

# The spirit of sport: the case for criminalisation of doping in the UK

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**Abstract** This article examines public perceptions of doping in sport, critically evaluates the effectiveness of current anti-doping sanctions and proposes the criminalisation of doping in sport in the UK as part of a growing global movement towards such criminalisation at national level. Criminalising doping is advanced on two main grounds: as a stigmatic deterrent and as a form of retributive punishment enforced through the criminal justice system. The ‘spirit of sport’ defined by the World Anti-Doping Agency (WADA) as being based on the values of ethics, health and fair-play is identified as being undermined by the ineffectiveness of existing anti-doping policy in the current climate of doping revelations, and is assessed as relevant to public perceptions and the future of sport as a whole. The harm-reductionist approach permitting the use of certain performance enhancing drugs (PEDs) is considered as an alternative to anti-doping, taking into account athlete psychology, the problems encountered in containing doping in sport through anti-doping measures and the effect of these difficulties on the ‘spirit of sport’. This approach is dismissed in favour of criminalising doping in sport based on the offence of fraud. It will be argued that the criminalisation of doping could act as a greater deterrent than existing sanctions imposed by International Federations, and, when used in conjunction with those sanctions, will raise the overall ‘price’ of doping. The revelations of corruption within the existing system of self-governance within sport have contributed to a disbelieving public and it will be argued that the criminalisation of doping in sport could assist in satisfying the public that

justice is being done and in turn achieve greater belief in the truth of athletic performances.

**Keywords** Spirit of sport · Doping · Criminalisation

## 1 Introduction

When Chris Froome won the Tour de France in 2015 he became one of only a handful of cyclists to win the title more than once and his success was something to be celebrated. Sports fans watching wanted to rejoice in his magnificent achievement. However, his victory was overshadowed by stories in the press implying his win was not a clean win, but one assisted by doping.<sup>1</sup> Despite Froome’s efforts to assuage the press and to persuade the public of his honesty,<sup>2</sup> there is still the perception, for some, that his successes are super-human, and cannot be achieved without cheating in some shape or form. What has to be done for the public to get back its faith in the truth of the performances it sees? What will it take for us to get back our belief in the ‘spirit of sport’?

WADA define the ‘spirit of sport’ as

‘The essence of Olympism, the pursuit of human excellence, through the dedicated perfection of each person’s natural talents. It is how we play true.’

The WADA Code goes on to state that ‘The spirit of sport is the celebration of the human spirit, body and

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<sup>1</sup> Lichfield (2015). <http://www.independent.co.uk/sport/cycling/tour-de-france-2015-doping-claims-dampen-the-mood-as-chris-froome-triumphs-10417336.html>.

<sup>2</sup> Windsor (2015). <http://www.cyclingweekly.co.uk/news/latest-news/chris-froome-described-as-close-to-human-peak-after-physiological-data-release-202644>.

mind'. This is reflected in the values we find in and through sport including: ethics, fair play and honesty; health; excellence in performance and fun and joy.<sup>3</sup>

It will be argued that the current system of anti-doping sanctions are ineffective in efficiently reducing doping and that this results in the public's loss of faith in the performances it sees and the loss of the 'spirit of sport'. In a year when Russia are banned from international athletics competition and a former No 1 ladies tennis player is found to have doped, is the current anti-doping system doing enough to alter the public's perception that doping is rife?<sup>4,5</sup> Carolan considers that 'traditional notions of sporting excellence' might perhaps already be damaged permanently,<sup>6</sup> but it will be argued that criminalisation of doping could change this perception by providing retributive justice and satisfying the public that athletes have had their 'just deserts'.

The biggest losers in doping are those that perform clean. The WADA Code protects athletes 'fundamental right to participate in doping free sport',<sup>7</sup> but it is argued that the Code is currently ineffective in fulfilling this obligation. Nicole Sapstead of UK Anti-Doping (UKAD) has asked the question 'What has happened to sport?' If doping is allowed to continue at its current level, she predicts that the public will stop watching. In her opinion, the performances of clean athletes are undermined by doping and cynicism breeds quickly.<sup>8</sup> This article will address what the law can do to get back the 'spirit of sport' in its broadest sense and will advocate criminalisation not as an alternative to the current system, but as an additional weapon with which to combat doping in sport. Creating a criminal offence could operate as a deterrent and also satisfy the public that justice has been and is being done and therefore alter the public's perception of the veracity of sporting performance.

For the purposes of this article, doping should be read to mean violations of Articles 2.1–2.6 of the WADA Code, which relate to the presence of prohibited substances in an athlete's sample, the use or the possession of a prohibited substance or method, evading sample collection, whereabouts failures and tampering with samples. Prohibited associations are excluded from doping for the purposes of this article as this violation would not fall within the fraud model which is proposed. Trafficking is also excluded from

the definition of doping for the purposes of this article and it will be proposed that trafficking should form the basis of a different offence to doping by the athlete.

For the purposes of this article, harm is intended to mean detrimental to health. Criminalisation of all forms of doping, as defined for the purposes of this article, is proposed based on the fraud model. Under the fraud model an athlete caught doping would commit a fraud by falsely representing that they were competing clean with the intention to make a financial gain for themselves in the form of prize money or sponsorship.

Criminalisation is advanced in a UK context because supranational measures would be onerous and unlikely to lead to any short-term change. Whilst it is not proposed that there be a formal harmonisation of state-led anti-doping measures amongst different states, this advancement is placed within the context of a broader global trend towards the criminalisation of doping in sport. There is value in a piecemeal approach to the criminalisation of doping. As more countries create criminal offences for doping, a de facto supranational law is formed.

The arguments for legalising the use of PEDs will be considered first (the 'anti-anti-doping' stance) as the alternative to retaining the current stance (the 'pro-anti-doping' stance) and by analysing the effectiveness of current sanctions, using this debate as a backdrop to the proposal for criminalisation of doping.

## 2 Anti-anti-doping

### 2.1 Psychology

The extraordinary psychology of athletes is cited by Savulescu et al. as justification for permitting the use of PEDs;<sup>9</sup> however, it will be argued that current anti-doping policy does not do enough to alter this psychology and deter athletes from doping. It is submitted that the psychology of athletes combined with the financial rewards for success guarantee that doping will always be a chosen path for some and that new methods and substances will always be sought out to achieve success. The results of Goldman's infamous Death in the Locker room survey revealed that over half of interviewed athletes would be prepared to die after five years if taking a banned substance would ensure success.<sup>10</sup> These results were tested with biannual surveys over a 10-year period and the results were the same.<sup>11</sup> The 2007 WADA commissioned literature review on attitudes to drugs in sport reports that this psychology prevails in, for

<sup>3</sup> WADA Code (2015), p. 14.

