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Submission for PhD by Published Works

Ross Coomber

**Perceptions of Illicit Drugs and Drug Users: Myth-Understandings and
Policy Consequences**

PERCEPTIONS OF ILLICIT DRUGS AND DRUG USERS: MYTH- UNDERSTANDINGS AND POLICY CONSEQUENCES

ABSTRACT

This submission to the University of Greenwich for a Ph.D. by published works is composed of ten peer-reviewed articles, five book chapters, and one journal editorial. The earliest publication is dated from 1992 while the two most recent articles have been formally accepted for publication and are to be published in the near future. The pieces, to aid coherence, are not arranged in strict chronological order but rather in an order best able to demonstrate coherence and theme. The central theme running through these published works relates to the ways that drugs, drug users, and the activities which surround them are often subject to exaggeration, distortion and untruths and that drug control policy, rather than being rationally based is often the result of fear, prejudice and unreason. The core of the submission, eight papers researching the dangerous adulteration of illicit drugs, reflects these issues strongly. An area almost untouched by social science prior to this research these papers represent an attempt to pull together a range of evidence to inform more fully about drug adulteration practices. A wide range of methods, including a relatively innovative approach to researching hard to reach groups via the Internet and World Wide Web were employed. Almost all of the findings are at odds with what is commonly and professionally (drugs field) assumed to happen as regards the adulteration/dilution of illicit drugs. The other contributions all reflect similar concerns but are focussed on other drug related areas. Each piece is preceded by a short contextualising introduction. The

appendices include a complimentary unpublished paper on drug adulteration, the preface to one of two books to which I was sole editor, some shorter contributions to drug field publications which, whilst widely read are less academic in their tone and approach, and two publications which represent the culmination of earlier joint research on drug policy.

INTRODUCTION & LITERATURE REVIEW

This is a submission for Ph.D. by published works at the University of Greenwich. Included in the submission is a range of published material that covers the period 1990 to the present day. In total a selection of sixteen publications make up the body of the submission with a further five short contributions to drug field journals/magazines, a preface to an edited book and an unpublished contribution to the adulteration research completing the submission in the appendices. Of the sixteen, ten are peer-reviewed articles, five are book chapters, and one is an editorial to the journal *Addiction Research*.

The introduction and literature review that follows will provide a framework through which the publications can be understood and contextualised. In particular it will outline the background to the work, show where the work is located in this respect, provide an assessment of its relative originality and contribution to the field and draw out the underlying themes that permeate the work. It will, where necessary, provide a broader contextualisation of the issues presented. The underlying theme represented and developed throughout the submission contributes to that body of work that argues that

representations of drugs and drug users, and the activities that surround them are often subject to exaggeration, distortion and a range of untruths. The various publications presented here develop and or explore this theme both empirically and discursively. Closely allied to this is the suggestion that much drug control policy, rather than being the result of decision making based on sound scientific reasoning is in fact often the result of fear, prejudice, morality, and as such, irrationality and relative unreason.

The general context: drug myths, drug attributions and the development of drug control policies.

Rational policymaking

It should go without saying that the basis of public policy should rest on the foundation of dispassionate and thorough amassing of data and be based upon the rational analysis of that data combined with the leavening of wisdom. But in the real world policy makers and those who implement policy and programs are not made in the image of Plato's philosopher-king. We forget the importance of cultural and social beliefs, ideology, values, and even simple coincidental timing of various events or "historical accident" (Saper, 1974: 183).

The aim of public policy, at its most basic level, is to achieve a desirable outcome for the issue or problem that is perceived to require intervention. Over the last three to four

centuries justification for government intervention in public affairs in the UK has been increasingly justified through scientific and rationalistic argumentation as opposed to that of tradition, religion or whim. From the nineteenth century, in relation to the broadening 'gaze' of the public health movement in particular, problems have been detected and policy solutions implemented (Eyden & Marsh, 1979). Industrialisation brought with it a whole panoply of ills, and what had been a relatively un-administered society became increasingly so: 'It was the pressure of facts, and unpalatable ones at that, which produced unexpected and (by most) undesired administrative growth' (Fraser, 1992: 117). The very accumulation of 'facts', of statistics, of information and knowledge played its part in creating a more centralised society, despite the predominance of individualism. There were many social ills: 'children working long hours, able-bodied males unemployed, women in childbirth, foetid cesspools and sewers, desperately dangerous mines, ships or railways, adulterated food, the scourge of smallpox' among many others (Fraser, 1992: 117). Each presented a problem for resolution but nineteenth century administrators, following the rationale of Benthamism had a method. That method was to accumulate information and knowledge on the issue under investigation, often with the use of Commissions. Action and/or legislation were based on the findings of the inquiry and ongoing activity concerning the issue was managed by professional experts (Fraser, 1992: 121). The approach in fact sums up the ideal model of policy making which has proved to be, 'the relatively durable element against which other premises and actions are supposed to be tested for consistency' (Gordon et al, 1993: 8). That is, the 'rational' model of policymaking. The underlying assumption posed by this model is that the issue,

where possible, should be considered a 'technical' one. Although much legislation has since been passed concerning directly moral or behavioural issues the justification for this type of intervention tends to be made through reference to harm to others, and more broadly to society, that particular behaviours result in. Such harms, where possible, are demonstrated through reference to 'objective' data and evidence.

We are forced to acknowledge however that policy is more than this. The processes of problem formulation, of policy decision-making, of policy implementation and even of post-implementation consideration can also be understood as inextricably political (Gordon *et al*, 1993; Hall *et al*, 1978). Thus, many areas of public policy have been subject to ongoing debate concerning the essentially political and/or moral basis of their formation and as a consequence a questioning of the objectivity of its reasoned justification. A problem that at first sight that has the appearance of being a technical or scientifically objective problem may be seen, when other considerations are taken into account to be more of a subjective, political or moral concern of a particular group or groups. Moreover, any public policy is also more than simply the sum of its constituent parts. Problem formation, policy formation and implementation certainly can be understood as adding up to a more or less rational policy infused with a greater or lesser degree of politics. The policy itself however, may, for differing individuals or parties, be symbolic of something that goes beyond the essence of the policy itself (Edelman, 1988; 1987; 1973; 1972).

A policy may be symbolic in many ways. It may take a specific shape or form which reflects current politico-economic thinking, for example, the use of pump-priming or 'seed-corn' funding mechanisms rather than full long term funding. 'Planning' may be considered a barrier to getting things done and so-called 'fast track' approaches taken. Such action however is as likely to be a symbolic approach to government as it is an objective approach to the issue in question. A policy may also be symbolic in that it is insincere. In such a case a policy initiative might be announced but the implementation of it never achieved or commitment to it demonstrably lacking (Ham, 1992; Hill & Bramley, 1986). At other times a convenient focus on one social problem may be a useful diversion away from another more politically contentious one. The argument that drugs have sometimes been a scapegoat for broader economic, social or political concerns is often raised by the literature (Musto, 1987; Berridge & Edwards, 1987; Miller, 1991; Szasz, 1987; Saper, 1974; Kohn, 1992).

