
THE PROBLEM OF DOPING

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INTRODUCTION

Doping has long been a matter of private concern for sports insiders.¹ Since 1988, however, when Ben Johnson was stripped of his gold medal at the Seoul Olympics after he tested positive for the steroid stanozolol,² doping increasingly has become a matter of public concern. Johnson's claim that he took drugs to level the playing field—suggesting that most if not all of his elite competitors were also using drugs³—coupled with data showing that teenagers (primarily

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We are grateful to Jeffrey Chemerinsky and Jonathan L. Williams for their invaluable conceptual contributions to our work. This Essay is dedicated to Don H. Catlin, M.D., Director of the UCLA Olympic Laboratory, who has devoted a good part of his professional life to the cause of doping control, and who is remarkable for his analytical prowess, his persistence in the face of extraordinary odds, and his unusual integrity. We have worked with him when he was an ally and when he was an opponent and in both roles he inspired the highest level of confidence.

1. See John Hoberman, *How Drug Testing Fails: The Politics of Doping Control*, in *DOPING IN ELITE SPORT: THE POLITICS OF DRUGS IN THE OLYMPIC MOVEMENT* 241, 241 (Wayne Wilson & Edward Derse eds., 2000) (describing the use of illicit drugs among Olympic athletes); Charles E. Yesalis, Stephen P. Courson & James E. Wright, *History of Anabolic Steroid Use in Sport and Exercise*, in *ANABOLIC STEROIDS IN SPORT AND EXERCISE* 51, 66 (Charles E. Yesalis ed., 2d ed. 2000) (describing the widespread use of steroids).

2. See *CBC News: Ben Johnson: Canada's Shame* (CBC television broadcast Sept. 26, 1988), available at <http://archives.cbc.ca/clip.asp?IDLan=1&IDClip=8702&IDDossier=0&IDCat=371&IDCatPa=263> (setting out the facts of Johnson's positive test).

3. *Johnson Insists "Everybody" at Seoul Was on Drugs*, SYDNEY MORNING HERALD, July 11, 2004, <http://www.smh.com.au/articles/2004/07/10/1089000397517.html>. In this same article, Johnson's coach, Charlie Francis, "attack[s] the idea that Johnson was stripped of his records and medals to ensure a 'level playing field' for non-doping athletes. 'Steroids are so ubiquitous, so omnipresent and have been for decades . . . When you realise the true extent of it, then things are as they appear . . . There is a level playing field out there. It just isn't the playing

boys) were beginning to use steroids both as a way to position themselves for careers in professional sports and for aesthetic reasons,⁴ caused the public for the first time seriously to focus on doping.⁵ In this post-1988 period, the U.S. Congress weighed in, with Senator John McCain holding hearings on doping in Olympic sports and threatening to strip away the autonomy of the United States Olympic Committee (USOC) if the Olympic Movement⁶ did not develop a serious, independent, and transparent anti-doping program.⁷ In response to an international outcry over the doping problem, of which McCain's hearings were a part, the International Olympic Committee (IOC) and the USOC created the World Anti-Doping Agency (WADA) and its domestic counterpart, United States Anti-Doping Agency (USADA), respectively.⁸ Other

field you thought it was." *Id.* For further discussion of the level playing field and its relation to doping, see *infra* note 99.

4. See Joe Layden, *Going to School: Education May Be the Only Way to Stem the Tide*, ALBANY TIMES UNION, Nov. 12, 1991, at D1 ("National surveys indicate that between 5 and 11 percent (as many as 500,000) of all male high school students have experimented with [steroids]. . . . Some take steroids because they want to look better. Others take them because they want to improve their athletic performance."). Dr. Charles E. Yesalis of Penn State University is recognized as having done the seminal work in this area. See Charles E. Yesalis, Penn State Dep't of Health Policy & Admin., <http://www.hhdev.psu.edu/hpa/faculty/yesalis.html> (last visited Apr. 31, 2008) ("In 1988 [Yesalis] directed the first national study of [anabolic steroid] use among adolescents and was the first to present evidence of psychological dependence on [steroids]. . . ."). Dr. Yesalis's later work showed "a significant increase in [steroid] use among teenage girls and boys." *Id.*

5. See Mark McClusky, *The Righteous Fury of Dick Pound*, WIRED, Jan. 2007, at 132, 132-33 ("The Johnson case was doping's mortal sin. . . . It was undeniable [following that case] that drugs had permeated sports to their highest level and that sporting officials were lagging far behind.").

6. The Olympic Movement "encompasses organisations, athletes and other persons who agree to be guided by the Olympic Charter." INT'L OLYMPIC COMM., OLYMPIC CHARTER 13 (2007), available at http://multimedia.olympic.org/pdf/en_report_122.pdf. Specifically, the Movement includes three main constituents: "the International Olympic Committee ('IOC'), the International Sports Federations ('IFs') and the National Olympic Committees ('NOCs')." *Id.* In addition to the main constituents, the Movement also "encompasses the Organising Committees of the Olympic Games ('OCOGs'), the national associations, clubs and persons belonging to the IFs and NOCs, particularly the athletes . . . as well as the judges, referees, coaches and other sports officials and technicians." *Id.* at 13-14.

7. DONALD FEHR ET AL., INDEP. COMM'N ON REFORM OF THE U.S. OLYMPIC COMM., REPORT AND RECOMMENDATIONS app. a (2003), available at <http://www.usoc.org/ReformofUSOCAApp.pdf>; see also U.S. Drug Chief, *Olympians Call for Anti-Doping Reforms*, CNN.COM, Oct. 20, 1999, <http://www.cnn.com/US/9910/20/olympic.drugs.02/> (advocating for the implementation of a drug-testing program for Olympic athletes).

8. Michael S. Straubel, *Doping Due Process: A Critique of the Doping Control Process in International Sport*, 106 DICK. L. REV. 523, 525 (2002); Paul C. McCaffrey, Note, *Playing Fair:*

important actors also got involved: Leading medical organizations⁹ and drug manufacturers¹⁰ undertook to educate the public about the adverse health effects of steroids, recombinant erythropoietin (rEPO), and human growth hormone (HGH). The National Football League (NFL) and the National Basketball Association (NBA) followed by implementing their own anti-doping programs.¹¹ Federal law enforcement authorities broke up steroid distribution rings, including the infamous Bay Area Laboratory Cooperative (BALCO).¹² And finally, prompted by the extraordinary 1997 assault on the single-season home run record by Mark McGwire and Sammy Sosa, by Barry Bonds's shattering of that record in 2001, and by the implications of Bonds's involvement in the BALCO scandal, Major League Baseball (MLB) hired former Senator George Mitchell to conduct a public investigation of the so-called "steroids era" in that sport.¹³

Why the United States Anti-Doping Agency's Performance-Enhanced Adjudications Should Be Treated as State Action, 22 WASH. U. J.L. & POL'Y 645, 646 (2006).

9. See, e.g., Michael N. Sawka et al., *Am. Coll. of Sports Med., Position Stand: The Use of Blood Doping as an Ergogenic Aid*, 28 MED. & SCI. SPORTS & EXERCISE i, vi (1996) ("It is the position of the American College of Sports Medicine that any blood doping procedure used in an attempt to improve performance is unethical, unfair, and exposes the athlete to unwarranted and potentially serious health risks."); Press Release, *Am. Coll. of Sports Med., Steroids Threaten Health of Athletes and Integrity of Sports Performance* (Oct. 23, 2003), available at http://www.acsm.org/Content/ContentFolders/NewsReleases/2003/STERIODS_THREATEN_HEALTH_OF_ATHLETES_AND_INTEGRITY_OF_SPORTS_PERFORMANCE.htm (condemning the development of designer steroids that were created to avoid detection of doping tests).

10. For example, Professor Doriane Lambelet Coleman received a grant from Amgen, Inc., the manufacturer of rEPO (sold under the trade name EPOGEN), to develop professional and lay materials concerning the health risks associated with the misuse of rEPO by athletes. See Doriane Lambelet & Paul D. Thompson, *Physicians' Ethical and Legal Responsibility When Athletes Use Performance Enhancing Drugs* (1992) (unpublished manuscript, on file with authors).

11. See Paul H. Haagen, *The Players Have Lost That Argument: Doping, Drug Testing, and Collective Bargaining*, 40 NEW ENG. L. REV. 831, 840-41 (2006) (summarizing the history of the NBA's program); Glen Macnow, *NFL Drug Game Gets More Serious*, SEATTLE TIMES, Dec. 22, 1991, at C1 (dating the NFL's punitive program to 1989); *NBA Head Stern Proposes Tougher Steroid Policy*, KTVU.COM, May 18, 2005, <http://www.ktvu.com/balco/4502303/detail.html> (describing a proposal to strengthen the National Basketball Association's (NBA) punitive program).

12. See generally MARK FAINARU-WADA & LANCE WILLIAMS, *GAME OF SHADOWS: BARRY BONDS, BALCO, AND THE STEROIDS SCANDAL THAT ROCKED PROFESSIONAL SPORTS* (2006) (chronicling the steroids scandal surrounding BALCO, including the international web of athletes who patronized the company and the investigation that exposed it).

13. See GEORGE J. MITCHELL, *REPORT TO THE COMMISSIONER OF BASEBALL OF AN INDEPENDENT INVESTIGATION INTO THE ILLEGAL USE OF STEROIDS AND OTHER*

This broader interest in sports doping has drawn the attention of academics and public intellectuals¹⁴ including Harvard University political philosopher Michael A. Sandel¹⁵ and federal appellate judge Richard A. Posner.¹⁶ Sandel is well known both within and outside the academy as a communitarian whose work has made important contributions to the national discourse on justice and the appropriate limits of democratic liberalism.¹⁷ It has been said of Posner that being a judge is “just his day job”¹⁸ and that his “most significant contribution has been in law and economics, the influential legal movement he practically created.”¹⁹ In their respective works on

PERFORMANCE ENHANCING SUBSTANCES BY PLAYERS IN MAJOR LEAGUE BASEBALL, at SR-1, SR-10-17, 112-20 (2007) [hereinafter MITCHELL REPORT], available at <http://mlb.mlb.com/mlb/news/mitchell/index.jsp> (describing Major League Baseball's drug policy); see also *supra* note 12 and accompanying text (noting the significance of the BALCO scandal in this context). This report is commonly known as the Mitchell Report.

14. See, e.g., Haagen, *supra* note 11, at 849 (arguing that doping should be policed, but that because WADA has not yet perfected its anti-doping approach, “it makes sense [in the professional sports setting] to defer to collectively bargained responses to the difficult questions of who ought to bear the burdens associated with cleaning drugs out of sports”); Peter Singer, *Why Not Let Doping Close the Gene Gap?*, JAPAN TIMES, Aug. 19, 2007, available at <http://search.japantimes.co.jp/print/eo20070819a2.html> (arguing that doping should be legalized to level the genetic playing field to the extent that it is safe, so that effort can be the basis for distinctions in sport); George F. Will, *Barry Bonds's Enhancement*, NEWSWEEK, Aug. 21, 2007, <http://www.newsweek.com/id/34762/output/print> (“Drugs . . . make sport exotic, by radical intrusions into the body, drain sport of its exemplary power by making it a display of chemistry rather than character.”). The most consistent academic contributor to this ongoing discussion is probably Professor John Hoberman, who has written a number of books and other works on the subject over a span of approximately fifteen years. See, e.g., JOHN HOBERMAN, MORTAL ENGINES: THE SCIENCE OF PERFORMANCE AND THE DEHUMANIZATION OF SPORT (1992) (looking at the modern sports establishments in the U.S. and Europe, and ongoing struggles over doping regulations); JOHN HOBERMAN, TESTOSTERONE DREAMS: REJUVENATION, APHRODISIA, DOPING (2005) (investigating modern attitudes toward enhancement of the mental, physical and sexual power of humans); Hoberman, *supra* note 1.

15. See MICHAEL J. SANDEL, THE CASE AGAINST PERFECTION: ETHICS IN THE AGE OF GENETIC ENGINEERING (2007).

16. See Richard A. Posner, *In Defense of Prometheus: Some Ethical, Economic, and Regulatory Issues of Sports Doping*, 57 DUKE L.J. 1725 (2008).

17. See, e.g., MICHAEL J. SANDEL, DEMOCRACY'S DISCONTENT: AMERICA IN SEARCH OF A PUBLIC PHILOSOPHY (1996); MICHAEL J. SANDEL, JUSTICE: A READER (2007); MICHAEL J. SANDEL, LIBERALISM AND THE LIMITS OF JUSTICE (1984).

18. Gary Rosen, Book Review, *He Has a Little List—and a Long Indictment*, WALL ST. J., Jan. 15, 2002, at A14.

19. Robert Boynton, Book Review, *Sounding Off*, WASH. POST, Jan. 20, 2002, Book World, at 8. Judge Posner is a prolific writer on a wide variety of subjects. See, e.g., RICHARD A. POSNER, CATASTROPHE: RISK AND RESPONSE (2004); RICHARD A. POSNER, AN ECONOMIC ANALYSIS OF LAW (1974); RICHARD A. POSNER, THE ECONOMICS OF JUSTICE (1981); RICHARD A. POSNER, HOW JUDGES THINK (2008); RICHARD A. POSNER, PUBLIC

doping,²⁰ Sandel and Posner tackle three of the most interesting and thorny issues raised by the practice: how to distinguish performance-enhancing substances and techniques that constitute cheating from those that are consistent with the spirit of sport;²¹ whether there is a meaningful distinction between sport and spectacle; and if there is, whether society has a sufficient stake in the distinction and in sport in particular to get involved in the regulation of doping.

In *The Case Against Perfection: Ethics in the Age of Genetic Engineering*, Professor Sandel pays substantial attention to the ethics of enhancement as these operate in the world of sport.²² His central thesis is that virtuous achievement in athletics (and in the arts) reflects “the gifted character of human powers and achievements.”²³ He describes those gifts as “talents and powers [that] are not wholly our own doing, nor even fully ours, despite the efforts we expend to develop and to exercise them,” and he includes among them both “effort and striving, grit and determination” and “grace and effortlessness.”²⁴ Sandel suggests that doping “is troubling because it distorts and overrides natural gifts.”²⁵ In this context, he argues that one can “distinguish changes that improve from those that corrupt”²⁶ by “[a]ssessing the rules of athletic competition for their fit with the excellences essential to the sport.”²⁷ For Sandel this last step is necessary to assure that “[s]port [does not] fade into spectacle, a course of amusement rather than a subject of appreciation.”²⁸ Finally, Sandel argues that “our appreciation for the gifted character of human powers and achievements” is important because it is necessary

INTELLECTUALS: A STUDY OF DECLINE (2003); RICHARD A. POSNER, *SEX AND REASON* (1992).

20. SANDEL, *supra* note 15; Posner, *supra* note 16.

21. The Code of the World Anti-Doping Agency provides that WADA shall place substances and techniques on its Prohibited List if they meet at least two of three criteria, including that they have the capacity to be performance enhancing, that they risk adverse health effects, and that they are in violation of the “spirit of sport.” WORLD ANTI-DOPING AGENCY, WORLD ANTI-DOPING CODE art. 4.3 (2003), available at http://www.wada-ama.org/rtecontent/document/code_v3.pdf; see also *infra* notes 60–65 and accompanying text (providing WADA’s definitions of the spirit of sport).

22. SANDEL, *supra* note 15, at 10–12, 25–44.

23. *Id.* at 27.

24. *Id.*

25. *Id.* at 31.

26. *Id.* at 37.

27. *Id.* at 42.

28. *Id.* at 43.

to preserve “key features of our moral landscape—humility, responsibility, and solidarity.”²⁹

Judge Posner responds to Professor Sandel in an essay in this issue of the *Duke Law Journal*, entitled *In Defense of Prometheus: Some Ethical, Economic, and Regulatory Issues of Sports Doping*.³⁰ Judge Posner substantially agrees with Sandel’s assessment of “which modes of athletic performance enhancement harm a sport and which do not.”³¹ Specifically, Posner explains that

Sandel is on to something in relating the objections to sports doping to the “nature” of sports The relation lies in the innate human delight—archaic as it may seem in our age rich in egalitarian pretense—in innate human hierarchies, such as hierarchies of height, strength (though it is innate only to a degree, being a function in part of the activities in which a person engages, even if he is not deliberately body building), agility, physical coordination, beauty, brilliance, and musical talent (and the delight in animal hierarchies too, as in horse racing). . . . These attitudes inform human beings’ love of sports, which isolate and exhibit innate hierarchies³²

Based on this analysis, Posner concludes that

[s]ports are designed to highlight, isolate, and display one or more of these hierarchies and to invite our admiration for the athletes who occupy the highest rungs. They are ‘a test of biological potential.’ So the question of doping and other technological interventions comes down to whether the particular intervention disrupts or obscures the hierarchy.³³

Otherwise, Judge Posner strongly disagrees with Professor Sandel’s conclusions about the value of humans’ Promethean instinct to control nature: Sandel thinks that this instinct is bad,³⁴ Posner

29. *Id.* at 86.

30. Posner, *supra* note 16.

31. *Id.* at 1732.

32. *Id.* at 1729.

33. *Id.*; *see also id.* at 1731 (“The only robust distinction between good and bad performance enhancers is between those that disturb or obscure, and those that leave unaltered, the hierarchies of ‘natural’ talent that sports seek to exhibit.”).

34. SANDEL, *supra* note 15, at 85–92 (expressing concern that this instinct applied to the promises of genetic engineering would diminish humans’ valuable senses of humility, responsibility, and solidarity).

thinks that it is good.³⁵ Most important for our purpose, however, Posner also disagrees with Sandel's counterpositioning of sport and spectacle.³⁶ Using tools from law and economics, Posner explains his view that

[t]he size of the crowd . . . that a sport attracts is inseparable from the success of the sport in exhibiting the hierarchy of "talents and virtues" that the audience admires. That exhibition is the key to a sport's popular success, or, in other words, to the size of the crowd that it attracts. What this means—and it is critical to the formulation of sensible public policy toward performance-enhancing drugs—is

35. Posner, *supra* note 16, at 1740, 1741 (expressing the view that "[h]ad early man been guided by Sandel, the human race would quickly have become extinct, having foresworn Promethean aspirations to control fire and make tools and in these and other ways tame a murderous environment by reducing the domain of the unexpected" and that "reduction of the[] dangers [faced by modern man] will depend on technological and analytical methods repugnant to Sandel, and on a spirit, opposed to his, of active engagement with a threatening environment").