<sup>4</sup> Gibson (2016b). <https://www.theguardian.com/sport/2016/jun/17/russia-rio-olympics-ban-doping-iaaf-sebastian-coe>.

<sup>5</sup> Mitchell (2016). <https://www.theguardian.com/sport/2016/jun/08/ maria-sharapova-banned-two-years-failing-drugs-test-meldonium>.

<sup>6</sup> Carolan (2006), p. 30.

<sup>7</sup> WADA Code (2015), p. 11.

<sup>8</sup> Tackling Doping in Sport conference, London, April 2016.

<sup>9</sup> Savulescu et al. (2004), p. 666.

<sup>10</sup> Goldman et al. (1984).

<sup>11</sup> Goldman and Klatz (1992).

example, college athletes, where 34% of all male hockey players admitted that they would take anabolic steroids if it would help them to play in the National Hockey League.<sup>12</sup>

Backhouse et al. report that amongst elite athletes, reasons for doping include desire to win and financial gain, and admit that, as long as testing fails to be 100% effective in identifying drug users, the rewards for sporting success are such that this deficiency in testing will be exploited. Haugen goes even further in his game theoretic model, predicting that unless the likelihood of athletes being caught doping is raised to unrealistically high levels, or the payoffs for winning are reduced to unrealistically low levels, all athletes could be predicted to cheat.<sup>13</sup> This is a view echoed by professional athletes. Matthew Pinsent, the former Olympic rower has said ‘there is a simple reason why rowers don’t cheat and that is that the rewards for winning simply aren’t that great’.<sup>14</sup>

Anderson extends this idea by linking the doping pressures felt by athletes to the inclusion of sport in the entertainment industry. He points out that the public want ‘world record times...or...unprecedented acts of endurance’ and concludes that ‘athletes are vulnerable to these (our) demands’.<sup>15</sup>

Such demands lead to the use of new performance enhancements which may be undetectable. The Cycling Independent Reform Commission (CIRC) report on the use of drugs in professional cycling revealed that despite the use of blood passports, new methods of micro-dosing of EPO are suspected,<sup>16</sup> and this is managed in a sophisticated way by those outside the cycling team itself.<sup>17</sup> Athletes continue to use performance enhancing substances some of which are highly experimental until they too are banned.<sup>18</sup> Meldonium was added to the WADA prohibited list on 1st January 2016 as it was deemed to have performance enhancing capacities. Athletes were seemingly very aware of this as a 2015 study revealed that 17% of Russian athletes tested positive for meldonium, with a global study finding positive readings for 2.2% of athletes.<sup>19</sup>

It will be argued that the current system of penalties imposed by International Federations, based on the WADA Code, do not do enough to deter athletes from doping and the potential rewards outweigh the penalties imposed if

caught. There is little that can be done to alter the size of financial rewards available to successful athletes without changing the entire economics of sport, but it will be argued that criminalisation of doping could act as a better deterrent by raising the ‘price’ of doping if caught, and help combat the prevalent athlete psychology.

## 2.2 Legalise doping

Given the difficulties in detecting doping,<sup>20</sup> and the psychology of the athlete, Savulescu et al. argue that certain forms of doping should be legalised, provided they do not expose an athlete to risks which are excessive.<sup>21</sup> A harm-reductionist approach is proposed by Kayser et al. which would permit the use of certain PEDs.<sup>22</sup> This view is supported by Anderson.<sup>23</sup> Harm reductionism proposes the legalisation of certain forms of doping in order to minimise the possible harm resulting from such conduct.

Savulescu et al. suggest that allowing doping would meet the values characterising the ‘spirit of sport’. They advocate that health can be monitored properly and substances regulated if doping is legalised,<sup>24</sup> although they are not specific about who would carry out such monitoring. Kayser et al. support this view accepting that such an approach would not be risk free, but would avoid the use of untested drugs and provide a medically supervised environment for doping.<sup>25</sup>

Countering arguments that doping gives an unfair advantage Savulescu et al. suggest that permitting doping would allow a more level playing field.<sup>26</sup> This is a view shared by Kayser et al. who ‘find the anchoring of today’s anti-doping regulations in the notion of fair-play to be misguided’ pointing out that an athlete who benefits from medical supervision and a ‘sophisticated technological environment’ comes ‘as close as possible to doping’ (2007, p. 3).<sup>27</sup> Carolan, in discussion on policy justifications for anti-doping, also notes difficulties in reconciling inconsistencies in anti-doping where the use of nitrogen tents is permissible but the use of EPO, which provides exactly the same effect, is not.<sup>28</sup> Anderson too speaks of the ‘ethical difficulties’ involved where the lines between what is

<sup>12</sup> Backhouse et al. (2006), p. 32.

<sup>13</sup> Haugen (2004), p. 73.

<sup>14</sup> Pinsent (2009), p. 288.

<sup>15</sup> Anderson (2013), p. 144.

<sup>16</sup> CIRC report (2015) p. 57.

<sup>17</sup> CIRC report (2015) p. 65.

<sup>18</sup> CIRC (2015) p. 62.

<sup>19</sup> Revealed in a documentary by Hajo Seppel in 2016 referred to online at <http://www.theguardian.com/sport/2016/mar/08/meldonium-maria-sharapova-failed-drugs-test> (last accessed 25 April 2016).

<sup>20</sup> See <https://wada-main-prod.s3.amazonaws.com/resources/files/2013-05-12-Lack-of-effectiveness-of-testing-WG-Report-Final.pdf> (last accessed on 25 April 2016).

<sup>21</sup> *Ibid.*, p. 670.

<sup>22</sup> Kayser et al. (2007), p. 1.

<sup>23</sup> *Ibid.*, p. 151.

<sup>24</sup> *Ibid.*, p. 668.

<sup>25</sup> *Ibid.*, p. 5.

<sup>26</sup> *Ibid.*, p. 668.

<sup>27</sup> *Ibid.*, p. 2–3.

