everyone makes poor choices at times, the typical (sane and sober) adult is better able to make choices that further his or her own interests than is a legislature or government regulatory agency. This claim has implicitly been challenged by the development of behavioral economics over the last half century, with its extensive documentation of the systematic errors to which adults are prone when making complex decisions.¹³³ We return to that challenge in Section C.

Although the Harm Principle appears to create a broad scope for individual autonomy, that is only true under specified limits on the kinds of external effects that are considered problematic. Most individuals are enmeshed in a web of sentiment and responsibility to family members, neighbors, co-workers and others, so that a risky choice that results in injury or death will tend to have harmful consequences for other people, including those who had no direct authority or influence over that choice. Furthermore, third-party effects are created by participation in private and government insurance programs and eligibility for safety net programs where any financial costs (for medical care, for example) are broadly shared.¹³⁴

In any event, in the case of living kidney donation, the direct external effects include considerable surplus of benefit over cost, in the sense that enhancing the quality and quantity of kidneys available for transplantation would reduce disability and save lives among patients, while saving the cost (to taxpayers) of maintaining these patients on dialysis.¹³⁵ Hence for kidney donation, unlike dueling or boxing (or a great variety of other risky activities), it appears that the external effects are far more positive than negative.

A concern with effects on society and culture also play an important role in the treatment of consensual violence, both pro and con. The criminal law relating to interpersonal violence generally rests on the legal myth that assaults disrupt the public order and are crimes against the State.¹³⁶ In principle, then, the question of whether the actual victim had consented is not relevant to establishing the guilt of the assailant. If two people agree to settle their

132. LEITZEL, *supra* note 1, at 21–27.

133. See generally DANIEL KAHNEMANN, THINKING FAST AND SLOW (2011) (describing the thinking processes of adults); Richard H. Thaler, *Prize Lecture: From Cashews to Nudges: The Evolution of Behavioral Economics*, NOBELPRIZE.ORG (Dec. 8, 2017), http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2017/thaler-lecture.html [https://perma.cc/C7TR-33FH].

134. *Id.* at 28 (quoting MILL, *supra* note 1, at 79) (“I fully admit that the mischief which a person does to himself may seriously affect, both through their sympathies and their interests, those nearly connected with him and, in a minor degree, society at large.”).

135. Held et al., *supra* note 11, at 883.

136. MICHELLE M. DEMPSEY, PROSECUTING DOMESTIC VIOLENCE: A PHILOSOPHICAL ANALYSIS 185–210 (200); Vera Bergelson, *The Right to be Hurt – Testing the Boundaries of Consent*, 75 GEO. WASH. L. REV. 165, 172–73 (2003); Alon Harel, *Why Only the State May Inflict Criminal Sanctions*, 14 LEGAL THEORY 113, 120 (2008).

differences with a fistfight, they may both be prosecuted for assault and battery.¹³⁷ More serious consensual violence, dueling with guns or edged weapons, has long been outlawed. Yet in other circumstances, consent transforms interpersonal violence into an acceptable or even virtuous activity, as in the case of surgery or sports.¹³⁸ An operation to remove a kidney for transplant following the donor's consent is of course not a criminal act, but rather (now considered) a virtuous one for both the surgeon and the donor. A boxer who knocks out his opponent (causing concussion), or a linebacker who sacks the quarterback with a crushing tackle, are cheered by their fans and team mates. In these cases, the violence is exempt from criminal liability, usually by statute but in any event by common practice.

The treatment of consensual violence in sports may be challenged from both sides. Libertarians under the influence of the Harm Principle may question why the carve out in the criminal law is limited to activities that could be construed as sports and does not extend to voluntary fights up to and including duels. Those with a more paternal view will take the contrary position, suggesting that boxing should be given the same criminal status as a barroom brawl. What are the special virtues of football, boxing, or other violent sports that balance against the foreseeable harms in the form of injuries to participants?

The principled distinction between criminal assault when the participants have consented, and the legal violence inherent in some sports, can be argued in various ways. For one thing, the violence in organized sports is regulated by the rules that are intended to limit the potential for serious injury. That argument may be tested against the increasing evidence regarding acute and chronic injury suffered by professional athletes, as previously summarized. A second line of argument is that these sports inculcate many virtues that are otherwise in short supply. University of Michigan football coach Jim Harbaugh opined that football is “the last bastion of hope for toughness in America in men.”¹³⁹ A more cynical view is that the “virtue” is not so much to the players as to the fans, whose enjoyment of the game supports an industry at the college and professional level worth many billions of dollars.