Another kind of diversionary policymaking is that where the impetus for the policy is to assuage concerns that something is being done about a problem as opposed to a clear concern for the problem itself and its sensible resolution. Edwards & Batley (1978: 68) in relation to the Urban Programme of the 1970's stated how in response to Enoch Powell's 'Rivers of Blood' speech, the programme was 'launched with a haste that militated against the development of any clear objectives or strategy', and that, 'It was politically imperative to be seen to be doing it..[for] a quick and visible impact'. Indeed, as regards activity around illicit drugs, concern for visible action over considered action may also

take precedence at times. Goode (1993: vi) refers to the claim by US Senator Christopher Dodd that in the late 1980's 'drugs' had become such a high profile topic that 'politicians engaged in 'a feeding frenzy' to assure their constituents that they are concerned with the drug issue'. Likewise the Central Funding Initiatives (CFI) of the early 1980's (in the wake of the inner-city urban unrest) have been argued to be more about government 'being seen to be doing something' than about a commitment to problem resolution (Mocroft & Doyle, 1991). The CFI for the Treatment and Rehabilitation of Drug Mis-Users may certainly be understood in this way (Coomber, 1996) despite its relative success (MacGregor *et al*, 1990; 1992a). Alternatively, as in the case of early concerns (or lack of them) around cannabis in the UK and US a policy agreement may be ratified because of its political expediency internationally and because it appeared to have little effect domestically (Saper, 1974; Bean, 1974; Shapiro 1998; Bruun *et al*, 1975). Too much of an attribution of intent to be insincere or misleading to policymakers however, may be analytically too one-dimensional. Edelman (1988) for example, considers that policy may or may not be the *conscious* application of the symbolic but its formation and implementation is as much a result of the *process* of how governments govern and engender continuing support and legitimacy than an attempt to deceive.

An informed understanding of any policy or group of policy interventions therefore needs an awareness of the broader political, social, national and international climates in which it was born. It needs to reflect upon the interests of those involved and the claims made for the evidence selected upon which the trajectory of the policy was formed. It is too

simplistic to see policymaking as either a necessarily rational process, either in terms of some kind of progressive or 'Whiggish' march of history, or in terms of reasoned consideration of the facts. Rather we need to see it as the result of a complex interplay of forces, some of which may be patently irrational or unreasonable. It is argued that the development of drug control policy is more usefully understood in such a light.

Drug control policy

Drug control policy is often presented as though its development has been relatively unproblematic, especially by governments. The underlying rationales to their origins and development, it is assumed, have been based on sound scientific understanding of the problems and risks the drugs involved present to the individual and society. The following quote, from a senior Director of the US Drug Enforcement Administration (DEA) perhaps sums up the position rather brusquely but none-the-less quite succinctly, 'Drugs are not bad because they are illegal they are illegal because they are bad' (cited in Coomber, 1998: xi). Little room for manoeuvre here and indeed there is little room for manoeuvre in party politics in either the UK or the US. Daniel Bell's (1960) suggestion that post-industrial societies were effectively consensus societies may still be open to debate but when it comes to the positioning on drugs it is certainly the case that little serious opposition or even debate is forthcoming. The trajectory of drugs control policy is one of increasing controls, both in terms of severity of punishment and in terms of breadth. Yet, despite this, there is a great deal of evidence to suggest that the trajectory of control policy and the consensus upon which it is built is not on the kind of secure

ground that it assumes. Over the course of the last one hundred years or so there have grown a number of myths relating to drugs, drug users and those who are involved in other ways. There is also a range of evidence to suggest that many of these myths were firmly implicated in the formation of drug control policies.

A brief history of early drug control

In the early and mid nineteenth century opium was still considered by most to be a panacea for many ills, from diarrhoea and other physical ailments to depression, and was self-prescribed and widely administered by all sections of the population (Harding, 1998). It had an extremely worthy reputation, both in the popular mind and that of the medical profession and had for centuries been seen as an extremely useful drug, its benefits seen as far outweighing its dangers (Scarborough, 1995).

The first act to bring opium under any sort of formal control in the UK was the 1868 Pharmacy Act. In reality the Act was a minor incursion merely subjecting the sale of opium to labelling restrictions. Indeed certain opiate based patent medicines even fell outside this limited control (Berridge and Edwards, 1987). At first sight, it looks as though the Act can be simply understood as an attempt to protect a population from the dangers of dangerous poisons and 'quack' poisoners. On one level this is a reasonable stance to take. We need not doubt the integrity of public health interventions to suggest that other issues also affect their origins. Various indicators regarding opium poisoning and its implication in suicide had been gathered and infant mortality statistics for the

1860's had revealed that children, particularly infants under one year of age, were particularly susceptible to death from opium poisoning (Berridge & Edwards, 1987). The issue was debated in the House of Commons, in the medical press and more widely in public lectures. Whilst Parssinen (1983) broadly concurs with the progressive, humanistic notion that opium was simply one of many dangers in urban society brought under the gaze and remit of the public health movement, Berridge & Edwards (1987) contend that middle class concerns over working class child rearing practices, and child doping in particular, was as significant: 'the campaign against the practice was full of the class assumptions which did much to mould attitudes to the use of opium in general' (Berridge & Edwards, 1987: 101).

Opiates became increasingly associated with inappropriate and dangerous behaviour as was evident from accompanying concerns at this time about adult use, particularly the 'stimulant' or non-medical use of opium by the 'dangerous classes' (Berridge & Edwards, 1987; Harding, 1988). Although there is little, if any evidence to show that opium was being used in this way it was widely reported to be the case at the time (Berridge & Edwards, 1987). However, although opium was implicated in certain health risks and became a focus for the broader public health movement of the time it wasn't opium alone that was focussed upon. The risks were inextricably linked to inappropriate practices that needed to be brought under control. Poor childcare was, and is, considered reprehensible. Uncontrolled (mis)use led to other concerns. The 'newly discovered' dangers presented by opium at this time were not restricted simply to the effects from poisoning or those

posed by 'drunken' or stimulant use but also its attributed power to degenerate the moral faculties of the user, particularly the habitual user. Harding (1988; 1998) relates how Quaker groups such as The Society of Friends, and The Society for the Suppression of the Opium Trade (SSOT), were successful in promulgating a conception of habitual use (addiction) which was ultimately seen as a moral failing. It is in such conceptualisations that we see the basis upon which transformative actions of drugs such as the opiates were argued to rest: 'at first to stimulate and afterwards to depress; to remove this depression the individual must take another dose—a habit of taking the drug is thus established. The nervous system suffers, the mental powers enfeebled, the moral faculties perverted, and there is an inability to distinguish between truth and falsehood' (Lauder Brunton, nineteenth century physician and scientist, Quoted in Harding, 1998: 10). Further, to a position that may be recognised from attributions to crack-cocaine in the 1980's '[opium] saps the moral nature, deteriorates the moral character, and one loses all sense of moral obligation' (Dr Foster speaking at an SSOT General Meeting in 1886, Quoted in Harding 1988: 51).

