'TECHNO-DOPING' – LEGAL ISSUES CONCERNING A NEBULOUS AND CONTROVERSIAL PHENOMENON

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Introduction

So-called techno-doping is one of the most exciting and topical subjects in sports law worldwide: 'Techno-doping' was the main topic of the congress of the German Association of Sports Law at the beginning of October 2012.
The discussion which took place there demonstrated that the term 'techno-doping' is not very clearly defined and must be linked to the aims which it seeks to achieve, in particular, those of equal opportunities and fairness in sport. In that discussion, I favoured a broad definition (see I.), bearing in mind that sporting performance is the result of various different factors which form a complete system. Proceeding from this broad definition, it is then up to the federations to prohibit specific measures, methods and equipment in order to achieve equal opportunities and fairness (see II.).
With regard to this general approach, I would like to refer to the 'classic cases' of Casey Martin and Oscar Pistorius. These cases highlight the general problems relating to disability in sports (see III.).
To give an initial introduction to the topic, I refer to the 200-meter final of the Paralympics in London this summer and some photographs showing the 'catapult shoe' used by the Soviet high-jumper, Yuriy Stepanov, Casey Martin with his golf cart and 'jump weights' used by a Spartan competitor (Akmatidas) in the Olympics (ca. 550–525 B.C.).

I. Definition

As already mentioned, a precise definition of 'techno-doping' is very difficult to arrive at, as sporting performance depends on a complete system which encompasses the physical and mental abilities of the athlete, the equipment and apparatus and the training opportunities. In this context, it should be mentioned that athletes with disabilities, whose use of technical apparatus in order to participate in their respective sports is legitimate, are sensitive to being linked to doping, which is clearly forbidden.
In order to provide an impression of the broad scope of the phenomenon of 'techno-doping', I would like to draw attention to the following *scenarios*:
(1) Body enhancement by means of surgery (e.g., breast reduction, the strengthening of sinews and ligaments by means of bodily tissues and artificial tissues, implants and amputations);
(2) The supplementation of missing body parts, or of body parts which do not function well (e.g., Oscar Pistorius' blades; more generally, prosthetics and orthotics, glasses for participants in shooting);
(3) Additional equipment to balance any physical and/or mental deficits (e.g., Casey Martin's golf cart; more generally: wheelchairs);

(4) Equipment (e.g., Stepanov's catapult shoes; full-body swimsuits; suits used in ski-jumping);
(5) Sporting apparatus (e.g., technical developments with regard to bicycles, bobsleighs and rowing boats; software in Formula One cars);
(6) Training methods and possibilities (e.g., wind tunnels, low pressure chamber, training with a new artificial knee);
(7) Competition (e.g., adjudicative technology, such as Hawk Eye and video recordings).

Irrespective of the criticism with which the term 'techno-doping' is generally met, in my view it is helpful to have regard to the classical definition of 'doping' in order to arrive at the decision as to what is permissible, and what is not. In doing so, one must consider the three classic grounds, upon which doping is forbidden: the avoidance of an unfair advantage in competition, the protection of the health and bodily integrity of the athlete and his competitors, and, finally, the reputation of the particular sport.[1]

Regarding the seven scenarios mentioned above, it is instructive to apply these three grounds which lead to the prohibition of doping, however, in order to avoid misunderstandings and regulatory loopholes, I would suggest replacing the term 'techno-doping' with 'forbidden measures and methods'. This definition would include technical measures which are suited to creating unfair advantages in competition, to endangering the health and bodily integrity of the athletes, and/or damaging the reputation of the sporting discipline and the organisations representing it. This definition allows us to comply with the principle of fairness, which requires differentiation without discrimination.[2]

II. Competence to rule on 'techno-doping' cases

The matter of competence to rule on 'techno-doping' cases can be regarded as a new aspect of the well-known problem in sports law of the autonomy of associations and federations and its limits. To this extent, I can confine myself to saying that, primarily, the federations and associations have the right to set and enact norms in order to regulate their sports. Accordingly, they can define 'techno-doping' and can rule on specific cases. However, such decisions may be subject to judicial review by courts of law and courts of arbitration. Consequently, the IAAF (International Association of Athletics Federations) had the right to forbid Stepanov's catapult shoes and the FIS (Federation Internationale de Ski) was entitled to allow the 'skating style' in cross-country skiing.

