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**Non-Analytical Positives:  
Forensic Interviewing and the Detection of Doping in Sport**

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## Should Doping be legalized?

*"It's not a question of whether it's 'a harmless drink'. It may well be. But it's against the law. "Eliot Ness, The Untouchables (Mamet, 1987)*

The recent revelations that Lance Armstrong was doping (USADA, 2012) have caught many in the media and in the sporting world by surprise. However, to many others, the revelations were simply confirmation of ongoing suspicions (see Walsh, 2012 for a telling historical review). Several major themes emerge from an analysis of the media coverage given to the release of the USADA report.

First, Armstrong appears to have never failed a doping test. Actually, that is not entirely true but this is a popular meme in the retelling of the Armstrong story so we will let that pass. Second, Armstrong was not alone and many other elite cyclists were also doping. Whilst we cannot be certain, 'many others' does not equate to 'all others'. Third, while the strategies used by Armstrong and his colleagues to evade detection were the result of careful planning, it would probably be wrong to think of Armstrong as some form of criminal mastermind. For a wide range of reasons, the anti-doping agencies and sporting bodies were, to all intents and purposes, remarkably easy to outwit.

Given these themes, many are asking whether it is now time to reassess the following question: should doping be legalized?

This question about legalizing doping has been raised repeatedly over the last few decades (e.g., Millar, 1994; Kayser & Smith, 2008; Cashmore, 2012). The arguments in favour of legalization have not changed greatly over the years and at first glance many of these arguments appear sound. For example, sport is inherently 'unfair' when an athlete who is genetically gifted is faster than everyone else and keeps winning races. However, whilst some would see such victories as part of the attraction of sport, others have quite a different perspective, seeing only inequality and a need to 'level the playing field' (e.g., Kayser & Broers, 2012) through the supply of performance enhancements to 'disadvantaged' athletes. For example, Tony Millar (Proszenko, 2012), a former Australian Commonwealth Games team doctor, recently argued that steroids should be allowed within sport, offering the following justification:

*"The thing they have told to me was that they were unfair. Well, they were given to everybody - and that's more than you can say about the world's best coaches and best equipment."*

Far from levelling the playing field, the supply of performance enhancements to all athletes would actually produce a new set of inequalities. Wiesing (2011; p.167) writes:

*The 'natural lottery' of athletic talents would be compensated for only partially by use of performance-enhancing agents. It would also be complemented by another 'natural lottery' of variable responses to doping measures, combined with the inventiveness of doping doctors. There would be no gain in 'justice' (i.e. fairer results that reflected efforts made) for athletes as a result of legalizing doping.*

Something that should be clarified at the outset is that the term 'doping' actually refers to two related, but actually quite distinct sets of issues. Doping includes both the use of performance

enhancements (in many cases, this is done through drugs such as steroids), and also the use of illicit (recreational) drugs such as marijuana. Performance enhancements, as the name suggests, are about improving sport performance. Illicit drugs are, for the most part, of little obvious benefit in sport (barring a few specific sports; see Cooper, 2012 for a discussion) and are, if anything, likely to be detrimental to sporting performance (as with tobacco and alcohol). The fact that there are two quite distinct types of doping has meant that calls to legalize doping may be referring to one or both forms of doping. The confusion is probably quite deliberate as activists have used arguments from one type of doping to justify conclusions about the other. For example, one might argue that marijuana does not enhance performance; therefore we should legalize *all* drugs, including steroids.

### The Rationale for Legalization

In 1991, Robert E. Peterson (at that time the Director of the Office of Drug Control for the state of Michigan), identified three main rationales for advocating drug legalization.

First, there are the ‘theorists’ (for recent examples, see Lippi, Banfi, Franchini & Guidi, 2008; Kayser & Boers, 2012). Peterson suggests that theorists ‘apply a form of economic, legal, political, or health-policy analysis to the issue and conclude that drug laws do not pass a cost-benefit test’ (p.325). The theorists usually play on public frustration with a problem to support a position that drug laws do not work. Supporting evidence is typically anecdotal or highly selective (Mangham, 2011).