With the emergent moral-pathological conception of habitual use combined with broader public health concerns around opium related effects on longevity, on poisoning, especially the young and fears of 'stimulant' use by the working classes, a shift in perception (albeit relatively minor at this stage) had begun to take place. This was a movement from seeing opium and its generic preparations as an essentially positive substance to something more problematic, however undefined. Negative associations

were beginning to permeate meanings of opium and its 'misuse'. Arguably however, no small part of this shift in perception was not about the fact that opium was being used but more about *how* it was used and by whom. Berridge & Edwards (1987) usefully outline how self-medication and the unregulated sale of medicines threatened the very development of the two emerging professions of medicine and pharmacy. Condemnation of working class child-doping practices and so-called stimulant use by the working classes they argue, were an important aspect of this attempt to bring opium within the remit of the professionals. Control over the production of the various opiate preparations available and of their sale, it was clear, would enhance the security and status of pharmacy whilst control of its prescription would do likewise for medicine. Both of these professions were heavily involved in the debate and lobbying activities calling for restrictions on opium.

Although the 1868 Act ended up as a very minor control over opium the debate and posturing engendered prior to its enactment was significant. 'Many of the features of the pre-1868 popular culture of opium remained undisturbed..It established, at first albeit partially, that opium was a professional matter and that it must indeed be subject to some form of control' (Berridge & Edwards, 1987: 122). These early shifts in perspective therefore saw opium and generic preparations move from a fairly eminent position to one that was slightly more circumspect. Rather than being seen as a common but sophisticated medication, easily accessed and administered and controlled largely through social and informal controls, where habit was recognised but largely accepted it was

increasingly understood as one open to misuse, abuse and where habitual with moral decrepitude.

Drug attributions and problem populations

Despite legislation like the 1868 Pharmacy Act, the development of serious of legal controls around drugs is essentially a twentieth century phenomenon (Murji, 1998). It is in the development of these controls however that some of the most common distortions, exaggerations and falsities surrounding illicit drugs have emerged and their effect on the perpetuation of current drug controls must be considered. This is not to suggest that the various substances that have come under official scrutiny and consequent control do not present variegated risks or that official concern of some kind is inappropriate. It is rather to suggest that *how* the problem has been defined, understood, and thus acted upon has been inextricably bound up with issues and concerns broader than those that relate to the substances themselves or the immediate justifications for the policy given at the time of implementation.

Two interrelated issues are of particular importance when considering the development of drug controls in the West. First the focus on the drug use of 'others', often 'foreigners', or parts of the indigenous population deemed to be a problem in some way. Second, that drugs such as opium, cocaine and cannabis were often attributed with powers that were wildly exaggerated and/or patently untrue (Bean, 1974; Kohn, 1992; Musto, 1987; Bullington, 1998; Berridge and Edwards, 1987; Harding, 1998; Stimson, 1994;

Lindesmith, 1943; Becker, 1963; Bean, 1994).

The immigrant Chinese populations of London's East End and various parts of the US became a focal point for drug related concern at the end of the last century and the beginning of this (Berridge & Edwards, 1987; Musto, 1987). The Chinese 'opium dens' were commonly portrayed, in both popular literature and the media as mysterious and dangerous places and their occupants, transformed by the demon practice, as both dangerous and untrustworthy. In particular Kohn (1992) has outlined how images of the opium den, opium smoking and the of the inscrutable Chinese combined to produce fears of innocent white women lulled into sexual liaison under the influence of opium and depraved Chinese men. Musto (1987: 85) refers to similar concerns in the US and in relation to cocaine and how 'it was supposed to enable blacks to withstand bullets which would kill normal persons and to stimulate sexual assault'. Indeed, the US House of Representatives in 1910 heard the following representation 'The colored people seem to have a weakness for it [cocaine]. It is a very seductive drug and it produces extreme exhilaration. Persons under its influences believe they are millionaires. They have an exaggerated ego. They imagine they can lift this building, if they want to, or can do anything they want to. They have no regard for right or wrong. It produces a kind of temporary insanity. They would just as leave rape a woman as anything else and a great many of the southern rape cases have been traced to cocaine' (Inciardi, 1986: 22).

Musto (1987) argues that the reaction to the drug use of ethnic minorities in the US had

as much to do with fears and anxieties caused by the broader effects of immigration and problems that were thought to be presented by the indigenous black population than with the drugs themselves. A concern for the (white) US way of life and the 'American way' was, at least partially, underlying the momentum for controls. Likewise, it has been argued that for the most part the descriptions of opium smoking in London's East End though widely reported were none-the-less unhelpful 'mythical' and a gross distortion of what actually did exist and the practices contained therein (Berridge & Edwards, 1987). 'The myth of the opium den was in the wider sense a domestic result of imperialism and the reaction to economic uncertainty. The Chinese and their opium use were a useful scapegoat' (Berridge & Edwards, 1987: 205). There is no doubt however that images of drug induced degradation and the potential danger it presented to society fed effectively in to the UK anti-opium movement, early perceptions of US problem drug use, and as a consequence, emergent national and international policymaking.

In each of the cases briefly outlined above, and in others which have emerged throughout this century, powers have been attributed to drugs which they patently do not have: cocaine—the ability to transform (particularly) 'black' men into marauding rapists with the strength of ten men (Inciardi, 1986; Musto, 1987) and phencyclidine (PCP)—likewise from the 1970's (Falk, 1994). Less ethnically ascribed but none-the-less not dissimilar in approach, heroin and crack cocaine have been seen as instantly addictive allied with an almost inevitable downward spiral to decadence, ill-health, and a likely death (Kaplan, 1985; Krivanek, 1988; Bean, 1994; Winick, 1962). Heroin, cocaine, cannabis (amongst

others), to *turn* the user into a criminal and/or a psychopath (Woodiwiss, 1998; Inciardi, 1986; Lindesmith, 1941; Tonry & Wilson, 1990). A full list of obviously untenable attributions would take more space than is available here but suffice it to say that drug related imagery has been, and it remains the case (cf. Woodiwiss, 1998; Murji, 1998 & 1999), often unreasonably distorted and exaggerated and, damagingly, associated with 'problem' populations.

If those populations that are at any one time giving some angst to the common sensibility, be they Southern blacks, immigrant Chinese, 'society' extroverts (Kohn, 1992), 50s jazz musicians (Becker, 1963; Bean, 1974; Young, 1971), the young (Miller, 1990), or any particular sub-group or culture who also happened to use drugs then it was a short step to suggest that their 'deviant' behaviour was due to the drugs in question. If the drugs were to blame, they *made* people bad. If drugs made people bad then they needed to be controlled and those groups as a consequence, and as was apparently self-evident, needed to be controlled.

Controlling drug use achieved both these aims—at least symbolically. Actual evidence relating to the transformative powers of the various drugs which became subject to national and international control however was generally in short supply and the justification of many of the initial controls were based upon understandings of particular drugs which have been largely discredited today by the scientific (often the social scientific) community. Indeed, in the case of cannabis, despite little evidence of its

harmfulness, and some extensive evidence that it may in fact be relatively unproblematic to the individual or society, was brought under early control (Kalant, 1972; Bruun *et al*, 1975; Shapiro, 1998).