The matter of the obligation of the sporting associations and federations to regulate and to decide is much more complicated. In an

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1 See e.g. *K. Vieweg*, The Appeal of Sports Law, www.irut.de/Forschung/Veroeffentlichungen/OnlineVersionFaszinationSportrecht/FaszinationSportrechtEnglisch.pdf, p. 39 (accessed on December 18, 2012).

2 See e.g. *K. Vieweg*, Bans on Discrimination and Duties to Differentiate in the German Law of Sports Organizations, in: The International Sports Law Journal 2006, p. 96 et seqq.

earlier work of mine, I concluded as follows: "Uncertainty, loopholes and, partly, the complete absence of provisions is widespread among sporting associations and federations. This is based on various grounds: apart from the pragmatic considerations of ensuring that charters and by-laws are as brief as possible, two additional aspects are also significant. These are a lack of consciousness of the conflicts, and the aim of the associations and federations not to limit their own ability to act by means of self-binding regulations. The lack and uncertainty of regulations lead to two questions: First, do the associations and federations have a duty to create regulations which are sufficiently clear in order to be applied by the competent organs of the associations and federations, as well as a basis for the decisions of the members? Secondly, is there an obligation on the part of the associations and federations to reach decisions if their rules and regulations do not expressly mention such decisions? What is the legal basis, what are the conditions, and what are the objects of such duties to regulate and to decide?"[3] In my view, there exists a duty of the associations and federations to support their members. Consequently, there is a duty on the part of the associations and federations to make clear rules and regulations, and to apply them consistently.[4] Regarding forbidden measures and methods, I would like to refer to my lecture at the conference of the German Sports Law Association which took place in October 2012.[5]
In addition, a further problem should be mentioned – it is not enough to formulate and apply rules and regulations. It is also necessary to ensure, by means of checks, that athletes comply with these rules and regulations. For example, it is imperative that, in the Paralympics in the sprint competitions, only permitted blades are used.[6] Another example is the control of the thickness of the underwear worn by ski-jumpers, taking into account that the International Ski Federation (FIS) requires a maximum thickness of 3 mm.[7]

III. The cases of Casey Martin and Oscar Pistorius as examples of disability in sports

Traditionally, the set of problems relating to 'techno-doping' are associated with two well-known cases: that of Casey Martin, and that of Oscar Pistorius. Both cases were of global significance, dealing, as they did, with the problem of discrimination against disabled athletes.

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3 *K. Vieweg*, Normsetzung und -anwendung deutscher und internationaler Verbände, Berlin 1990, p. 143 et seqq.

4 *K. Vieweg*, ibid., p. 244 et seqq.; The Appeal of Sports Law http://www.irut.de/Forschung/Veroeffentlichungen/OnlineVersionFaszinationSportrecht/FaszinationSportrechtEnglisch.pdf, p. 7 et seqq, accessed on 28.11.2012.

5 *K. Vieweg*, 'Techno-Doping' – Regelungs- und Durchsetzungsmöglichkeiten der Sportverbände, in: K. Vieweg (ed.), 'Techno-Doping', Stuttgart 2013 (in print).

6 As to the conflict between H. Popow and W. Czyz, see Frankfurter Allgemeine Zeitung (September 8, 2012), p. 28.

7 FIS Changes to the Specifications for Competition Equipment Ski Jumping 2012, No. 4.3.

At this juncture, I would like to cite the relevant part of the contribution made by Saskia Lettmaier and myself to the Handbook on International Sports Law, edited by James A.R. Nafziger and Stephen F. Ross.[8] There, we wrote:

The principle of equal opportunities in sports led to a distinction between the able-bodied, on the one hand, and handicapped persons, on the other. In time, the concept of competition gained acceptance in disabled sports and caused the evolution of new types of competition (e.g. wheelchair-basketball) as well as the definition of disability categories. At an international level, certain competitions are pointing the way to the future – in particular, the Paralympics which have been taking place since 1992. Some spectacular cases (Casey Martin, Oscar Pistorius) have drawn the attention of sports law to this difficulty. These cases will be examined in more detail below. In particular, problems relate to the participation of handicapped persons using technological aids in able-bodied competitions (see 1.); the exclusion of athletes because of a risk of self-injury (see 2.); the participation of the able-bodied in contests for the disabled (see 3.); and the classification of disabled sports by type and degree of disability (see 4.).