We do not evaluate Professor Sandel and Judge Posner's disagreement over humans' Promethean ambitions and their relationship to doping. As we explain in Part I, genetic enhancement technology—on which both premise their views on this matter—is still no more than a futuristic possibility. See *infra* notes 134–35 and accompanying text. And unlike genetic enhancement, doping with traditional substances like steroids does not provide the basis to argue about the merits of perfecting individuals or the species. To the extent, however, that Posner is right that Promethean ambitions have often benefited humans and that humankind is currently faced with significant problems that demand that individuals be the best that they can be, other solutions short of altering genomes or the gene pool exist that would effect the same and maybe even better ends. For example, society might begin seriously to consider public policy measures designed to maximize children's intellectual and physical potential and to provide adults the opportunity not merely to survive but also to contribute their resulting skills to better society and the species. Alternatives along these lines would be no less driven by liberal values than policies supporting the development of genetic enhancement technology, and they would avoid the distributive injustices that drive Sandel to reject this technology at the outset. See *supra* note 34 and accompanying text. Ultimately, it cannot be the case that mankind will solve its most significant problems—Posner lists "apocalyptic terrorism, the proliferation of weapons of mass destruction, global warming, biodiversity depletion, pandemics, and catastrophic scientific accidents" among these, Posner, *supra* note 16, at 1741—by tweaking the genomes of the select individuals who can afford this technology and those who cannot, or—and this goes to Sandel's strongest argument about the importance of individuals feeling "humility, responsibility, and solidarity" about and toward their fellow man, SANDEL, *supra* note 15, at 85–92—by creating a substantial additional disconnect between those who can access modern technology and those who cannot. (We assume for purposes of this argument that Posner would not subscribe to a "new eugenics" program that would require tweaking all accessible genomes according to some set standard.)

36. See Posner, *supra* note 16, at 1733 (criticizing Professor Sandel's "attempt to oppose 'amusement' to 'appreciation' and 'size of the crowd' to 'integrity'").

that the “problem” of sports doping has only a minor public dimension; its solution can largely be left to the free market.³⁷

In other words, Posner explains, owners of sport would have the necessary incentives to develop and enforce relevant anti-doping rules if fans demanded them, and they have incentives to permit doping “to the extent it improves a sport in the eyes of the spectators.”³⁸ He acknowledges that effective regulation of doping may be difficult in the absence of criminal sanctions when market forces suggest that it is rational to engage in doping, which may be true when “the gains from doping are great enough and the likelihood of detection is small enough.”³⁹ But ultimately, for him, the choice to punish or promote doping does not have “any great public significance.”⁴⁰

This Essay responds to Professor Sandel and Judge Posner in these respects. Part I discusses the problem of defining cheating and its opposite, the spirit of sport. In particular, it describes the anti-doping authorities’ efforts to do this work, evaluates Sandel’s and Posner’s contributions, and analyzes several commonly used substances and techniques for compatibility with emerging definitions. Part II evaluates the arguments in support of doping regulation, focusing on Sandel’s distinction between sport and spectacle and Posner’s argument that governmental interventions in anti-doping regimes are unwarranted because doping has no public significance. The Essay concludes that neither Sandel nor Posner has got it exactly right, but that they have made substantial contributions to the evolving understanding of these central issues. To the extent that the sports world is harmed in its public relations by revelations about doping, it is also helped in its anti-doping cause by the broadening of the discussion to include talented minds like theirs.

37. *Id.* at 1773–34.

38. *See id.* at 1735–36 (describing this result as an outgrowth of consumer choice when “arms race” phenomena do not affect it). Although Judge Posner refers to “team owners” in the professional sports context, we refer extensively in this Essay to regulators of Olympic sport. All sports regulators face similar public relations incentives, and our analysis applies equally to both.

39. *See id.* at 1736 (“The combination of difficulty of detection with incentives to defect may make purely private sanctions for violating a doping ban an inadequate deterrent. Criminal or other public penalties may be necessary.”); *id.* at 1737 (“This consideration may warrant imposing criminal penalties on athletes who engage in forms of doping that both are difficult to detect and reduce the economic value of the sport.”).

40. *Id.* at 1734.

I. DEFINING CHEATING AND ITS OPPOSITE, THE SPIRIT OF SPORT

Cheating and its opposite, what WADA calls “the spirit of sport,”⁴¹ are both familiar concepts. Nevertheless, the governing authorities of domestic and international sport have yet to develop rigorous definitions for either. Doing this work is essential to the integrity and ultimate success of their anti-doping programs. This Part describes the conceptual difficulties inherent in the development of a good definition of cheating in sports, explores WADA’s initial efforts, and evaluates Professor Sandel’s and Judge Posner’s contributions. It then proposes a definition of cheating based on a synthesis of their ideas and analyzes the compatibility of some specific substances and technologies with this definition.

A. *The Definitional Conundrums*

As both Professor Sandel and Judge Posner recognize, the hardest conceptual problem for sports governing authorities in the area of doping concerns drugs and technologies that do not pose a health risk but seem like cheating. Cold medicines,⁴² altitude simulators,⁴³ golf carts,⁴⁴ artificial body parts,⁴⁵ and genetic

41. See *infra* notes 60–66 and accompanying text.

42. See, e.g., *Romanian Loses Gold-Medal Appeal*, N.Y. TIMES, Dec. 13, 2000, <http://query.nytimes.com/gst/fullpage.html?res=9B04E1D8103FF930A25751C1A9669C8B63> (“The [IOC] accepted the Romanian team’s explanation that the drug was taken innocently and that Raducan had gained no competitive advantage from it, but it refused to reinstate the medal.”).

43. See, e.g., DORIANE LAMBELET COLEMAN ET AL., CTR. FOR SPORTS LAW & POLICY, POSITION PAPER: WHETHER ARTIFICIALLY INDUCED HYPOXIC CONDITIONS VIOLATE “THE SPIRIT OF SPORT” 1 (2006), available at <http://www.law.duke.edu/features/pdf/hypoxiareponse.pdf> (discussing whether altitude simulators should be banned).

44. See *PGA Tour, Inc. v. Martin*, 532 U.S. 661, 690 (2001) (holding in part that Title III of the Americans with Disabilities Act required the PGA to allow a disabled golfer to use a golf cart because that accommodation would not “fundamentally alter” the purpose of the rule that players walk the course).

45. The Court of Arbitration for Sport (CAS) overturned a decision of the International Amateur Athletic Federation (IAAF) that double-amputee sprinter Oscar Pistorius could not compete in able-bodied events on the ground that his Ossur Cheetah Flex-Foot prosthetics give him an unnatural advantage. Press Release, Court of Arbitration for Sport, Athletics—Case Oscar Pistorius v/ IAAF (May 16, 2008), available at <http://www.tas-cas.org/d2wfiles/document/1086/5048/0/press%20release%20pistorius%20english.pdf>. The court held that “the IAAF did not prove that the biomechanical effects of using this particular prosthetic device gives [him] an advantage over athletes not using the device.” *Id.*

engineering⁴⁶ all have been discussed in this context. Despite bioethical restrictions on human-subjects research, it is relatively easy to identify drugs and technologies that have either definitive or potential adverse health effects.⁴⁷ It is also relatively easy to justify banning such drugs and technologies: at a minimum, a private membership organization like the USOC has the right (both legally and according to free market ideology) to define itself and its enterprise in a way that excludes athletes who risk their health to achieve success; given their fiduciary relationship with athletes, it is understandable that they would make this choice.⁴⁸ It is fortuitous, therefore, that the drugs and technologies that have the greatest potential to enhance an athlete's chances of success—including the drugs at the heart of the BALCO scandal: steroids, HgH, and rEPO—have either definitive or potential adverse health effects.⁴⁹ It is much more difficult, though, to define the list of drugs and technologies that should be banned solely because they constitute cheating.⁵⁰

46. See, e.g., SANDEL, *supra* note 15, at 25, 44 (arguing that genetic engineering celebrates the scientist, not the athlete, and would obscure athletics' appreciation of natural gifts); Gary I. Wadler, Women's Sports Found., Doping in Sport: From Strychnine to Genetic Enhancement, It's a Moving Target, Address at the Duke Conference on Doping in Sport 7–9 (1999) (transcript available at <http://www.law.duke.edu/sportscenter/wadler.pdf>) (describing genetic enhancement as the ultimate form of doping).

47. See Jennifer A. Gniady, Note, *Regulating Direct-to-Consumer Genetic Testing: Protecting the Consumer Without Quashing a Medical Revolution*, 76 *FORDHAM L. REV.* 2429, 2437 (“[The Food, Drug, and Cosmetic Act] mandates that all new drugs be proved safe before marketing . . .”).

48. See Ted Stevens Olympic and Amateur Sports Act, 36 U.S.C. §§ 220503(6), (11) (2000 & Supp. 2005), available at http://www.usoc.org/12699_12720.htm (listing among the purposes of the statute the establishment of the Olympic Committee as the national body responsible “to promote and encourage physical fitness and public participation in amateur athletic activities” and “to encourage and support research, development, and dissemination of information in the areas of sports medicine and sports safety”); *id.* § 220511 (requiring the committee to report to the president and Congress of the United States quadrennially regarding the extent to which it has fulfilled its intended purposes); see also *id.* § 220524(9) (describing the obligations of the national governing bodies, including the obligation to “encourage and support research, development, and dissemination of information in the areas of sports medicine and sports safety”).

49. See *infra* notes 180–90 and accompanying text (setting out Posner's incorrect contrary view).

50. See, e.g., Gina Kolata, *Slippery Slope on the Playing Field*, *N.Y. TIMES*, July 11, 1999, at § 4 (Week in Review), at 18 (“[S]ome critics are pointing to . . . a disconnect between excessive worry over performance-enhancing drugs and uncritical applause for the other ways of boosting an athlete's performance—from high-technology running shoes to chains of stores devoted to dietary supplements.”).

Defining cheating is difficult because—like obscenity,⁵¹ child maltreatment,⁵² and torture⁵³—it is at least in some respects in the eye of the beholder. For example, even if steroids did not have definitive or potential adverse health effects, we would believe that taking them under any circumstances is cheating because they fundamentally alter the athlete’s “natural” or “gifted” levels of physical and mental strength.⁵⁴ We recognize, however, that some might permit this use to treat injuries if it facilitated only a return to baseline levels.⁵⁵ Still others might permit their unregulated use, on the view that anything humans might develop that has the potential to enhance performance is fair game.⁵⁶

Relatedly, developing a credible list of substances and technologies that ought to be banned solely because they constitute

51. See GEORGE C. CHRISTIE, THE NOTION OF AN IDEAL AUDIENCE IN LEGAL ARGUMENT 34 (2000) (“[O]bscenity is often, like beauty, in the eyes of the beholder.”); see also *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring) (“I shall not today attempt further to define the kinds of material I understand to be embraced within [the notion of hard-core pornography]; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.”).

52. Doriane Lambelet Coleman, *The Legal Ethics of Pediatric Research*, 57 DUKE L.J. 517, 559 (2007) (“[P]arenting decisions and practices are judged according to majoritarian cultural norms and thus a ‘know it when you see it’ test for child maltreatment.”).

53. CIA Director Porter J. Goss explained that

[w]hat we do does not come close [to torture] because torture, in terms of inflicting pain or something like that, physical pain or causing a disability, those kinds of things that probably would be a common definition for most Americans, sort of, *you know it when you see it*, we don’t do that because it doesn’t get what you want.

William Branigin, *CIA Director Defends Detention Policy*, WASH. POST Nov. 29, 2005, http://www.washingtonpost.com/wp-dyn/content/article/2005/11/29/AR2005112900667_pf.html (emphasis added) (quoting Porter J. Goss).

54. See *infra* notes 87, 100–04 and accompanying text. In this respect, as we explain in Part I.C, we agree with both Sandel and Posner. *Id.*

55. It is theoretically possible for athletes to use steroids or HgH, or even to have surgery simply to return to natural or gifted baselines. See, e.g., MITCHELL REPORT, *supra* note 13, at 10 (noting that some athletes use HgH for injury repair). If athletes use steroids in this way, it can be said that they do not do anything that was not already possible naturally. Nevertheless, we reject this view. What is possible in theory is not necessarily possible in practice; that is, athletes would struggle to get the doses exactly right without crossing the boundaries of their natural abilities, and it would be difficult if not impossible to police any transgressions. Moreover, if athletes were permitted to use HgH, for example, to recover more quickly from training injuries, athletes would have little incentive to design their training programs intelligently so as to reduce the incidence of injuries that might otherwise sideline them. As things stand, such “intelligent design” is a notable aspect of what society admires in athletes who are healthy and peaking when it counts most.

56. This is the logical extension of the argument that athletes ought to be permitted to do anything that is natural to enhance their performance, and that anything that humans make is, by definition, natural. See *infra* note 114.

cheating appears, at least at first blush, to present an intractable line-drawing problem.⁵⁷ Depending on one's point of view, for example, the use of altitude simulators (also known as artificial hypoxic conditions) by athletes who want to "rest high, train low" is a useful illustration of this problem.⁵⁸ The fact that anti-doping rules, including the list of banned drugs and technologies, is developed in the international arena by regulators from diverse legal and ethical cultures merely compounds the line drawing dilemma. As a result, sports governing authorities have tended to avoid the issue whenever possible; apart from a few notable categories, the banned list mostly has been assembled based on substances' training- and performance-enhancing properties and the health risks they pose to athletes who would use them.⁵⁹

B. The World Anti-Doping Agency's Efforts to Define The Spirit of Sport

To its credit, WADA has begun to tackle the problem of defining the spirit of sport. Its World Anti-Doping Code (the Code) has been crafted to "provide[] that substances and methods may be banned for use by athletes if they meet at least two of the following three criteria: (1) they are performance enhancing; (2) they are dangerous to the health of the athlete; or (3) they violate 'the spirit of sport.'"⁶⁰ In other words, the Code expressly provides that a drug or technology can be banned because it violates the spirit of sport, even if it does not also pose a risk to health.

More importantly, WADA has begun the difficult work of developing and explicating its view of the spirit of sport. In particular,

57. For a description of Dr. Thomas Murray's articulation of this point, see *infra* note 61.

58. See COLEMAN ET AL., *supra* note 43, at 1–6 (describing WADA's efforts since 2006 to engage this issue and the related debate over the status of artificially induced hypoxia); SANDEL, *supra* note 15, at 32–34 (describing the hypoxia debate); Posner, *supra* note 16, at 1725 (characterizing artificial hypoxia as "trembl[ing] on the edge between tolerated and reprobated methods of improving one's athletic performance"); see also Gina Kolata, *Live at Altitude? Sure. Sleep There? Hmm.*, N.Y. TIMES, July 26, 2006, at D1 (reporting on this controversy).

59. See, e.g., World Anti-Doping Agency, *The 2007 Prohibited List*, Sept. 16, 2006, available at http://www.wada-ama.org/rtecontent/document/2007_List_En.pdf. Diuretics, which are primarily used by athletes as masking agents, and stimulants, Edward H. Jurith & Mark W. Beddoes, *The United States' and International Response to the Problem of Doping in Sports*, 12 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 461, 473 (2002), are probably the best examples of substances that fall into this category.

60. COLEMAN ET AL., *supra* note 43, at 1 (summarizing article 4.3.1 of the WORLD ANTI-DOPING CODE, *supra* note 21).

it has engaged bioethicist Dr. Thomas H. Murray of the Hastings Center to develop an institutional position on the meaning of the spirit of sport and to defend WADA's position on the issue.⁶¹ And in 2006, WADA initiated what might be considered a test case that purported to challenge the use of altitude simulators as contrary to the spirit of sport; WADA had separately declined to classify the technology as posing a real health risk.⁶² In the context of this case, WADA's Ethical Issues Review Panel—the internal committee lead

61. Dr. Murray is the Chair of WADA's Ethical Issues Review Panel. The Hastings Center, Thomas Murray, Ph.D., <http://www.thehastingscenter.org/people/profiles/murray.asp> (last visited Apr. 31, 2008). In this capacity, Murray has written (among other things) a position paper entitled *In Search of the Spirit of Sport*, in which he lists and then responds to the “[f]ive arguments [that] come up repeatedly in one variation or another” from those he describes as “opponents of doping control,” including that all training and performance aids are “the same”; that there is no way to draw the line between cheating and legitimate performance enhancement that is not arbitrary; that it is paternalistic to defend doping classifications on the basis of the harm the designated substances and techniques might do to those who use them; that “resistance [to doping] is futile” because the cheaters will always be ahead of anti-doping authorities; and that the technological improvement of humans, including athletes, should be applauded rather than derided. Thomas H. Murray, *In Search of The Spirit of Sport*, PLAY TRUE (World Anti-Doping Agency, Montreal, Can.), Issue 3 – 2007, at 24, 24–26, available at http://www.wada-ama.org/rtecontent/document/PlayTrue2007_Winter_RevolutionEvolution_En.pdf. Although we disagree with Murray's suggestion that only opponents of doping control legitimately raise concerns about line drawing in this context—as Professor Sandel's book, Judge Posner's essay, and this Essay reflect, line drawing in this area is both conceptually challenging and important to get right to assure the integrity of doping control—we agree with his particular conclusion that “difficult cases are never reasons to abandon line drawing altogether.” *Id.* at 25.