Second, there are the ‘rights’ advocates, who argue that drug use is an individual right that should not be stopped by government, or ‘Big Brother’ (for a recent examples, see Kayser & Smith, 2008; Kayser & Boers, 2012). Any dissent with this viewpoint is dismissed as the immature or thoughtless opinions of the uneducated, or painted as the views of the corrupt and hypocritical ruling elite (Mangham, 2011).

Third, there are the ‘users’, who are motivated by self-interest.

Fast forward to 2012 and in the sporting world a familiar story is being repeated with calls to abandon the ‘war on performance-enhancing drugs’. One of the most intriguing of the proposed changes is that instead of attempting the ‘failed’ strategies of deterrence and detection, bans on performance enhancing drugs should be removed (i.e., legalization) and a ‘harm reduction’ system initiated (e.g., Stewart & Smith, 2010). Under such a system athletes would be able to openly use performance enhancing drugs as prescribed and administered by a medical doctor.

Proponents of such a view (e.g., Kirkwood, 2009; Cashmore, 2012) typically argue that the spectacle of sporting competition would be boosted by such a development (athletes would throw, hit and run faster than ever, etc.). The problem of ‘cheating’ would also be removed by the simple expedient of legalization (i.e., it is not cheating if it is not against the rules). The costly and intrusive anti-doping testing regime could be abandoned and millions of dollars (or billions of dollars, depending on the cost-benefit analysis system) then spent on other more worthwhile pursuits.

The harm reduction approach to drug control has a long history (for a review see Stoker, 2007a, 2007b, 2007c). In its original context, harm reduction was intended as one of several concurrent strategies. For example, in Australia the *Ministerial Council on Drug Strategy* (2011) argues for harm reduction as one its three pillars, the other two being demand

reduction and supply reduction. These other strategies are rarely mentioned in the context of anti-doping work where harm reduction is portrayed as a standalone solution. This is probably not surprising as the policy documents that are cited in support of harm reduction in sport typically do not actually mention either doping or sport. It should be noted here that activists typically cite policy documents (e.g., Global Commission on Drug Policy, 2012) as support for their claims. The relatively large body of empirical work on the subject barely gets mentioned, a theme we will return to below.

Apart from the problem of harm reduction solutions being cited out of context, their actual relevance to sport is sometimes quite tenuous. That is, it is not entirely clear what ‘harm’ is being reduced. For example, outside of the world of sport, one recent call for a harm reduction strategy came from the Global Commission on Drug Policy (2012), where the harm clearly under consideration is HIV/AIDS.

It is not always clear what ‘harm’ would be reduced by legalizing doping in sport. Smith and Stewart (2008) suggest three possible harms: ill-informed advice (e.g., doping schedules based on unreliable information from unreliable sources, such as the Internet); contaminated supply; and the threat of severe shame and punishment. The evidence that any of these harms actually exist is usually only briefly addressed. Instead, there are statements such as ‘Although robust evidence relating to damage is lacking, the criminalisation and demonisation of users is growing’ (Kayser & Smith, 2008; p. 86). Another recent example is:

*Even if sufficiently complete and accurate data on the negative aspects of anti-doping policy are still lacking .... We cannot ignore the side effects of current anti-doping policy for society in general. (Kayser & Broers, 2012)*

Surprisingly, the possible harm caused by performance enhancing drug use is denied in some writings. For example, Kayser and Smith (2008; p.87) state that ‘Anti-doping policy has been forged without the benefit of robust data concerning the long term health effects of the most prevalent performance enhancing drugs’. In short, performance enhancing drugs are not considered to be unhealthy; it is the labelling and stigmatization of their use that is seen as problematic. Some take such arguments even further. Kirkwood (2009; p.197) provides quite an amazing illustration of the logic employed by advocates of harm reduction.