1. Ensuring access through special accommodations

Until relatively recently, there had been little litigation involving persons with disabilities and sports. The most highly publicized case on the issue arose in 2001, when Casey Martin, a professional golfer afflicted with Klippel-Trenaunay-Weber syndrome, a degenerative circulatory disorder that obstructs the flow of blood from Martin's right leg back to his heart, fought all the way to the United States Supreme Court to obtain a reasonable accommodation for his disability in the form of the use of a golf cart in professional golf tournaments.[9] The *Martin* case marked the first stage in a growing controversy surrounding the integration of disabled athletes into mainstream competitive athletics. Most recently, the focus of this debate has been on the South African sprinter Oscar Pistorius, who was aiming to run at the Beijing Olympics in the summer of 2008, either in the 200 meter or the 400 meter or as a member of the South African relay team, despite the fact that – born without fibula bones – he had had both legs amputated below the knee before his first birthday.[10] The question was whether Oscar Pistorius should be

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[8] *K. Vieweg/S. Lettmaier*, Anti-discrimination law and policy, in: J. Nafziger/S. Ross (eds.), Handbook on International Sports Law, Cheltenham, UK/Northampton, MA, USA, 2011, p. 258 (271 et seqq.).

[9] *PGA Tour, Inc.* v. *Martin*, 532 U.S. 661 (2001). For an in-depth discussion, see *S. Zinger*, Diskriminierungsverbote und Sportautonomie, Berlin 2003, p. 192 et seq.

[10] Pistorius was the gold medalist in the 200 meter as well as the bronze medalist in the 100 meter at the 2004 Summer Paralympics in Athens. In addition, he is the double amputee world record-holder in the 100-, 200- and 400-meter events. See, e.g., P. *Charlish/S. Riley* (2008), 'Should Oscar Run?', 18 Fordham Intell. Prop., Media and Ent. L.J. 929.

allowed to compete in the Olympics using a pair of J-shaped carbon fiber blades known as 'Cheetahs' attached to his legs.[11]

Requests like those by Martin and Pistorius – for special accommodations or a change in the rules of the game on account of their physical shortcomings – present the tension between equality and the competitive ethos of sport in unusually stark relief. Thus, one might argue that the very idea of special accommodations is inappropriate for sports competitions because these competitions, by their very nature, are intended to identify and reward the very best. As Justice Scalia of the United States Supreme Court remarked in his forceful *Martin* dissent:

[T]he very *nature* of competitive sport is the measurement, by uniform rules, of unevenly distributed excellence. This unequal distribution is precisely what determines the winners and losers – and artificially to 'even out' that distribution, by giving one or another player exemption from a rule that emphasizes his particular weakness, is to destroy the game.[12]

However, unlike in the sex discrimination context, where, as we saw above, a separate-but-equal model still seems to represent the dominant approach, one of the key principles of anti-disability discrimination law is the concept of mainstreaming. The policy is that individuals with disabilities should be allowed to participate in programs in the least restrictive environment.[13] Thus, the main anti-disability discrimination statute in the United States – the Americans with Disabilities Act (ADA) of 1990[14] – requires that 'reasonable modifications' be made for a qualified person with a disability.[15] The relevant legislation in England and Wales is similar. Under the Disability Discrimination Act (DDA) 1995, as amended in 2005,[16] a duty exists to make reasonable adjustments to accommodate the disabled individual to whom the act may apply.[17] In fact, a positive duty to make reasonable accommodation for disabled persons exists throughout the European Union: Article 5 of Council Directive

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11 *M. Pryor*, 'Oscar Pistorius is Put through his Paces to Justify his Right to Run', The Times (London) (November 20, 2007), available at www.timesonline.co.uk/tol/sport/more_sport/athletics/article2903673.ece (last accessed October 24, 2009).

12 *PGA Tour, Inc.* v. *Martin*, 532 U.S. 661, 703-04 (2001) (emphasis in original). Justice Thomas joined in the dissent.

13 See, e.g., the provisions of the Americans with Disabilities Act, 42 U.S.C.A. § 12182(b)(1)(B) ('accommodations shall be afforded to an individual with a disability in the most integrated setting') and (C) ('Notwithstanding the existence of separate ... programs ... an individual with a disability shall not be denied the opportunity to participate in such programs ... that are not separate').

14 42 U.S.C.A. §§ 12101–213. The ADA expanded upon the provisions of the Federal Rehabilitation Act (RA) of 1973, 29 U.S.C.A. §§701–96, which was limited to the federal government, its contractors and grantees. The ADA prohibits discrimination against people with disabilities by employers (Title I), public entities (Title II), and privately owned businesses and services that provide public accommodations (Title III).