137. MODEL PENAL CODE § 211.1 (AM. LAW INST. 2016). The Model Penal Code states that the victim's consent to bodily injury is a defense “when conduct is charged to constitute an offense because it causes or threatens bodily injury, consent to such conduct or to the infliction of such injury is a defense if: (a) the bodily injury consented to or threatened by the conduct consented to is not serious; or (b) the conduct and the injury are reasonably foreseeable hazards of joint participation in a lawful athletic contest or competitive sport or other concerted activity not forbidden by law.”). The MPC also distinguishes simple assault—purposely, knowingly or recklessly caused bodily injury, to which the defense of consent might be applied, or become a mitigating factor—from aggravated assault—purposely, knowingly or recklessly caused *serious* bodily injury under circumstances manifesting extreme indifference to human life. *Id.*

138. Bergelson, *supra* note 136, at 172–73; see also Heidi Hurd, *Was The Frog Prince Sexually Molested?: A Review of Peter Westen's The Logic Of Consent*, 103 MICH. L. REV. 1329, 1329 (2005).

139. Angélique S. Chengelis, *HBO Piece Reveals Harbaugh's Burning Will to Win*, DETROIT NEWS (Apr. 20, 2015), <http://www.detroitnews.com/story/sports/2015/04/19/hbo-jim-harbaugh-reveals-um-love-real-sports/26042201/> [https://perma.cc/ZZN7-EV2A].

In any event, it is difficult to imagine a persuasive empirical study that compared the cultural effects of compensated kidney donation to those of professional violent sports, and none exists as far as we know. Our intuition is that a program of compensation for kidney donors would not degrade the culture, but rather affirm a cultural commitment to respond to disability and sustain life—and that in any event it would be more positive than the effects of compensating the deliberate brutality of football and other violent sports.

C. Cognitive Biases and Limitations

The belief that adults are able to discern and act on their true interests when faced with complex choices is basic to JS Mill's argument for freedom from government interference. During the last half-century, economists and behavioral scientists have explored the limitations and biases in decision making, demonstrating that even competent and sober adults tend to make systematic errors in decision-making.¹⁴⁰ When the stakes are high, as they are in choosing to donate a kidney or play professional football, even a free-choice advocate may accept that some limits are warranted. If NOTA were amended to allow payments to donors, potential kidney donors could be protected against being unduly tempted through the existing structure of screening, counseling, and delay. On the other hand, it is not clear that NFL recruits have such protections in place.

Ideally, a rational person faced with an important decision (donate a kidney, sign a contract to play professional football) would want to proceed as a decision analyst would instruct.¹⁴¹ The goal is to combine the objective consequences of the option with the individual's subjective valuation of these consequences, including timing (now versus later) and likelihood:

- List all possible consequences over the life course
- Estimate the probability of each consequence
- Assess the utility gain or loss of each consequence according to the decision maker's own preferences
- Calculate whether the expected value in terms of utility gains and losses is positive.¹⁴²

Needless to say, that is not how such decisions are made in practice, although in the case of kidney donation (and not football) much of the relevant information will at least be provided as part of the counseling required of

140. See generally KAHNEMANN, *supra* note 133 (describing the thinking processes of adults); Beard & Leitzel, *supra* note 129, at 266 (describing kidney donation in Kahnemann's terms); Thomas R. Beard & James A. Leitzel, *Compensated Live Kidney Donations* (June 17, 2015) (unpublished draft), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2619934 [<https://perma.cc/6S67-H5ZQ>] (arguing that safeguards can protect donors from the dangers of a compensation system for live kidney donations).

141. See generally ROBERT D. BEHN & JAMES W. VAUPEL, *QUICK ANALYSIS FOR BUSY DECISIONMAKERS* (1983) (laying out a process for decision making); James W. Vaupel & Philip J. Cook, *Life, Liberty and the Pursuit of Self-Hazardous Behavior* 15 (Duke University, Working Paper, 1978).

142. Vaupel, *supra* note 141, at 15.

potential donors.¹⁴³ The difficulty of making an informed decision is greater because the decider can only go down that path once.

Research in behavioral science has documented the tendency of adults to make systematic errors in their decisions. Much of this research has focused on choices that have uncertain outcomes, outcomes that are distributed over time, or require the decision maker to predict her sense of well-being under the scenarios implied by the available choices.¹⁴⁴ For example, although people tend to discount the value of delayed consequences according to how far in the future they would be experienced, they can make sensible choices between prospects that offer a payoff in one year or larger payoff in two years. However, prospects with immediate payoffs are often tempting out of proportion to their objective value and induce impulsive choices that are later regretted.¹⁴⁵ The difficulty of self-regulation is well reflected in the famous “marshmallow” test in delayed gratification.¹⁴⁶ Thus, the issue is not whether individuals should be trusted to act like well-informed decision analysts, but whether they could benefit from legal restrictions on the menu of possibilities available to them.