*To many, the notion of medically supervised doping at major sporting events, such as the Olympics, seems strongly counterintuitive. This sensibility likely developed in ignorance of the long-standing practices of medical supervision of doping in the Olympics of the mid- to late 20th century. Canada, the former East Germany, and the Soviet Union all had some level of physician assistance for their athletes who took banned substances .... Although these measures were probably safer than athlete directed doping programs, the illegality of such behavior in sport relegated it to a deviant subcultural “underground” status, keeping such measures out of the public view for fear of repercussions ..... This subcultural status likely minimized the harm-reduction benefits of medical supervision. If international sporting organizations took the lead in offering medical supervision of all performance- enhancing-drug users as a means to reduce harms without the overhanging threat of punishment, then the harm-reduction effect should be more pronounced.*

Kirkwood's interpretation of the consequences of drug use is not widely shared. In an article in the Sports Medicine Australia publication *Sport Health*, Dr J. (2005) provides a succinct summary of the prevailing consensus about the impact of steroids on East German athletes.

*Anabolic steroids are the prime category of drugs that should be cited to show why use of certain drugs in sport should be illegal.... The stories of East German female athletes who have suffered from infertility in the years after their athletic careers are exhibit A in the argument against the use of anabolic steroids. Like all drug categories, there are grey areas, but at least with steroids we are more united in being hard across the board in this category*

In short, the term 'harm reduction' appears to have been hijacked and is now often used as a proxy term for legalization. Evidence in favour of harm reduction is largely based on the simple logic whereby a problem is acknowledged ('something must be done') and a likely solution identified ('this is something'). Evidence in favour of the proposed solution is either anecdotal, taken out of context, or as is more often the case based solely on the 'this is something' style of problem solving. For example, in many articles arguing for a harm reduction approach, there is not a single study cited demonstrating that harm reduction actually works (in any context). For example, in arguing for a harm minimization approach, Stewart and Smith (2008) cite the Drugs and Crime Prevention Committee, Parliament of Victoria (2000) report 'Harm minimisation: Principles and policy frameworks'. In the preface to this report, the Committee's perspective is outlined.

*This document endorses harm-minimisation as the most justified fundamental guiding principle for the development of illicit drug policy. There are different views, though, as to how harm-minimisation should be defined and what might be involved in realising it. This document refines and defends a particular conception of harm-minimisation, and it also outlines some of the characteristics of a systematic harm-minimisation framework for the implementation of drug programs, interventions and activities.*

Single (1997) argued that the lack of a clear definition of harm reduction raised the danger of the term being 'co-opted' by persons with very different interpretations. One possible example here is that the Parliament of Victoria report does not refer to doping or sport, yet the report is cited as justification for a model of anti-doping in the context of sport.

To complicate matters even further, legalization/harm reduction is clearly not the solution that the sporting world, the public, and other key stakeholders actually want, as we will discuss in the following section.

### **The Views of the Public, Athletes and Coaches**

Drug legalization is an argument that struggles to find widespread support beyond a handful of advocates (Mangham, 2011). For example, in Australia, a recent survey of public opinion about drugs in sport (with a large, nationally representative sample), found that 90% of the Australian public saw the problem of performance enhancing drug use in sport as serious; 96% 'strongly agreed' or 'agreed' that athletes should feel guilty about breaking the rules and taking performance enhancing drugs; and 91% believed that companies should stop sponsoring athletes who have been found guilty of using performance enhancing drugs (Engelberg, Moston & Skinner, 2012).

A survey of elite Australian athletes revealed a similar pattern of results (Skinner, Moston & Engelberg, 2011). An unavoidable conclusion is that the public and elite athletes are opposed to performance enhancing drugs. In short, calls for a harm reduction approach run counter to prevailing community opinion.

Whilst such studies of the public and athletes offer a consistent message, the interpretation of such data varies. For example, Mazanov, Huybers and Connor (2012) conducted an online survey on the spirit of sport, with a sample of 168 Australian adults. The study found that the sample ranked health issues in sport as less important than ‘rule following’, a finding that is consistent with the current legalistic approach to doping. Undeterred, the authors concluded that “Advocates of harm minimisation may need to work harder to convince the general public that prioritising athlete health is a genuine anti-doping policy option” (p.384).

As Peterson (1991) pointed out, most calls for the legalization of drugs, suffer from a lack of popular support.