<sup>28</sup> Carolan (2006), p. 15.

permitted and what is proscribed become so blurred that any distinction is unjustifiable.<sup>29</sup>

Anderson supports the view that the harm-reductionist approach as advocated by Savulescu–Kayser could work to balance the ‘inequities of the current system’ brought about through natural biological advantages such as large lung capacity and environmental benefits such as living at altitude.<sup>30</sup> Carolan goes further and contends that ‘equality is just as capable—in theory at least—of supporting a levelling down of standards by the legalization of performance enhancing drugs, as authorizing the existence of a strict anti-doping regime.’<sup>31</sup>

As for adherence to rules, Savulescu et al. suggest that we should draft rules which athletes are prepared to obey which in turn will give credence to the sport.<sup>32</sup> They also suggest that we should marvel at the human desire to improve and not battle against it since ‘performance enhancement is not against the spirit of sport—it is the spirit of sport—to choose to be better is human’.<sup>33</sup> In a similar vein, Carolan advocates that the ‘pursuit of better methods of performance improvement is...the very object of sport itself.’<sup>34</sup>

Anderson argues that the cost and ineffectiveness of current anti-doping justifies a more pragmatic approach based on ‘libertarian’ paternalism, suggesting that the funds used in anti-doping might be better spent elsewhere in developing sport and he believes that the ineffectiveness of anti-doping has a ‘negative impact on both athlete’s behaviour and the sporting public’s attitude to doping’.<sup>35</sup> This impact on the sporting public’s attitude to doping is agreed, but can be used as an argument to support criminalisation of doping rather than as justification for allowing it. Anderson also argues quite powerfully that the ‘virus’ of doping could be ‘better contained’ if a harm reductionist-approach was used as a ‘vaccine’ by re-educating and providing ‘knowledge-based compliance’.<sup>36</sup> Education based on knowledge is an important part of tackling doping in sport but rather than adopting this as part of a harm-reductionist approach to doping, education should be used in conjunction with anti-doping policy, including criminalisation, attacking the consequences of doping *and* the cause.

### 3 Pro-anti-doping

It is argued that an anti-doping stance must be maintained to uphold the ‘spirit of sport’ and to support the core values which the WADA Code defines as underpinning that spirit: ethics and health.

#### 3.1 Ethics

Since not all participants will dope, doping creates an unfair advantage and it is unethical to cheat. O’Leary says “victory is inextricably linked to rules....successful athletes are afforded a unique place in society. Sporting heroes are society’s heroes. By heralding the success of the drugs-assisted athlete we are in danger of undermining society itself....sporting competition fails to be a test of persons and therefore, drug-taking is ethically indefensible.”<sup>37</sup>

Whilst Kayser et al. suggest that the harm reductionist approach of supervised doping would provide greater equality,<sup>38</sup> the author’s view is that this model still allows scope for inequality based on financial ability to obtain the most effective PEDs. Further, given athlete psychology, it is argued that some will always exceed the boundaries of what is permitted under the harm-reductionist model. Also of ethical concern is a point identified by Carolan, that legalisation of PEDs could force clean athletes to dope and risk their health for sporting success.<sup>39</sup>

#### 3.2 Ethics and health—youth and amateur sport

If the harm reductionist approach is taken and doping is permitted, Kayser et al. propose the ‘development of an anabolic substance or dosage scheme designed and adapted specifically for athletes.’<sup>40</sup> At what age would children be allowed to dope? Savulescu et al. suggest that children should be banned from competitive sport to prevent the ethical dilemma arising.<sup>41</sup> This is clearly impractical as no country will be able to develop elite athletes if youth participants are kept out of competitive sports. In our current system, youth participation in sport is competitive and leads to professional membership in early adulthood or before,<sup>42</sup> yet, generally, children must be aged 16 or over to

<sup>29</sup> Ibid., p. 143.

<sup>30</sup> Ibid., p. 151–152.

<sup>31</sup> Ibid., p. 9.

<sup>32</sup> Ibid., p. 669.

<sup>33</sup> Ibid., p. 670.

<sup>34</sup> Ibid., p. 11.

<sup>35</sup> Ibid., p. 141–142.

<sup>36</sup> Ibid., p. 149–154.

<sup>37</sup> O’Leary (1998), p. 164–166.

<sup>38</sup> Ibid., p. 3.

<sup>39</sup> Ibid., p. 27.

<sup>40</sup> Ibid., p. 4.

<sup>41</sup> Ibid., p. 669.

<sup>42</sup> Gymnasts can compete in world championships from age 15 for certain disciplines. <http://www.fig-gymnastics.com/site/page/view?id=679> (last accessed 25 April 2016).

consent to medical treatment.<sup>43</sup> Who would take the decision to allow the child under this age to dope? It would be unethical to allow parents to do so on behalf of their child given the possible health risks. International Cycling Union (UCI) president Brian Cookson goes further, suggesting that grooming young cyclists to take drugs is “nothing short of child abuse”.<sup>44</sup> It is argued that there is a ‘modelling’ justification for criminalising doping as youth competitors will follow the example of their sporting role models. In 2015, cyclist and British junior time-trial champion Gabriel Evans, admitted the use of erythropoietin (EPO) which has long been the professional cyclist’s endurance drug of choice.<sup>45</sup> Carolan argues that ‘athletic obsession, intellectual and emotional immaturity, and heady notions of fame and fortune combine to form a potent cocktail which can cloud the young athletes’ judgment.’<sup>46</sup>

Whilst the reforms in cycling such as the introduction of the blood passport are anecdotally believed to have led to a reduction in doping in the sport, WADA funded research carried out by Lentillon-Kaestner indicates that youth cyclists are still dope curious.<sup>47</sup> This research also reveals that although there is now a stigma attached to doping in cycling since clean teams such as Sky will not employ dopers, doping has become an individual pursuit and there is a residual sub-culture of doping with those historically involved in doping still managing teams.<sup>48</sup>

The modelling justification for anti-doping and specifically for the criminalisation of doping applies equally to amateur athletes. The CIRC report found that “doping in amateur cycling is becoming endemic”,<sup>49</sup> and top amateur riders Dan Staite and Jason White are amongst those that have been banned for refusing to give a blood test.<sup>50</sup> Michael Shermer, an American former pro-cyclist is not surprised that amateurs are doping, saying that “ego, honour, status, hierarchy—aka ‘bragging rights’—are just as powerful motivations for humans as financial rewards, and in many cases even stronger”.<sup>51</sup>

<sup>43</sup> See detail at [http://www.nhs.uk/nhsengland/aboutnhservices/documents/consent\\_%20aguideforparentsdh\\_4117353.pdf](http://www.nhs.uk/nhsengland/aboutnhservices/documents/consent_%20aguideforparentsdh_4117353.pdf) (last accessed 25 April 2016).