It is helpful to deconstruct the decision to donate a kidney under both the current regime (no compensation) and a hypothetical regime (in which the donor would be financially compensated). Living donation is an arduous process that would not be undertaken by the average well-informed person without a substantial reward of some sort (whether monetary or emotional). Under the current regime, only about 6,000 living donors volunteer each year. Almost all of these donors specify who is to receive their kidney, and as a consequence the donor has the satisfaction of saving the life of a family member or friend, and presumably enjoys their gratitude as well.¹⁴⁷ Potential donors undergo screening, both medical and psychological.¹⁴⁸ Although donors do not have to pay the expense of the screening and operation, they may have lost earnings at the time that are not reimbursed. If they experience medical consequences years later no financial help will be forthcoming from the beneficiaries of their gift, or the kidney-donation system.

Everything about this process leans against making an impulsive decision to donate. Indeed, those who choose to become a donor may typically see it as an obligation rather than an opportunity. They may be under pressure by family

143. Devasmita Choudhury et al., *Independent Donor Ethical Assessment: Aiming to Standardize Donor Advocacy*, 24 *PROGRESS TRANSPLANTATION*, no. 2, 2014, at 1, 1 (transplant centers have independent donor advocates or advocacy teams, charged with ensuring that donors are well informed at the time they consent).

144. David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 *Q. J. ECON.* 443, 445–46 (1997).

145. See generally Shane Frederick et al., *Time Discounting and Time Preference: A Critical Review*, 40 *J. ECON. LITERATURE* 351, 353 (2002) (explaining how time affects decisionmaking).

146. Walter Mischel et al., *Cognitive and Attentional Mechanisms in Delay of Gratification*, 21 *J. PERSONALITY & SOC. PSYCHOL.* 204, 204 (1972).

147. Cook & Krawiec, *supra* note 9, at 21.

148. *Id.*

members or may not see any acceptable alternative to the unpleasant prospect of donating. There is no temptation in this scenario, given the delays, the counseling, and the fact that much of the pain and risk precede the usually rewarding event of donation.

If the system for screening potential donors were preserved, but now with the possibility of compensation (for the sake of argument, worth \$50,000) then many more donors would likely come forward, especially for non-directed donations. For the additional donors, the payment would be a stronger incentive than the psychic rewards of a pure altruistic act. (In fact, in this regime some would-be family donors may decide to refrain, given the knowledge that other suitable kidneys are available.) The increase in donations would save many lives and reduce costs to taxpayers. But the question remains of whether the promise of payment would tend to encourage donations that are not in the donors' true interest, as a decision analyst would define that interest.

For the potential donor, the prospect of financial reward may overcome concerns about the temporary pain and disability, not to mention the slight risk of death, stemming from the operation, as well as the small probability of medical problems years or decades later. There is nothing intrinsically irrational about a willingness to assume medical risk in exchange for a substantial amount of money. But the quality of the choice may be influenced by the sequence of events. If donors were offered a \$50,000 check on the day that they volunteered to donate but did not have to actually go on the operating table for a year, impulsive ill-considered donations might be the norm. But the disproportionate temptation of an immediate payoff could be managed if the payment were not made until after the operation. In the normal course of events, payoff would be put off for weeks or even months while the donor underwent screening and matching.¹⁴⁹

The delayed payoff would have the effect of protecting potential donors against impulsive decisions while respecting their underlying preferences for the value of the money vis-à-vis the medical risks of donation. The delay is in the spirit of the “nudge” approach to policy design popularized by Richard H. Thaler and Cass Sunstein.¹⁵⁰ It contrasts with the paternalistic approach, which effectively denies the validity of the donor's preferences. A recent survey, for example, found a sizable group that thought it was unacceptable to offer potential subjects in a risky medical experiment as much as \$10,000.¹⁵¹ The authors speculated that these respondents thought that a large payoff would induce people to participate who placed too much value on money (or too little on their

149. To further ensure that donors' decisions were made in prudent fashion, the payment could be made in kind, in the form, for example, of lifetime disability and medical insurance policies. Of course, that form of compensation may mute the supply response simply because it would be less alluring.

150. See generally RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (2008) (presenting the libertarian paternalism thesis and recommendations for choice architecture).