15 42 U.S.C.A. § 12182(b)(2)(A)(ii) and (iii).

16 Public Acts 1995 c. 50.

17 See, e.g., Part III (Discrimination in Other Areas) s. 21.

2000/78/EC, which is binding on Member States as to the object to be achieved, provides that in order 'to guarantee … equal treatment in relation to persons with disabilities, reasonable accommodation shall be provided … unless such measures would impose a disproportionate burden on the employer.'[18]

Once it has been determined that the relevant anti-disability discrimination provision is in principle applicable – and, as we saw above, there may be some difficulty in enforcing the legislation against private entities[19] – much will depend on the reach of the statute's exempting provisions, i.e. on the recognized limits to integration. Broadly speaking, defenses to a claim of disability discrimination in the sports context can arise in two kinds of case.

a) Fundamental alterations

In *PGA Tour, Inc.* v. *Martin*, a case which continues to define the legal issues surrounding disability and mainstreaming in sports, the PGA Tour did not actually dispute that Martin had a disability for which the use of a golf cart was both a reasonable and a necessary accommodation. Rather, it defended its actions based on the language of § 12182(b)(2)(A)(ii) of the ADA, which provides an exemption from the modification requirement if 'the entity can demonstrate that making such modifications would fundamentally alter the nature of such goods, services, facilities … or accommodations.' The case was then argued on the basis of whether waiving the PGA Tour rule requiring golfers to walk the course without the use of a cart in Martin's case would fundamentally alter the nature of the PGA Tour event.

The United States Supreme Court held that there were two ways in which a rule change might fundamentally alter the activity in question: by changing 'such an essential aspect of the game of golf that it would be unacceptable even if it affected all competitors equally', or by giving the disabled person not only equal access but 'an advantage' over other competitors.[20] As regards the first part of the inquiry, the Court concluded that allowing the use of a cart would not change an essential aspect of the game of golf because 'the essence of the game has been shot-making.'[21] The court also noted that the ban on carts is not required by golf's general rules and that carts are

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18 Official Journal L 303, 02/12/2000 P. 0016–0022.

19 See section II.(a)(3) supra. The Supreme Court expressly considered the reach of the ADA in *PGA Tour, Inc.* v. *Martin*. The PGA is a private tour that does not employ professional golfers and receives no funds from the state or federal governments. It argued that it was a public accommodation only with respect to the spectators, not the competitors. The Supreme Court agreed with the lower courts that the tournaments held by the PGA were, in fact, public accommodations for the competitors as well as the spectators, making Title III of the Act applicable (532 U.S. 661, 678–80). The case sends the broader message that courts should construe the ADA's coverage liberally. It is likely that only a few events, held at legitimately private clubs that own their own facilities, will avoid ADA coverage.

20 532 U.S. 661, 682.

21 *Ibid.* 683.

indeed strongly encouraged in much of golf.[22] By contrast, allowing a wheelchair user to return the ball after its second bounce in racquetball has been held to alter such an essential aspect of the game that it would be unacceptable even if the modification affected all competitors equally. The Supreme Judicial Court of Massachusetts reasoned that the essence of the game of racquetball, as expressly articulated in the official rules, was the hitting of a moving ball before the second bounce and that giving a wheelchair player two bounces and a footed player one bounce in head-to-head competition would create a new game, calling for new strategies, positioning, and movement of players.[23] The second leg of the Supreme Court's inquiry in *Martin* concerned whether the modification in question – the use of a cart – would give Martin a competitive advantage. The court held that the ADA required the PGA to make an individualized assessment of Martin's claim. Relying on the trial court's findings that Martin 'easily endures greater fatigue even with a cart than his able-bodied competitors do by walking'[24], the court found that using a cart did not give Martin an advantage and that it was the PGA's duty under the ADA to provide him with one.

While *Martin* opened the door for suits by athletes seeking accommodations or rule modifications for their disabilities, it does not make every modifications suit a winner. The more recent Pistorius controversy is illustrative in this regard. Pistorius' bid for entry into the 2008 Summer Olympic Games ran up against a March 2007 amendment to its competition rules by the IAAF.[25] The amendment banned the 'use of any technical device that incorporates springs, wheels or any other element that provides the user with an advantage over another athlete not using such a device'[26]. Undoubtedly, the artificial limbs used by Pistorius were technical devices, and, equally undoubtedly, they afforded Pistorius a performance advantage over and above anything he could have achieved without such limbs. The crucial question, however, was whether the artificial limbs overshot their (permissible) aim of compensating for Pistorius' lack of lower legs and instead constituted an (impermissible) enhancement – what some have called 'techno-doping'[27]. A 2007 study conducted by German professor Gert-Peter Brüggemann for the IAAF found that Pistorius' limbs used 25% less energy than able-bodied runners to run at the same speed and that they led to less vertical motion combined

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22 *Ibid.* 685–6. Even the PGA does not ban carts in some of its tours.