Anecdotal but sensationalist reports of the harm that cannabis could do to individuals and society were used as the basis for its initial inclusion into international agreements and in the development of US national policy in particular (Bruun *et al*, 1975; Woodiwiss, 1998; Becker, 1963; Saper, 1974, Inciardi, 1986). The images of Reefer Madness that were promoted in the US in the 1950's, particularly by powerful figures like Harry Anslinger, long time Head of the Federal Bureau of Narcotics have been described as 'the ravings of a madman. Using the mass media as his forum, Anslinger described marijuana as a Frankenstein drug that was stalking American youth' (Inciardi, 1986: 22). Fear inducing, sensationalist and inaccurate stories were released to the media about all manner of violent (often sexual) crimes supposedly caused by marijuana intoxicated (usually immigrant) youths. 'As a result of Anslinger's crusade, on August 2, 1937, the Marijuana Tax Act was signed into law, classifying the scraggly tramp of the vegetable world as a narcotic and placing it under essentially the same controls..as opium and coca products' (Inciardi, 1986: 23). Almost all the effects those such as Anslinger attributed to cannabis are no longer accepted by the social scientific community, nor indeed much of the public, as tenable. However, although cannabis is no longer discredited in the way it was, continued justification for its prohibition commonly relates to its attributed ability to act as a 'gateway' to other, more dangerous drugs. Again, whilst this is a perspective that in

its simplest form has been largely discredited by the scientific community it is none-the-less an image that continues to be propagated by public bodies, enforcement agencies and politicians (Zimmer & Morgan, 1997). It is this type of relationship, the way that largely unsubstantiated assumptions about drugs, drug dealers and drug users inflect broader understanding of what the drug problem is, that is explored in many of the papers included in this submission and the work on drug adulteration in particular.

An outline of the submitted research and how it is located in the broader literature

Drug adulteration myths

The core of this submission consists of eight distinct but related research papers on aspects of illicit drug adulteration/dilution and the practices of drug dealers and traffickers. Initial impetus for the research came from issues raised through my teaching on my final year undergraduate course *Drugs and Drug Use in Society* that highlighted certain apparent inconsistencies around commonly accepted notions of drug adulteration. The literature was fairly clear that dangerous adulterants or diluents (adulterants are active ingredients, such as caffeine, added to the primary substance, diluents are non-active ingredients, such as glucose –literally, to dilute) were indeed a significant if not common risk to the drug user. Media references to 'dicing with death' playing 'Russian roulette each time they take drugs' or the truism 'that you never know what you are buying' which inferred that dangerous adulteration with various poisonous or dangerous

substances was a real and significant risk moreover were never countered. Strychnine, 'rat-poison', brick-dust, ground light bulbs, were just some of the cutting agents commonly asserted as added to street drugs by unscrupulous dealers to make extra profit. The literature was also fairly clear however that drug users do not drop down dead like flies but that mortality attached to drug use, particularly to moderate and occasional drug use, which predominates, is relatively rare. Where mortality was an issue (despite the fact that poisonous adulterants were/are often the knee-jerk assumption of the police, as was the case with Leah Betts) it was almost exclusively found to be related to overdose, poly-drug use or to inappropriate co-activity. Thus the situation consistently arose where dangerous adulteration was emphasised as constituting significant risk to the drug using population but where the evidence for its involvement in mortality or even morbidity rates was less obvious. If dangerous adulteration was a common occurrence then it should be expected to impact on mortality statistics more obviously. Perhaps, given the general acceptance of the existence of dangerous adulteration practices, its occurrence was merely over-stated. Such substances were found but only relatively rarely. Exaggeration of drug effects and dangers more generally is hardly uncommon. Initially therefore, little more than an exploration as to exactly what cutting agents were used in illicit drugs such as heroin, ecstasy, cocaine, amphetamine and LSD, which were the drugs with the most common associations with dangerous adulteration was sought. In particular, it looked as though an exploration of how often dangerous substances were actually found would provide a re-assessment of the level of risk accorded to this problem. What was found however, went some way beyond this and the research

developed to an extent not originally anticipated.

Although there were pockets of disparate forensic information regarding drug adulteration it was nearly all to be found in forensic science journals and other publications relating to the field of forensic science, or, in watered down form, in intelligence reports. Most forensic based literature merely listed what was found, provided no context and in many cases was at pains to emphasise the techniques and machinery (e.g. Gas Chromatography or x-ray Spectrometry) used to attain the data. In fact no wider discussion about the significance of the forensic data to broader representations of what was in street drugs and what drug dealers and traffickers did to them was contained in the forensic literature. This is despite the fact that they patently presented a number of anomalies to general discourses around drug adulteration. When discussion of these issues had been raised elsewhere they tended not to concern themselves with what actually goes into street drugs, more with what users believed were in them (Cohen, 1989; Forsyth, 1995). It was, and remains, a very under-researched topic area.

Initial forays (Coomber, 1997a) into the area involved looking at the existing forensic literature, the rationales given for dangerous adulteration, and the literature regarding drug related mortality and morbidity. Rather than revealing, as was expected, that the risk of dangerous adulteration had been merely exaggerated, it indicated that nearly all of what is commonly believed to take place in relation to *dangerous* drug adulteration, or

indeed drug adulteration per se, was largely untrue. Indeed, after critically reviewing the forensic evidence for dangerous adulteration, and the rationales for how and why it might take place it was concluded that there was no forensic or medical evidence that dangerous adulteration was a common activity or more importantly that it actually took place at all. Moreover, the evidence suggested that less adulteration (with any substance) took place than is often believed and that when it did it was often with 'quality' materials that in certain circumstances even enhanced the primary drug in some way as opposed to materials that merely detracted from it. It was further speculated in Coomber (1997a) that drug dealers were unlikely to use dangerous substances for a range of reasons and that where cutting did take place it was likely to be prior to importation. Drugs it seemed, were not routinely cut by drug dealers. This of course had great consequences for *how* drug dealers were perceived and understood. It also countered the seminal work of Preble and Casey (1969) that had found cutting to be a routine activity all the way down through the chain of distribution in mid-1960s New York, a perspective that had been understood as representing the norm and that had been given further credence by expose docu-novels such as Sabbag's *Snowblind* (1990).

The evidence and argumentation put forward in (Coomber, 1997a), particularly that relating to the practices of drug dealers, was largely speculation based on deductive reasoning. It was speculation that was supported by the forensic evidence but speculation none-the-less. At this point it was decided to try to research the area more fully and endeavor to build up a more definite picture of what was done to street drugs by those

who sold them and why. The first step in this direction led to a number of drug dealers, both inside and outside prison, being interviewed about their adulteration and dealing practices. Much that had been speculated in the first paper appeared to be borne out by the findings in Coomber (1997b). The dealers interviewed reported only rarely cutting the drugs they sold with anything, as they had alternative means to make profit which did not involve endangering their clients, and when they did it was with relatively innocuous substances such as glucose or even ascorbic acid (Vitamin C). Despite believing in dangerous adulteration, evidence for its existence, other than anecdotal, was not forthcoming from this group.

There was now a case being built that suggested that illicit drug adulteration practices in the UK were not what they had previously appeared to be. The next question to be asked was how this fitted into the broader international drug trafficking and drug-dealing scenario. To obtain some indicative information on this some new and innovative research via the Internet and the World Wide Web was carried out which attempted to replicate the earlier work with drug dealers in South East London (Coomber, 1997c). Successfully reaching 80 drug dealers in 14 countries, this research suggested that drug dealers in other parts of the world, including the United States, also did not routinely cut the drugs they sold.