62. See WADA Ethical Issues Review Panel Report, *Artificially Induced Hypoxic Conditions to Modify Performance* (Apr. 21, 2006), available at http://www.gbshaun.com/altitudeforall/wada_statement.html. Although WADA subsequently suggested that artificial hypoxia implicate health concerns, its argument appeared to rest on mere speculation about those effects. See Phil Couvrette, *World Anti-Doping Agency Holds Off on Oxygen-Tent Ban*, USA TODAY, Sept. 16, 2006, http://www.usatoday.com/sports/2006-09-16-wada-oxygen-tents_x.htm?loc=interstitialskip (detailing WADA's call for “studies [to] look further into health implications” and suggesting that “side-effects of using the chambers could include altitude-sickness as well as sleep disturbance and could affect the response of the immune system”). According to the author of the leading studies on the technologies, the view that artificial hypoxia may have adverse health effects is based on a mischaracterization of the scientific data. See Letter from Jean-Paul Richalet, Professor of Physiology, Univ. of Paris, to Colleagues (Aug. 28, 2006), available at http://www.gbshaun.com/altitudeforall/Hypoxia_Richalet.html (describing the absence of studies supporting WADA's suspicions). In any event, WADA's own Health, Medical & Research Committee declined to classify artificial hypoxia as a health risk for purposes of defining these technologies as coming within the definition of doping. See SCIENCE AND TECHNOLOGY COMMITTEE, HUMAN ENHANCEMENT TECHNOLOGIES IN SPORT, 2006–07, H.C. 67, at 25, available at <http://www.publications.parliament.uk/pa/cm200607/cmselect/cmsctech/67/67.pdf> (quoting Dr. Bruce Hamilton of UK Athletics as saying that despite the Ethical Issues Review Panel decision, hypoxic chambers were not put on the Prohibited List).

by Murray and charged with doing this work—noted that the Code “provide[s] [only] general guidance and some examples of elements that are constitutive to or promotive of th[e] concept” including “ethics, fair play and honesty, health, excellence in performance, fun and joy, respect for self and other participants, and courage among others.”⁶³ And it suggested that this guidance could be amplified by the understanding that “for any particular means for enhancing performance . . . the crucial test will be whether it supports or detracts from sport as the expression of natural talents and their virtuous perfection.”⁶⁴ Finally, the panel suggested that in determining whether a particular drug or technology is virtuous, one should look to whether it “operate[s] on the athlete” who “is merely a passive recipient” of its benefits, in which case the use would not be virtuous.⁶⁵ It contrasted such use with virtuous ones “with which the athlete actively engages and interacts as part of the process of training and competing in order to enhance performance.”⁶⁶

WADA’s Executive Committee ultimately decided to abandon its 2006 effort to place altitude simulators on the list of prohibited technologies.⁶⁷ The decision likely was influenced at least in part by the conceptual and practical flaws inherent in the Ethical Issues Review Panel’s explication of the spirit of sport. The “virtuous perfection” of “natural talents” does move the ball forward by giving some indication of what WADA might intend by that term: it assumes that athletes have a baseline set of natural gifts, and it allows them to engage in virtuous efforts to enhance those gifts. Because it does not provide a viable definition of “virtue,” however, the standard is “no more useful as a workable test for line drawing” than is the concept it is intended to explicate.⁶⁸ Together with our colleagues Professors Paul Haagen and Curtis Bradley, we have written that “[t]he distinction . . . between ‘active’ and ‘passive’ uses of technology fails as a rule to determine whether something” is virtuous “because it is overbroad and otherwise impossible to

63. WADA Ethical Issues Review Panel Report, *supra* note 62, at 1–2.

64. *Id.* at 2.

65. *Id.*

66. *Id.*

67. See Couvrette, *supra* note 62 (reporting that WADA decided to “h[o]ld off on banning the use of hypoxic chambers”).

68. COLEMAN ET AL., *supra* note 43, at 3.

sustain.”⁶⁹ Among other reasons, this distinction fails because (1) the distinction captures much that is permitted according to widely shared views of the virtuous perfection of natural talents, for example, “[e]lectrical stimulation machines, massage equipment and therapy, and ice and heat treatments”;⁷⁰ (2) “athletes could not be prevented from using other technologies—helicopters or teleskis, for example—to lie (passively) at natural elevations”;⁷¹ and (3) without a physiological test that can distinguish red blood cell counts obtained as a result of resting at high altitudes from red blood cell counts obtained as a result of resting in artificial hypoxic conditions, a ban on artificial hypoxia would be impossible to police.⁷² WADA’s decision not to pursue this case was also based on strong opposition from Olympic stakeholders, who may have had other reasons to oppose the ban.⁷³ Despite this decision, however, WADA continues to be committed, if not to the particular refinement of the spirit of sport at issue in this test case, at least to developing a spirit of sport-based definition of doping.⁷⁴

69. *Id.*

70. *Id.* at 4.

71. *Id.* at 5.

72. *Id.*

73. See, e.g., Russell Langley, *WADA Decides Against Hypoxic Chamber Ban*, UK SPORT, Sept. 21, 2006, available at http://www.uk sport.gov.uk/news/wada_decides_against_hypoxic_chamber_ban/ (noting the United Kingdom’s concerns that “the banning of hypoxic chambers begins to blur the fair and enforceable line where we can determine whether or not a doping offence has been committed” and that “there is currently no realistic solution for the regulatory control of hypoxic chambers so there would be no way of monitoring its use or misuse if it was added to the List at this stage”); see also ANNE BROWN, CANADIAN CENTRE FOR ETHICS IN SPORT, SUBMISSION TO WADA CONCERNING THE STATUS OF HYPOXIC DEVICES 1–2 (2006), available at <http://www.cces.ca/pdfs/CCES-PAPER-HypoxicDevices-E.pdf> (arguing that there is no evidence that artificial hypoxia has caused “injuries or adverse health consequence[s]”; that “the rationale of the WADA Panel is problematic”; and that “adding hypoxic devices to the WADA Prohibited List will call into question the credibility of the List and, by association, the credibility of the World Anti-Doping Program”); The Safety and Ethics of Hypoxic Altitude Systems: Experts’ Opinions and Statements, http://www.gbshaun.com/altitudeforall/hypoxia_resources.html (last visited Apr. 31, 2008) (compiling a number of international organizations’ and individuals’ views of WADA’s proposal to ban artificial altitude technologies).

74. For example, its homepage features Dr. Murray’s exposition, *In Search of the Spirit of Sport*, with the tag line “[t]he struggle for the future, and perhaps the soul, of sport is an ongoing conflict.” Murray, *supra* note 61, at 24.

C. *Michael J. Sandel and Richard A. Posner on the Definition of Doping*

This definitional work is tremendously important to get right. As we argue in Part II, a number of constituencies are heavily invested in the results of this process, including the governing authorities that promote and sell (figuratively to the public and literally to sponsors) an image of sport that is antithetical to cheating;⁷⁵ clean athletes who invest significant emotional, financial, and time-related resources in participation in sport consistent with that image;⁷⁶ and the public that is promised fair athletic competitions.⁷⁷ Arguably, children are the most important subgroup within this last constituency: given how culturally significant sports are in most societies, successful athletes are powerful role models not only for the relatively few children who seek to become successful athletes themselves but also for all children who look to role models as they develop their own moral codes.⁷⁸ Thus, although sports governing authorities should be principally responsible for defining cheating and its opposite, the spirit of sport, this problem has social and political significance that transcends the

75. Television commercials around the Olympics illustrate this point well, as they typically feature athletes who are either sponsored by or portrayed as emblematic of companies for whom the commercials are made. Most often, the featured athletes are young, wholesome, and indistinguishable in their nonathletic lives from others in the community. *See, e.g., Super* (Home Depot television commercial 2006), available at <http://www.youtube.com/watch?v=vP6Mc0a-N4Y>; *The Best of Us* (International Olympic Committee television commercial 2008), available at <http://www.youtube.com/watch?v=jEGBjJkOP34>; *see also Effects of Performance Enhancing Drugs on the Health of Athletes and Athletic Competition: Hearing Before the S. Comm. on Commerce, Science, and Transportation*, 106th Cong. 86 (1999) (statement of Doriane Lambelet Coleman, Professor, Duke University School of Law), available at <http://bulk.resource.org/gpo.gov/hearings/106s/75594.pdf> (describing the Olympic Committees' historical reluctance to control doping because positive drug tests would tarnish the clean sport image that is essential to their marketing efforts' success).

76. *See, e.g., MITCHELL REPORT*, *supra* note 13, at 14 (“[O]ne of the ‘biggest complaints’ among [clean] players was that a ‘guy is using steroids and he is taking my spot.’”); Dave Krieger, *Shorter’s Longing Is a Drug-Free Sports World*, ROCKY MOUNTAIN NEWS (Denver, Colo.), May 27, 2006, http://www.rockymountainnews.com/drmn/sports_columnists/article/0,1299,DRMN_83_4731879,00.html (noting that Frank Shorter’s commitment to worldwide anti-doping efforts stems from his unexpected defeat by Waldemar Cierpinski of the former East Germany, who, after relegating Shorter to silver in the 1976 Olympic marathon, was later confirmed to have participated in East Germany’s doping program); *see also infra* notes 171–72 and accompanying text (describing doping as theft).

77. *See, e.g., MITCHELL REPORT*, *supra* note 13, at 11 (describing doping as a “[t]hreat to the [i]ntegrity of [b]aseball” on the ground that it is a breach “of the trust placed in this sport by its fans”).

78. *See infra* notes 191–96 and accompanying text.

interests of those organizations. It is because of this that it is both appropriate and a welcome development that public intellectuals like Professor Sandel and Judge Posner from outside of the international sports community are intrigued by this problem to the point of lending their considerable talents toward its solution.

There is much that Professor Sandel and Judge Posner have gotten right. Most important is the process by which appropriate consensus on definitions of cheating and the spirit of sport can be reached. As we implied in Section A when we analogized cheating to obscenity, child maltreatment, and torture,⁷⁹ when a standard risks devolving into an arbitrary know-it-when-you-see-it test, it is critical to discern and for the relevant constituencies to agree on the particular qualities of a violation that make it normatively repugnant. Those qualities become the standard against which alleged violations must be tested.⁸⁰ Although it still risks arbitrary classifications in marginal cases, this approach generally cabins discretion to find that a substance or technology is cheating. Sandel's and Posner's respective works on doping reflect precisely this process. Thus, both begin with the attributes of sport and athletes that make them attractive, what WADA calls "the spirit of sport" and what its Ethical Issues Review Panel has called "the virtuous perfection of natural talents."⁸¹ For Sandel, this is a combination of "natural talents" or "gifts" and "effort

79. See *supra* notes 51–53 and accompanying text.

80. For example, the qualities of obscenity that make it (at least for many) normatively repugnant include its "appeal to the prurient interest in sex, which portray sexual conduct in a patently offensive way, and which, taken as a whole, do not have serious literary, artistic, political or scientific value." *Miller v. California*, 413 U.S. 15, 24 (1973). The analogous qualities of maltreatment include its tendency to cause the child serious physical or emotional injuries or deprivations. See Child Welfare Information Gateway, What is Child Abuse and Neglect?, <http://www.childwelfare.gov/pubs/factsheets/whatiscan.cfm> (last visited Apr. 31, 2008) (describing child abuse and neglect as an act or omission resulting in or presenting an imminent risk of serious physical or emotional harm). Similarly, torture has been defined as

any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, . . . or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity.

Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, art. I, ¶ 1, *opened for signature* Dec. 10, 1984, S. TREATY DOC. NO. 100-20 (1988), 1465 U.N.T.S. 85, *available at* <http://www2.ohchr.org/English/law/pdf/cat.pdf>.

81. See *supra* notes 60, 64 and accompanying text.

and striving, grit and determination.”⁸² For Posner, these are “the hierarchies of ‘natural’ talent” including “grit and determination.”⁸³ Both derive from these attributes a standard for distinguishing good from bad performance enhancers. For Sandel this line can be drawn by looking to the substances and technologies that “improve” and “corrupt athletic competition as a human activity that honors the cultivation and display of natural talents.”⁸⁴ For Posner the line is drawn “between those [enhancers] that disturb or obscure, and those that leave unaltered, the hierarchies of ‘natural’ talent that sports seek to exhibit.”⁸⁵ And both conclude with an application of these attributes or factors to particularly thorny doping dilemmas. In this context, Sandel and Posner both discuss altitude simulators, running shoes, vision correction, and golf carts, among other things.⁸⁶

Read together, Professor Sandel and Judge Posner also make a significant substantive contribution to the hard work that is defining the spirit of sport: they move the ball beyond Dr. Murray’s formulation for WADA to explain an essential difference between the virtuous perfection of natural talents and its opposite, cheating or doping. Sandel and Posner begin with “natural talents and gifts,” which they take to include “grit and determination” (nature, as in nature/nurture).⁸⁷ They understand these to be genetic (natural) endowments that athletic competition at least partially showcases.⁸⁸ And they understand that athletes supplement these talents and gifts with effort (nurture).⁸⁹ But they draw the line between acceptable or virtuous efforts (in the spirit of sport) and unacceptable ones (cheating or doping) according to whether they “disturb or obscure . . . the hierarchies of ‘natural’ talent that sports seek to exhibit.”⁹⁰ In other words, they draw the line according to what a substance or technology does, not according to what it is: a substance or technology is cheating if its effect is to rearrange the hierarchy of

82. See *supra* notes 23–24 and accompanying text.

83. See Posner, *supra* note 16, at 1739 (considering grit and determination as one of those innate “natural hierarchies”).

84. SANDEL, *supra* note 15, at 29, 37.

85. See *supra* note 33 and accompanying text.

86. See SANDEL, *supra* note 15, at 29–30, 32–34, 42; Posner, *supra* note 16, at 1725, 1727–28.

87. See *supra* notes 23–24, 86 and accompanying text; see also *infra* notes 111–13 and accompanying text.

88. See SANDEL, *supra* note 15, at 27–28; Posner, *supra* note 16, at 1727.

89. See SANDEL, *supra* note 15, at 27–28; Posner, *supra* note 16, at 1727.

90. Posner, *supra* note 16, at 1731; see also *supra* notes 25–33 and accompanying text.

natural talents in a particular sport—that is, if it expands the capacities that a particular athlete’s genetics alone would permit. Former 1500-meters champion Jeff Atkinson put it this way in 1990: “Track and field is about running around in circles as hard as you can do that If you want to go around faster, you can get a bicycle. Using drugs is just like using a bicycle. It’s not you.”⁹¹ On the other hand, a substance or technology is within the spirit of sport if it merely facilitates the fruition of those capacities.⁹² Asked about what he has added as a coach to tennis star Andy Roddick’s game, Jimmy Connors explained this last point with appropriate Sandelian humility: “You take what you have . . . add a little bit here and a little bit there and try to make it even better . . . you have the talent, you have the weapons, you have what you are good at, and you try to go a bit beyond that.”⁹³

Judge Posner explains his view—which we share—that the source of “human beings’ love of sports” is probably “the innate human delight . . . in innate human hierarchies, such as hierarchies of height, strength[,] . . . agility, physical coordination, beauty, brilliance, and musical talent.”⁹⁴ This is especially true of appreciation for the

91. Peter Gambaccini, *Drugs*, RUNNER’S WORLD, Oct. 1, 1990 (quoting Jeff Atkinson), available at 1990 WLNR 3053875.

92. Medical ethicist Dr. Norman Fost has argued that doping authorities are hypocritical in choosing among technological and pharmaceutical innovations on the basis that some are natural and others are not; as far as he is concerned, Janet Evans’s “‘slime suit,’ a greasy swimsuit that had been developed in secret [and] slashed her time” at the 1988 Olympics was no different from the stanozolol that resulted in Ben Johnson being stripped of the gold medal in the 100-meters event. Kolata, *supra* note 50. What our analysis shows is that Dr. Fost misunderstands the intention of the anti-doping authorities. They have no interest in banning performance-enhancing innovations and technology in general; nor would they deny that all are “unnatural” in the sense that they do not come directly from nature. See WADA Ethical Issues Review Panel Report, *supra* note 62, at 2 (“Sport has embraced technology and the expert systems that go into the design of improved equipment and refined training methods.”). Rather, as we understand these authorities, they seek only to ban those innovations and technologies that rearrange the natural hierarchy of talents and gifts. See *id.* (“But it is vital always to remember that sport is fundamentally about the athlete, and not about the equipment or expert systems upon which the athlete may rely.”).

93. *The Australian Open Live* (Tennis Channel television broadcast Jan. 23, 2007); see also Gambaccini, *supra* note 91 (quoting track official Tracy Sundlun as saying that track and field “is a sport that’s based on natural values” and that “[y]ou are what you are, you do what you can, and that’s where it has to end—without outside help”).

94. Posner, *supra* note 15, at 5–6. As one commentator observed,

Beauty is not the goal of competitive sports, but high-level sports are a prime venue for the expression of human beauty. The relation is roughly that of courage to war. The human beauty we’re talking about here is beauty of a particular type; it might be called kinetic beauty. Its power and appeal are universal. It has nothing to do with sex

geniuses in sport, athletes such as Edwin Moses,⁹⁵ Michael Jordan,⁹⁶ Roger Federer,⁹⁷ and Tiger Woods.⁹⁸ They are revered precisely

or cultural norms. What it seems to have to do with, really, is human beings' reconciliation with the fact of having a body.

David Foster Wallace, *Federer as Religious Experience*, N.Y. TIMES, Aug. 20, 2006, http://www.nytimes.com/2006/08/20/sports/playmagazine/20federer.html?_r=1&oref=slogin&pagewanted=print.

95. Sports commentator Oliver Irish describes Edwin Moses as almost invincible:

Bounding prodigiously over the 10 three-foot hurdles, taking an unprecedented 13 steps between hurdles instead of the usual 14, he was a formidable assembly of speed, technique, grace and stamina: Moses consistently made the most demanding of events seem almost ridiculously simple. "My slow is faster than most athletes' fast," he said. "People either think that I'm a freak or that the other guys aren't any good."

Oliver Irish, *Do You Remember When . . . Ed Moses Was Almost Invincible*, OBSERVER (London), June 1, 2003, <http://sport.guardian.co.uk/athletics/story/0,,966355,00.html>. The Laureus Foundation, which Edwin Moses chairs, and its World Sports Academy, of which he is a member, describes his athletic accomplishments this way:

Edwin Moses will always be remembered for one of the most dominant reigns in world sport. For a remarkable nine years, nine months and nine days, he remained invincible in the 400 metres hurdles, being unbeaten in 122 consecutive races (107 finals). Bounding over the 10 three-foot obstacles, he took an unprecedented 13 steps in between the hurdles instead of the usual 14 and managed to produce a rare winning mix of speed, grace and stamina. By the time he retired from the sport in 1989, Moses had won two Olympic gold medals, in Montreal in 1976 and Los Angeles in 1984 and a bronze in Seoul in 1988. He would almost certainly have won a third gold, but for the American boycott of the 1980 Olympics in Moscow. In 1983 he broke the world record for the fourth time in Koblenz, Germany, with a time of 47.02, a mark which stood for the next nine years. During his career he won three World Cup titles and two World Championships.

Academy Members—Laureus, Edwin Moses, <http://www.laureus.com/academy/members?id=158> (last visited Apr. 31, 2008).