23 *Kuketz* v. *Petronelli*, 433 Mass. 355, 821 N.E.2d 473 (2005).

24 *Ibid.* 690 (quoting *Martin* v. *PGA Tour, Inc.*, 994 F.Supp. 1242, 1252 (D. Or. 1998)).

25 Some have suggested that this rule was introduced specifically to deal with the threat posed by Pistorius, an allegation vehemently denied by IAAF council member Robert Hersh. *Charlish/Riley*, note 10 supra, 930.

26 IAAF Competition Rule 144.2(e) (2008).

27 For the term, *J. Longman*, 'An Amputee Sprinter: Is He Disabled or Too-Abled?', The New York Times (May 15, 2007), available at www.nytimes.com/2007/05/15/sports/othersports/15runner.html?_r=1&oref=slogin (last accessed October 24, 2009).

with 30% less mechanical work for lifting the body.[28] Brüggemann concluded that Pistorius had considerable advantages over athletes without prosthetic limbs.[29] Based on these findings, the IAAF ruled Pistorius' prostheses ineligible for use in competitions conducted under the IAAF rules, including the 2008 Summer Olympics.[30]

In May 2008, however, the Court of Arbitration for Sport (CAS) reversed the ban, clearing the way for Pistorius to pursue his dream, although the athlete ultimately failed to qualify for the Olympics. A major component of the court's decision was that there was insufficient evidence that the prosthetics provided an *overall* advantage to Pistorius when their disadvantages were taken into account.[31] In other words, the court held that what mattered was the whole package of benefit and detriment over the entire course of the race – the net status of performance – rather than the impact of the prosthetic limbs in isolation.[32] For instance, while Pistorius' prosthetics may return more impact energy than the human foot, as the Brüggemann study found,[33] this benefit might be offset by their also causing slower starts,[34] being ill adapted to rainy and windy conditions, and difficult to handle in navigating bends. Similarly, just as Pistorius has the advantage of suffering no fatigue in his legs below

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28 For further information, G.-P. *Brüggemann, A. Arampatzis, F. Emrich*, *et al.* (2008), 'Biomechanics of Double Transtibial Amputee Sprinting Using Dedicated Sprinting Prostheses', Sports Technology 1, No. 4–5, 220, 226 et seq.; 'Blade Runner Handed Olympic Ban', BBC Sport (January 14, 2008), available at http://news.bbc.co.uk/sport2/hi/olympics/athletics/7141302.stm (last accessed October 24, 2009).

29 'Studie beendet Olympiatraum von Pistorius', Welt Online (December 19, 2007), available at www.welt.de/welt_print/article1475643/Studie_beendet_Olympiatraum_von_Pistorius.html (last accessed October 24, 2009).

30 'IAAF Call Time on Oscar Pistorius' Dream', The Daily Telegraph (January 10, 2008), available at www.telegraph.co.uk/sport/othersports/athletics/2288489/IAAF-call-time-on-Oscar-Pistorius-dream.html (last accessed October 24, 2009).

31 The evidential burden of proving the 'advantage' in terms of IAAF rule 144.2.(e) is on the sports association which imposed the suspension. The applicable standard the association must apply to prove that the user of the prosthesis has an overall net advantage over other athletes not using such devices is the 'balance of probability'; CAS 2008/A/1480, *Pistorius* v. *IAAF*, para. 92.

32 The IAAF did not ask Professor Brüggemann to determine whether the use of the prosthesis provides an overall net advantage or disadvantage. CAS 2008/A/1480, *Pistorius* v. *IAAF*, paras. 85, 93 = Sp*u*Rt 2008, 152, 154. The only purpose of the determination was the question whether Pistorius' use of the prosthesis provided him with any kind of advantage.

33 'Studie beendet Olympiatraum von Pistorius', Welt Online (December 19, 2007), available at www.welt.de/welt_print/article1475643/Studie_beendet_Olympiatraum_von_Pistorius.html (last accessed October 24, 2009).

