Manufacturing muscle: an overview of the history and legal aspects of doping in sport
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Abstract
This paper traces the origins and development of doping in sport, as well as the policies and procedures that have been used— with limited success— in eliminating sports doping. Critical attention is given to the various problems of doping control policies and procedures, such as high costs, ineffective tests, procedural errors, privacy violations, infringement on economic freedoms, and a failure to consider culpability, particularly in instances of inadvertent drug use without performance-enhancing benefits, e.g. marijuana use. Serious doubts can be raised about the fairness and effectiveness of current doping control policies and strategies. It is argued that an effective strategy for the prevention of doping in sport should rest on harm reduction principles of educating athletes about the potential harms of drug use, teaching safe alternatives to achieving their athletic goals to reduce demand, and targeting traffickers of prohibited substances rather than restricting the rights and freedoms of athletes with ineffective results.

Keywords: Doping; World Anti-Doping Agency; Doping Control Policy; Court of Arbitration for Sport


1. Introduction.
At the 1988 Summer Olympics in Seoul, Korea Canadian sprinter Ben Johnson shattered the 100m World Record of the time finishing the race in 9.79 seconds. The day after his victory, urine sample tests revealed the use of a banned steroid called stanozolol. Despite Johnson’s original denials of steroid
use and claims of apparent sabotage, the International Olympic Committee (IOC) revoked Johnson’s Olympic Gold medal and World Record time. This was not the first time Olympic athletes had tested positive for steroid use. For example, in the 1976 Summer Olympics in Montreal, eight of 275 tested athletes were found to have used steroids (Todd and Todd, 2001). Johnson’s failed test was, however, the first to generate worldwide outrage and concern for the infiltration of drugs in sport, which continues to this day. In this paper, the long controversial history of doping in sport is explored by examining its genesis and development, the emergence of control policies and procedures to prevent doping, and legal challenges to doping policies and procedures. Tracing this history reveals the overall ineffectiveness of the ongoing battle to prevent and control doping in sport.

2. The Origins and Development of Doping.

The term doping is commonly believed to have originated from the root word dop from the Kaffir dialect of South Africa. The term dop refers to the use of a highly stimulating drink used by members of a tribe during religious rituals. Some accounts also suggest that Zulu warriors drank dop to enhance their prowess in battle. In the 1800s, Dutch settlers in South Africa adopted the term and began applying it in the context of sport. The term spread back to Amsterdam where swimmers were accused of dop-ing (Voy and Deeter, 1991).

The meaning of the word doping has expanded over time. Common definitions of doping tend to resonate with the origins of the word, which involves the ingestion of a chemical substance for performance-enhancing benefits. The World Anti-Doping Code (2008, p. 8-12) has built upon this definition and defines doping as any of the following:

i) Presence of a banned substance or its metabolites in the athlete’s body.
ii) Use or attempted use of a prohibited substance or method.
iii) Refusing or evading sample collection.
iv) Failure to provide whereabouts during out-of-competition testing,
v) Tampering or attempting to tamper with any part of doping control
vi) Possession of prohibited substances or methods.
vii) Trafficking and prohibited substance or method.

As such, doping can now refer to a number of activities and methods beyond the ingestion of chemical substances. It is believed that doping has a history as long as the history of sport and competition. Ancient Greek athletes supposedly ate the testicles of lambs believing it would provide special strength in sports such as wrestling, boxing, and running. Likewise, Roman gladiators are said to have used stimulants from plants that were believed to improve endurance and courage making them fiercer in competition (Mottram, 2011).

Early accounts of doping in modern sport, beginning in the 1800s, indicate the use of various stimulating chemicals and drugs such as heroin, cocaine, caffeine, and amphetamines, particularly within bicycle racing (Yesalis and Bahrke, 2002). In the 1904 Olympics, United States marathon winner Thomas Hicks admitted using strychnine and brandy during the race to fuel his performance. In a 1955 bicycle race, five of 25 riders tested positive for amphetamine use. The use of amphetamines in sport began to really be seen as a serious issue in the 1960s following several amphetamine-related deaths, including British cyclist Tommy Simpson (Todd and Todd, 2001).

The most significant development in doping has been the discovery of the positive effects of anabolic steroids on muscle growth and recovery. Early scientific research on anabolic steroids revealed that, “It changed
them, and fundamentally… after many months on testosterone, their chest and shoulder muscles grew much heavier and stronger… it caused the human body to build the very stuff of its own life” (de Kruif, 1945, p. 226). Steroids offered athletes more long-term gain than other performance-enhancers, as there were greater long-term benefits for muscle gain, as compared to the short bursts of energy from amphetamine stimulus. After it’s discovery, and before the advent of reliable testing in the mid-1970s, steroid use was widespread in sport. A poll of track and field contestants at the 1972 Munich Olympics found that 68% were using anabolic steroids (Todd, 2001).