96. David Halberstam recounts Chicago Bulls coach Phil Jackson's advice to Michael Jordan upon learning Jordan was considering retirement:

[Jackson] reminded Jordan of the singular pleasure he would be denying millions of ordinary people when he left the game because his gifts were so special. His talent, Jackson said, was not merely that of a great athlete but transcended athleticism to become an art form. His gift was along the lines of a Michelangelo, Jackson said, and therefore Jordan at the least had to understand that it belonged not just to the artist but to all those millions who stood in awe of the art itself and derived, in a life otherwise filled with the mundane, such pleasure from what he did.

DAVID HALBERSTAM, *PLAYING FOR KEEPS: MICHAEL JORDAN AND THE WORLD HE MADE* 9 (1999). "Michael Jordan," said author and Chicago resident Scott Turow, "plays basketball better than anyone else in the world does anything else." *Id.* at 10.

97. For example, David Foster Wallace writes that

Roger Federer is one of those rare, preternatural athletes who appear to be exempt, at least in part, from certain physical laws. Good analogues here include Michael Jordan, who could not only jump inhumanly high but actually hang there a beat or two longer than gravity allows, and Muhammad Ali, who really could "float" across the canvas and land two or three jabs in the clock-time required for one. There are probably a half-dozen other examples since 1960. And Federer is of this type—a type that one could call genius, or mutant, or avatar.

Wallace, *supra* note 94. Wallace adds that

because their performances reflect an unusual, once-in-a-lifetime mix of extraordinary natural talent and unusually intelligent effort.⁹⁹

Federer is a first-rate, kick-ass power-baseliners. It's just that that's not all he is. There's also his intelligence, his occult anticipation, his court sense, his ability to read and manipulate opponents, to mix spins and speeds, to misdirect and disguise, to use tactical foresight and peripheral vision and kinesthetic range instead of just rote pace—all of this has exposed the limits, and possibilities, of men's tennis as it's now played.

Id.

98. Describing a fan's reaction to underdog Zach Johnson's win over Tiger Woods at the Masters in 2007, Thomas Boswell wrote:

[O]ccasionally, just often enough to give the rest of us some perverse yet inspirational hope, a true plodder, a man without any pretense to great gifts in his field, will upend the most universally acknowledged genius of the age. . . . We wouldn't want such things to happen too often. Beyond a certain point, it's deeply unsettling, against the order of things. But every once in a while, it's profoundly okay. . . . On days like this, when Woods doesn't quite win another major championship, we almost appreciate him more. In four days, Johnson seldom played a stroke that was beyond the best swing of Everyman. In contrast, Woods hit contorted improvisational recoveries . . . that even other pros never attempt. A few Zach Johnsons go a long way. But they have their place and give us hope. Talent knows the odds when faced with genius, but always wants a rematch.

Thomas Boswell, *It Doesn't Take a Genius to Beat Tiger*, WASH. POST, Apr. 9, 2007, at E1, available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/04/08/AR2007040801230.html>.

99. To the extent that opponents of doping talk about the need to level the playing field they mean the need to assure that everyone follows the same rules and, in particular, that athletes do not engage in doping as a way to disturb or obscure the hierarchy of natural talents and gifts. *See, e.g.*, Kolata, *supra* note 49 (setting out the view of Drs. Murray and Catlin that "drug testing in the Olympics 'is an effort to preserve what is beautiful and admirable in sports and to ensure that all athletes compete on a level playing field'"). Otherwise, elite sports celebrate uneven playing fields and the combination of merely excellent athletes and rare geniuses who populate them. *See* SANDEL, *supra* note 15, at 12 ("It has always been the case that some athletes are better endowed, genetically, than others. And yet we do not consider the natural inequality of genetic endowments to undermine the fairness of competitive sports."). This, in turn, is why there is no room in elite athletics for remedial measures designed to level the playing field by removing some athletes' natural advantages.

Inconsistent with this widely held position are suggestions like those of philosopher Peter Singer that performance-enhancing drugs should be legalized to level the genetic playing field so that effort is the value that is isolated and rewarded. *See* Singer, *supra* note 14 (apparently agreeing with Oxford ethicist Julian Savulescu that "without drugs, those with the best genes have an unfair advantage" and suggesting that permitting athletes to engage in doping assures that "[e]ffort . . . becomes more important than having the right genes"). Depending on how it is interpreted, the provision in the Ted Stevens Olympic and Amateur Sports Act requiring sports authorities to "encourage and provide assistance to amateur athletic programs and competition for amateur athletes with disabilities, including, where feasible, the expansion of opportunities for meaningful participation by such amateur athletes in programs of athletic competition for able-bodied amateur athletes" could also be inconsistent with this position. Ted Stevens Olympic and Amateur Sports Act, 36 U.S.C. § 220503(13) (2000 & Supp. 2005). This statutory provision would be consistent with the position that elite sports exist in part to celebrate natural talents and gifts if it is intended, for example, to encourage the authorities to permit athletes in the wheelchair division to compete alongside, although not in the same division as, able-bodied

Although doping is anathema for clean athletes at all levels, known or suspected doping that disturbs the natural hierarchy at this most elite level is particularly abhorrent to spectators.

When the petite, former running prodigy Mary Decker (later Slaney) went toe-to-toe with the Soviet women in the finals of the 1983 World Championships in the 1500- and the 3000-meters events and beat them all down the stretch to win this improbable double,¹⁰⁰ spectators, including her competitors, understood that they were

athletes in the New York Marathon, or to permit disabled athletes like Casey Martin to compete in Professional Golf Association events with a golf cart. *See* Posner, *supra* note 16, at 1730 (“Stamina is not what a golf tournament seeks to test, so compensating for an abnormal deficiency in stamina does not . . . disturb the relevant hierarchy, as it would in long-distance swimming.”). The provision would be inconsistent with this view, however, if it is intended to encourage the authorities to do as Singer suggests—to level the genetic or physical playing field as a way to isolate effort as the value rewarded in elite athletic competition.

According to this analysis, although double amputee sprinter Oscar Pistorius is to be lauded for his extraordinary effort and determination, because genetic and physical ability is also part of the equation, he should not be permitted physically to level the playing field by using cheetah blades prosthetics to make up for the fact that he has no lower legs. *See supra* note 45 (introducing Pistorius’s case as an example of just how complicated it is to arrive at a good definition of doping). As one commentator noted in the aftermath of the Court of Arbitration for Sport’s decision that Pistorius was free to compete in IAAF-sanctioned (able-bodied) events, these blades are notably unlike the golf cart that Casey Martin used to get around on the golf course:

The cart did not create a golf swing for Martin, didn’t draw or fade a shot, didn’t blast him out of a bunker or roll in a putt. Once he got to his ball, he was just like everyone else in the competition. . . . But make no mistake, running is definitely part of running. When Pistorius reaches the point of performance, when the gun goes off, he is not like everyone else in the competition. He cannot perform the required movements without the prosthetic aids.

Dan O’Neill, *Pistorius Is Admirable, But Does He Really Belong?*, ST. LOUIS POST-DISPATCH, May 25, 2008, at D2 (explaining that Pistorius “was born without fibulas in his legs, and when he was just 11 months old, both limbs were amputated below his knees”).

Finally, although we agree with Posner’s view that elite athletics properly celebrate extraordinary genetic and physical gifts as well as effort, we disagree with his aside that privileging genetics in this way is “archaic in this era of egalitarian pretense.” *See* Posner, *supra* note 16, at 1727; *see also* SANDEL, *supra* note 15, at 28 (“[E]xcellence consists at least partly in the display of natural talents and gifts that are no doing of the athlete who possesses them. This is an uncomfortable fact for democratic societies [whose members] want to believe that success, in sports and in life, is something we earn, not something we inherit.”). Specifically, we disagree with Posner that this historical period is appropriately characterized as pretense with respect to progressive efforts to treat disabilities of all sorts as remediable. We especially disagree to the extent that his position reflects disdain for solutions that would permit disabled and underprivileged individuals to compete equally for jobs and educational opportunities. Natural talents and gifts sometimes facilitate individuals’ entrée into employment and educational settings. But it cannot be said of these settings as it can of elite athletics that showcasing natural talents and gifts is their *raison d’être*.

100. USATF Hall of Fame, Mary Slaney (Decker), <http://www.usatf.org/halloffame/TF/showBio.asp?HOFIDs=196> (last visited Apr. 31, 2008).

seeing something really special: the triumph of innate human hierarchies, grit, and determination over a sports juggernaut that excelled at the chemical reconstruction of its athletes and their potential.¹⁰¹ Conversely, when doping is widely believed to cause the defeat of geniuses or the eclipse of their records—for example, when Barry Bonds broke Hank Aaron’s longstanding career home run record¹⁰² and when Florence Griffith Joyner broke Evelyn Ashford’s world record over 100-meters event¹⁰³—spectators lament the inevitable diminishment of the vanquished but still greater athlete. Similarly, when athletes who dope are unbeatable during their careers or afterward as a result of the record left behind, they deprive the world of the opportunity to delight in geniuses who follow because their doping obscures the real significance of future performances. One commentator has suggested, for example, that an explanation for Marion Jones’s decision to engage in doping before the 2000 Sydney Olympics is that without the use of prohibited drugs she never could have replicated or broken Griffith Joyner’s world record in the 100-meters event; she was denied the “title of world’s fastest woman ever.”¹⁰⁴

101. See Yesalis et al., *supra* note 1, at 51, 57–59 (discussing the history of national doping programs, including those of the Soviet Union and the former Eastern Bloc countries); Mary Decker—1983 World Championships 1500m last lap (television broadcast 1983), available at <http://video.aol.com/video-detail/mary-decker-1983-world-championships-1500m-last-lap/2934287214>.

102. See *supra* note 13 and accompanying text; *infra* note 144 and accompanying text.

103. Despite her repeated denials, Florence Griffith Joyner is widely believed to have used prohibited performance-enhancing drugs in the year leading up to her spectacular performances in the 100- and 200-meters events in 1988. According to sports governing officials, she never tested positive. But she was never subjected to random out-of-competition drug testing, a program which was only instituted after her abrupt retirement from the sport in 1989. See *Flo-Jo: Tarnished Star of the Track*, OBSERVER (London), Feb. 8, 2004, available at <http://observer.guardian.co.uk/osm/story/0,,1140773,00.html> (“Her dramatic improvement in 1988 and rapid retirement, then her shockingly early death, have led many to conclude that Griffith Joyner was using steroids and other banned drugs, and that she is one of the greatest cheats in the history of sport.”); Patrick O’Neill, Op-Ed., *When Ego Is the Enemy*, NEWS & OBSERVER (Raleigh, N.C.), Jan. 17, 2008, available at <http://www.newsobserver.com/print/thursday/opinion/story/885955.html> (“Few believe Griffith Joyner was ‘clean’ when she ran those incredibly fast times.”); Ian Thomsen, *Flo-Jo Case Leaves Risk of Drugs Still in Question*, INT’L HERALD TRIB., Sept. 26, 1998, available at <http://www.ihf.com/articles/1998/09/26/ian.t.php> (discussing suspicions that her death may have been due to performance-enhancing drug use and suggesting that “[t]he rumors linking [her] to drugs are not at all unfounded” because “[i]n the year leading up to the 1988 Olympics, her body underwent a conversion as if in the hands of a sculptor”).

104. O’Neill, *supra* note 103. In his op-ed, Patrick O’Neill notes that Marion Jones was already a superstar in 1993 when she first set foot as a freshman on the campus of the University

Finally, although both Professor Sandel and Judge Posner care about substances and technologies that have the potential to create conditions that would render geniuses and exceptional performances invisible by “disturb[ing] or obscur[ing] . . . the hierarchies of natural talent that sports seek to exhibit,”¹⁰⁵ Posner cares about hierarchy to the exclusion of any other measure, whereas Sandel is inclined also to look at whether the use of particular substances and technologies is natural.¹⁰⁶ For example, Posner argues that even potentially hierarchy-altering substances and technologies would be fine if everyone took them so that their effect was not to disturb any hierarchy but rather simply to make everyone’s performance incrementally more brilliant.¹⁰⁷ And Sandel rejects efforts that seem unnatural to him, including the use of altitude simulation devices to “rest high” and “train low,” and the consumption of enormous amounts of fast food by some football players seeking to gain unusual and unhealthy amounts of weight.¹⁰⁸ Indeed, because Sandel privileges nature over nurture, he implies that there may be more to admire in the gifted talents of a Joe DiMaggio than there is in the earned abilities of a

of North Carolina at Chapel Hill. *Id.* Although Michael Jordan is an alumnus, O’Neill recalls that “[l]ocal track aficionado Jim Spier said that in Jones, UNC was signing its greatest athlete ever—in any sport.” *Id.* O’Neill probes why someone with her “natural” talent and potential would need to take drugs. *Id.* And he suggests that the answer lies in Florence Griffith Joyner’s world record in the 100- and 200-meters events:

As great as Jones was, she never would have attained the title of world’s fastest woman ever. The records Jones was targeting . . . were established by the late Florence Griffith Joyner in 1988 when FloJo ran those superhuman times of 10.49 (100) and 21.34 (200). Few believe Griffith Joyner was “clean” when she ran those incredibly fast times. Jones’ bests of 10.65 and 21.62, set in 1998, are great times, but in sprinting, where records usually fall by one- or two-hundredths of a second, Jones’ best times are still light years away from Griffith Joyner’s records. Sadly, the only way Jones could have made that happen was by using drugs.

Id.

105. Posner, *supra* note 16, at 1731.

106. Our earlier reading of Professor Sandel and Judge Posner together, *see supra* notes 87–93 and accompanying text, and our use of this reading in our own analysis of various substances and technologies, *see infra* Part I.D, purposefully avoids these points of disagreement between the two scholars. It intentionally borrows what is, in our view, the best of each of their individual contributions, to arrive at a Sandel-Posner formula for defining doping. Of course, to the extent that either or both of them continue to disagree with aspects of this synthesis, the formula might more appropriately be characterized as our own. We want to be clear, however, that it is very much a product of the ongoing discussion we describe throughout this Section, a discussion which has featured not only Sandel and Posner, but also Drs. Don Catlin and Thomas Murray, and many others along the way.

107. *See* Posner, *supra* note 16, at 1731–32.

108. SANDEL, *supra* note 15, at 32–35.

Pete Rose.¹⁰⁹ His discussion of this point, and particularly his suggestion that he is not entirely comfortable with coaching as a way to perfect natural talents and gifts, implies that he holds at least a version of the classic perspective on the proper engagement of sport that characterizes professionalism of any sort as a taint on the purity of the endeavor.¹¹⁰ Posner flatly rejects Sandel's distinction between gift and effort on the grounds that: "'grit and determination' are . . . as innate as 'natural talents'—they are no less natural";¹¹¹ naturalness as a tool to sort substances, technologies, and behaviors is too slippery to be of much use;¹¹² and humans should be lauded for their Promethean ambitions, that is, for working innovatively and diligently to make the most of their natural gifts.¹¹³

Judge Posner is right, of course, that naturalness of effort is not particularly helpful as a line-drawing tool, particularly in contrast to the hierarchies of natural (genetic) talents and gifts.¹¹⁴ The latter is not perfect, but as Posner puts it most succinctly, it may be "[t]he only robust distinction between good and bad performance enhancers."¹¹⁵

109. *Id.* at 27–29.

110. *Id.* at 38 (suggesting that coaching might be a violation of "the spirit of amateur athletics, which include[s] . . . training wholly on one's own, or with one's peers" and that "[w]hether [coaching is] a legitimate means of performance enhancement depends on [one's] view of the purpose of . . . sports and their attendant virtues"). As Sandel notes, this perspective was perhaps most famously featured in the film *Chariots of Fire*, which won the 1981 Academy Award for Best Picture. *Id.* One of the film's two principal protagonists, Harold Abrahams, is condemned by his Cambridge University masters for paying a coach to help him train for the 1924 Olympic Games in Paris. Abrahams rejects their condemnation, telling his masters, "I'll carry the future with me." See Michael J. Reimer, *Chariots of Fire: Twenty-Five Years Later*, COMMUNIQUE, Apr. 9, 2006, http://www.communiquejournal.org/040906_chariots_of_fire.html.

111. Posner, *supra* note 16, at 1727.

112. *Id.* at 1727–28. In Posner's view,

[t]he meanings [of the word "nature"] quickly get confounded when one is talking about sports doping because the objections to it are bound up with a sense that drugs themselves are not "natural" (though all are composed ultimately of natural materials, as is everything physical) and on that ground alone are likely to be more objectionable to Sandelians than, say, exercise.

Id. at 1728.

113. *Id.* at 1729.

114. See, e.g., Jonathan Baert Wiener, *Beyond the Balance of Nature*, 7 DUKE ENVTL. L. & POL'Y F. 1, 12 (1996) (arguing against the presumption that humans are "separate from and morally inferior to nature" and that "humans (including human creativity) are every bit as much a product of nature as any other organism"); Jonathan Baert Wiener, *Law and the New Ecology: Evolution, Categories, and Consequences*, 22 ECOLOGY L.Q. 325, 340–45 (1995) (challenging, in the environmental context, the view that nature and human action can be distinguished and that human action is artificial vis-à-vis nature).

115. Posner, *supra* note 16, at 1731.

We also agree with his sense that grit and determination can be “gifted” or “natural” in the sense that Sandel intends these terms. Finally, we share Posner’s view that efforts expended in search of perfecting natural talents and abilities of all kinds are generally efforts well spent.¹¹⁶ With respect to sport in particular, although the professionalizing of formerly amateur sports has created some new areas of concern,¹¹⁷ we do not share Sandel’s apparent nostalgia for the amateur era and the class-based inequities by which it was intentionally defined.¹¹⁸ Although Professor Sandel’s body of work as a whole suggests that he would join us in eschewing these inequities,¹¹⁹ they are the inevitable result of a rule that privileges nature over effort and that allows effort only within the boundaries of classic amateurism.

At the same time, we disagree with Judge Posner that maintaining the hierarchy of natural gifts is all that should matter in the equation: there is a lot to be said for working innovatively and hard to *perfect* (rather than to *alter*) natural talents and gifts, and for being witness to the results. From the athlete’s perspective, this means the exhilaration of knowing and reaching (rather than transcending) the limits of one’s own body. From the spectator’s perspective, it means the excitement of seeing the results of that accomplishment, multiplied by however many individual athletes are

116. See *supra* note 35 (noting our view on Professor Sandel’s and Judge Posner’s discussions of humans’ Promethean ambitions).