34 Observing Pistorius' run, one can see that he was slower than other able-bodied runners off the starting blocks and during the acceleration phase, but faster during the second and third 100 meter; CAS 2008/A/1480, *Pistorius* v. *IAAF*, 41= Sp*u*Rt *2008*, 152, 153.

his knees, so also is he subject to the disadvantage of only being able to produce propulsive effects via muscles above his knees.[35]

Of course, the net effect of technical aids on a disabled athlete's overall performance must be difficult, if not impossible, to quantify accurately (and any attempt to do so is bound to have significant resource implications[36]). One suspects that one reason why *Martin* has not set off a barrage of suits by disabled athletes seeking an accommodation to participate in mainstream sports[37] is that, because of the ethos of competition, most disabled athletes do not want, or accept, any actual or perceived favors. To receive or to be suspected of receiving special aid devalues the athletic achievement. As Pistorius told reporters, 'If they [the IAAF] ever found evidence that I was gaining an advantage, then I would stop running because I would not want to compete at a top level if I knew I had an unfair advantage.'[38]

What if the tests carried out on Pistorius had been conclusive that the prosthetic limbs did in fact go further than merely redressing his overall performance balance? Indeed, in some cases, it might not be possible to accommodate a disabled athlete without at the same time improving his situation beyond that of the average competitor. This need not necessarily preclude participation. One solution to the dilemma might be to impose a scoring handicap equivalent to the (illicit) advantage on the athlete concerned.[39] Sports have developed a sophisticated machinery to set various forms of handicaps: occasionally, better competitors are physically hindered;[40] in team

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35 *Charlish/Riley*, note 10 supra, 936. Another advantage the use of a prosthesis may provide is the mental impact on the other athletes who have to start next to an amputee. It is an open question whether this is the case and whether a possible psychological obstacle of the able-bodied athletes may be considered given the non-discrimination rule.

36 The tests conducted on Pistorius cost in the range of €30 000. See *Charlish/Riley*, note 10 supra, 939. If funding such tests is left to the individual athlete, challenges are unlikely to be brought. If sports governing bodies are left to pick up the tab, on the other hand, the financial burden on these might also be immense. The respective sports association should, however, regulate the process by which a disabled sportsperson who uses a prosthetic can take part in competitions for able-bodied sportspeople in a way that guarantees safety and saves money. Thus, the sports association should compile a list of all institutions to be considered in the necessary studies, enumerate all factors to be investigated, and set out the procedure to be followed in the event that a disabled sportsperson makes an administrative appeal. *A. Chappel* (2008), 'Running Down a Dream: Oscar Pistorius, Prosthetic Devices, and the Unknown Future of Athletes with Disabilities in the Olympic Games', 10 NC JOLT On line Ed. 1, 16, 26.

37 On the limited impact of *Martin* in terms of similar cases brought, *H.T. Greely* (2004), 'Disabilities, Enhancements, and the Meanings of Sports', 15 Stan. L. & Pol'y Rev. 99, 111.

38 'Pistorius Is No Novelty Sprinter', The Daily Telegraph (Sport) (July 11, 2007), available at www.telegraph.co.uk/sport/othersports/athletics/2316794/pistorius-is-no-novelty-sprinter.html (last accessed October 24, 2009).

39 For a similar proposal see *Greely,* note 37 supra, 122 et seq.

40 In most thoroughbred horseracing, e.g., weight is added to some of the horses to balance out the different weights of the jockeys.

sports, weaker teams are sometimes given special advantages;[41] and in a few sports, the actual scoring is adjusted to help inferior competitors.[42] Perhaps we should consider using these various handicapping methods to further the integration of disabled athletes into mainstream sports.

b) Risk of injury to others

Allowing a disabled individual to compete with the help of an accommodation may present substantial injury problems with other competitors. For instance, if Pistorius had qualified for the Olympics and been allowed to run in the main pack of the race, his running blades might have posed a safety hazard for fellow athletes.[43] Under the ADA, the employment qualification standards under Title I may include 'a requirement that an individual shall not pose a direct threat to the health and safety of other individuals in the workplace'[44], while Title III declares that public accommodations are not obliged 'to permit an individual to participate … where such individual poses a direct threat to the health and safety of others … that cannot be eliminated by a modification of policies, practices, or procedures or by the provision of auxiliary aids or services'[45]. In *Badgett* v. *Alabama High School Athletic Ass'n*,[46] Mallerie Badgett, a minor wheelchair-bound track-and-field athlete with cerebral palsy, brought a claim against the Alabama High School Athletic Association (AHSAA) under the ADA because she wished to compete in the able-bodied track-and-field competition. The court denied her claim, finding that the AHSAA had made reasonable modifications by establishing a separate wheelchair division. The court held that in deciding what was reasonable both competitive and safety considerations had to be taken into account and that there were legitimate safety concerns about having able-bodied and wheelchair-bound athletes compete in mixed heats.