*“There is no groundswell of ranks to legalize drugs, the concept is opposed by a six-to-one margin, politically it is a dead issue, and the nation’s recognized leaders in drug prevention, education, treatment, and law enforcement adamantly oppose it. The drug legalization discussion is more a pseudo-academic and entertainment exercise than a policy debate”. (Peterson, 1991; p.324)*

The rationale for changing the current anti-doping system is that it has failed both as a tool of detection and deterrence. The Armstrong case appears to support such claims. The logic runs something like this: Armstrong never failed a drugs test; therefore the testing regime must be flawed, therefore, all testing should be abandoned. But is this quite a leap in logic and one that does not meet the needs of either users (athletes) or consumers (the public). Instead of abandoning the war, perhaps we should instead consider other ‘weapons’ as an alternative solution.

### Coordinating Investigations

One broad category of detection that has largely gone unnoticed in most debates on how anti-doping efforts have failed is that of ‘non-analytical positives’: evidence of doping from sources other than biological testing. The World Anti-Doping Agency (WADA: 2011) recently released guidelines concerning the coordination of investigations between anti-doping agencies and other public agencies, most significantly, police forces. The guidelines state:

*This means new investigative methods and techniques have to be deployed, and new partnerships have to be forged, particularly between the sports movement and public authorities engaged in the broader fight against doping in society. These new partnerships will allow Anti-Doping Organizations to take advantage of the investigative powers of those public authorities, including search and seizure, surveillance, and compulsion of witness testimony under penalties of perjury. In many seminal anti-doping cases, very serious anti-doping rule violations were only uncovered because of the use of such powers by the public authorities. (WADA, 2011; p.1)*

The guidelines then go on to argue that even cases using biological analytical evidence

“such as cases based on longitudinal studies developed as part of an Athlete Biological Passport program – may be supplemented with non-analytical evidence” (p.6). The guidelines also state:

*the sports movement must remain assiduous in developing further tools and mechanisms for investigating doping violations beyond the traditional drug-testing model. Just as is the case with the enforcement of most disciplinary rules and prohibitions outside the field of doping, so in the field of ‘non-analytical violations’ sports bodies must develop their own powers of inquiry and investigation, training their personnel in investigative techniques, in order to facilitate the gathering of information and evidence beyond the sample collection process itself.*

To many in the sporting world, especially those advocating legalization, this possible direction in anti-doping will undoubtedly be horrifying. It runs entirely counter to their own position, and yet it is an ‘alternative’ strategy that has considerable merit: it would be consistent with existing anti-doping efforts; it would largely be received positively by the public and many athletes; and perhaps most significantly of all, it might actually work.

### **The Criminalization of Doping**

It is a matter of contention as to whether drug use in sport should be treated as a criminal offence. In Australia a slight majority of the public favours the criminalization of doping, with investigations to be run by the police (Engelberg et al., 2011). However German Olympic Committee President Klaus Steinbach (Reuters, March 8 2006) has opposed any such moves. Nevertheless, some countries (most notably Italy and France) have already introduced legislation under which drug use in sport is a criminal offence. While this debate continues, it should be noted that the current methods of investigating suspected drug use in most countries do not yet employ the full armoury of forensic investigative procedures. Instead, sports bodies have adopted an almost exclusively scientific (biological) approach to drug detection. This self-imposed restriction inevitably hinders the investigation of the true extent of drug use in sport.

It is a popular fallacy, known as the “CSI effect” (Goodman-Delahunty & Verbrugge, 2010) that most criminal investigations are solved through the use of scientifically verifiable evidence (such as fingerprints or DNA). In fact, the majority of cases are solved through evidence obtained during interviews with witnesses, or from suspects (confessions). The importance of such (non-biological) evidence was highlighted by the decision by the Court of Arbitration for Sport (CAS) to uphold the ban imposed on US sprinter Tim Montgomery, who was banned for nearly two years, largely on the testimony of another athlete (Kelli White) who named him as a drug user.

Despite such successes, evidence obtained in the form of testimony from those suspected of using drugs typically takes a secondary role in prosecutions. For example, cyclist Mark French, who had at one stage ‘confessed’ to using a banned substance and had acted as whistleblower against his team-mates, was, amazingly, cleared of using banned substances following ‘beyond reasonable standards’ of scientific testing of suspected drugs.