The mid-1970s and onwards can best be described as a science or “bio-medical war in sport” whereby new designer substances are continually manufactured, alongside new masking agents, while doping control agents and scientists have struggled to keep up (Fogel, 2013, p. 283). On occasion, high profile cases like that of Ben Johnson, the East German Olympic team, Lance Armstrong, or of countless Major League Baseball players give the suggestion that dopers will be caught. Most doping, however, continues to go undetected. It is estimated that “the probability of detecting a cheater who uses doping methods every week is only 2.9% per test” (Hermann and Henneberg, 2013, p. 2).


Alongside the development of different drugs and doping techniques, various policies and governing bodies have been inaugurated in a failed attempt to prevent the widespread use of drugs in sport. In this section, I will now turn to overviewing the key points and developments in the history of doping control policies and procedures.

The fist major stand against doping in sport was taken by the International Association of Athletics Federation (IAAF), the governing body for the sport of track and field, in the year 1928. The IAAF outlawed the use of stimulating substances. Many international federations followed their lead, but their doping control measures were limited to policy and ineffective, as reliable tests had not yet been developed.

Following the death of British cyclist Tommy Simpson in 1966, the International Olympic Committee (IOC) established a medical commission to fight doping. Drug tests were first introduced at the Olympic Winter Games in Grenoble and at the Summer Games in Mexico in 1968. The tests were riddled with problems and were highly ineffective due to false positives, false negatives, high costs, and limited tests that could not detect most substances. According to a former United States Olympic team drug tester, “The athletes knew better than anyone that the drug testing posed little threat to them. They scoffed at the testing notices and went right on with their routine drug use with little fear of detection” (Voy and Deeter, 1991, p. 79). Although it was widely known that anabolic steroids were being used at this time, testing methods for steroids were insufficiently developed and did not allow for their inclusion on the banned substances list (Mottram, 2005).

Anabolic steroids were not added to the IOC’s list of banned substances until 1976, as reliable tests were not developed until 1974. The 1976 Summer Olympics in Montreal were the first Olympics with testing for anabolic steroids and eight of 275 tested athletes were found to have used steroids (Todd and Todd, 2001). It was not until Ben’s Johnson’s failed drug test in the 1988 Olympics, after he had won the 100m gold medal, when a moral panic took hold based on the notion of a drug-epidemic sweeping sports (Taylor, 1991).

By the beginning of the 1980s, an apparent increase in the number of international sport-related, many of which doping-related, disputes led to the IOC creating and funding
an independent, international tribunal for sports disputes. In 1984, the independent tribunal was established called the Court of Arbitration for Sport (CAS). CAS has since become a significant authority in the resolution of doping related disputes.

The next major initiative of the IOC in relation to doping was to convene the First World Conference on Doping in Sport in Lausanne in 1999. Major problems plagued doping control in international sport, and the goal of the conference was to strategize on solutions. Some of the problems that needed to be addressed included: a lack of consistency and compatibility of doping rules in different sports, lack of consistency of testing and policies in different countries and federations, high costs of doping control measures, legal challenges of test reliability, and difficulties with out-of-country testing (Houlihan, 1999).

It was decided that the solution to these problems would be to develop unified standards and coordinated efforts of sports organizations and public authorities. Following the proposal of the Conference, the World Anti-Doping Agency (WADA) was established. Following the Copenhagen Declaration on Anti-Doping in 2003, WADA unveiled its Code to be used as a guide and authority for governing bodies of sport to develop harmonized anti-doping policies aimed at protecting athlete’s health, preserving fair play, and fostering the spirit of sport. By 2004, in large part due to IOC requirements for participation in the Summer Olympics in Athens, most sports organizations adopted the WADA code (Hunt, 2011). Athletes are bound to anti-doping policies of WADA, and their national sport governing body developed thereof, via a contractual relationship by participating in the sport.

4. Legal Challenges to Doping Control Policies and Procedures.

It is well documented that testing procedures for doping are largely ineffective (Fogel, 2013). Historically, athletes have been shown to beat doping tests through: (a) corrupt payoffs to doping control officers, (b) playing the odds, relying on the low likelihood of ever being tested in many sports (e.g. in Canadian football, less than 10% of players are tested in a given year), (c) timed drug cycling, by strategically using drugs at times when they are least likely to be tested, (d) low dosages, since the tests allow for some individual variance in naturally produced substances (termed endogenous production), (e) masking agents, which cover up the use of banned substances, (f) cleansers, which rid the body of traces of drug use faster, (g) urine replacement, and (h) using newly designed substances that tests do not exist for yet (Fogel, 2013). While some of these approaches have become out-of-date with new testing approaches and technologies, it remains highly unlikely that a doping athlete is ever caught.