2. Excluding athletes because of a risk of self-injury

Quite apart from the question of whether there is a duty to ensure access for disabled individuals through special accommodations, there is the issue of whether a disabled athlete can be excluded on the (paternalistic) ground that participation carries a high risk of self-

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41 In many professional leagues in the United States, the worst teams get the first choice of players who enter the draft, presumably allowing them to equalize ability in the league over time.

42 Amateur golf and bowling, e.g., give special scoring advantages to weaker competitors based on their previous results.

43 IAAF general secretary Pierre Weiss in fact voiced this concern, expressing a wish that the South African Olympic Committee not select Pistorius for its relay team 'for reasons of safety'. See 'Relay Safety Fears Over Pistorius', BBC Sport (July 15, 2008), available at http://news-bbc.co.uk/sport2/hi/olympics/athletics/7508399.stm (last accessed October 25, 2009). The CAS did not, however, address the question whether the use of prosthetics could lead to an increased risk of stumbling, thereby creating a greater risk of injuring other athletes.

44 42 U.S.C.A. § 12113(b).

45 42 U.S.C.A. § 12182(b)(3).

46 2007 WL 2461928 (N.D. Ala. May 3, 2007).

injury.[47] An example is the person who has only one kidney but still wants to participate in a contact sport such as interscholastic wrestling.[48] In the United States, the focus of the inquiry is on whether the disabled athlete is an otherwise 'qualified individual'[49], i.e. whether he is able to meet all of the program's requirements in spite of his handicap.[50]

In *Pahulu* v. *University of Kansas*,[51] the plaintiff was injured during football practice and later diagnosed with a very narrow cervical canal, leading team doctors to believe that he was at very high risk of serious neurological injury. As a result, Pahulu was suspended from football. He sued, claiming the university discriminated against him by disqualifying him only on account of his disability. The court denied Pahulu's injunction, holding that he failed to meet the 'otherwise qualified' standard because he did not fulfill the team's medical requirements. The court found that the team doctors' risk assessment provided a reasonable and rational basis for the disqualification, precluding further judicial scrutiny.[52]

Where a disabled athlete is aware of and willing to incur the dangers involved in continued athletic participation, allowing a third party to interpose its 'benevolent paternalism'[53], as the *Pahulu* court did, requires some strong justification. Citing a sport organization's 'inherent right to protect an athlete's health'[54] – from himself (!) – should not be regarded as sufficient as this amounts to justifying paternalism for paternalism's sake. Whether protecting the organization's reputation, which might be tarnished by a competitor

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47 For discussion, see *Paul M. Anderson* (1999), Sports Law: A Desktop Handbook, p. 52 et seq. and *S. Zinger* (2003), Gleichbehandlung im Sport – Unter besonderer Berücksichtigung US-amerikanischer Rechtsprechung, in: K. Vieweg (ed.), Spektrum des Sportrechts, p. 1, 13 et seq.

48 *Poole* v. *South Plainfield Bd. of Ed.*, 490 F.Supp. 948 (D.C.N.J. 1980).

49 Many of the cases predated the ADA and were decided under § 504 of the Rehabilitation Act of 1973 (RA), which prohibits discrimination against 'otherwise qualified' individuals, in federally funded programs, solely because of their handicap (29 U.S.C. § 794).

50 *Southeastern Community College* v. *Davis*, 442 U.S. 397, 398 (1979).

51 897 F.Supp. 1387 (D. Kansas 1995).

52 *Ibid.* 1394. For a similar decision, see *Knapp* v. *Northeastern University*, 101 F.3d 473 (7th Cir. 1996) (holding that requiring medical qualification did not violate the RA, provided the school had significant medical evidence indicating a serious risk of injury). For a decision that went in the opposite direction, see *Poole* v. *South Plain Field Bd. of Ed.*, 490 F.Supp. 948 (D.C.N.J. 1980) (holding school had neither duty nor right under RA to exclude student who knew of dangers and – with parents' consent – still chose to compete).