Conversely, athletes convicted of using banned substances may offer reasonable explanations for their actions once an allegation of cheating is made. For example, hours before the 2006 Winter Olympics, US Slider Zach Lund was suspended after losing an appeal of a drug

violation. Lund had used the banned masking agent finasteride; a substance he claimed was present in an anti-baldness treatment he was taking. The suspension was upheld by CAS who acknowledged that Lund had not been well served by the drug agencies and that although he had made a mistake, he was not a cheat. Such incidents generate considerable negative publicity, affecting both the individual athlete, the sport in which they participate, and also the anti-drugs agencies themselves.

### The Language of Lies

A common assumption underlying most forensic interviewing is that the responses given by an innocent person differ in measurable ways (quantitatively and qualitatively) from those of a guilty person. There are many possible reasons for this difference, but one suggestion is that the guilty person behaves and responds atypically because they are (unsuccessfully) trying to mimic the actions of an innocent person. A second possible reason is that lying promotes emotional reactions, stemming from uncertainty (in this case, ‘what would a drugs test show?’) and feelings of guilt and shame (Gudjonsson, 2003).

Take for example US baseball player Rafael Palmeiro, who shortly before testing positive for steroids had made the following statement to the US congress.

*“Let me start by telling you this: I have never used steroids. Period. I don't know how to say it any more clearly than that. Never. The reference to me in Mr. Canseco's book is absolutely false.”*

This statement contains a number of linguistic clues suggestive of deception. For example, Palmeiro overstates his innocence with multiple consecutive denials (Moston & Stephenson, 2009) and uses inappropriate intensifiers such as “Period” (Erickson, Lind, Johnson and O'Barr, 1978). However, at the time few (if any) suspected Palmeiro was lying. In fact, his denial brought him considerable praise in the US media for being so bold and categorical. In sum, while linguistic analysis can be used to determine the likely veracity of a statement, without established norms, both for the individual (does the speaker naturally use a repetitive style with inappropriate intensifiers?), or the general population, such analyses tend to be highly subjective and heavily influenced by contextual factors (post hoc justifications) such as whether or not guilt or innocence has already been determined (Shuy, 1998).

In order to standardize the procedures by which interviewers can differentiate between the innocent and the guilty, a series of questioning protocols (for example, the ‘behavior analysis interview’ by Inbau, Reid, Buckley and Jayne, 2004) have been developed for use in criminal investigations. The trained interviewer interprets the response of the suspect (both in terms of its content and the way in which the suspect answered the question, including non-verbal behaviour, tone of voice, length of time before replying, etc.) in light of the norms for that question, and the behavioural norms for that person (such as their responses to earlier ‘control’ questions). To date, despite their widespread usage (the behavior analysis interview is widely used in the United States, across all levels of policing from local police through to the Federal Bureau of Investigation), the procedures included in protocols such as the behavior analysis interview have not been systematically examined or verified. There is little evidence to support the assertion that observers can detect deception through non-verbal cues (e.g., Vrij 2004), but more promising results have been found to suggest that the detection of deception through content based analysis of statements is possible (e.g., Vrij, 2005). Consequently, it may be possible to differentiate between those innocent and guilty of using performance enhancing drugs by systematic analysis of their testimony, possibly in the form

of responses to a set of standardised questions where there are established norms for truthful and deceitful respondents.

It should also be noted that the very act of interviewing may be a strong deterrent to drug use. Faced with the problem of having to lie about their behaviour (rather than hoping they have been able to conceal drug use), avoiding detection becomes considerably more complicated. An illustrative example here is a case from Peoria in the USA from 2001 (Peoria Journal Reports, 22 October 2001) involving student athletes suspected of attending an alcoholic party, a violation of the school's athletic policy. Students who denied going to the party were asked to take a polygraph test to confirm their stories. Upon hearing this development several students changed their stories and admitted their guilt. Interestingly, polygraph evidence was actually inadmissible in that case (some students took the test and failed) due to its inherent unreliability.