151. Sandro Ambuehl et al., *More Money, More Problems? Can High Pay Be Coercive and Repugnant?*, 105 AM. ECON. REV. 357, 358 (2015).

health).¹⁵²

The same concerns that apply to the quality of kidney donor decisions also apply, and more obviously, to the decision to sign a contract to play in the NFL. Players are provided with little information about the risks. Although, the longer-term risks (including the risk of CTE in middle age) have not been well quantified, they appear to be far higher than for kidney donation. The payoff in both financial terms and status is also very high, and in part conveyed immediately. Any counseling or screening that might occur is up to the player to pursue.

D. Exploitation, Coercion, Race & Class

Living kidney donors in the United States have above-average incomes (after adjusting for sex and age),¹⁵³ perhaps because potential donors with lower incomes cannot afford to miss work.¹⁵⁴ In a new regime in which donors were paid a substantial fee, it is predictable that the influx of volunteers would have below-average incomes. The prospect of financially stressed individuals attempting to make ends meet by “selling” a kidney raises a red flag for some ethicists.¹⁵⁵ A compensation regime would expand the choice set for those in comfortable circumstances, but those in desperate circumstances might feel compelled to sell a kidney; in that sense, the option of selling could be seen as coercive. Furthermore, a system that in part depends on the poor to supply kidneys could be seen as exploiting the poor. This line of thought is represented in a 2001 report of the National Bioethics Advisory Commission in a related circumstance, paid participation in medical experiments: “benefits threaten . . . the voluntary nature of the choice, . . . raise the danger that the potential participant’s distributional disadvantage could be exploited [and] . . . lead some prospective participants to enroll . . . when it might be against their better judgment and when otherwise they would not do so.”¹⁵⁶

Using words like “coercion” and “exploitation” to characterize the introduction of a new option by which poor people (and others) could earn a substantial amount of money provides more heat than light on this situation. There is a legitimate ethical concern that so many Americans are poor, with inequality increasing over time. But that observation does not support a ban on compensation, which in fact limits the options available to the poor and thereby makes a bad situation (their lack of marketable assets) worse. But for anyone not persuaded by this argument, we note that these social-justice concerns have been

152. *Id.* at 359.

153. Jagbir Gill et al., *The Effect of Race and Income on Living Kidney Donation in the United States*, 24 J. AM. SOC’Y NEPHROL. 1872, 1874 (2013).

154. Rodrigue, *supra* note 5.

155. Capron, *supra* note 129, at 47; Debra Satz, *The Moral Limits of Markets: The Case of Human Kidneys*, 108 PROC. ARISTOTELIAN SOC’Y 269, 276 (2008).

156. Ambuehl, *supra* note 151, at 357 (quoting NAT’L BIOETHICS ADVISORY COMM’N, ETHICAL AND POLICY ISSUES IN RESEARCH INVOLVING HUMAN PARTICIPANTS 90 (2001)).

raised with at least equal force to compensating boxers. One set of commentators, for example, lament that most boxers are

from poor, working-class backgrounds. Many are members of minority groups for whom boxing may seem to be one of the few ways out of the misery they were born into . . . an impoverished society (such as in many Latin American nations) or an economically depressed city (such as Detroit) is fertile ground for a flourishing boxing industry.¹⁵⁷

As more has become known about the dangers of repeated head trauma, similar arguments regarding football have become more prominent. About 70% of NFL players are black, and Pacific Islanders are also overrepresented as compared to the American population.¹⁵⁸ Accordingly, much attention has been paid to the concussion crisis as a race and class problem. As one observer recently noted, “What’s a little permanent brain damage when you’re facing a life of debilitating poverty?”¹⁵⁹ In reality, however, NFL players are better educated themselves, and come from better educated homes, than is average for Americans, in part because the NFL typically recruits college students. Still, some NFL players, like some would-be kidney donors, come from poverty.

V

CONCLUSION

Our claim is that there is a stronger case for compensating kidney donors than for compensating participants in violent sports. If this proposition is accepted, one implication is that there are only three logically consistent positions: allow compensation for both kidney donation and for violent sports; allow compensation for kidney donation but not for violent sports; or allow compensation for neither. Our current law and practice is perverse in endorsing a fourth regime, allowing compensation for violent sports but not kidney donation.