117. For example, in his retrospective on the significance of the film *Chariots of Fire*, the critic Michael J. Reimer suggests that

it is worth pondering our society’s unquestioning acceptance of professional athletics. . . . [T]he cost of professionalism, and of the overachieving and hypocritical amateurism that preceded it, has been very high. The excessive pressure to achieve that is put on children and youth, the unbridled competitive ethos leading many to the use of performance-enhancing drugs, the corrupting rivers of cash flowing into the coffers of sports organizations, coaches, celebrities, and agents—these and other evils are the result of a view of sports which begins with Harold Abrahams and ends with Tonya Harding.

Reimer, *supra* note 110. Harold Abrahams is the character in *Chariots of Fire* who embraces an early form of professionalism in athletics, and Tonya Harding was “the U.S. figure skater implicated in a convoluted plot to injure her chief rival [Nancy Kerrigan] in the 1994 Winter Games.” *Id.*

118. See *Definition of an Amateur Athlete; Nations of the Earth Where Modern Sport Flourishes to Agree on More Drastic Rules to Keep Professionalism Away from Amateurism*, N.Y. TIMES, Oct. 26, 1913, at S4, available at <http://query.nytimes.com/gst/abstract.html?res=9507E1DC1E3BE633A25755C2A9669D946296D6CF>; see also Wikipedia, Amateur Sports, http://en.wikipedia.org/wiki/Amateur_sports (last visited Apr. 31, 2008).

119. For a brief description of Professor Sandel’s work, see *supra* note 17. For Sandel’s focus on issues of distributive justice, see *supra* note 29.

on display. If everyone in a race took a cocktail of steroids, HgH, and rEPO, so that the natural hierarchy was not altered but everyone ran incrementally faster, the race would be about something different—it certainly would look different—from a race in which no one or only one or a few athletes took this cocktail. (Imagine for purposes of this exercise eight “Ben Johnsons” or eight “Florence Griffith Joyners” lined up at the start of the Olympic 100-meters event.¹²⁰) Of course, one could take the position that the former is better than the latter for both athletes and spectators because everyone clocks in at a faster time. But as we have just suggested, and as we argue further in Part II, this is to isolate only a part of what makes the race worth training for and watching.

D. An Analysis of Some Performance Enhancers as Violations of the Spirit of Sport

Synthesizing the best of Professor Sandel and Judge Posner on the definition of doping yields a formula for deciding whether substances and technologies violate or constitute the spirit of sport that focuses on their hierarchy-altering potential. This formula is itself a progression from Dr. Thomas Murray’s proposed standard for WADA and reflects not only our own thinking but also that of others who have considered the definitional conundrums at the core of this endeavor.¹²¹ This Section’s analysis of some performance enhancers as violations of the spirit of sport demonstrates the formula’s intellectual rigor, practical utility, and also something of its flaws.

Steroids are the paradigmatic example of doping because their use represents a kind of effort that “disturb[s] or obscure[s] . . . the hierarchies of ‘natural’ talent that sports seek to exhibit.”¹²² They

120. Compare photograph of Ben Johnson (on file with the *Duke Law Journal*), available at http://farm1.static.flickr.com/223/448224387_7d139c6aff.jpg, and photograph of Florence Griffith Joyner, available at <http://www.tribuneindia.com/2004/20040813/oly11.jpg> (handing off the baton to Evelyn Ashford in final of women’s 400-meters relay at 1988 Olympics in Seoul), with Evelyn Ashford 10.76 World Record (television broadcast Aug. 22, 1984), available at <http://www.youtube.com/watch?v=-Mdu3fQXBUE> (film clip of Ashford’s world record in the 100-meters event, which Griffith Joyner destroyed in 1988). Johnson was caught using steroids following his victory in the 100 meters in the Seoul Olympics, *supra* note 2, Griffith-Joyner is widely believed to have used prohibited substances in that same period, *supra* note 103.

121. Dr. Murray’s proposal appears to have influenced the development of Professor Sandel’s thinking on this issue, which Judge Posner and we have responded to in turn. See SANDEL, *supra* note 15, at 32–34. Because of this, in our view, it is appropriate to characterize the progression toward the standard we apply in this Section as including his work.

122. Posner, *supra* note 16, at 1731.

permit athletes who use them to train harder and recover faster from training and injury than they ever could without their use.¹²³ And they effect psychological changes that contribute to their users' aggressiveness and confidence (grit and determination) in training and in competition.¹²⁴ These two effects together offer the potential for *exponential* improvements, improvements that would not be naturally possible without drugs. (A geneticist would say that these improvements were beyond that which their DNA would otherwise express.) As a result, athletes who use steroids can be competitive with and even defeat athletes who do not use them and who would otherwise have been in a different league in terms of abilities and achievements. At the highest levels of sport, in which the differences among the top athletes are measured in seconds and even hundredths of a second, some athletes' steroid use undoubtedly has made the difference, literally, between making the Olympic team and being left behind to watch the events on television, between being on the podium at the Olympics and being relegated to the stands to watch the medal ceremony, and between being a world-record holder and an also-ran. Athletes who use steroids must expend substantial effort for their drug-induced promise to be realized, and so these athletes start with their baseline natural talents and gifts but they also work hard to benefit from their doping. Indeed, doped athletes may work even harder than athletes who do not use steroids because these drugs allow for more and more difficult training than would otherwise be possible. But again, this effort is illegitimate because it results in a

123. The Mitchell Report describes the impact of anabolic steroids on the body this way:

Steroids foster the anabolic process (muscle growth and the increase of muscle mass) and also limit catabolism (the breakdown of protein in muscle cells). As a result, steroid users can increase the muscle gain resulting from strenuous exercise and maximize the impact of a high protein diet. In addition, because of their anti-catabolic effect, steroids reduce the soreness that normally results from strenuous exercise, which allows an athlete using steroids to exercise more frequently At least until a given anabolic steroid loses its efficacy for the user, larger doses generally result in more rapid gains in lean muscle mass and strength.

MITCHELL REPORT, *supra* note 13, at 5–6; *see also* Richard V. Clark, *Anabolic Androgenic Steroids: Historical Background, Physiology, Typical Use, Side Effects*, in PHARMACOLOGY, DOPING AND SPORTS: A COMPLETE SCIENTIFIC GUIDE FOR ATHLETES, COACHES, PHYSICIANS, SCIENTISTS AND ADMINISTRATORS (Jean L. Fourcroy ed., forthcoming 2009) (manuscript at 4–5, on file with the *Duke Law Journal*) (describing the tremendous impact of steroids on muscle growth).

124. Clark, *supra* note 123 (manuscript at 10); *see also* C. Maravelias et al., *Adverse Effects of Anabolic Steroids in Athletes: A Constant Threat*, 158 TOXICOLOGY LETTERS 167, 172 (2005) (explaining that “aggressiveness, euphoria . . . [and] altered libido” are among the “mental status and behavioral changes” that “individuals may experience . . . with anabolic steroid use”).

rearrangement of the natural hierarchy that would have been obtained without the drugs: the group that comprises the Olympic team or the New York Yankees is different because of steroids, as is the roster that designates those who will run in the Olympic final or be starters in the World Series.

HgH, rEPO, and stimulants also constitute doping because they “disturb or obscure . . . the hierarchies of ‘natural’ talent that sports seek to exhibit.”¹²⁵ HgH causes bone and muscle development beyond that which would result from the expression of the athlete’s own DNA; this drug effectively trumps that DNA.¹²⁶ Thus, for example, a basketball player who, as an adolescent, uses or is given HgH to grow beyond what would otherwise have been a natural height of five feet nine inches to a height of six feet one inch gains the sport-specific advantages of that added height to the detriment of those competitors who attain that height as a result of their natural gifts. Stimulants afford athletes concentration levels and reaction times beyond what would be natural or what could be achieved from hard work.¹²⁷ Depending on the dose injected and the presence of adequate nutrients (such as iron), rEPO can cause the body to mass produce red blood cells, increasing its oxygen carrying capacity in a way and at a speed that would be impossible naturally.¹²⁸ Thus, a tennis player

125. Posner, *supra* note 16, at 1731.

126. See MITCHELL REPORT, *supra* note 13, at 10 (“[B]ecause human growth hormone stimulates growth in most body tissues, athletes use it to promote tissue repair and to recover from injury.”); Clark, *supra* note 123 (manuscript at 2) (noting that growth hormone can have anabolic effects); Macnow, *supra* note 11 (“Human growth hormone [is] a genetically engineered protein that accelerates bone and tissue growth.”).

127. See John Hoberman, Op-Ed., *The Doping Of Everyday Life*, BOSTON GLOBE, Aug. 21, 2006, http://www.boston.com/news/globe/editorial_opinion/oped/articles/2006/08/21/the_doping_of_everyday_life/ (discussing “[t]he performance-enhancing effects of ADHD drugs such as Ritalin and Adderall [including that they] exceed those of the classic amphetamines by promoting a supernormal capacity for mental focus” and arguing that it is illogical for the public to care only about their misuse by athletes when they are similarly being misused by students to gain the same competitive advantage).

128. According to Dr. Benjamin D. Levine, Director of the Institute for Exercise and Environmental Medicine at the University of Texas Southwestern Medical Center,

EPO, like other drugs, bypasses all the regulatory processes that keep the red cell mass (among other things[]) in check[.]. So at altitude, EPO goes up, the body makes more red cells (and concentrates them . . .), so oxygen delivery increases and EPO gets shut off. Indeed, after a month at altitude, EPO levels are indistinguishable from sea level. In contrast, EPO injection creates a constant signal that is not responsive to any feedback mechanisms.

E-Mail from Benjamin D. Levine, Director, Inst. for Exercise & Env’tl Med., to authors (May 21, 2008, 18:46 EST) (on file with the *Duke Law Journal*).

who uses Ritalin to overcome attention deficit disorder, or a cyclist who uses rEPO to gain oxygen carrying capacity beyond that which could be achieved by training, gains the sport-specific advantages of those traits to the detriment of those who were gifted with or have trained to achieve normal or even exceptional baseline levels. Because of the speed at which stimulants and rEPO act on the body, these drugs can appropriately be analogized to Rosie Ruiz's infamous ride on the subway to the finish line of the New York City Marathon, a ride that Sandel sets out as an "easy case" of cheating.¹²⁹

Notably, despite their surface similarity to rEPO, altitude simulators cannot be classified as doping according to this analysis, because unlike rEPO, their effects on the body are the same as the effects of natural altitude. Altitude simulators do not and cannot cause the body to be more and perform differently than its genes would otherwise allow; rather, they merely provide the same low oxygen stimulus present at "natural" altitude, which initiates exactly the same pattern of gene expressions that would occur in that setting.¹³⁰ Moreover, unlike rEPO and Rosie Ruiz's subway ride,

129. See SANDEL, *supra* note 15, at 30. Professor Sandel writes that Ruiz used the subway to get to the finish line of the Boston Marathon. *Id.* The most thorough accounts make no mention of her riding the subway there, however. *E.g.*, Lisa Tuite et al, *Rosie Ruiz: From Kenmore Square to West Palm Beach, Fla., It's been a Mystery*, BOSTON GLOBE, Apr. 14, 1996, at 69; see also Karen Guregian, *Boston: The Crowning Moment*, BOSTON HERALD, Apr. 17, 2006, at 94 ("Maybe Rosie Ruiz walked over from her hotel and simply jumped into the race. Or maybe she took the subway. Race historians have different theories on her route to the Copley Square finish line.") Instead, they refer to Susan Marrow's claim that as the earlier New York City Marathon was being run, she was on the subway with Ruiz from Greenwich Village to Columbus Circle, near the finish line, which Ruiz later crossed. *E.g.*, Stephen Harris, *The Scam: It's Been 25 Years Since Rosie Ruiz Failed to Fool the World*, BOSTON HERALD, Apr. 15, 2005, at 118. Although there are numerous references to Ruiz using public transportation on her way to temporary victory in Boston, *e.g.*, Gerry Callahan, *Marathon Legend Taken for a Ride; BAA Ignores a Nonpareil Cheater*, BOSTON HERALD, Apr. 17, 1992, at 80 ("Rosie Ruiz [was] a woman who, as we all know, completed the 1980 marathon in a unique fashion. She took the [subway]."), it seems likely that "[s]omewhere along the way, as folklore is apt to do, the two stories [New York and Boston] combined . . ." see Robin Washington, *Win with a 'Terrific Time; Cheating in the Boston Marathon Unlikely, But If You're Determined to Try, Here's How*, BOSTON HERALD, Apr. 19, 1999, at 2. "[T]here's about as much evidence [that Ruiz took the subway during the Boston Marathon] as there is of her running the rest of the race." *Id.*

130. E-mail from Benjamin D. Levine, Director, Institute for Exercise & Environmental Medicine, to authors (Feb. 11, 2008) (on file with authors). The physical environment produced by altitude simulators is quite natural; it is characterized simply by reduced oxygen levels in the air. At physical altitudes, hypoxia (oxygen deficits) are caused by low barometric pressure. At simulated altitudes, hypoxia are caused by diluting the air with nitrogen. Either way, athletes are required to use technology (planes, trains, or automobiles for naturally induced hypoxia, and altitude simulators for artificially-induced hypoxia) to attain these altitudes. *Id.*

altitude simulators do not cause the body to do or get anywhere more quickly than it could naturally; the body on an altitude simulator goes through all of the stress and recovery as the body at natural altitude, in real time. Not everyone agrees with this analysis. Apart from Sandel, whose views on altitude simulators we have already discussed,¹³¹ medical ethicist Dr. Norman Fost has argued that rEPO cannot be distinguished from altitude training or spending time using altitude simulators because all three are designed to raise the hemoglobin level of blood.¹³² This misses the point, however: rEPO is not banned because of what it is—an agent that raises hemoglobin levels—it is banned because it raises those levels in a manner and at speeds that cannot be achieved naturally by the athlete who uses it.

The formula that has been developed and applied in this Section is not perfect as a tool for sorting substances and techniques according to whether they constitute doping or the virtuous perfection of natural talents. For example, it is theoretically possible that steroids, rEPO, and stimulants (among other drugs) could be used in amounts that are sufficiently small that they do not result in a rearrangement of the natural hierarchy; at the same time, their use still would be performance enhancing. In this context, the line-drawing problem inherent in this exercise might still exist, at least in individual cases. It is also scientifically impossible (at least given existing technology) to establish the nature and extent of an individual athlete's baseline natural talents and gifts; the formula assumes the ability to know this baseline. Finally, performance-enhancing substances and techniques may exist or could be developed that cannot be sorted according to this hierarchy-altering criterion. Genetic engineering, the focus of Professor Sandel's remarks,¹³³ could fit within this category if it ever became available as an enhancer of athletic potential, although it could also be argued that this technique would be the ultimate hierarchy-altering tool.

The fact that this formula is not perfect, however, does not diminish the potential that it has to do important work for anti-doping authorities. The prospect of genetic engineering looms large for these authorities; indeed, it looms so large that WADA already

131. See *supra* text accompanying note 107.

132. Kolata, *supra* note 58.

133. See generally SANDEL, *supra* note 15, at 25–44 (discussing genetic engineering as the next tool for enhancing athletic achievement).

has experts thinking about the issue.¹³⁴ The reality, though, is that the genetic engineering of athletes is probably still a long way off,¹³⁵ and meanwhile, anti-doping authorities continue to be overwhelmed by traditional manipulations like steroids and permutations on those themes, including BALCO's infamous "the clear."¹³⁶ In this setting, the question whether a substance or technique "disturb[s] or obscure[s] . . . the hierarchies of 'natural' talent that sports seek to exhibit,"¹³⁷ particularly if it is asked at the rulemaking stage at which individual appeals are irrelevant, can go a long way toward solving the conundrum that is drawing the line between cheating and the spirit of sport.

II. THE PROBLEM WITH DOPING

In contrast with their work on the definition of doping, both Professor Sandel and Judge Posner fall short in describing the harms caused by the practice. Specifically, Sandel's analysis falls short in focusing on the largely erroneous notion that doping causes sport to turn into bad spectacle,¹³⁸ and Posner's falls short in focusing on the

134. See Special Feature, *Gene Doping*, PLAY TRUE (World Anti-Doping Agency, Montreal, Can.), Issue 1 – 2005, at 2, 2–12, available at http://www.wada-ama.org/rtecontent/document/Play_True_01_2005_en.pdf (devoting a cover and special report to the issue in *Play True*, an official publication of WADA); *IOC Hopes to Crack Down on 'Gene Doping' in 2010*, CTV.CA, Jan. 6, 2008, http://www.ctvbc.ca/servlet/an/local/CTVNews/20080106/doping_athletes_080106?hub=BritishColumbiaHome ("WADA awarded Jim Rupert a \$325,000 grant to come up with a prototype test that will tell the difference between real hormones and those created by gene therapy.").

135. See *Gene Doping*, *supra* note 134, at 9–12 (setting out Dr. Thomas Murray's view that the problem of gene doping is more hype than reality); cf. *IOC Hopes to Crack Down on 'Gene Doping' in 2010*, *supra* note 134 ("Gene therapy—molecular based medicine—is advancing very, very quickly and it is quite possible that there could be breakthroughs in the next couple of years that could be applied to sports by 2010" (quoting WADA gene doping grant recipient Jim Rupert)).

136. See MITCHELL REPORT, *supra* note 13, at 112–43 (discussing the BALCO case, including its featured and previously undetectable steroid products "the clear" and "the cream"); Jere Longman & Joe Drape, *Decoding a Steroid: Hunches, Sweat, Vindication*, N.Y. TIMES, Nov. 2, 2003, <http://query.nytimes.com/gst/fullpage.html?res=9E07E3DD1030F931A35752C1A9659C8B63&sec=&spon=&pagewanted=print> (describing Dr. Don Catlin's work to discover the chemical construction of the clear). "The clear" refers to tetrahydrogestinone, an anabolic steroid famously distributed by BALCO. Jessica K. Foschi, Note, *A Constant Battle: The Evolving Challenges in the International Fight Against Doping in Sport*, 16 DUKE J. COMP. & INT'L L. 457, 470 (2006).