Current drug testing procedures are largely only effective in catching casual and accidental users. If a test result indicates drug use, the guilty athlete then has an opportunity to offer a statement in their defence. In a forensic context, this is seen as creating an opportunity for an 'ambush defence'. This occurs when a person only offers an exculpatory statement once they have had a chance to evaluate the strength of evidence against them (for example, if DNA is found on a needle, but no traces of drugs, the guilty athlete may admit to injecting vitamins). By collecting a detailed statement from the athlete about drug use, fraudulent ambush defences become considerably more difficult. Furthermore, genuinely accidental breaches of the anti-doping code could be identified, resulting in the exoneration of innocent athletes.

### **The Forensic Anti-Doping Interview**

It is our contention that athletes who are engaged in doping can be identified through skilled investigative interviewing. To date, we have collected an extensive body of data on responses to questions about doping from athletes and non-athletes, including both children and adults. We have also collected data from athletes currently engaged in doping. In a coordinated plan of research we have established normative answers for doping and non-doping athletes, and we are currently implementing field trials to establish the feasibility of detecting doping through an analysis of patterns of responses to a standard set of questions. The results to date have been highly encouraging. Some of the findings fit within existing bodies of doping research, including the 'false consensus effect'. For example, Petróczi, Mazanov, Nepusz, Backhouse and Naughton (2008) found that athletes who used performance enhancing drugs offered much higher incidence estimates than non-users (35.11% vs. 15.34%). Petróczi et al (2008) interpret this finding as evidence of a 'false consensus effect', whereby cheating athletes over-estimate the prevalence of such behaviour. Our research has confirmed this general pattern of responses, with cheating athletes giving higher incidence estimates than non-users. There are also distinct patterns in how such estimates relate to other opinions on doping. In our work we are trying to identify clusters of responses that are indicative of doping. As with the behavior analysis interview protocols, such data does not constitute 'evidence' of doping. Instead, it is used to target individuals for further investigations. Such an approach is feasible within the anti-doping investigative framework proposed by WADA.

Our current work is thus a step towards changing the way that anti-doping testing is conducted and prosecuted. Interviews with athletes about their drug use may be conducted either in tandem with existing drug testing protocols, or as an alternative detection strategy. It may even be possible to give interviews the same status as biological testing, with similar

procedures for the selection of those to be questioned and identical sanctions for non-compliance. This possibility is explicitly recognised in the WADA (2011) guidelines:

*And where the sample collection process has generated information indicating a possible refusal or failure to provide a sample, or a potential whereabouts violation, or possible tampering or attempted tampering, sports bodies can investigate the surrounding facts in much the same way as they currently investigate other apparent disciplinary breaches, including interviewing the athlete involved and any other potential witnesses. Where appropriate, rules can provide for sanctions for failure to co-operate with such investigations. (WADA, 2011; p.A2-1)*

## Conclusion

Attempts to empirically validate the efforts of anti-doping authorities to deter and detect doping are typically beset with numerous conceptual problems. For example, measuring the detection rate or the incidence of doping in a given population over a period of time, can only partially determine whether or not such efforts have been effective. Consequently, attempts to conclude that the war on doping has failed are difficult to prove. Anecdotes can be used to support either position and are consequently of limited value in the determination of an appropriate policy response. Therefore, calls to legalize doping, justified by the apparent failure of anti-doping efforts, are clearly premature. Subsequent calls for harm reduction schemes are not inherently wrong, but advocates clearly need to put forward a more compelling case than has hitherto been the case.

To date, the efforts of anti-doping authorities have reflected a relatively limited budget, but more importantly a limited outlook on the problem. The people charged with detecting doping are, generally speaking, not familiar with criminal or deceptive conduct, nor are they familiar with forensic investigative procedures. The creation of schemes such as the 'athlete whereabouts system' are essentially attempts to patch up an unreliable investigatory framework. The tools to detect doping, thereby reducing both the *demand* for and the *supply* of drugs (the two other pillars of Australian drug policy), have not yet been fully utilized.

In sporting terms, in the war on doping we have reached the half-time stage and the authorities are losing. Instead of conceding defeat, their novice coach has recognised some errors in team selection and is now benching some of the underperforming players that were selected because they had the cleanest uniforms, and is now sending on some proven winners instead. The second half should be interesting.

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