Growing more confident that dangerous adulteration was largely mythical, in Coomber (1997e) the potential mechanisms through which the idea had originated, how it was

maintained and perpetuated were explored. Moreover, because belief in dangerous adulteration appeared to be so widespread and relatively uncontested, it was argued that it had attained the status of established fact. Although emerging evidence suggested that it was largely mythical it was difficult to apply to it the status of myth as myths are often widely contested and this was not. It was further argued that without the assumption that dangerous adulteration was a real and significant activity other myths that also contributed to the image of the 'evil' drug dealer start to collapse. Over the years, other attributions to the evil drug dealer had suffered through lack of evidence (e.g. dealers selling to children at cheap rates, or giving drugs away free to entice them, get them addicted and thus secure reliable clientele) but the continuing belief in dangerous adulteration had bolstered the image. If dealers did cut their drugs with rat-poison didn't that prove that they were the most degenerate of all? If they do not however, and indeed if, as the research appeared to indicate, that they often had a relatively humane approach to selling drugs, the homogenous and largely demonised image of the drug dealer was unhelpful. It was further speculated that such images had had, and continued to have, significant impact on making drug related offences the most harshly punished in nearly all societies, particularly in the 'developed' world

In the course of the on-going research it became obvious that the forensic evidence, for a number of reasons, could be improved and made more transparent. In particular it would be useful to know what proportion of the heroin samples seized at the street level had adulterants in them and what they were. Forensic data from Customs and Excise (which

had not been made publicly available) on seizures made prior to or at importation had already been obtained for comparison. The Head of the Forensic Science Service for the United Kingdom was contacted and an arrangement was made for data from 228 heroin samples which had been analysed in 1995–96 to be re-appraised in a way that would provide the information needed. This was not straight-forward as the samples, which had been individually analysed for specific prosecutions, were located in laboratories across the UK and records had not been kept as to the existence or not of adulterants. The findings reported in Coomber (1997f) however were important and worth the effort involved. That nearly half of the 228 were found to have *no* adulterants at all considerably strengthened my previous assertions that the cutting of street drugs was neither routine nor predictable once imported into the UK. Moreover, the fact that there was little overall difference between the heroin purity of Customs seizures and 'street' seizures further supported the assertion that what cutting did take place was, in the main, undertaken prior to importation.

The research on adulteration was now beginning to take real shape and more rewardingly each new step in the research had largely confirmed the main speculative assertions put forward in the original paper.

Nearly half of the responses to the research via the Internet and World Wide Web had been from individuals who had sold drugs in the US. Although the US based responses were consistent with the others in that survey and with the UK research which had

preceded it the US none-the-less appeared to present a special case. To begin with the purity of heroin seized at the US borders and those obtained from street level differed markedly and always had done. Street level heroin, on aggregate, was significantly less than at the borders; suggesting consistent cutting was taking place after importation. This data was more secure than even the UK data as the US has a much more comprehensive and well-organised heroin-profiling system than any other country. Was the US a special case? The undermining of the rationales for the cutting of street drugs with dangerous substances held as much for the US as it did for the UK. The Internet data suggested that once again that cutting was rare as opposed to routine. Was this indicative sample more problematic than it at first appeared? It was decided to re-examine in detail the US forensic evidence. Detailed information was available (but had not been interrogated in this way) but not in the public domain. A fortuitous contact with one Drug Enforcement Administration (DEA) official however enabled access to another agent whom, given time, provided the new information needed. Again, as with the UK research, data was requested on the proportion of samples where no cutting agents were found. Without the experience and knowledge accorded this researcher in the preceding research it would not have been possible to interrogate the DEA data in such a fruitful way. When the data was dis-aggregated (Coomber, 1998a) it became clear that heroin sold in particular US cities rarely contained any cutting agents. Where this was the case the heroin originated from Mexico where adulteration prior to importation (according to Customs data) was also rare. Drug dealers in the cities where Mexican heroin predominated did not cut the heroin they sold, even where it was 'gang-controlled'.

There is no reason to believe that cutting only took place in those cities where non-Mexican heroin predominated. It also transpired that the bulk of the US border seizures were made at international airports where heroin from high purity sources made up nearly all of the seizures. The aggregate purity of seizures at these points would therefore almost certainly exceed those of 'street' seizures where the aggregate purity indicators would be drawn from poorer purity sources as well as high. Mexican heroin for example, even when not adulterated, has a lower aggregate purity than Colombian heroin. Finally, it was found that although there was disparity between border and street samples when samples of equal *weight* were compared purity tended to be more or less the same. Adulteration practices of dealers in the US therefore, despite initial appearances from the much more comprehensive profiling system, appear to be, like the UK, much more limited than commonly assumed.

Throughout the period of this research it had been asserted (Coomber, 1997a,b,e) that because drug field professionals, the police and the media tended to propagate or support the notion of dangerous adulteration that the general public would also be likely to believe it. In Coomber (1998b) this assertion was tested on a student population. It was reasoned however, that in relation to beliefs on drug cutting, this convenience sample could be reasonably understood as a lay population rather than simply a 'student' population. It was certainly true that there were no significant differences between the beliefs of those who had previously used drugs and those who had not. In part this was true because of the overwhelming structure of the responses. Nearly all of the

respondents believed that dangerous adulteration took place and believed in a selection of such substances from rat-poison to brick dust and ground light-bulb glass to be used. In fact this research indicated that lay beliefs about a wide range of activities related to drug adulteration were on the one hand fairly homogenous and on the other completely at odds with the emerging evidence.

Methodological issues raised by the research

The findings of the research into dangerous drug adulteration practices represents but one of two important aspects raised by the research. Some important methodological considerations and practices were also developed.

Using the Internet and the World Wide Web (WWW) to address the three-fold problem of accessing a hard to reach population that was both vulnerable (to prosecution) and extremely wary, was, and remains a relatively under-developed methodology. What limited research had been undertaken (and published) at this time that had used this route to access research populations was predominately that of survey research overwhelmingly concerned with ensuring population representativeness. In Coomber (1997c) and more particularly in (1997d) the argument was made that research utilising the Internet and WWW could usefully be undertaken that was not necessarily hindered by the limitations of the population sample. It was further argued that opportunities were now being presented through this medium that were not previously available to research inquiry. Proper caution was advised in a number of respects, as was information on how

to actually carry out research via the Internet. In particular, it was demonstrated, for the first time in publication (English language at least) that the Internet and WWW could be usefully employed to research hard to reach and not just 'normal' research populations. It also demonstrated that we are able to re-assure and protect vulnerable individuals using this methodology whilst at the same time potentially exposing a greater than ever number of individuals to the existence of particular research projects across international (and physical) borders. The methodology is far from problem free but also far from being redundant and this work represents an initial step along that route.