137. Posner, *supra* note 16, at 1731.

138. Sandel also focuses on the problems that genetic engineering may ultimately cause the human race. See *supra* note 34 and accompanying text. Because genetic engineering as Sandel

questions whether market inefficiencies are implicated by doping, and if so, whether there is anything that ought to be done about them. As a result, both ignore or give only short shrift to most of the really important harms caused by the practice: the damage done to athletes who exemplify the spirit of sport and who play by the rules that define this ideal; the risks of adverse health effects created by some of the most popular drugs associated with doping; the harm done to children when they emulate their athlete role models who dope; and the negative implications of doping for sport as politics.

A. *The Opposition of Sport and Spectacle*

In Professor Sandel's view, doping is inherently bad because it undermines the integrity of the sport in which it is used. As he sees it, the integrity of a sport "means more than playing by the rules, or enforcing them. It means writing the rules in a way that honors the excellences central to the game and rewards the skills of those who play it best."¹³⁹ Doping may undermine the integrity of sport by turning it into a spectacle: "[B]y isolating and exaggerating through artifice an attention-grabbing feature of a sport, [spectacles] depreciate the natural talents and gifts that the greatest players display."¹⁴⁰ Once a sport becomes a spectacle, the athletic performance becomes "a source of amusement rather than a subject of appreciation."¹⁴¹

There are two problems with Sandel's analysis. First, his attempt to counterpose appreciation of the natural hierarchy of talents on the one hand and amusement on the other ignores the inherent overlap between the two in both amateur and professional sports. It also ignores the fact that, at least in this area of overlap, spectacle is not necessarily a bad thing. Second, his suggestion that doping can turn a sport into a spectacle is at best only a theoretical possibility. That is unlikely to happen in the real world, at least not nearly to the extent he suggests.

imagines it is largely a futuristic possibility, we do not address it in this Essay beyond the summary points we make in note 35, *supra*.

139. SANDEL, *supra* note 15, at 36.

140. *Id.* at 37; *see also* Krieger, *supra* note 76 ("Athletes who perform outstanding physical feats through doping make sport nothing more than another circus act unworthy of any place in our schools or our social fabric." (quoting Olympian Frank Shorter)).

141. SANDEL, *supra* note 15, at 43.

Sandel's distinction between sport and spectacle can be illustrated by looking at professional basketball. The San Antonio Spurs play basketball as a sport and the Harlem Globetrotters play it as a spectacle.¹⁴² Both teams play the game for the amusement of their fans, however; and fans' appreciation for the players' abilities is not obviously diminished by that fact.¹⁴³ Finally, although doping conceivably could turn aspects of the sport—dunking, for example¹⁴⁴—into spectacle, there is no realistic danger that doping could turn the professional basketball played by the Spurs into the spectacle played by the Globetrotters. For that to happen, there also would have to be a significant change in the rules of the sport.¹⁴⁵

142. The Harlem Globetrotters play exhibition basketball games, during which the players combine athleticism, trick shots, and comedy in their routines. See The Official Site of the Harlem Globetrotters, Globetrotter History, <http://www.harlemglobetrotters.com/history/globetrotters/> (last visited Apr. 31, 2008) (recounting some aspects of the Globetrotters' history).

143. The distinction does matter, however, for many things that are important in a sport but are not important in a spectacle. The final score is important for the Spurs. From time to time, a spectacular shot that excites the fans will contribute to the final score, but its ultimate importance is primarily in its contribution to that score. For the Globetrotters, the spectacular shot is an end in itself; it has no significance beyond the amusement of the fans.

144. Even though doping does not entirely transform a sport into a spectacle in the sense that Professor Sandel means, its effect is significant. We agree with Sandel that doping undermines the integrity of sports. In sports like baseball and track and field, in which record keeping is integral to the enterprise, the harmful effect of doping can be irreversible. Between 1927 and 1998, only two men hit sixty or more home runs in a season: Babe Ruth (sixty) and Roger Maris (sixty-one). Baseball Almanac, Single Season Leaders for Home Runs, <http://www.baseball-almanac.com/hitting/hihhr4.shtml> (last visited Apr. 31, 2008). Since 1998, however, three men have hit more than sixty home runs in a season: Mark McGwire (1998 and 1999), Sammy Sosa (1998, 1999, and 2001), and Barry Bonds (2001). *Id.* McGwire broke Roger Maris's single-season record in 1998, when he hit seventy home runs. *Id.* Bonds then broke McGwire's record in 2001, when he hit seventy-three home runs. *Id.* A clean athlete may never break Bonds's record, which many suspect is the product of performance-enhancing drugs. One of the most revered records in baseball thus may have become meaningless, likely the result of a doping-fueled spectacle. The same may be true of some previously celebrated records in track and field. See Lynn Zinser, *With Drug-Tainted Past, Few Track Records Fall*, N.Y. TIMES, Aug. 29, 2004, at 1 (suggesting that the "falloff from record levels" at the Athens Olympic Games "serve as a constant reminder of the sport's embarrassing past" of performance-enhancing drug use). When doping distorts records, even great athletes such as Barry Bonds and Marion Jones may not be able to resist the temptation to use performance-enhancing drugs to secure what they believe are their rightful places in their sports' record books. See FAINARU-WADA & WILLIAMS, *supra* note 12, at xv–xvi (discussing this point with respect to Bonds and the BALCO scandal); *supra* notes 103–04 and accompanying text (discussing this point with respect to Marion Jones).

145. Sandel implicitly acknowledges this point. See SANDEL, *supra* note 15, at 35–36 (describing how rules prescribe permissible conduct in a game).

As we note in Part I, we agree with Sandel that the athletic ideal includes both natural gift and, beyond that, effort.¹⁴⁶ However, hard work and doping are not merely different means to the same end; and although, as Sandel points out, there is a danger that doping will distort the natural order among athletes in some sports, that is not necessarily true for all sports. We admire the hard, smart work of professional golfer Tiger Woods. It enhances his natural physical and mental gifts and allows him to produce brilliant golf shots to win golf tournaments.¹⁴⁷ It would be inaccurate, however, to say that his effort improves his natural talents as doping does. Rather, his effort cultivates those talents so that he reaches his full potential.¹⁴⁸ Doping unbinds athletes' potential from their natural gifts. But unlike a sport like track and field, many sports like golf are too complex for doping alone to turn them into a spectacle. Other golfers without Woods's natural gifts might be able to elevate one or more of the natural hierarchies of his natural talents through some hyperagency such as doping, but doing so would not necessarily improve their overall golf games, which determines their competitiveness. During a round of golf, (good) spectacle might arise, such as players consistently hitting 350-yard drives. But those occasions would not likely "depreciate the natural talents and gifts that the greatest [golfers] display."¹⁴⁹ In other words, these players probably would not displace Woods as the best golfer in the world. The complexity of the golf game would require more than isolating and exaggerating one facet of the game. On the other hand, golf would become a spectacle if it devolved into a long-drive contest; but again, this would require an extraordinary change in the rules of the game.¹⁵⁰

146. See *supra* notes 87–93 and accompanying text.

147. See, e.g., Tiger Woods Top 10 Short Game (Golf Channel television broadcast), available at <http://www.youtube.com/watch?v=rnJ2unr5eXY&feature=related> (Part 1); http://www.youtube.com/watch?v=l1g_C1bQkaY (Part 2); http://www.youtube.com/watch?v=8Fd9dORL_JM (Part 3).

148. This point is consistent with how we read Professor Sandel and Judge Posner together as they define what constitutes doping. See *supra* notes 87–93 and accompanying text.

149. SANDEL, *supra* note 20, at 37.

150. There is a golf-related spectacle called a long-drive competition in which competitors are judged on the basis of how far they hit their drives, but it bears no meaningful relationship to the sport of golf. See, e.g., ESPN Premieres Highlights from World Long Drive Championship, WORLDGOLF.COM, Dec. 19, 2007, <http://www.worldgolf.com/newswire/browse/12146-ESPN-premieres-highlights-from-World-Long-Drive-Championship> (announcing a program dedicated to the sport of long drive); Long Drivers of America, RE/MAX Long Drive Championship, <http://www.longdrivers.com/remax.php> (last visited Apr. 31, 2008) (listing winners of the 2007 RE/MAX World Long Drive Championship).

Finally, although it is still unlikely, there is a risk that doping could cause less complex sports to devolve into bad spectacle. Dramatic rule changes would not be necessary, for example, to turn individual stages of the Tour de France or the 100-meters event in either track or swimming into versions of bad spectacle. Indeed, if all or even some of the top athletes in those events typically dope, those athletes and their spectators might easily miss and then (if the doping continues unchecked over time) eventually forget that the events are not entirely unidimensional: They are not only about how fast each athlete clocks in at the end. They are also about how athletes get there and the inherent nature of the performance.¹⁵¹ Indeed, it is precisely because regulators appreciate that Olympic sports embody an ideal beyond merely *citius, altius, fortius*—swifter, higher, stronger¹⁵²—and because (in Posner's words) "human[s] innately delight . . . in innate human hierarchies," that it is unlikely that they would permit doping to transform even simple events like sprinting and cycling into bad spectacle.¹⁵³

B. Doping and Market Efficiencies

Judge Posner's view that humans' preference for innate hierarchies is itself innate suggests that he also believes it is unlikely that the market (as a reflection of what people want to see) will ultimately discount or reject the significance of these hierarchies. In other words, the market is likely to demand that owners intervene through regulation whenever there is a threat to the natural order.¹⁵⁴ As we have already noted, we largely agree with Posner on this threshold point.¹⁵⁵

Judge Posner also allows, however, that it would not be problematic if the market—presumably against the grain of humans' innate desires or consistent with an evolution of those desires—comes

151. See *supra* note 107 and accompanying text (setting out and rejecting Judge Posner's suggestion that doping would be acceptable, and maybe even preferable, if everyone engaged in the practice).

152. For commentary on the Olympic ideal, see Walter Kirn, *Mormons and the Olympic Ideal*, TIME, Feb. 1, 2002, <http://www.time.com/time/printout/0,8816,198830,00.html>; Mike Wise, *Rediscovering the Olympic Ideal*, WASH. POST, Feb. 27, 2006, at E9, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/26/AR2006022601308.html>.

153. See Posner, *supra* note 16, at 1729.

154. See *id.* at 1733–34.

155. See *supra* notes 94 and 104 and accompanying text.

to embrace athletic performances that alter that order.¹⁵⁶ Specifically, he agrees that “Sandel is on to something in relating the objections to sports doping to the ‘nature’ of sports both in the Aristotelian sense . . . and in the biological sense.”¹⁵⁷ He explains that “human being[s] love . . . sports . . . [because sports] isolate and exhibit innate hierarchies” of “height, strength . . . , agility, physical coordination, beauty, [and] brilliance.”¹⁵⁸ Accordingly, the rules of sport are designed “to invite our admiration for the athletes who occupy the highest rungs.”¹⁵⁹ Whether doping and other technological interventions should be banned from a sport “comes down to whether the particular intervention disrupts or obscures the hierarchy.”¹⁶⁰ But although Posner agrees that Professor Sandel has identified “which modes of athletic performance enhancement harm a sport and which do not,” he sees no “great public significance” in regulating doping, even if it turns a sport into a spectacle.¹⁶¹

In Judge Posner’s view, the market should decide whether sports doping is bad and thus warrants regulation. As he sees it, doping is not inherently bad; it has benefits “to the extent it improves a sport in the eyes of the spectators.”¹⁶² Thus, for example, if steroids created consistently strong competition for Tiger Woods, spectators might view this development as a good thing as long as it did not relegate Woods to the ranks of the apparently mediocre, which would turn golf into a spectacle. Posner rejects what he sees as Sandel’s “attempt to oppose ‘amusement’ to ‘appreciation’ and ‘size of crowd’ to

156. Posner, *supra* note 16, at 1734 (proposing an economic approach to the problem of sports doping). In a sport like golf in which a single player can become a dominant winner, knowledgeable spectators prefer a rivalry among the top players. Such a rivalry generates the excitement and interest that sustain and grow the sport. Erik Spanberg, *Can New Rivalries Put Golf on an Upswing?*, CHRISTIAN SCI. MONITOR, Apr. 6, 2005, at 11 (“Every sport needs rivalries,” says John Feinstein, a best-selling golf writer. “Not just stars, but rivalries. What you have now with these four guys are genuine rivalries. Start with Tiger and Phil, who still don’t like each other, no matter how much they claim otherwise.”).

157. Posner, *supra* note 16, at 1729.

158. *Id.*

159. *Id.*

160. *Id.* We think the appropriate focus is not the effect of doping on the hierarchy of isolated talents but its effect on who occupies the highest level of the sport. If some golfers improve their driving distance but do not improve their scoring averages, they are not likely to affect the top of the world rankings. Their doping is not likely to be consequential within the sport of golf, even though they have obscured the hierarchy of strength and physical coordination.

161. *Id.* at 1734.

162. *Id.* at 1735.

‘integrity.’”¹⁶³ To the contrary, Posner argues, the enjoyment of a sport, so that its games attract a large crowd “is inseparable from the success of the sport in exhibiting the hierarchy of ‘talents and virtues’ that the audience admires.”¹⁶⁴ Because this exhibition of natural talents and values directly correlates to the size of the crowd the game attracts (and therefore to success of the sport), the “problem” of sports doping has only a “minor public dimension; its solution can largely be left to the free market.”¹⁶⁵

We strongly disagree. Like Sandel, we believe both that celebrating natural talents and gifts is an inherently worthy enterprise and that government may properly intervene to regulate markets (and other social phenomena) to protect and preserve important values and institutions; we include the existence of clean sport among these.¹⁶⁶ The government’s role in this last regard is often especially important at times and in circumstances in which these values and institutions are unpopular. Finally, we do not accept the premise underlying Posner’s argument that the market is otherwise all that counts.

C. *The Interests Affected by Doping*

Professor Sandel and Judge Posner are correct to emphasize that doping is significantly problematic because it risks rendering invisible

163. *Id.* at 1733.

164. *Id.*

165. *Id.* at 1734. Judge Posner recognizes that finding the “optimum positive level of sports doping” in a particular market may be difficult. *Id.* at 1135. For that reason, to protect the economic efficiency of sports markets, he allows that some form of public regulation of doping may be required both because of the difficulty of controlling the level of doping and because of the inherent conflicts of interest between team owners as an economic group and individual team owners:

[A]lthough team owners have a collective interest in maintaining the integrity of the innate talent hierarchy that the sport in which their teams engage is designed to exhibit, individual owners have an incentive to defect from rules designed to maintain that hierarchy. The owner who can dope his athletes without the other owners’ discovering what he is doing can steal a march on them.

Id. at 1736. This conflict, when combined with the difficulty of detecting the use of some performance-enhancing drugs, “may make purely private sanctions for violating a doping ban an inadequate deterrent. Criminal or other public penalties may be necessary.” *Id.* But in his view, public intervention is warranted only to protect the “economic value of the sport.” *Id.* at 1737. Posner specifically denies any public significance in controlling doping beyond “consumer preferences and the behaviors of team owners, leagues, and individual athletes that those preferences evoke.” *Id.* at 1738.

166. See SANDEL, *supra* note 15, at 26–29 (arguing that “effort isn’t everything” in the athletic arena).

feats of natural genius and rearranging hierarchies of natural talents and gifts. In focusing otherwise as they do on the opposition of sport and spectacle and on the question whether the market can or should correct any inefficiencies created by doping, however, both neglect the other equally significant problems caused by doping. These problems stand on their own as sufficient justifications for doping control, including regulation by public authorities.

1. *Protecting Athletes Who Play by the Rules.* Judge Posner mentions the “significant blow” to the reputations of athletes who are caught doping,¹⁶⁷ but nowhere acknowledges the significant impact of the practice and of weak doping control on clean athletes who do not use performance-enhancing drugs. And although Sandel lauds natural talents and gifts—in other words, clean athletes and athletics—throughout his work, the damage done to them by doping does not appear at all. This relative neglect is not unusual, as commentators and regulators have tended to focus on those who violate anti-doping rules, on spectators who may or may not care about sport tainted by doping, and on the public relations implications of doping scandals. In our view, however, the implications of doping for athletes who play by the rules and in accordance with the spirit of sport are of equal importance and ought to receive due attention, especially from regulators acting in the public interest.

Does it matter whether Canadian Ben Johnson or American Carl Lewis¹⁶⁸ was declared the winner of the 100-meters event at the 1988 Seoul Olympics? The correct answer is, it depends. If steroids were not banned (but also were not explicitly permitted) by the rules of track and field, it likely would not have mattered that Ben Johnson won, even if Carl Lewis believed the victory was not in the spirit of sport.¹⁶⁹ On the other hand, because steroids were banned, both Carl

167. Posner, *supra* note 16, at 1737.

168. Ben Johnson narrowly defeated Carl Lewis in that race, finishing in 9.79 seconds. Lewis's second place 9.92 seconds became the world record after Johnson's positive test for stanozolol. Larry Schwartz, *King Carl Had a Long, Golden Reign*, ESPN.COM, <http://espn.go.com/sportscentury/features/00016079.html> (last visited Apr. 31, 2008).

169. A practice that is not forbidden can still seem against the spirit of the sport. The following example comes from a basketball game between the University of California, Los Angeles (UCLA) and the University of Washington (Washington), in which Washington upset UCLA:

With UCLA down 66-61 with 47 seconds left because the Huskies had squandered much of a nine-point lead at the foul line, Washington's Tim Morris was about to get called for a five-second violation on an inbound play. Instead, he threw the ball off

Lewis and the public had a legitimate objection to Johnson being declared the winner.¹⁷⁰

the nose of Alfred Aboya, who was guarding him closely across the boundary line, and it banged into an incensed UCLA bench.

The Huskies retained possession and Jon Brockman, who had 12 points and 17 rebounds, scored. Ryan Appleby added two free throws following a steal to put Washington . . . up 70-61. The upset, accompanied by a wild celebration, was back on.

"He just threw it off the kid's face," UCLA coach Ben Howland said of Morris' sneaky trick.

When asked if that is OK, perhaps by the unwritten code of how to play the game, Howland shot back, "No."

"The official said there is nothing he can do," Howland said. "So I guess legally you can do it."

Washington Takes Down No. 4 UCLA in a Shocker, USA TODAY, Feb. 10, 2008, http://www.usatoday.com/sports/college/mensbasketball/pac10/2008-02-10-ucla-washington_N.htm.