<sup>44</sup> <http://www.bbc.co.uk/sport/cycling/31814387> 10 March 2015 (last accessed 25 April 2016).

<sup>45</sup> Abraham (2015). See <http://www.cyclingweekly.co.uk/news/latest-news/gabriel-evans-curiosity-and-loss-of-national-title-led-to-epo-use-203527> 10 December 2015 (last accessed 10 October 2016).

<sup>46</sup> *Ibid.*, p. 30.

<sup>47</sup> Lentillon-Kaestner (2013), p.192.

<sup>48</sup> CIRC report (2015), p. 79.

<sup>49</sup> *Ibid.*, p. 68.

<sup>50</sup> Slater (2015). <http://www.bbc.co.uk/sport/cycling/32662773> (last accessed 26 April 2016).

<sup>51</sup> See note 52.

### 3.3 Health

The health of athletes is a key argument for anti-doping. For those that participate in sport there is a purity in the simplicity of driving body and mind through mental and physical barriers; endorphins are produced and physical and mental health improves. EPO is a naturally occurring hormone, secreted by the kidneys, whose function is to regulate red blood cell production. It is manufactured for the medical treatment of anaemia and increases the number of red blood cells in the body. When used as a PED this allows more oxygen to pass from the lungs to the muscles resulting in better performance in training or competition. Using too much EPO will cause the blood to thicken, a side-effect which has resulted in heart attacks and strokes in cyclists.<sup>52</sup> Despite awareness of the massive risks, historically, cyclists persisted in their use of EPO, setting alarms to get up in the night and use the turbo to thin the blood and prevent death.<sup>53</sup> The advent of blood passports has reduced the ability of athletes to use large doses of EPO but micro-dosing is still suspected practice and new drugs are being developed to take its place.<sup>54</sup>

On health and risk, Carolan reports of inconsistencies in the approach by sporting bodies to risk in sport with different approaches being taken to doping risks and other risks such as the risk of injury in contact sports.<sup>55</sup> However, he concludes that whilst some sports are inherently dangerous, doping can be treated separately to inherent risks as it is not an essential element of the sport.<sup>56</sup> It is accepted that substances and methods can be prohibited under the WADA Code even if they are not deemed to be detrimental to health,<sup>57</sup> but since doping does include practices which can be dangerous to health, arguments based on health risks are advanced as just one justification for maintaining an anti-doping stance. If doping is permitted as per the harm reductionist model, athletes will undoubtedly push the boundaries beyond what is safe and a paternalistic argument that athletes need to be protected against themselves will be addressed as a basis for justifying criminalisation.

Anderson equates anti-doping with the Prohibition era and suggests that it may aggravate the problem of doping, rather than solve it, and force athletes to source counterfeit

<sup>52</sup> Siddique (2015). See <http://www.theguardian.com/sport/2015/aug/02/blood-doping-what-is-it-and-has-anyone-died-as-a-result-of-it> (last accessed 25 April 2016).

<sup>53</sup> See *The Death of Marco Pantani* by Matt Rendell (2006) Orion for detail.

<sup>54</sup> CIRC Report p. 58–62.

<sup>55</sup> *Ibid.*, p. 24.

<sup>56</sup> *Ibid.*, p. 25.

<sup>57</sup> WADA Code Article 4.3.3.



and potentially unsafe PEDs.<sup>58</sup> It is argued that in the era of internet consumerism it is impossible to prevent this supply since those seeking an advantage will always look outside that which is permitted and create the demand. Lentillon-Kaestner's findings support this view. The current cyclists interviewed in the study were dope-curious and reported that it was possible to find out everything about doping and easy to source drugs online.

Carolan suggests that PEDs 'are but a short psychological step from performance enhancing vitamin pills and dietary supplements.'<sup>59</sup> Of concern too is the method of permissible drug administration which the harm-reductionist approach would advocate. Paul Kimmage wrote in *Rough Ride*, his autobiography of his time as a professional cyclist:

'A syringe did not always mean doping...The substances taken were not on the proscribed list...And yet...as soon as you accepted the taking of medication, the line between what was legal and what was illegal...grew very thin.'<sup>60</sup>

David Millar has spoken about the use of needles in professional cycling to inject vitamins and supplements blurring the lines between legal behaviour and injecting banned substances.<sup>61</sup> The International Olympic Committee introduced a no needle policy for 2012 and UCI and the international federations for rowing and gymnastics now have a no-needle policy for competition.<sup>62</sup> This trend is hard to reconcile with the harm reductionist approach where doping of approved PEDs via intravenous methods could present the same blurring of lines between injecting permitted and prohibited substances.

#### 4 The current position

It is argued that the current system of penalties imposed by the WADA Code is insufficient to deter athletes from doping, does not do enough to satisfy the public that performances are clean, and therefore, the 'spirit of sport' is being lost. To assess this argument, it is necessary to address the shortcomings of the current system. WADA was established after the Festina scandal to promote, co-ordinate and monitor the fight against dop-

ing in sport.<sup>63</sup> The WADA Code forms the basis of the rules of International Federations who are signatories to the Code. The new 2015 WADA Code has increased sanctions to a 4-year ban for a first violation if intention is present.<sup>64</sup> A 4-year ban has been described as "career ending",<sup>65</sup> but athletes' careers can span multiple Olympic games,<sup>66</sup> and it is therefore submitted that the bans do not present a sufficient deterrent to athletes. With certain limited exceptions such as trafficking involving minors,<sup>67</sup> a lifetime ban will only be given to the doper on the third offence.<sup>68</sup>

Lifetime bans are often called for as a response to new doping scandals emerging,<sup>69</sup> but such bans for first time violations have been dismissed as legally unworkable by Sir Craig Reedie, President of WADA.<sup>70</sup> They would be disproportionate and could constitute a restraint of trade.<sup>71</sup> It is argued that the current system of sanctions do not act as a sufficient deterrent to the doper. This is accepted by academics that favour legalising the use of PEDs. Kayser et al. admit that 'truly deterrent penalties would have to be as severe as sanctions for major crimes' (2007, p. 7). Criminalising doping in sport could operate to provide such a stigmatic deterrent.