53 For this term, see *B.P. Tucker* (1996), 'Application of the Americans with Disabilities Act (ADA) and Section 504 to Colleges and Universities: An Overview and Discussion of Special Issues Relating to Students', 23 J.C. & U.L. 1, 33.

54 For this argument, see *M.J. Mitten* (1998), Enhanced Risk of Harm to One's Self as a Justification for Exclusion from Athletics, 8 Marq. Sports L.J. 189, 192.

being severely injured or killed in competition,[55] or averting a liability risk should trump the athlete's right to decide is questionable, especially where the athlete is prepared to sign a waiver that would release the organization from all liability.[56] While paternalism might be appropriate in amateur, in particular in high school and collegiate sports (where the persons protected are usually minors), it seems very hard to justify in the case of *professional* (adult) athletics. Where a competent athlete's livelihood is threatened if made to abstain from sports participation, his right to decide what is in his own best interests should be regarded as paramount.[57]

3. Participation of the able-bodied in competitions for the disabled

Another facet to the participation problem presents itself where able-bodied athletes wish to take part in competitions for the disabled. In wheelchair-basketball, for example, up to two non-disabled athletes may be included on a team. Also, an able-bodied athlete could take the view that he has no advantages in sports intended for the disabled, giving him a right to participate. Similarly, an able-bodied person might wish to take part in a marathon for persons using wheelchairs. This particular problem may be approached in the following way: the relevant association rules and their application are subject to judicial scrutiny. The facts of the individual case and the principle of proportionality are the decisive criteria. The question of whether participation may be confined to disabled persons, as intended by the association, has to be addressed by balancing the interests at stake.

4. Classifications by type and degree of disability

In disabled sports, there are various classifications to ensure equal opportunities. The need for classification arises from the existence of different types of disabilities and their varying severity. There is a distinction, for example, between physical and intellectual disability. Persons who are physically disabled are further categorized into subgroups, such as athletes with a visual impairment or athletes using wheelchairs. These groups are again subdivided according to the severity of the disability, in particular according to the individual's mobility impairment due to the disability. This classification, however, may run into difficulties. On the one hand, the various categories should not be overly strict, given that, otherwise, there would not be a sufficient starting field. On the other hand, they should only cover athletes who have similar physical conditions in order to comply with the principle of equal opportunities. Finding a solution to such a conflict of objectives is difficult and can lead to judicial review if an athlete feels discriminated against by the

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55 *Knapp* v. *Northwestern University*, 942 F.Supp. 1191, 1199 (N.D. Ill. 1996); *Mitten*, note 54 supra, 192.

56 On the legal validity of waivers, see T.G. *Church/J.R. Neumeister* (1998), 'University Control of Student-Athletes with Disabilities under the Americans with Disabilities Act', 25 J.C. & U.L. 105, 180 et seq.

57 For the argument that a distinction be drawn between professional and amateur sports, *Mitten*, note 54 supra, 221 et seq.

definition of the categories or by his or her classification. In discus throwing, for example, various grades of disability are united in one competition to provide a sufficient starting field. To offset this, however, a points system based on the grade of the disability is introduced: the more severe the impairment, the less the distance required in order to gain an accordant score. To ensure equal opportunities in discus throwing, it is of the utmost importance that the conversion factor which determines the score be non-discriminatory with regard to the grade of disability[58].
Up until now, these questions have not been subject to judicial review. For this reason, questions of proof which would be much more relevant in this context than in the *Martin* and *Pistorius* cases have not played a role so far.

Conclusion

'Techno-doping' is a term which is very widely used, but which is perhaps not very suitable or clear. Keeping in mind that sporting performance is the result of various factors which form a complete system, I suggest, as a first step, taking into account the seven scenarios which I have already mentioned and then, in a second step, considering the aims of equal opportunities and fairness, the health and bodily integrity of the athletes and the reputation of the sporting discipline. In the third step, it is up to the federations to stipulate what is permitted and what is forbidden. Of course, these decisions can be subject to judicial review. Two famous cases have been ruled on by courts (Casey Martin) and the Court of Arbitration for Sports (Pistorius).

[58] Marianne Bruchhagen, e.g., a paraplegic discus thrower, abandoned her career because she found the points system to be unfair. The system is based exclusively on the respective world record of one grade of disability: see Frankfurter Allgemeine Zeitung (July 7, 2008), p. 31.