170. See *supra* notes 75-78 and accompanying text (discussing the constituencies interested in and affected by doping violations). Equally important, however, is whether the rules banning doping can be enforced fairly. If Ben Johnson had taken only aspirin at the 1988 Olympics, but the IOC used a test that could not distinguish between aspirin and stanozolol, would it have been fair to strip him of his world record and his gold medal if the rules did not ban using aspirin? And would *that* have been in the spirit of sport? Resolving these questions is important because some banned substances, including testosterone, rEPO, and human growth hormone, cannot be reliably detected directly; as a consequence, the federations that police doping use indirect tests. For example, WADA uses an indirect test for exogenous testosterone, which relies on the ratio of testosterone to epitestosterone (T/E) present in an athlete's urine, a ratio that otherwise has no significance. A problem arises when such an indirect test cannot exclude all nondoping explanations for the test results, but nevertheless triggers a presumption of doping. See Jenny Jakobsson Schulze et al., *Doping Test Results Dependent on Genotype of UGT2B17, the Major Enzyme for Testosterone Glucuronidation*, J. CLINICAL ENDOCRINOLOGY & METABOLISM (forthcoming June 2008) (manuscript at 3), available at <http://jcem.endojournals.org/cgi/rapidpdf/jc.2008-0218v1.pdf> (discussing the inadequacy of available testing for exogenous testosterone). While this presumption is formally rebuttable, in fact it is just as impossible for the athlete to rebut the presumption as it would have been for the federations to prove doping in the first instance. In circumstances where the athlete is innocent, the result is both ironic and tragic: the anti-doping regime itself becomes responsible for "depreciate[ing] the natural talents and gifts that the greatest players display." SANDEL, *supra* note 15, at 37. That in fact is the case with the T/E test for exogenous testosterone. See, e.g., *Slaney v. Int'l Amateur Athletic Fed'n*, 244 F.3d 580, 593 (7th Cir. 2001). The Seventh Circuit explained:

Reduced to its essence, Slaney contends that the burden-shifting approach adopted by the IAAF violates United States public policy. We disagree. According to the parties, proving the presence of exogenous testosterone in the body by scientific tests is not possible at the present time. Therefore, the IAAF has adopted the rebuttable presumption of ingestion from a high T/E ratio in an athlete's urine, as detailed throughout this opinion. Were the IAAF not to make use of the rebuttable presumption, it would be nearly impossible, absent eyewitness proof, to ever find that an athlete had ingested testosterone.

Id. This case demonstrates that the governing authorities of sport can be said to have a legitimate policy basis for using the T/E ratio and similar indirect tests for doping. However, it also (at least implicitly) acknowledges that an inevitable result of the authorities' policy choice is

When athletes who dope displace clean athletes in rankings, records, competitions, and on teams, they breach their covenant with spectators, including children who hold them out as role models; they violate the terms of their contracts of engagement with their governing bodies; and they steal from the athletes they unfairly displace.¹⁷¹ This thievery encompasses not only dreams, hard work, and reputations but also money: prize money, sponsorships, and the long-term career opportunities that flow from athletic success in societies that privilege athletic achievement. To the extent that rankings and records are concerned, the thievery has a potentially long tail, as we have already discussed in relation to suspicions that Florence Griffith Joyner's untouchable 100-meters world record set in 1988 may have been tainted by prohibited drug use.¹⁷²

The public's interest in the integrity of its covenant with sport and in regulating breaches of contract, theft, and fraud is particularly salient when—as Judge Posner recognizes—the owners may not have an interest in doing so. Posner is right that some degree of prohibited doping may improve a sport in the eyes of spectators. That is widely believed to have been the case in 1998 when Mark McGwire and Sammy Sosa mounted an unprecedented assault on baseball's single-season home run record.¹⁷³ The excitement of their quest brought fans back to the ballparks after the destructive strike that affected both the 1994 and 1995 seasons. Commentators generally agreed that the home run race—a spectacle within the game—may have saved baseball, the sport.¹⁷⁴ Many of the same commentators later

the sacrifice of innocent athletes who happen to test “positive” according to their terms. The authors represented Mary Decker Slaney in this matter.

171. See *supra* note 76 and accompanying text; see also *Effects of Performance Enhancing Drugs on the Health of Athletes and Athletic Competition: Hearing Before the S. Comm. on Commerce, Science, and Transportation*, *supra* note 75, at 87 (statement of Professor Doriane Lambelet Coleman) (arguing that prior to the establishment of WADA and USADA as independent anti-doping agencies “the IOC and USOC . . . permit[ted] athletes who use[d] drugs to steal opportunities and dreams from those who follow the rules”).

172. See *supra* notes 103–04 and accompanying text. The authors are working on an article entitled *Doping as Fraud and Theft* which focuses specifically on this point.

173. For a discussion of the home run record chase, see *supra* note 13 and accompanying text.

174. See, e.g., Murray Chass, *No Letup in Home Run Race: 66 and 66, Just Minutes Apart*, N.Y. TIMES, Sept. 26, 1998, at A1 (“The home run race has created a new phenomenon in baseball: home fans cheering for and saluting visiting players whose home runs could help beat the home team. Home fans have also taken to booing their own teams’ pitchers if they walk Sosa and McGwire, or even throw them pitches that are out of the strike zone.”); Bill Dedman, *The Great Home Run Race, Part II*, N.Y. TIMES, Sept. 8, 1999, at D1 (describing fans’

acknowledged that the race likely was tainted by doping, which they and the owners ignored at the time.¹⁷⁵ In Posner's analysis, however, the suspected doping was contained at the optimal level. Nevertheless, it may have harmed a clean athlete who otherwise might have won the home run crown in 1998 if McGwire and Sosa had not put that goal beyond them. Ken Griffey, Jr., hit fifty-six home runs in 1998, the same number he hit in 1997 when he led major league baseball in home runs.¹⁷⁶ Often, athletes like Griffey have performance clauses in their contracts that pay bonuses for attaining certain benchmarks, including leading the league in a major hitting category such as home runs.¹⁷⁷ If McGwire's and Sosa's performances

excitement about a possible new home run record). The doping-fueled home run race would not have been the first time a spectacle was used to draw fans to the ballpark. In 1951, Bill Veeck, the new owner of the St. Louis Browns, inserted a midget pinch hitter into an official game. Jim Tootle, *Bill Veeck and James Thurber: The Literary Origins of the Midget Pinch Hitter*, 10 *NINE* 110, 111 (2002). The opposing pitcher "had trouble throwing strikes to the diminutive [batter], who complicated matters by going into a crouch, leaving [the pitcher] a minuscule strike zone as a target." *Id.* at 111. The midget "walked on four straight pitches and trotted down to first base." *Id.* The manager of the Browns replaced him with a regular member of the team's roster and he "returned to the dugout to a standing ovation." *Id.* The president of the league "was furious" and "immediately banned the use of midgets in future games." *Id.* The owner noted "there was nothing in the rules about the size of players." *Id.*

175. One blogger captured the hypocrisy involved:

When McGwire and Sammy Sosa battled for the homerun record and rightly captivated America, it was fairly magical. Every at bat McGwire had would be shown on TV as ESPN broke into whatever coverage they were providing and showed McGwire instead. No one seemed to be complaining then that Sammy Sosa's [*sic*] had grown a second jaw and had an eyebrow ridge that you could land 747s on, nor that McGwire was simply too huge to be that flexible. Advertisers didn't care. Ballparks across the nation didn't care. And sportswriters, the men and women who vote on the hall of fame, certainly didn't seem to mind flying across the country to chronicle the exploits of both men, spilling pages of ink on the chase for Roger Maris. It was a national obsession. It would be safe to say that that year, McGwire (and Sosa) saved baseball and reignited the nation's passion for the sport.

So it angers me when I read sportswriters today saying that they couldn't vote for McGwire for the hall of fame because they wouldn't know what to say to their children. Say this: Mark McGwire paid our mortgage.

Tod Goldberg: The Case for Mark McGwire, http://todgoldberg.typepad.com/tod_goldberg/2007/01/the_case_for_ma.html (Jan. 10, 2007, 14:03 PST).

176. See The Official Site of Major League Baseball, Stats: Historical Leaders http://mlb.mlb.com/stats/historical/leaders.jsp?c_id=mlb&baseballScope=mlb&statType=1&sortByStat=HR&timeFrame=1&timeSubFrame=1997 (last visited Apr. 31, 2008) (listing the statistics for 1997); The Official Site of Major League Baseball, Stats: Historical Leaders, http://mlb.mlb.com/stats/historical/leaders.jsp?c_id=mlb&baseballScope=mlb&statType=1&sortByStat=HR&timeFrame=1&timeSubFrame=1998 (last visited Apr. 31, 2008) (listing the statistics for 1998).

177. See, e.g., Cot's Baseball Contracts, St. Louis Cardinals, http://mlbcontracts.blogspot.com/2004/12/st-louis-cardinals_11971260115041890.html (last visited Apr. 31, 2008).

were the product of doping, they may have cheated Griffey out of the economic benefits and prestige that should have been his based on the home runs he legitimately hit. But because team owners had no economic incentive to regulate what for them was beneficial doping, public intervention would have been required to protect the interests of clean athletes like Griffey who might have been cheated by the doping of others.¹⁷⁸

2. *Substances and Technologies Associated with Adverse Health Effects.* Although Professor Sandel acknowledges that adverse health effects provide justification for regulating doping,¹⁷⁹ he mentions this point only briefly, as this is not the locus of his concerns about the practice. In contrast, Judge Posner tackles the problem, expressing reservations about doping classifications based on adverse health effects because, in his view, there is little empirical support for the position that performance-enhancing drugs are unhealthy, and the risks to health that do exist would be eliminated if the drugs could be purchased lawfully, rather than as they are today, on the unregulated

178. The ambivalence of baseball owners toward doping is reflected in the contrast between how they deal with betting and how they deal with doping. Baseball is intolerant of betting by players because it threatens the integrity of the competition. The rules of baseball reflect this intolerance. Major League Rule 21(d) provides that “any player, umpire, or club or league official or employee, who shall bet any sum whatsoever upon any baseball game in connection with which the bettor has a duty to perform shall be declared permanently ineligible.” MAJOR LEAGUE R. 21(d), available at <http://www.baseball1.com/bb-data/rose/rule21.html>; see also MITCHELL REPORT, *supra* note 13, at 25 (contrasting the league’s treatment of betting and doping in the pre-2002 period). The league’s ban of Pete Rose, “Charlie Hustle,” for betting, *Morning Edition: The Pete Rose Controversy* (NPR radio broadcast May 19, 2003), available at <http://www.npr.org/templates/story/story.php?storyId=1265784>, demonstrates that it is serious about its zero tolerance for betting. In contrast, the league’s rules against performance-enhancing drugs are remarkably tolerant. The original collectively bargained rules, adopted in 2002 but only put into effect in 2004, provided that a “first positive test result[ed] in treatment, followed by a 15-day suspension for a second positive and up to a year suspension for a fifth positive.” Hal Bodley, *Baseball Officials Announce Tougher Steroids Policy*, USA TODAY, Jan. 12, 2005, http://www.usatoday.com/sports/baseball/2005-01-12-steroid-policy_x.htm. The rules adopted in 2005 give a player three chances before being banned for life, but even a lifetime ban may be lifted after two years. Kathy Kiely, *MLB, Players Agree to Update Drug Policy*, USA TODAY, Nov. 16, 2005, http://www.usatoday.com/sports/baseball/2005-11-15-steroids-agreement_x.htm; Major League Baseball, Joint Drug Prevention and Treatment Program, Amendment 18 of the 2005 Collective Bargaining Agreement, available at <http://fl1.findlaw.com/news.findlaw.com/usatoday/docs/sports/mlbdrugpolicy05.pdf>. *Lawmakers Take Some Credit for MLB Steroid Policy*, FOXNEWS.COM, Nov. 16, 2005, http://www.foxnews.com/printer_friendly_story/0.3566.175669.00.html. If the league were serious about regulating doping, it would approach the matter with the same intolerance it has for betting: a permanent ban and expungement of the player’s records for any use of a performance-enhancing substance.

179. SANDEL, *supra* note 15, at 35–36.

black market.¹⁸⁰ In our view, Posner in particular does a disservice to the ongoing discussion about the problems associated with doping by marginalizing the significance of adverse health effects.

It is true, as Judge Posner says, that many of the drugs used by athletes come from the black market.¹⁸¹ HgH, for example, is only legally obtained by prescription, and its prescription is limited to specified conditions that athletes generally cannot meet.¹⁸² Like any medicine, it is also true that therapeutic doses of at least some performance enhancing drugs may be relatively safe, meaning that their medical benefits likely outweigh their risks for patients who need them.¹⁸³ Even therapeutic doses may be overdoses, however, for individuals who do not need them. And in any event, athletes are notorious for exceeding those doses.¹⁸⁴ Indeed, it is entirely possible that therapeutic doses are not sufficiently performance enhancing for the athletes who use them for this purpose.

Judge Posner is otherwise incorrect about the safety of typically used performance-enhancing substances. As Dr. Richard V. Clark has written in another context, “[t]he suggestion that the risks associated with these compounds are exaggerated belies our limited clinical data

180. See Posner, *supra* note 16, at 1732–33; see also MITCHELL REPORT, *supra* note 13, at 6 (describing “an association between steroid abuse and significant adverse side effects”).

181. MITCHELL REPORT, *supra* note 13, at 4, 235, 237, 300–01 (describing the black market as a principal source).

182. See Laurie Barclay & Désirée Lie, *Growth Hormone Deemed Illegal for Off-Label Antiaging Use*, MEDSCAPE MED. NEWS, Oct. 28, 2005 (on file with the *Duke Law Journal*). Drs. Barclay and Lie argue that

[u]nlike most drugs approved by the . . . [FDA], GH can only be distributed for indications specifically authorized by the Secretary of Health and Human Services The FDA has approved GH only for GH deficiency-related syndromes . . . and muscle-wasting disease associated with HIV and AIDS “Off-label use for many drugs is a normal and accepted practice in medicine, but [because of these laws] that is not true for growth hormone.”

Id. (quoting Dr. S. Jay Olshansky).

183. E-mail from Philip M. Rosoff, Director, Duke Hospital Clinical Ethics Program, to authors (May 21, 2008, 18:21 EST) (on file with the *Duke Law Journal*).

184. See Karl E. Friedl, *Effects of Anabolic Steroids on Physical Health*, in ANABOLIC STEROIDS IN SPORT AND EXERCISE, *supra* note 1, at 175, 177–78. Dr. Friedl notes that

[u]nlike scientifically determined doses for desired medical treatments, there is no established dose for strength or weight gain for any anabolic steroid. Some . . . athletes . . . equate doses between different anabolic steroids by the mass units (or even more simply, by the number of tablets!), without considering differences in potency or effects. Thus, . . . [doses] which range from levels that may be lower than replacement doses to the more frequently documented doses that far exceed any experienced in clinical medicine.

Id.

and may encourage inappropriate use.”¹⁸⁵ The Mitchell Report is particularly specific in regards to steroids and HgH: “Steroid users place themselves at risk for psychiatric problems, cardiovascular and liver damage, drastic changes to their reproductive systems, musculoskeletal injury, and other problems.”¹⁸⁶ And HgH “is associated with potentially severe adverse side effects” including “acromegaly, the overgrowth of bone and connective tissue that leads to protrusion of the jaw and eyebrow . . . cancer, impotence in men, menstrual irregularities in women, cardiomyopathy, hypothyroidism, and arthritis.”¹⁸⁷ Finally, rEPO has the potential to kill if athletes seeking a competitive edge misuse it: “It thickens the blood, often resulting in thrombosis and stroke. ‘You have mud instead of blood,’ . . . ‘You could be dead in a month.’”¹⁸⁸

Evidence of the adverse health effects of steroids, HgH, and rEPO relates to risk rather than to definitive adverse outcomes. In other words, an expert usually could not honestly tell an athlete, “If you take this steroid at this dosage you will have cardiovascular and liver damage.” The expert could only say, “If you take it you may have such damage.” This is no different, however, from most other situations in which experts are asked to evaluate drugs for their relative safety and efficacy as regulators seek to determine whether

185. See Clark, *supra* note 123 (manuscript at 11). Senator Mitchell retained endocrinologist Dr. Richard V. Clark to serve as his expert during his investigation of doping in baseball, and it is Dr. Clark’s scientific and medical opinions on the performance enhancing and health effects of prohibited substances that are represented in the Mitchell Report. MITCHELL REPORT, *supra* note 13, at SR-5. Dr. Clark is a senior research scientist at GlaxoSmithKline. He is also the past president of the American Society of Andrology and serves as a reviewer for numerous relevant scientific journals, including *The American Journal of Medicine*, *Biology of Reproduction*, *Endocrinology*, *Fertility and Sterility*, the *Journal of Andrology*, *The Journal of Clinical Endocrinology and Metabolism*, and the *International Journal of Andrology*. Task Force, Dr. Richard V. Clark, <http://www.law.duke.edu/sportscenter/participants.html> (last visited Apr. 31, 2008). The authors worked with Dr. Clark when he was their expert in the *Slaney* case.

186. MITCHELL REPORT, *supra* note 13, at SR-8; see also *id.* at 6–9, 261 (describing the negative health effects associated with steroid use); Clark, *supra* note 123, at 3–4, 7–10.

187. MITCHELL REPORT, *supra* note 13, at 10–11.

188. Gambaccini, *supra* note 91. Professors Doriane Lambelet Coleman and Paul D. Thompson have also written of the dangers of rEPO:

[T]he medical risk of induced erythrocytosis is potentially great but undocumented. Intravascular thrombosis secondary to polycythemia, resulting in myocardial infarction or stroke, is the primary concern . . . [T]he popular press has speculatively linked the deaths of 18 European cyclists to rEPO use. No medical confirmation of this possibility has been forthcoming, but International sports governing bodies have responded to the possible risk and banned the use of blood boosting techniques [on the basis of that risk.]

Lambelet & Thompson, *supra* note 10, at 3–4.

they should be made available to the public or banned. The safety of particular drugs is always evaluated in relation to their likelihood of providing particular medical benefits to the patients who would use them, and drugs are disallowed or restricted according to this equation when they are found to pose more than a “minimal risk” of harm.¹⁸⁹ That some athletes have and will continue to do a different risk-benefit analysis for themselves—for example, some are willing to take abnormal (or beyond minimal) risks to achieve success in sports¹⁹⁰—does nothing to alter this more general norm about allowable levels of risk.