It is also argued that current penalties fail to give confidence to the public that clean athletes are really clean. When former dopers return to competition clean athletes suffer by association. When a former doper competes alongside other athletes, doping is back in the arena as a topic and a possibility and doubts surface about the status of other athletes. When watching former doper Justin Gatlin run alongside Usain Bolt, some might wonder whether Bolt is clean.<sup>72</sup> As Anderson admits 'The stigmatisation of athletes is particularly acute given that...almost every new, extraordinary feat of endurance...is met with a level of incredulity...by the general public founded on the assumption, or even presumption, of cheating.'<sup>73</sup>

<sup>58</sup> Ibid., p. 149.

<sup>59</sup> Ibid., p. 31.

<sup>60</sup> Kimmage (2007), p. 94.

<sup>61</sup> Tackling doping in sport conference, London, 2016.

<sup>62</sup> Tynan (2011). See <http://www.independent.co.uk/sport/olympics/ioc-extends-no-needle-ban-to-all-sports-in-2012-2309415.html> (last accessed 25 April 2016).

<sup>63</sup> The Festina cycling team, caught with a team car full of doping products just before the start of the 1998 Tour de France, were banned from the race.

<sup>64</sup> WADA Code, 10.2.

<sup>65</sup> Stacey Cross, UKAD, Tackling Doping in Sport Conference 2016.

<sup>66</sup> Sir Steve Redgrave won gold in rowing at five consecutive Olympic games.

<sup>67</sup> WADA Code, 2.7.

<sup>68</sup> WADA Code, 10.7.2.

<sup>69</sup> Ingle (2016), See <http://www.theguardian.com/sport/2016/mar/16/lynsey-sharp-athletics-lifetime-ban-drug-cheats> (last accessed 25 April 2016).

<sup>70</sup> See <http://www.bbc.co.uk/sport/athletics/28319312> (last accessed 25 April 2016).

<sup>71</sup> Soek (2006), p. 249–255.

<sup>72</sup> American sprinter Gatlin was banned for positive drugs tests in 2001 for 2 years (later reduced to 1 year) and in 2006 for 4 years.

<sup>73</sup> Ibid., p. 147.

However, rather than accept this as a reason for legalising the use of some PEDs, it is argued that this is a reason for utilising the law to improve this perception. Criminalisation could operate to satisfy the public that retributive justice has been and is being done and restore lost confidence.

## 5 Criminalisation

Doping in sport is destroying the ‘spirit of sport’ and the celebration of excellence in performance. It has been argued that an anti-doping stance should be supported, that the current anti-doping system is ineffective in deterring athletes from doping and that the prevalence of doping has led to a perception by the public that even supposedly clean athletes may be cheating.

Criminalisation of doping in sport is advocated for two reasons: to punish doping with a stigmatic deterrent and to alter public belief in the truth of sporting performance.

### 5.1 Deterrent

It is accepted that any criminalisation of doping would run in parallel to sanctions imposed by the WADA Code. Since any period of incapacitation imposed by a criminal sanction is unlikely to exceed any period of suspension by the Code, it could be argued that criminalisation will not act as a greater deterrent than the current system of sanctions. However, the stigma attached to a criminal record is greater than that attached to any regulatory offence and may act as a more powerful deterrent to the athlete. A criminal record in the United Kingdom carries with it an obligation of disclosure to employers for 7 years after imprisonment of up to 6 months and for 5 years for non-custodial sentences such as a fine.<sup>74</sup> Whilst an athlete may be high profile and such disclosure may therefore be moot initially, the period of disclosure may last beyond any sporting career and notoriety and may therefore impinge upon ordinary employment prospects later. For more serious fraud offences, incarceration is a real possibility, providing a greater deterrent than a bar from competition imposed by International Federations, and any consequent loss of sponsorship.

It can also be argued that punishment can have a subconscious effect on society and provide an educative deterrent. Bottoms states that ‘the facts of the prohibition, and citizens’ evolving response to it, can influence the

development of a new strand of positive morality’ and goes on to give the example of the offence of drink driving about which there is now ‘substantially greater moral disapproval....than was the case thirty years ago when it was first made a criminal offence.’<sup>75</sup> Criminalising doping could create such an educative deterrent over time.

### 5.2 Public perception

Those that watch sport want to see clean athletic performances based on dedication to training and natural talents. The reaction of sponsors to Maria Sharapova’s failed drugs test indicates their perception that the public want clean sport.<sup>76</sup> A tarnished athlete is assumed by sponsors to be bad for business. Solberg et al. conducted empirical research into public opinion on the consequences of doping scandals and found that the public had ‘no tolerance of pure doping substances, such as EPO, amphetamines and anabolic steroids’. They concluded that ‘sponsors ... represent the derived demand for sport’ and ‘commit resources to sport because of direct demand, i.e. from the general public’ as ‘an overwhelming majority of respondents supported tough reactions from sponsors towards the athletes/teams involved in doping scandals, for example a reduction in sponsor support’.<sup>77</sup> The realisation that performances are based on doping enhancement is devastating to the audience and the credibility of the sport.

The current anti-doping system is self-regulated by sport and recent revelations of corruption in testing regimes and within International Federations include cover-ups, destruction of samples and payment of money to conceal doping tests.<sup>78</sup> The absence of an independent and credible enforcement programme has affected public perception of sport as a whole. The criminalisation of doping would be enforced through the criminal justice system which would involve the independence of the police and the judicial system. The rigour of this system could instil public belief in the process of sanctions for doping offences and satisfy the public that offending athletes have received their ‘just deserts’.

### 5.3 Justification

In their Statement on the Criminalization of Doping in Sport, WADA says that it ‘does not wish to interfere in the sovereign right of any government to make laws for its people’ and goes on to state that the 4-year ban has been

<sup>74</sup> Fraud, Bribery and Money Laundering Offences Definitive Guideline. Sentencing Council. October 2014. [https://www.sentencingcouncil.org.uk/wp-content/uploads/Fraud\\_bribery\\_and\\_money\\_laundering\\_offences\\_-\\_Definitive\\_guideline.pdf](https://www.sentencingcouncil.org.uk/wp-content/uploads/Fraud_bribery_and_money_laundering_offences_-_Definitive_guideline.pdf) (last accessed 13 September 2016).

<sup>75</sup> Bottoms (2002), p. 25.

<sup>76</sup> Kennedy (2016).

<sup>77</sup> Solberg et al. (2010), p. 2–16.