When athletes have been successfully caught for doping violations, it has given rise to countless challenges in legal and arbitration courts, requiring further resources in the continued losing battle against sports doping. Historically, common areas of challenge, with mixed success, have been on the grounds of: i) procedural issues, ii) culpability, and iii) economic freedom. The future of legal challenges of the policies and procedures for doping will likely be on the grounds of privacy rights, religious rights, and other human rights violations (Valkenburg et. al, 2014). The very establishment of the Court of Arbitration for Sport in 1984 was, by in large, a function of the need to deal with doping-related challenges and to ensure that the controversies remained within the realm of sports governance (Gardiner et al., 2006). Only a small sampling of important cases over the last 30 years are discussed in this paper. The purpose is not to provide a detailed history of the development of case law on
doping in sport, but rather to show the vulnerabilities of doping control policies and procedures to legal challenge. In most legal challenges, the athlete falls short in bringing forth a successful case to have their doping violation nullified. It does, however, remain troubling that continued resources are poured into maintaining ineffective, reactive doping control policies and procedures. Furthermore, claims of violations of individual rights are commonplace, which should raise concerns that doping control policies and procedures have gone too far.

i) Procedural Issues

As part of the disciplinary proceedings for doping infractions, sports governing bodies must show that the procedures for collecting, storing, and analyzing testing samples were carried out correctly. Challenges of unreliable tests, chain of custody violations, unfair hearings, and lack of establishing burden of proof have been frequent.

In the case of Modahl, testing samples went unrefrigerated in hot Lisbon temperatures for two days before the testing commenced. Also, the chain of custody documents were missing for her ‘A’ test. When her ‘B’ sample was opened there was a strong ammonia odour and a pH of 9 (normal is 5). Despite these issues, doping control officers tested it anyways and both samples showed significant levels of testosterone in her body. She received a four-year suspension. On appeal, Modahl was able to successfully show that the conditions under which the samples were stored could have led to bacteria formation, which could cause a failed testosterone test. Modahl then brought a challenge against the British Athletics Association (BAF) on the grounds that she was denied a fair hearing, another procedural issue, though she was unsuccessful in that particular claim.

In Varis, a suspension was overturned despite a positive test for EPO after procedural errors were made. In this instance, WADA provisions granting the right to be represented at the opening and analysis of the B sample was violated. As a result, the B sample was rendered invalid leading CAS to cancel the sanction imposed on her by the International Biathlon Union. The case reveals that antidoping authorities and laboratories do not always follow their own rules, and that the consequence of this can be an overturned decision.

In Reynolds, United States track and field athlete, and Olympic gold medalist, Butch Reynolds appealed a suspension after a positive test for Nandrolone on the grounds of an undermined testing process. He successfully argued that the doping control room was not secured or guarded while the doping control officer had left his control station, which undermined the validity of the procedures and results. The argument that his sample could have been switched or sabotaged was seen as very possible and his suspension was eventually overturned. Reynolds was later awarded $27,356,008 following an action against the IAAF on the grounds of: breach of contract, breach of contractual due process, defamation, and tortious interference with business relations.

ii) Culpability

Possibly the most controversial aspect of the World Anti-Doping Code (WADC) is the adherence to the legal concept of strict liability. In Article 2.1.1, the (WADC) affirms that:

For purposes of anti-doping violations involving the presence of a Prohibited Substance (or its Metabolites or Markers), the Code adopts the rule of strict liability… Under the strict liability principle, an anti-doping rule violation occurs whenever a Prohibited Substance is found in an Athlete’s bodily Specimen. The violation occurs whether or not the Athlete intentionally or unintentionally used a Prohibited Substance or was negligent or otherwise at fault.

Intent, therefore, is not considered an element of determining guilt in a doping offense. If a prohibited substance is found in an athlete’s body, an anti-doping violation has occurred.
Despite regular protest that principles of natural justice are violated, both CAS and the English High Court have held that a strict liability rule is lawful as it might be the only way to effectively police doping. The position of the courts to allow the continued use of strict liability principles by WADA and national sport organizations was firmly entrenched in Quigley. In the case is was stated:

It appears to be a laudable policy objective not to repair an accidental unfairness to an individual by creating an intentional unfairness to the whole body of other competitors. This is what would happen if banned performance-enhancing substances were tolerated when absorbed inadvertently. Moreover, it is likely that even intentional abuse would in many cases escape sanction for lack of proof of guilty intent. And it is certain that a requirement of intent would invite costly litigation that may well cripple federations – particularly those run on modest budgets – in their fight against doping (at 129).