3. *The Welfare of Children.* Another constituency that has and must continue to receive substantial attention from commentators and regulators is children who are adversely affected by the influence of role model athletes who engage in doping.¹⁹¹ Professor Sandel

189. See Doriane Lambelet Coleman, *The Legal Ethics of Pediatric Research*, 57 DUKE L.J. 517, 536–39 (2007) (discussing the “minimal risk” standard imposed by federal regulations in pharmaceutical research); E-mail from Dr. Richard V. Clark, senior research scientist at GlaxoSmithKline, to authors (Feb. 21, 2008, 08:46 EST) (on file with the *Duke Law Journal*) (“I find it interesting how minimal risks are the norm for evaluating drugs for genuine disease conditions, for example Viox [*sic*] and Avandia, while another group seems to be pushing for use of agents with well established and serious risks.”). Of course, drugs are also disallowed or restricted when there is reliable proof of a causal connection between the use of the drug and harm that outweighs its benefits, but this is not the usual case: risk is.

190. For example, in “a 1995 poll of 198 sprinters, swimmers, powerlifters and other assorted athletes, most of them U.S. Olympians or aspiring Olympians,” 195 responded “yes” when asked whether they would take a performance-enhancing substance if they would not be caught and would win, and over 50 percent said “yes” when asked whether they would take a performance-enhancing substance if they would not be caught, win all competitions for five years, and then die from the side effects of the substance. Michael Bamberger & Don Yaeger, *Over the Edge: Aware That Drug Testing Is a Sham, Athletes to Rely More Than Ever on Banned Performance Enhancers*, SPORTS ILLUSTRATED, Apr. 14, 1997, at 62.

191. See MITCHELL REPORT, *supra* note 13, at 15–17 (noting that “prominent athletes” are role models for “young athletes” including in regard to doping). The Mitchell Report states that [t]his common sense conclusion is well supported by the facts. After the Associated Press reported in August 1998 that Mark McGwire was using androstenedione, a steroid precursor that was legal at the time, sales of that supplement increased by over 1,000%. McGwire may not have wanted to be a role model, but he was. According to the National Institute on Drug Abuse, by 2001, 8% of male high school seniors had used andro within the prior year.

Id. at 15–16; see also Krieger, *supra* note 76 (“[T]ruly [doping is] a health issue for our children. They’re emulating stars who choose to be dirty with apparent impunity. Some children may even feel they have no choice but to take performance-enhancing drugs now. If talk of steroids, EPO and human growth hormone makes your eyes glaze over, just ask your teenage children. They’ll explain it to you.” (quoting Olympian Frank Shorter)); George Vecsey, *Parents Feel Betrayed by Millionaire Role Models*, N.Y. TIMES, Feb. 10, 2008, at 10 (reporting on the story of Frank and Brenda Marrero whose son Efrain “watched [Mark McGwire] and Barry Bonds as

agrees with the conventional wisdom—to which we also subscribe—that substances and technologies should be banned when they are shown to pose a health risk.¹⁹² Judge Posner dismisses this criterion as either overstated or of legitimate concern only to the athlete who chooses to use drugs.¹⁹³ He is wrong on both counts. There is ample support for the proposition that children engage in risky behaviors, including doping, when they are influenced to do so by their role models.¹⁹⁴ There is also ample support for the proposition that the drugs that are typically used for performance enhancement—steroids, rEPO, and HgH—pose serious risks to health at the doses necessary to make a difference, even when the drugs come from legitimate sources.¹⁹⁵ Finally, society has an interest in the adverse emotional and ethical implications of doping and the culture of lawlessness that supports it.¹⁹⁶ The public, through the government and in its role as

role models” before he killed himself at the age of 19 after taking and then coming off of steroids); Letter from Dr. Ralph Hale, Chairman of the U.S. Anti-Doping Agency, and Shawn Smeallie, Executive Director of the Coalition for Anabolic Steroid Precursor and Ephedra Regulation (CASPER), to Sen. Richard Durbin (July 12, 2004) (“These substances no longer pose just a threat to athletes, but also to the American public, in particular children and women.”). Notably, Olympic sponsors often direct their television commercials at children, encouraging them to think of Olympic athletes as role models. See, e.g., *Olympic Gymnast Barbie* (Mattel television commercial 1996), available at <http://www.youtube.com/watch?v=WSMo037toRQ>; *Super*, *supra* note 75.

192. See SANDEL, *supra* note 15, at 35–36 (“The most familiar argument for banning drugs like steroids is that they endanger athletes’ health. But safety is not the only reason to restrict performance-enhancing drugs and technologies.”).

193. See *supra* note 180 and accompanying text. This latter point is a version of what Dr. Thomas Murray characterizes as the “detour into paternalism” argument against anti-doping rules. See *supra* note 61 (setting out this argument). Murray’s response is different depending on whether the athlete who would use drugs is a child or an adult. If it is a child, he responds that “[p]aternalism is an essential part of good parenting.” Murray, *supra* note 61, at 2. His point is the time-honored one that children lack the experience necessary to evaluate risks; adults need to do this for them. *Id.* If it is an adult, he responds that “even if paternalism weakens as athletes become adults, protecting athletes from the coercive power of drugs in sport remains a solid ethical justification for effective doping control.” *Id.* We agree with Murray’s analysis in both respects. We also find separate rationales for sports governing authorities to designate harmful substances and techniques as doping, including the right of those authorities to define the terms of their sports in ways that exclude risk-taking behavior; to protect the interests of athletes who follow the rules for ethical and health and safety reasons; to protect their brands, that is, the image of their sports as healthy enterprises; and to assure the integrity of their role models as younger generations—the children—look to them for guidance as they grow.

194. See, e.g., MITCHELL REPORT, *supra* note 13, at 15–17 (discussing how athletes serve as role models for children); *supra* note 79 and accompanying text.

195. See *supra* notes 185–90 and accompanying text.

196. See, e.g., Maravelias et al., *supra* note 103, at 172. In their article, the authors discuss a number of adverse psychological reactions to steroids, including irritability, aggressiveness,

parens patriae, has an interest in regulating doping at any level that contributes to these phenomena.

4. *The Interest in Sport as Politics.* Finally, neither Professor Sandel nor Judge Posner mentions the longstanding and significant public interest in sport as politics. Since the founding of the ancient Olympic Games, sport has been used by governments as a tool to promote both nationalism and international harmony and as a vehicle for diplomacy. There are abundant examples of sport as politics. In the modern era, these include the founding of the modern Olympic Games in part to foster harmony among nations;¹⁹⁷ the Nazis' use of the 1936 Berlin Olympics as "a showcase for the 'new Germany,'" including their philosophy of Aryan superiority;¹⁹⁸ the killing by a faction of the Palestine Liberation Organization of Jewish athletes

depression, mood swings, altered libido, psychosis, withdrawal and dependency disorders, anxiety, insomnia, and addiction. *Id.* The article also emphasizes that "the developing nervous system of children may be especially vulnerable to the psychological effects of steroids . . . [because a]dolescents may lack the maturity to cope with possible drug-induced mood changes." *Id.* The authors conclude that "[t]here have also been reports stating that there is a relationship between hormone levels . . . and the emotional dispositions and aggressive behaviors of adolescents. The results indicate that high hormone levels are related to potentially adverse consequences for boys and girls." *Id.*

Professor Doriane Lambelet Coleman has argued that the federal government has an obligation to intervene in the affairs of the Olympic Committees when they fail effectively to curb doping, including "because their failure to stop the use of drugs affects the health and welfare, including the ethical development, of American children." *Effects of Performance Enhancing Drugs on the Health of Athletes and Athletic Competition: Hearing Before the S. Comm. on Commerce, Science, and Transportation, supra* note 75, at 87 (statement of Professor Doriane Lambelet Coleman). The need to educate young children has been recognized internationally. See, e.g., U.N. Educ., Scientific and Cultural Org. (UNESCO), Anti-Doping Education, http://portal.unesco.org/shs/en/ev.php-URL_ID=9684&URL_DO=DO_TOPIC&URL_SECTION=201.html (last visited Apr. 31, 2008). UNESCO believes that

[i]t is important to educate young people about the harm doping does to sport as well as to the individuals concerned. Schools provide an ideal learning environment because it is often here where young people learn about "fair play" and teamwork as part of physical education programmes or through their own participation in sporting activities.

Id.

197. Melvin L. Adelman, Book Review, *J. SOC. HIST.*, Fall 1972, at 113, 113 ("[Mandell] rejects the cherished belief of Baron Pierre de Coubertin and other idealogues [*sic*] of Olympism that the Games would help create international harmony. . . . As a result, the passionate pursuit of victory, a dominant force at the Games from the beginning, undercut the Olympic ideal of international cooperation.").

198. The History Place, *The Triumph of Hitler: The Berlin Olympics*, <http://www.historyplace.com/worldwar2/triumph/tr-olympics.htm> (last visited Apr. 31, 2008).

and Israeli officials at the Olympic Village in Munich in 1972;¹⁹⁹ President Carter's decision to withdraw the United States Olympic Team from the 1980 Games in Moscow in response to the Soviet Union's invasion of Afghanistan;²⁰⁰ the Soviet Union's retaliatory boycott of the 1984 Los Angeles Games;²⁰¹ and the apparent acceptability of soccer as an expression of nationalism worldwide.²⁰²

The early controversy surrounding the 2008 Summer Olympics in Beijing provided a particularly rich example of sport's political dimension.²⁰³ China's economic ties to the Sudan²⁰⁴ and domestic human rights record²⁰⁵ drew strong criticism in connection with the Olympics. Some activists pushed to brand the Games the "Genocide Olympics" because of the Sudanese government's involvement in killings in Darfur.²⁰⁶ After writing two letters to Chinese President Hu Jintao chastising the country for its silence on Darfur, American film director and producer Steven Spielberg publicly resigned his position as artistic adviser to the Olympics.²⁰⁷ President Bush said he planned

199. Simon Reeve, *In Munich, the PLO Defined Israel's Future*, SUNDAY INDEP. (S. Afr.), Jan. 29, 2006, <http://www.sundayindependent.co.za/index.php?fSectionId=1086&fArticleId=3086935>.

200. See Andy Walton, *Olympic Boycotts: In Propaganda War, Refusing to Play Is a Risky Move*, CNN.COM, <http://www.cnn.com/SPECIALS/cold.war/episodes/20/spotlight/> (last visited Apr. 31, 2008) (describing this decision and noting that "Jimmy Carter didn't introduce politics to the Olympics—they are old, familiar friends").

201. See *id.* (noting that the Soviet Union's decision to boycott the Los Angeles Games "was widely regarded as a retaliatory move for the 1980 boycott").

202. See Anne Applebaum, *Flag on the Field: Soccer, The Last Acceptable Form of Nationalism*, SLATE, June 18, 2002, <http://www.slate.com/id/2067084/> (describing the rise in English nationalism from "soccer mania"); see also Adelman, *supra* note 197, at 113 ("correlating sport and the nationalist movements of the nineteenth century [that] intensified national pride"). A Google search using the words "soccer nationalism" yields approximately 224,000 hits.

203. For a discussion of various political protests concerning the Beijing Olympics, see generally Melinda Liu, *Spin the Games*, NEWSWEEK, Oct. 22, 2007, <http://www.newsweek.com/id/43378>.

204. Helene Cooper, *Darfur Collides with Olympics, and China Yields*, N.Y. TIMES, Apr. 13, 2007, <http://www.nytimes.com/2007/04/13/washington/13diplo.html?pagewanted=print>.

205. Human Rights Watch provides a summary of ongoing concerns in this regard. See Human Rights Watch, *Asia: China and Tibet*, <http://hrw.org/doc/?t=asia&c=china> (last visited Apr. 31, 2008) (detailing human rights abuses in these countries).

206. See generally Ilan Greenberg, *Changing the Rules of the Games*, N.Y. TIMES, Mar. 30, 2008, § 6 (Magazine), at 52 (describing Dream for Darfur's efforts to use the Games to draw attention to Darfur).

207. Helene Cooper, *Spielberg Drops Out as Adviser to Beijing Olympics in Dispute Over Darfur Conflict*, N.Y. TIMES, Feb. 13, 2008, at A12. Don Cheadle, another American film star, applauded Spielberg's move, saying it could start a trend with the potential to "change the

to attend the Olympics, characterizing them (in contrast to Spielberg) as a mere “sporting event.”²⁰⁸ Only moments later, however, the President added that he planned to speak with Hu Jintao about China’s relationship with the Sudan, lest anyone think his trip might be an endorsement of Chinese policy there.²⁰⁹ Major human rights groups also criticized China for its repressive practices in preparing the country for the Games,²¹⁰ and French President Nicolas Sarkozy suggested he might boycott the Opening Ceremony on these grounds.²¹¹ The Dalai Lama, long an advocate on behalf of Tibet, took a different approach: he backed the Beijing Olympics because the Games “uphold the principles of freedom of speech, freedom of expression, equality and friendship, China should prove herself a good host by providing these freedoms.”²¹² In any event, Chinese officials did not respond well to the international pressure, accusing activists of “trying to politicize the Olympic[s],” a goal that they claimed was “against the spirit of the Games.”²¹³ But their actions tell a different story. Indeed, China is said to be “trying hard to show the world that it’s lightening up”²¹⁴ as a way to market itself (politically and commercially) to the world.²¹⁵

calculation of [the Chinese] government.” *Id.* (quoting Don Cheadle, cofounder of the Darfur advocacy group Not On Our Watch).

208. *BBC News: Interview with President George W. Bush* (BBC television broadcast Feb. 14, 2008), available at <http://news.bbc.co.uk/2/hi/americas/7245670.stm>.

209. Regarding this political situation, President Bush explained:

On the other hand, I have a little different platform than Steven Spielberg so, I get to talk to President Hu Jintao. And I do remind him that he can do more to relieve the suffering in Darfur. . . . I am not gonna . . . go and use the Olympics as an opportunity to express my opinions to the Chinese people in a public way ‘cause I do it all the time with the [Chinese] president.

See id.

210. For example, Human Rights Watch established a web site dedicated to pre-Olympics Chinese human rights issues. Human Rights Watch, Beijing 2008: China’s Olympian Human Rights Challenges, <http://china.hrw.org> (last visited Apr. 31, 2008).

211. Alan Cowell, *Sarkozy Courts Britain; Press Falls for His Wife*, N.Y. TIMES, Mar. 28, 2008, at A7.

212. His Holiness the Dalai Lama, Statement on the Forty-Ninth Anniversary of the Tibetan National Uprising Day (Mar. 10, 2008) (transcript available at <http://www.tibet.net/en/ohhdl/statements/10march/2008.html>). The Dalai Lama continued, “Therefore, besides sending their athletes, the international community should remind the Chinese government of these issues.” *Id.*

213. Edward Cody, *Chinese Official Decries Attempt to Link Darfur, Olympics*, WASH. POST, May 19, 2007, at A13 (quoting Chinese Foreign Minister Yang Jiechi).

214. Liu, *supra* note 203.

215. *See* Stuart Elliott, *For Olympics, China’s Marketers Are Showing Their Pride*, N.Y. TIMES, Nov. 17, 2007, at C8 (“[The Olympics signal to China] ‘the emergence of China, standing

In part because sports are imbued with political significance, most countries treat their regulation as a direct concern of government, and their management is lodged within the equivalent of federal administrative agencies or departments.²¹⁶ Although the United States has not adopted this model, its creation and sanctioning of the USOC as a quasi-public body and its regulation of Olympic sports under the Ted Stevens Olympic and Amateur Sports Act²¹⁷ leave little doubt that the status of sport in the United States is, as it is elsewhere, a matter of significant public and regulatory concern. To the extent that doping negatively impacts the integrity of sport to the point that it threatens a nation's image in the international arena—for example by branding it as roguish or deceitful—government has a legitimate interest in its regulation.

CONCLUSION

The problem of doping is generally considered in administrative, journalistic, and political terms. This treatment is most often begged by scandals that provoke a significant public reaction. The BALCO scandal and related revelations that baseball was infected with performance enhancing drug use was typical in this respect: It caused reporters to chase the story and to develop a factual sense of its scope and cast of characters. This, in turn, laid the foundation for congressional inquiries and demands for administrative reforms. The reform process was initiated when the Commissioner of Baseball

next to the United States and assuming its rightful place as a center of gravity.” (quoting public relations professional Tom Doctoroff)).

216. See, e.g., Department of Health and Ageing, Sport, <http://www.health.gov.au/internet/main/publishing.nsf/Content/sport-2> (last visited Apr. 31, 2008) (providing information about Sport Branch programs and policies); Official Web Gateway to the Government of Pakistan, Ministry of Sports, <http://www.pakistan.gov.pk/ministries/index.jsp?MinID=43&cPath=713> (last visited Apr. 31, 2008); Government of Federation of Bosnia and Herzegovina, Federal Ministry of Culture and Sports, http://www.fbihvlada.gov.ba/english/ministarstva/kultura_sport.php (last visited Apr. 31, 2008).

217. See *supra* note 48 and accompanying text; see also *Effects of Performance Enhancing Drugs on the Health of Athletes and Athletic Competition: Hearing Before the S. Comm. on Commerce, Science, and Transportation, supra* note 75, at 87 (statement of Professor Doriane Lambelet Coleman) (“[The U.S.] government not only has the right, but also the obligation, to intervene in the affairs of these organizations to address the drug testing problem in Olympic sport.”).

retained former Senator George Mitchell to conduct a thorough inquiry into the “era of doping” in baseball.²¹⁸

Professor Michael J. Sandel and Judge Richard A. Posner join a growing group of academics and public intellectuals who are delving into the problem of doping using the very different historical, philosophical, and economic lenses that are the tools of their respective trades. These different lenses provide a much richer sense of the problem’s contours and inherent complexities. Because of this, they also provide the basis for an eventual resolution of the thornier aspects of the problem. In this Essay, we have examined Sandel’s and Posner’s thoughts on three of those aspects: how to draw the line between substances and techniques that are fair game and those that constitute doping; whether there is a difference between sport and spectacle; and the nature of the public’s interest in sport as an institution and in doping as a practice that risks its integrity. Although we do not agree with all of their conclusions, they have made serious contributions to the ongoing discussion of these issues. Their line-drawing work in particular deserves considered attention from WADA and other stakeholders as they continue to work toward a useful and defensible definition of the spirit of sport.

218. See MITCHELL REPORT, *supra* note 13, at SR-5 (describing the investigation into steroid use in Major League Baseball); see also *supra* notes 2–13 and accompanying text.