A common argument in support of the ban on kidney donation is that if people were offered the temptation of substantial compensation, some would volunteer to donate against their own “true” best interests. This argument is often coupled with a social justice concern, namely that if kidney donors were

157. MICHAEL A. MESSNER & DONALD F. SABO, *SEX, VIOLENCE AND POWER IN SPORTS* 77–78 (1994) (quoted in David Gendall, *The Sport of Boxing: Freedom versus Social Constraint*, 5 *WAIKATO L. REV.* 71, 77 (1997)). We have found no systematic analysis of the socio-economic status of professional boxers. Certainly, there are many anecdotal reports of boxers fighting their way out of poverty and the argument is often made (though, as noted, without apparent empirical support) that boxers are disproportionately drawn from among the poor. *See, e.g.*, Michael Gunn & David Ormerod, *Despite The Law: Prize Fighting And Professional Boxing*, in *LAW AND SPORT IN CONTEMPORARY SOCIETY* 33–34 (Steven Greenfield & Guy Osborn eds., 2000).

158. *NFL Census 2016*, PROFOOTBALLLOGIC (Apr. 19, 2017), <http://www.profootballlogic.com/articles/nfl-census-2016> [https://perma.cc/B6TL-S9R9].

159. Mychal Denzel Smith, *For Black Boys, The NFL – And Traumatic Brain Injury – Can Be Lottery Tickets*, *NATION* (Jan. 28, 2013), <https://www.thenation.com/article/black-boys-nfl-and-traumatic-brain-injury-can-be-lottery-tickets/> [https://perma.cc/ZXA4-RXFS].

paid, a large percentage of volunteers would be poor and financially stressed, and for them the offer of a substantial financial inducement would be coercive. In sum, a system of compensated donation would provide an undue temptation and end up exploiting the poor.

To these arguments we offer both a direct response, and a response by analogy with violent sport. A fundamental norm of our culture and legal tradition is to respect the choices of (sober, competent, well informed, adult) individuals. That norm serves to limit government interference with private choices. It is supported by the right to liberty from undue government interference. A well-developed organ procurement process in the American system seeks to ensure that potential donors are fully capable of making a good decision. Potential kidney donors are not only provided with full information, but also screened for mental and physical disability. Although there is the possibility of “mistakes” (a decision to donate against the true best interests of the individual) under a compensated system, the screening, consent process, and delays should minimize the chance for the kind of errors that behavioral economics has demonstrated are common. Under such circumstances, the opportunity to be paid for donating a kidney is not exploitative or coercive, but rather welfare-enhancing.

We also argue by analogy with professional football, boxing, and other legal but violent sports. The medical risks to a professional career in violent sports are much greater both in the near and long term than the risks of donating a kidney. On the other hand, the consent and screening process in professional sports is not as developed as in kidney donation. Social justice concerns stem from the fact that most players are black and some come from impoverished backgrounds. In sum, the arguments against compensating kidney donors apply with equal or greater force to compensating athletes in these sports.

Note that these arguments focus on the donors’ welfare and ignore the welfare of people in need of a kidney. A comprehensive evaluation of amending NOTA to allow compensation requires that both groups be considered. Such an evaluation, conducted by PJ Held and colleagues, reached the following conclusion about a regime in which the government would pay living donors enough (\$45,000) to end the kidney shortage, thus saving much of the cost of dialysis that is currently borne by Medicare:

From the viewpoint of society, the net benefit from saving thousands of lives each year and reducing the suffering of 100,000 more receiving dialysis would be about \$46 billion per year, with the benefits exceeding the costs by a factor of 3. In addition, it would save taxpayers about \$12 billion each year.¹⁶⁰

The present value of this total flow of social benefits would exceed \$1,300 billion.¹⁶¹

160. Held, *supra* note 11, at 877.

161. This is a conservative estimate, since it assumes that the net benefit would remain constant over time, and that the appropriate social discount rate is 3.5%. See Mark A. Moore et al., *The Choice of the Social Discount Rate and the Opportunity Cost of Public Funds*, 4 J. BENEFIT-COST ANALYSIS 301, 402 (2013).

As far as we know, there has been no cost-benefit analysis of the analogous reform in football, namely to ban professional compensation. But a first cut is the market value of NFL teams, since that value reflects the present value of future ticket sales and broadcast payments, net of costs, under the current legal regime. Presumably a ban on compensation would end professional football and drive the value of the thirty-two current teams to zero. That value, according to Forbes Magazine, is currently about \$56 billion.¹⁶² That amount should be reduced to take account of subsidies by host cities, and expanded to take account of consumer surplus. Without actually doing that refined calculation, it is clear that the monetized value of allowing compensation for professional football players is far less than for allowing compensation for kidney donors.

162. FORBES, SPORTS MONEY: 2017 NFL VALUATIONS, <https://www.forbes.com/forbes/welcome/?toURL=https://www.forbes.com/nfl-valuations/&refURL=https://www.google.com/&referrer=https://www.google.com/> [https://perma.cc/2EQ7-6WAY] (last visited Jan. 23, 2018).