A second important methodological issue was raised in those parts of the research that involved the contacting of the drug dealers, the survey of lay beliefs and the unpublished paper 'Post-Preparation Residue: A Contribution to Beliefs in the Dangerous Adulteration of Street Drugs' (see Appendix B.). This concerned the credibility of those with 'privileged' knowledge and how we, in the research community might understand that knowledge. In each instance it was demonstrated that many of the respondents believed that the beliefs they asserted had important credibility because they were 'closer' to the issue or involved in it in some important way. Thus statements such as 'I know it happens' or 'my friend got sick with heroin in ecstasy' were never backed up with any kind of real first hand evidence. In fact when asked for first hand evidence some respondents felt that reference to it being 'common knowledge' was wholly sufficient. As regards the dangerous adulteration of drugs, everybody more-or-less believed in it but no one could provide evidence for it, or had first hand experience of it. Researchers thus need to be sure that when they are

recording difficult to access information that they do not accept it uncritically. When one of the only ways to access that information is through privileged informers the situation may occur where 'common knowledge' to the group, consistently and coherently presented to the researcher, may appear to be reasonable and reliable data, but may in fact be nothing of the sort. Interrogation of *how* the individual or groups concerned really know what they say they know is important. As this research has consistently demonstrated when a respondent says they have first hand knowledge of something they may actually mean something significantly less definite.

A third issue related to the way that forensic material regarding drug adulteration is collected and analysed. On the basis of the research findings presented in Coomber (1998f) a number of recommendations were made for improving the way that the forensic profiling of illicit drugs and the monitoring of trends in trafficking is organised and carried out in the UK and the European Union. At present the approach is haphazard, extremely limited, not open to comparative analysis, and wholly unsuitable for providing an informed picture of drug adulteration practices and other important aspects relating to trends in drug trafficking. The recommendations suggest building on, though surpassing in a number of important ways, the method utilised by the DEA in the US. This is a method that is far more systematic and comprehensive than that employed elsewhere also involving the inclusion of samples obtained through the purchase of illicit drugs at 'street' level for the purpose of analysis. In particular, recommendations were made for greater strategic approach overall. This would involve determining exactly what information

was needed. Only then could an appropriate method for collection of data (basic suggestions were outlined) be implemented. It was further recommended that complimentary to a strategic approach to the collection of samples would be the strategic and systematic application of particular types of analysis. Again specific suggestions were provided regarding which drugs should be monitored and which type of analysis should be employed. Finally, suggestions were made regarding how such information should be reported. At present the method, the implications of the findings and the significance of them is opaque to even the professional (Criminal Intelligence Service; the police, the media etc) drug field related worker and needs to be made more accessible and transparent.

Appraisal of the contribution of the research on drug adulteration

In the case of the conventional Ph.D. submission an appraisal would be made of the contribution that the research makes to the specific literature that it has become a part of. In the case of Ph.D. by Published Works it may be appropriate to also consider the impact the research has had more broadly, either on further research, policy or society.

In relation to the specific literature on adulteration the research papers submitted have contributed to it in a number of definite ways. First, the extant literature is almost totally derived from the field of forensic science. This research sought to provide a broader social scientific understanding of the phenomenon and to map out what actually happens

to street drugs, why it happens, and what people believe happens regarding drug adulteration/dilution. The forensic literature does not seek to do this and very little social scientific research had previously attempted to do it, and none had focused on the processes and the nature of adulteration itself. In this sense a whole range of issues were reviewed, analysed and researched from a comparatively new perspective and the findings from that body of research raised significant questions about much that was assumed about the adulteration of street drugs. To begin with, most of what has previously been accepted by much of the drug field literature, the police, the media, drug dealers, drug users and the lay public as regards dangerous drug adulteration was found to be significantly at odds with the research findings. Moreover, the general picture as regards how much cutting takes place, who does the cutting, what kind of materials are used, and why cutting takes place was also shown to differ significantly from common perception. The research also suggested that the demonised image of the drug-dealer, bereft of morals and care for consequences of their behaviour towards others, is, as with many other drug myths, an unhelpful one. As well as contributing to the specific drug field literature on adulteration, cutting practices, drug dealer images, and drug mythology more generally, a number of issues pertaining to research methods were also developed and raised. In particular, innovative methods to access hard to reach (including 'criminal') populations using the Internet were developed as was argumentation about the validity of non-representative sampling in such circumstances. Important considerations for ethnographic/qualitative research were also discussed regarding the reliability of types of 'privileged' knowledge that hard-to-reach groups might provide. A new picture of

what happens to illicit drugs, by whom, and why, has thus been produced. An original contribution to the specific literature, both in terms of the findings, and certain methods utilised, has therefore been made.

As well as contributing to the specific literature relating to drug adulteration and drug dealing this research also contributes to that broader research literature alluded to earlier in this introduction that has problematised much that is conventionally thought about illicit drugs and their control. In particular, it has shown that fears relating to drug adulteration are largely unfounded and grossly out of proportion to the evident risk. The attribution of certain unsubstantiated risks to the drugs in question and of an 'evilness' to those who sell them is as we have seen a common thread in the history of recent drug controls, a thread also exposed here in relation to dangerous adulteration.

As regards the impact of this research more broadly one needs to be more circumspect. Many of the myths that abound about illicit drugs have been discredited for some years and yet they continue to be widely believed and propagated. The research presented here has been in the public domain but a short time and its impact that it has had, if any, is difficult to assess. There are two areas however where it might be possible to gauge a contribution. First, as is evidenced in the appendices, a number of short articles have been published by drug field journals/magazines/newsletters that have a broader readership than the peer reviewed journals that service a mainly academic audience. In this sense, drug field workers and even some users may be more aware of the findings and have some of their fears

regarding adulteration assuaged. Secondly, and more pro-actively on my part, because in Coomber (1997f) consideration was given to the unreliable and inefficient way forensic evidence is collected and reported some attempts have been made to improve these procedures. To this end talks are currently underway with the Head of the Australian Government Analytical Laboratory in Sydney (Australia's primary unit for the forensic analysis of illicit drugs) who has indicated that he is keen to get a pilot project off the ground based on the recommendations made. I am also pursuing the setting up of pilot projects, on similar lines, in the United States and ultimately will be looking to co-ordinate similar research through the European Union.

The control of drugs in sport

It has been suggested that the development of controls in the non-sporting world has been infused with unreliable conceptions of what effects drugs such as heroin or cocaine have on the user and that concerns with drug use have often been inextricably related to who is using the drug than with drug use per se. Significantly, there are a number of important parallels that relate to the more recent development of controls over performance enhancing drugs (PED's) in the sporting arena. The conventional justification for the highly punitive and ever-widening prohibition on so-called PED's is formally based upon the twin aims to eliminate cheating and protect the health of the competitor (Fraleigh, 1985). However, just as in the non-sporting world PED's have been attributed with powers they do not (or have not been proven) to have—both in terms of health risks, transformative capabilities, and in terms of performance enhancement. An obvious consequence of this is the controls that

have emerged and that are effectively based on such reasoning are open to equally critical appraisal as those in the non-sporting world. Such a position provides the context for my work on drug control policy in sport.