<sup>78</sup> Gibson (2015). See <https://www.theguardian.com/sport/2015/nov/09/wada-iaaf-russia-dick-pound-banned> (last accessed 28 June 2016).

globally accepted by sport and therefore ‘the Agency does not believe that doping should be made a criminal offence for athletes.’<sup>79</sup> Despite this stance, France, Italy, Austria and most recently Germany, have made it an offence not only to traffic and supply PEDs but also to dope. The models adopted in Austria and Germany punish an athlete who benefits financially from doping and competing, based on fraud. Is this a model which should be adopted in the UK as part of a globalised, albeit not formally harmonised, anti-doping effort?

It is widely accepted that to criminalise behaviour, the behaviour must be wrongful, it must be necessary to criminalise the conduct and it must be permissible in law. It is easy to demonstrate that doping is wrongful. It has been argued that it is morally wrong and therefore unethical to cheat and that doping creates an unfair advantage and is therefore cheating. Cheating is contrary to the ideology of sport and notions of fair play.

Liberalism dictates that behaviour should only be criminal when necessary to protect others from direct harm as a result of the offender’s behaviour. Whilst there is no primary harm to others if an athlete dopes, it is argued that there is secondary harm, as identified by Kaplan to those that model their behaviour on the doper.<sup>80</sup> This is seen in the examples of youth and amateur doping incidents already discussed.

It can be argued that doping in sport is a minority issue, undertaken by few members of the population and therefore not of sufficient impact to warrant criminalisation. However, given the health arguments which support the case for anti-doping, this is countered by what Kaplan calls ‘the categorical imperative’ justification for criminalising doping. He argues that although the harm might only appear to be a risk to the actor and relatively few actors participate, anyone would suffer harm if they participated in the banned behaviour.

Justification for the criminalisation of recreational drugs is based on the paternalistic argument that the drug taker should be protected from the harm they inflict upon themselves and this could be applied to doping in sport since the harm suffered can be far greater from taking steroids or EPO than from smoking cannabis.<sup>81</sup> For youth competitors, Brown considers that ‘paternalistic interference is not only permissible but may indeed be obligatory

to prevent harm and allow for a full flourishing of the child’s potential development.’<sup>82</sup>

The definition of doping used in this article includes prohibited methods and it is accepted that not all forms of doping will result in harm to the participant. However, criminalisation of doping is advanced based upon the fraud model and the intended or actual financial harm is advanced as an additional means of justifying criminalisation. Additionally, in fraud no harm need be suffered, it is the dishonest conduct which is punished, and, accordingly, whilst physical and financial harm may be the result of doping in sport, it is not an essential requirement.

Husak identifies the principal of the criminal law as the last resort stating that it must be necessary,<sup>83</sup> and Kadish speaks of a ‘crisis of over criminalisation’ if law making is unsupported by prosecutions to justify its enactment.<sup>84</sup> The necessity of criminalisation is substantiated, it is argued, when the importance of sport is considered. The legacy of London 2012 was the subject of a Government report which stressed the need for participation in sport to be encouraged for future generations.<sup>85</sup> There is a direct correlation between sporting success at professional level and sporting involvement at recreational level. The successes of Bradley Wiggins winning both gold in the time trial at the Olympics and the Tour de France in the same year vastly enhanced participation in road cycling with all the health benefits that ensue, but subsequent revelations of large-scale doping at the 2012 Olympic Games have marred it’s legacy.<sup>86</sup> Clean wins and the belief in clean wins are an essential part of the ‘Wiggins effect’ and must be protected.

This article proposes criminalisation of doping in the UK based upon the fraud model. This model is defined and explained below.

#### 5.4 How the offence might work

In Austria, Section 147 of the Austrian Strafgesetzbuch (StGB) creates an offence of fraud for any individual who has cheated by using a prohibited substance or forbidden method. Penalties are dependent upon the size of the financial reward as a result of the fraud, and range from a fine to a 10-year prison sentence. A similar approach

<sup>79</sup> See <https://www.wada-ama.org/en/media/news/2015-10/wada-statement-on-the-criminalization-of-doping-in-sport> (last accessed 25 April 2016).

<sup>80</sup> Kaplan (1971), p. 1067.

<sup>81</sup> Cannabis is a Class C controlled drug under the Misuse of Drugs Act 1971.

<sup>82</sup> Brown (1985), p. 15.

<sup>83</sup> Husak (2004), p. 211.

<sup>84</sup> Kadish (1968), p. 20.

<sup>85</sup> Inspired by 2012: The legacy from the London 2012 Olympic and Paralympic Games, online at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/224148/2901179\\_OlympicLegacy\\_acc.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224148/2901179_OlympicLegacy_acc.pdf) (last accessed 25 April 2016).

<sup>86</sup> Riach and Ingle (2015). See <http://www.theguardian.com/sport/2015/nov/09/london-olympics-russia-doping-report> (last accessed 25 April 2016).



should be taken in the UK. The existing crime of fraud by false representation, s.2 Fraud Act 2006 could be used in its' current format to allow fraud charges to be brought where an athlete dopes and by competing dishonestly makes the false representation that they are doing so clean. A reward of prize money or sponsorship is the gain that the athlete intends to make for him or herself, or by depriving another of those earnings, he or she causes or exposes the would-be winner to loss or risk of loss. The offence requires proof of dishonesty which may necessitate the application of the Ghosh test to show that the athlete was both objectively dishonest by the standards of reasonable and honest people and subjectively dishonest in that the athlete would have to understand that his or her conduct was dishonest by those standards.<sup>87</sup> Given the public's response to doping revelations, it seems that the test for objective dishonesty will be easily satisfied and make it difficult for a doper to deny an awareness of these standards. Dishonesty is unlikely therefore to be a barrier to convictions.

It is arguable that prosecutions might be limited to high profile cases involving large financial gains, but fraud in a sporting context should result in the same criminal sanction as any other fraud. Fraud outside the sporting context is a very serious offence, and depending upon factors such as the amount of money and level of planning involved can be tried on indictment and lead to a 10-year prison sentence.<sup>88</sup>

Doping, as defined for the purposes of this article, refers to forms of doping intended to gain an advantage, and therefore can be seen as cheating and can form the basis of a fraud. With intended or actual financial gains to the doper or losses to the competitor who performs clean, the fraud offence can cover all incidents of doping as defined for the purposes of this article, in both professional sport and amateur sport where prize money, sponsorship or funding is at stake. As with all criminal offences, the sentence can reflect the level of culpability with factors of sophistication, planning and sustained periods of time justifying larger sentences, and lesser culpability and lower sentences for one-off occurrences and peripheral roles. Trafficking would not fit within the fraud model and would need to form a separate criminal offence. The Misuse of Drugs Act 1971 includes trafficking offences, there is already an overlap between Class C drugs and substances prohibited by WADA and prosecutions do result from trafficking PEDs.<sup>89</sup> This legislation could be extended to include all substances banned by WADA.