The ruling argues that fairness to an athlete is of lesser concern than ensuring that a doped-up athlete, regardless of how they got that way, does not compete in sport. In Baxter v. IOC68, a British alpine skier was stripped of his bronze medal won at the 2002 Winter Olympics in Salt Lake City for inadvertent use. Baxter, who had a documented history of nasal congestion issues, had ingested an over-the-counter medication containing the banned substance levometamphrine. He regularly used the same product in England without issue, but had purchased the medication in Salt Lake City unaware that the product had a different formulation in the United States. Although the panel found that that Baxter did not intend to ingest the substance, he was nevertheless found guilty of the doping offense and his disqualification was upheld.

In Gasquet, a tennis player appealed a suspension from the International Tennis Federation (ITF) for cocaine use on the grounds of “no fault or negligence.” Gasquet argued that he had not used cocaine and that trace amounts of cocaine in his body were the result of kissing a young woman who had used cocaine, without his knowledge of her use. The ITF tribunal accepted the argument, and imposed a lesser suspension of two and a half months rather than the WADA prescribed sanction of one year. WADA exercised its right of appeal to CAS, but same result was decided upon.

In a similar case, a Brazilian athlete tested positive for traces of an anabolic steroid called clostebol. He claimed that he was contaminated as a result of sexual intercourse with a woman who had administered a medication containing clostebol for a vaginal infection. Despite scientific proof than an athlete could test positive after sexual intercourse with a woman using this medication, the athlete was held strictly liable (Pereira et al., 2004).

In most of these, and other similar cases, the substance the athlete has tested positive for through inadvertent use is not even a definitive performance-enhancing substance. According to ARTICLE 4.3.3. of the WADA Code, for a substance to be prohibited, it must meet 2 out of 3 of the following criteria:

- Medical or scientific evidence of performance enhancement
- Medical or scientific evidence of potential health risk
- WADA determination that substance or method violates the spirit of sport

Given that “spirit of sport” remains a vague, unclear term any substance regardless of its performance-enhancing benefits can end up on the prohibited list. And, the WADA code states in clear terms that the prohibited list is final and, as such, challenges to the list are not permitted. The result is that you can have unsuspecting athletes banned from their livelihood for trivial, accidental violations that have little or no effect on performance-enhancement in sport. Banning athletes on
these grounds seems contrary to the Spirit of Sport rather than promoting it, and will continue to result in legal challenges.

**iii) Economic Freedom**

It has been shown by the courts that there are inherent economic aspects of sport. Therefore, sport cannot have a complete exemption from treatises of economic rights and EU competition law. Article 6 of the UN Covenant on Economic Rights states: “The States Parties to the present Covenant recognize the right to work, which includes the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts, and will take appropriate steps to safeguard this right.” Likewise, Article 1 of the European Social Charter states the requirement to: “protect the right of the worker to earn his living in an occupation freely entered upon.” EU competition law is the most straightforward example of economic regulation that has an impact on sport. Article 81 of the EC Treaty states:

1. The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market.

2. Any agreements or decisions prohibited pursuant to this Article shall be automatically void.

Banning athletes from competition and therefore their livelihood in many cases for the use of substances that are often not illegal to possess or use could be seen as a violation of economic freedom rights.

In *Meca-Medina* this was one aspect of their many legal challenges. In the case, two swimmers were banned for four years following positive tests for a prohibited substance. The two swimmers aimed to prove that anti-doping rules were in breach of EU Competition Law as it restricted their economic freedom to pursue their careers. While their appeals were largely unsuccessful, the case does raise questions about the fairness of current anti-doping strategies. On the one hand the prowess of an athlete is a commodity to be bought and sold, while on the other they are disqualified for getting caught doing what it takes to gain that prowess.

### 5. Conclusion.

From the ancient Greeks eating lamb testicles to Lance Armstrong using EPO, doping in sports competitions has always occurred and likely will always occur. The future possibilities for doping are vast, particularly with much theoretical discussion of the potential for gene doping in sport (Miah, 2004; Naam, 2005). WADA’s response to the doping threat in sport has been to wage what Alexander (2014) has termed a “war on doping in sports” (p.1). Even in rare cases where athletes who are using prohibited drugs test positive, the highest likelihood is that it is for marijuana, which has been shown to not have performance-enhancing benefits in sport yet remains on the WADA prohibited list. Serious doubts can be raised about the fairness and effectiveness of current doping control policies and strategies.

If doping control is seen as a competition between drug testers, drug designers, and athletes, then designers and athletes appear to have a sizable advantage and are winning the competition. The testers are restricted by budgetary constraints, limited testing technologies, and the need to keep up with ever changing pharmaceutical advances. A reactive approach on the part of doping control officials does not and cannot work effectively, yet WADA’s approaches are primarily reactive. An effective strategy for the prevention of doping in sport should, instead, rest on harm reduction principles of educating athletes about the potential harms of drug use, teaching safe alternatives to
achieving their athletic goals to reduce demand, and targeting traffickers of prohibited substances rather than restricting the rights and freedoms of athletes with ineffective results.

6. References

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