In Coomber (1993) a range of the literature was reviewed that suggested that the use of performance enhancing drugs (PED's) was more common than is often accepted by sporting authorities; that representations of PED's effects, in terms of enhancing performance and in terms of health risks was unreasonably overstated, and that there was no evidence to suggest that 'getting tough' was a successful strategy to employ if the aim was to prevent the use of PED's. In many respects this paper was relatively introductory but it did make two arguments which had not at that time been applied to drug control in the sporting context that were further developed in Coomber (1996). The overt pursuit of a prohibitionist strategy backed up with extremely harsh punishment (but with no real ability to stop the activity) it was argued, had resulted in PED use being driven underground where haphazard experimentation was common. No real opportunity to research either the potential harmful effects of drugs such as anabolic steroids or their efficacy as a PED was therefore possible under these conditions and research which had been carried out was insufficient because of the doses used did not mirror those used in practice. It was therefore argued that current control policies, which were inconsistent and contradictory in a number of ways, were actually *increasing* harm to the drug user. Preventing harm to the drug user is of course one of the main tenets of sporting drug control policy. A harm reduction approach to drug use in sport was argued to be the only pragmatic way forward. Specific gains achieved using such

an approach that had been recently made in the UK in the non-sporting world were referred to. At the time of writing in 1992, and as far as I am aware, I was the only commentator on this issue to draw distinct parallels between the development of controls in the sporting world and the non-sporting world and in particular to advocate a shift towards harm reduction.

One reason why sporting authorities were unable to engage in broader debate on drug use and learn from the non-sporting world it was suggested (Coomber, 1996) is because those that make policy in sport are not drug experts they are sports administrators. They are therefore unlikely to see or understand the parallels between the experience of the sporting world and the non-sporting world. It was argued that sports administrators need to become more historically and socially informed, understand the impact of harm reduction policies and, in the face of a failing policy, take the responsibility to *lead* public opinion not defer to what they believe it to be regarding the responsibility of drug control policy.

In Coomber (1999b) the contradictory nature of drug control policy in sport was outlined and assessed. In particular, it was pointed out that the current concern about PED's is in fact a relatively recent one and that its development could not be divorced from the development of concerns about 'drugs' per se in the mid-1960's. Moreover, the well publicised health risks attached to PED's, anabolic steroids in particular, that had provided so much momentum and justification for the implementation of drug controls in sport, had little basis in the medical literature. Many of the dangers had been unreasonably exaggerated. It was

further argued that the level of punishment handed out to 'drug-cheats' was comparatively excessive and could not be justified through reference to the amount or type of advantage said to accrue from PED use. Other forms of advantage seeking could produce greater levels of advantage and/or levels of harm and yet they may receive almost no punishment in comparative terms. Ironically, especially as regards anabolic steroids, scientific evidence of the advantage giving properties is to date unproven yet governing bodies are willing to punish severely those that use them. In addition, it is pointed out that there is a whole range of substances, techniques, technologies and resources open to certain competitors and not to others. The 'level playing field' of sporting lore is, in reality a myth, and yet drug control policy is partially based on its very existence. At the time of writing it even remains unclear exactly what is a PED or indeed what actually constitutes a drug. Creatine supplementation is permissible yet the use of testosterone is not. Both are substances naturally produced in the body and they allegedly provide similar benefits. One is considered legitimate the other is not. One is considered a drug the other is not. Drug controls in the sporting world it is argued are replete with contradiction, based upon unreasonable assessments of drug risks and the performance enhancing potential of PED's. It is further suggested that moral outrage relating to PED's is greater depending on who is believed to be using the drug and that certain nations are more likely to be scapegoated than others. As an overall appraisal, it is suggested that drug control policy, in its current highly punitive and often-contradictory form, is neither rationally sustainable nor practicable.

Drug risks, good and bad drugs

The overstatement of risk is prevalent in both the sporting and non-sporting control contexts. In the editorial to *Addiction Research* and the preface to the edited book *The Control of Drugs and Drug Users: Reason or Reaction*, it is argued that the 'drug problem' as commonly perceived, relates strongly to the perceived riskiness of particular drugs and drug use in general. 'Bad' drugs (illegal ones) are deemed as being more risky than the 'good' (legal, prescribed or otherwise) drugs. This dichotomy, it is argued, is an unhelpful one. It is unhelpful both because it doesn't reflect the reality of comparative drug risks, as many legal drugs present more danger than some illegal ones, or help to clarify what the drug problem is, in the broader sense. Gossop (1997) has argued that we are a drug using society and that it is only when we accept that to be the case, acknowledging that 'drugs' relates not to just the illegal ones but also to the ones we all use, will we be able to have reasoned debate about drugs and the problems they present. This is essentially an argument for broadening out the context of drugs, understanding them in perspective to the wider world of drug use. In the editorial it is suggested that such reasoning needs extending to the discipline of risk analysis and its under-developed approach to drug related risk. At present, it is suggested, legal drugs are assessed in terms of their likely risks, illegal ones to their potential risk— a decidedly different method. This is also evident in the representation of drug risks in sport. The result is that like is not being compared with like and the good/bad dichotomy of understanding drug risks is perpetuated. The editorial argues that methods should be sought to provide a reasoned comparative framework to assess drug risks and that these should be placed in a broader (societal) risk framework. This would enable the

various risks related to specific legal or illegal drugs to be compared in similar, broadly agreed upon (less sensationalist) ways and further, enable such risks to be located within the ubiquitousness of risk that is in every day life. Some recommendations for how an improved approach to risk analysis of drugs might proceed are provided.

In the preface to *The Control of Drugs: Reason or Reaction* it is argued that the initial attribution of badness to a drug often has as much to do with *who* is using the drug than with the drug itself. Saper (1973: 185) for example has related that opium smoking by Chinese immigrants was a problem in the US early in this century whilst the use of opium and opium based preparations orally or by injection, 'largely by middle and upper classes, white Anglo-Saxon Protestants (mostly female) and some Irish. One pattern was viewed as acceptable because the 'good' people did it. The other pattern was viewed as a growing menace' by white middle-class women was not.' The preface, somewhat like this introduction, briefly reviews these issues before introducing and contextualising the book itself.

Other works

Three chapters included in this submission (Coomber, 1995a,b,c,) are all from a book that I jointly edited with the Institute for the Study of Drug Dependence, *Drugs: Your Questions Answered*. The chapters each provide an introduction to the areas they consider: the media; drug myths; and issues around treatment and the nature of addiction. Coomber (1992a) is a short chapter that resulted from a conference presentation. It deals with the problems of

accessing the non-white drug user who may want to access drug treatment. It argues that the issue is unlikely to be resolved by simply appointing 'black' workers (a common argument) for a number of important reasons. Drug services have limited resources. In multi-ethnic settings they are unable to have a drug worker that is representative of each ethnic grouping. Which group is to get the 'black' worker? What of those groups who don't get 'their' worker? Moreover, whilst it may be appropriate to have non-white workers working in drug projects (in the way that it is in any field) having them serve 'their' community may just 'ghettoise' the worker and non-white clients may come to be seen as his/her client. It is argued that the bigger question of attracting white and non-white users to services has to be addressed. Only a fifth of those addicted to drugs are believed to use drug services and research has shown that drug services are simply not visible to many that might use them.

Items in the appendices not already mentioned

Appendix A.

Although the publications relating to the Central Funding Initiative (CFI) for the Treatment and Rehabilitation of Drug Mis-Users do not reflect the same set of themes that run through the other submitted works it did none-the-less present a significant contribution to the drugs field literature. Reporting on both the development of drug services during the early to late 1980s and the efficacy of a particular form of public administration they represent the culmination (not the total publications) of three years research which mapped out the shape

of drug services in England at that time; issues pertaining to their development, and on the success of the policy. The period was one of significant change: a shift from hospital to community provision; a shift from statutory to more non-statutory, voluntary provision; the emergence of HIV and AIDS; a shift towards a more social psychological approach to treatment; a shift from local to central government funding, the growth of a drug using population desperately in need of service provision. As well as providing a sorely needed outline of what services were in existence the research also provided insight into the vagaries of maintaining funding for services, for an 'undeserving' population during a period of central and local government cutbacks and scarce resources. A wide range of issues on the day to day running of different kinds of drug services was also discussed. As these publications were the result of joint enterprise (see Statement Conforming to Regulation 9.15 below) and as Professor Susanne MacGregor was the primary author of the two texts included these have been included in the appendix as supplementary works.