<sup>87</sup> *R v Ghosh* [1982] Q.B. 1053 (Court of Appeal, Criminal Division).

<sup>88</sup> Magistrates Sentencing Guidelines (2008). [https://www.sentencingcouncil.org.uk/wp-content/uploads/MCSG\\_web\\_-\\_October\\_2014.pdf](https://www.sentencingcouncil.org.uk/wp-content/uploads/MCSG_web_-_October_2014.pdf) (last accessed 30 June 2016).

WADA's 2013 report on the lack of effectiveness of testing programs indicated that 'the real problems are human and political factors. There is no general appetite to undertake the...expense of a successful effort to deliver doping free sport'.<sup>90</sup> This view is echoed by Anderson.<sup>91</sup> However, despite the Government's agenda to steer away from creating a surfeit of criminal offences,<sup>92</sup> there is a developing appetite for the criminalisation of doping and a recognition that this would act as a deterrent.<sup>93</sup> In 2014, Lord Moynihan introduced his private members Governance of Sport Bill to the House of Lords which included a clause criminalising doping and more recently has set up an online petition to present to the government.<sup>94</sup> Tracey Crouch, Parliamentary Under-Secretary of State for Sport, has recently stated in the press that the government are considering the legalities of criminalising doping.<sup>95</sup> UK Athletics' 2015 Manifesto for Clean Athletics proposes an agenda to criminalise the supply or procurement of performance enhancing drugs and David Cameron, whilst in office, indicated that he would like Parliament to consider criminalising doping in sport.<sup>96</sup>

It is accepted that criminalisation must be supported by adequate testing and the funding that this requires and that it would form a part of anti-doping measures, rather than an alternative to the current system. To be effective, anti-doping organisations would need to work together with prosecuting bodies to form a coherent harmonisation of processes and utilisation of evidence. Any fines paid as a result of successful prosecutions could be paid into a fund to support enhanced testing and policing, similar to the scheme proposed by WADA President, Sir Craig Reedie, for sponsorship revenue earned from drugs cheats to be paid into anti-doping funds.<sup>97</sup>

<sup>89</sup> Gibson (2011), <https://www.theguardian.com/sport/2011/nov/21/shot-putter-carl-fletcher-ban> (last accessed 13 September 2016).

<sup>90</sup> See <https://wada-main-prod.s3.amazonaws.com/resources/files/2013-05-12-Lack-of-effectiveness-of-testing-WG-Report-Final.pdf> (last accessed on 25 April 2016).

<sup>91</sup> BBC Radio 4, Law in Action, 26 November 2015.

<sup>92</sup> See the Ministry of Justice, Criminal Offences Gateway Guidance (2001) <http://www.justice.gov.uk/downloads/legislation/criminal-offences-gateway-guidance.pdf/> (last accessed 25 April 2016).

<sup>93</sup> This is a view supported by Paula Ratcliffe. <http://www.theguardian.com/sport/2016/jan/11/paula-radcliffe-uk-athletics-world-records-rejects> (last accessed 25 April 2016).

<sup>94</sup> <https://www.change.org/p/criminalise-doping-in-sport-in-britain> (last accessed on 30 June 2016).

<sup>95</sup> See <http://www.bbc.co.uk/sport/34653817> (last accessed 25 April 2016).

<sup>96</sup> <http://uk.reuters.com/article/uk-sport-doping-cameron-idUKKCN0XA1IK> (last accessed on 30 June 2016).

<sup>97</sup> Gibson (2016a). <https://www.theguardian.com/sport/2016/may/08/craig-reedie-wada-drugs-in-sport> (last accessed 30 June 2016).

A globally harmonised anti-doping programme seems impracticable and unfeasible given state autonomy, but as more states incorporate anti-doping offences into their criminal law, a global movement towards the criminalisation of doping develops. The same arguments of deterrence and public perception, advanced in this article on a UK basis, apply globally. Whilst only a few countries have criminalised doping in sport, the issue of jurisdiction is important, but as more states criminalise doping, there will be an increased likelihood that a doper will be committing a crime. Consequently the deterrence will become greater and there could be an improvement in public perception and belief in sporting performances worldwide.

## 6 Conclusions

It has been argued that a harm reductionist approach to doping would be dangerous to the health of athletes with youth participants being of particular concern. It has also been contended that an anti-doping stance is necessary to uphold the values of fair-play and equality which underpin the ethos of sport. By upholding these values in a criminal framework, the law could operate to act as a deterrent to other dopers but more importantly could bring back belief in the ‘spirit of sport’. It has been proposed that criminalisation within the UK is viable both theoretically and pragmatically. Criminalisation would be a stronger deterrent to athletes than current sanctions, and retributive justice administered by the independent criminal justice system could alter the public’s perception of sport’s highest achievers. The public’s reaction to the best sporting achievements could shift from ‘doping but not caught’ to ‘clean because not prosecuted’, bring back faith in the truth of the greatest sporting moments and revive the ‘spirit of sport’.

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## References

- Abraham R (2015) Cycling Weekly. <http://www.cyclingweekly.co.uk/news/latest-news/gabriel-evans-curiosity-and-loss-of-national-title-led-to-epo-use-203527>. Accessed 25 April 2016
- Anderson J (2013) Doping, sport and the law: time for repeal of prohibition? *Int J Law Context* 9(2):p135–p159
- Backhouse S, Mckenna J, Robinson S, Atkin A (2006) International literature review: attitudes, behaviours, knowledge and education—drugs in sport: past, present and future. Carnegie Research Institute, Leeds
- Bottoms A (2002) Morality, crime compliance and public policy. In: Bottoms A, Tonry M (eds) *Ideology, crime and criminal justice* (2002)
- Brown WM (1985) Paternalism, drugs and the nature of sports. *J Philos Sport* 11:14–22
- Carolan E (2006) The new WADA code and the search for a policy justification for anti-doping rules. *Seton Hall J Sports Entertain Law* 16(1):1–43
- Cycling Independent Reform Commission (2015) Report to the president of the union cycliste internationale. Union Cycliste International, Lausanne
- Gibson O (2011) Shot-putter Carl Fletcher given four-year ban for trafficking steroids. *The Guardian*, 21 Nov 2001. <https://www.theguardian.com/sport/2011/nov/21/shot-putter-carl-fletcher-ban>. Accessed 13 Sept 2016
- Gibson O (2015) Russia accused of ‘state-sponsored doping’ as Wada calls for athletics ban. *The Guardian*, 9 Nov 2015. <https://www.theguardian.com/sport/2015/nov/09/wada-iaaf-russia-dick-pound-banned>. Accessed 28 June 2016
- Gibson O (2016a) Sir Craig Reedie wants drug-cheat sponsorship money for anti-doping fight. *The Guardian*, 8 May 2016. <https://www.theguardian.com/sport/2016/may/08/craig-reedie-wada-drugs-in-sport>. Accessed 30 June 2016
- Gibson O (2016b) Russian athletics: IAAF upholds ban before Rio Olympics. *The Guardian*, 17 June 2016. <https://www.theguardian.com/sport/2016/jun/17/russia-rio-olympics-ban-doping-iaaf-sebastian-coe>. Accessed 27 June 2016
- Goldman B, Klatz R (1992) *Death in the locker room: steroids and sport*, 2nd edn. Elite Sports Medicine Publications, Chicago
- Goldman B, Bush PJ, Klatz R (1984) *Death in the locker room: steroids in sport*. Icarus Press, South Bend
- Husak D (2004) The criminal law as last resort. *Oxford J Leg Stud* 24(2):207–235
- Haugen K (2004) The performance-enhancing drug game. *J Sports Econ* 5:67–86
- Ingle S (2016) Britain’s Lynsey Sharp urges athletic to impose life bans on drug cheats. *The Guardian* 16 March 2016. <http://www.theguardian.com/sport/2016/mar/16/lynsey-sharp-athletics-life-time-ban-drug-cheats>. Accessed 25 April 2016
- Kadish SH (1968) The crisis of overcriminalization. *Am Crim L Q* 7:17
- Kaplan J (1971) The role of the law in drug control. *Duke Law J* 1971:1065–1068
- Kayser B, Mauron A, Miah A (2007) Current anti-doping policy: a critical appraisal. *BMC Medical Ethics* 8. [www.biomedcentral.com/1472-6939/8/2](http://www.biomedcentral.com/1472-6939/8/2). Accessed 25 April 2016
- Kennedy M (2016) Sharapova loses major sponsors after positive drug test. 8 March 2016. <http://www.npr.org/sections/thetwo-way/2016/03/08/469629511/sharapova-loses-major-sponsors-after-positive-drug-test>. Accessed 25 April 2016
- Kimmage P (2007) *Rough ride*, 3rd edn. Yellow Jersey Press, London
- Lentillon-Kaestner V (2013) The development of doping use in high-level cycling: from team-organised doping to advances in the fight against doping. *Scand J Med Sci Sports* 23:189–197
- Lichfield J (2015) Chris Froome wins Tour de France 2015: doping claims dampen the mood as Brit triumphs. *The Independent*, 26 July 2015. <http://www.independent.co.uk/sport/cycling/tour-de-france-2015-doping-claims-dampen-the-mood-as-chris-froome-triumphs-10417336.html>. Accessed 25 April 2016
- Magistrates Sentencing Guidelines (2008) [https://www.sentencingcouncil.org.uk/wp-content/uploads/MCSG\\_web\\_-\\_October\\_2014.pdf](https://www.sentencingcouncil.org.uk/wp-content/uploads/MCSG_web_-_October_2014.pdf). Accessed 30 June 2016
- Mitchell K (2016) Maria Sharapova receives two-year ban for failing drug test. *The Guardian*, 8 June 2016. <https://www.theguardian.com/sport/2016/jun/08/maria-sharapova-receives-two-year-ban-for-failing-drug-test>

- [com/sport/2016/jun/08/maria-sharapova-banned-two-years-failing-drugs-test-meldonium](http://www.bbc.com/sport/2016/jun/08/maria-sharapova-banned-two-years-failing-drugs-test-meldonium). Accessed 27 June 2016
- O’Leary J (1998) Sports law. London, Cavendish, pp 164–166
- Pinsent M (2009) HGH—the perspective of an elite rower and journalist. *Growth Hormone and IGR Research* 19, 288. <http://another-sample.net/hgh-the-perspective-of-an-elite-rower-and-journalist>. Accessed 25 April 2016
- Riach J, Ingle S (2015) London Olympics were sabotaged by Russia’s doping, report says. *The Guardian*, 9 Nov 2015. <http://www.theguardian.com/sport/2015/nov/09/london-olympics-russia-doping-report>. Accessed 25 April 2016
- Savulescu J, Foddy B, Clayton M (2004) Why we should allow performance enhancing drugs in sport. *Br J Sports Med* 40(Supplement 1):113–115
- Siddique H (2015) Blood doping what is it and has anyone died as a result of it? 2 August 2015. <http://www.theguardian.com/sport/2015/aug/02/blood-doping-what-is-it-and-has-anyone-died-as-a-result-of-it>. Accessed 25 April 2016
- Slater M (2015) Doping in cycling: why are the amateurs ‘emulating the pros’? 10 May 2015. <http://www.bbc.co.uk/sport/cycling/32662773>. Accessed 25 April 2016
- Soek J (2006) The strict liability principle and the human rights of athletes in doping cases. TMC Asser Press, The Hague
- Solberg HA, Hanstad DV, Thoring TA (2010) Doping in elite sport—do the fans care? Public opinion on the consequences of doping scandals. *Int J Sports Market Spons* 11(3):2–16
- Tynan G (2011) IOC extends ‘no needle ban to all sports in 2012. *The Independent*, 8 July 2011. <http://www.independent.co.uk/sport/olympics/ioc-extends-no-needle-ban-to-all-sports-in-2012-2309415.html>. Accessed 25 April 2016
- Windsor R (2015) Chris Froome described as “close to human peak” after physiological data release. *Cycling Weekly*. <http://www.cyclingweekly.co.uk/news/latest-news/chris-froome-described-as-close-to-human-peak-after-physiological-data-release-202644>. Accessed 25 April 2016
- World Anti-Doping Code (2015) Canada: World Anti-Doping Agency