Appendix D.

This appendix includes short papers of drug adulteration and drugs control in sport that have appeared in non-peer reviewed drug field journals/magazines that are highly regarded and broadly read. Again these are included as supplementary works.

CONCLUSION

There is still much progress to be made regarding an understanding of what constitutes drug-related problems. Indeed the mere designation of a 'problem' is itself far from straight

forward and as often involves the inflection of moral, political and prejudicial reasoning as it does a reasoned consideration of the available evidence. To demonstrate that much that is perceived about drugs and drug users is at the very least over-simplified but often almost totally wrong is fairly easy. Numerous misunderstandings abound about addiction, about the effects of drugs and as we have seen about the transformative and degenerative powers of certain drugs. Many of these misunderstandings might be more usefully designated 'myth-understandings' as the perceptions are strongly influenced and constantly re-enforced not by minor deviations from what is known of these phenomena but by 'drug myths' that are often wholly unsubstantiated by the research literature. The published works presented here have shown how this works in a number of ways in relation to a number of issues. Dangerous drug adulteration is but one relatively minor aspect of what are perceived to be a myriad of risks attached drug use. Arguably however, the perpetuation of this second-level myth almost unchallenged, supports and re-enforces other existing myths about street drugs and those that sell them that have been more successfully countered in the past. The continued belief in dangerous drug adulteration and how it comes about confirms the transformative and degenerative powers of drugs such as heroin and that drug dealers are capable of the most heinous of behaviours towards others. It is a perspective that attributes risks to drugs that are unproven and behaviours to those involved that, just as in many cases in the past, bears little resemblance to the available evidence but is reliant upon anecdote, fear and unreasonable assumption. Likewise, in the sporting world we again see that exaggerated and distorted representations of drug risks inflect heavily on policy to control drug use there but we also see how the special status of 'drugs' allows drug related offences

to be considered as a problem separate to other forms of cheating and advantage seeking. Despite the unproven ergogenic capability of many PED's they are prohibited and comparatively severe punishments are meted out. The essential justification for both however is based upon a common perception and much propagated assumption that PED use helps produce great improvements in a competitors performances and is a serious threat to health.

These works then do not attempt to replace one rationality for another. For the most part the literature referred to and the works presented here seek to demonstrate how aspects of the reasoning that has produced policy in the past and continues to do so now have been inflected with unreasonable perspectives even when understood *within their own terms*. This isn't to suggest what the drugs problem is per se, or that it should be seen as unproblematic but as South (1999: 11) has also commented 'The twentieth-century 'Great Prohibition' on drugs has also been a 'Great Prism' through which the dominant ways of looking at drugs are focused in particular ways and yet distorted'.

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STATEMENT CONFORMING TO REGULATION 9.14

I hereby declare that this submission for Ph.D. by Published Work is not substantially the same as any that I have previously made or am currently making, either in published form, for a degree, diploma or similar qualification at any university or similar institution.

I further declare that until the outcome of this application to the University is known, the work or works submitted will not be submitted for any such qualification at another university or similar institution.

STATEMENT CONFORMING TO REGULATION 9.15

All of the publications listed above are the work of Ross Coomber except for the following two publications which are the result of collaborative work.

MacGregor, S., Ettore, B., Coomber, R. and Crosier, A. (1992) 'Paradigms and Practice in Drug Services in England', *International Journal of Drug Policy*, March. pp.

MacGregor, S., Ettore, B., Coomber, R. and Crosier, A. (1990) *Drug Services in England and the Impact of the Central Funding Initiative*, ISDD Research Monograph Series, ISDD, London.

These publications were the partial result of a three-year Department of Health funded research project on the development of new drug services in England in the 1980's. They represent the broad culmination of the project but not all of its output. In addition to these publications the project produced a further eight reports on various aspects of the research. These research reports, as might be expected, are more detailed in a number of ways than the publications submitted here. Professor Susanne MacGregor authored both papers presented here and the ordering of the names reflects the formal hierarchy of those involved in the research. My personal involvement in the research was considerable as was all members of the team. In particular I spent over three months 'in the field' based at the Department of Health headquarters at the Elephant and Castle, London trawling through files and memorandums relating to the origins, implementation and decision-making processes of the Central Funding Initiative for the Treatment and Rehabilitation of Drug Mis-Users. Otherwise, each member of the team was fully involved in the development of the project both in terms of contributing to decisions on the appropriate direction of the research, its development and all practical details. Most of the individual reports, which ultimately fed into those publications submitted here either had sections written by individual members of the team or direct involvement in others ways.

Coomber, R. (1997a) 'Vim in the Veins – Fantasy or Fact: The Adulteration of Illicit Drugs', *Addiction Research*, Vol. 5, No. 3, pp. 195–212

Each of the papers on dangerous drug adulteration represents a distinct but related piece of research. The end, cumulative result, is a range of papers that make up a new and contrary account of what is commonly thought about drug adulteration and issues pertaining to it.

This, the first of the papers on dangerous drug adulteration sought to explore just what street drugs were 'cut' with, who did the cutting, how and why. A review of the forensic literature and of the rationales for dangerous drug adulteration suggested that dangerous adulteration was not a common occurrence, if indeed it happened at all. It was also found that less cutting of any kind takes place than is normally believed. This directly contradicted the belief that cutting is a routine and predictable outcome of drugs passing through the chain of distribution. Moreover, it was also found that when drugs were cut it was with comparatively benign substances, indeed ones that often enhanced the quality of the product not detracted from it. As such, this paper suggests that most of what is normally thought about the cutting of street drugs is in fact unhelpful. In an under-researched area this paper represented the first known attempt to consider these issues in detail and offer a broader context from either a social scientific or forensic science perspective.

VIM IN THE VEINS—FANTASY OR FACT: THE ADULTERATION OF ILLICIT DRUGS

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The purpose of this paper is to throw some light on the adulteration and dilution of illicit drugs, heroin, cocaine, amphetamine and ecstasy in particular. The findings of the paper question common assertions that street drugs are 'dirty' drugs full of dangerous and unknown quantities such as brick-dust, Vim, Ajax (domestic cleaning agents), rat-poison and even ground glass, as well as the logic of why such practices should be thought to exist. Common adulterants and diluents (diluting agents) are outlined and discussed and an understanding of them as essentially rational and relatively safe not unpredictable and life-threatening is put forward. It is further suggested that far less adulteration than is frequently believed to take place actually does so.

Keywords: Adulterants; diluents; impurities; dangerous adulterants; purity; drug market effects on adulteration practices

Note on Terminology

The term adulterant is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Adulterants proper, are in fact other psychoactive drugs (like caffeine, or paracetamol) which are much cheaper than the main substance, have a similar or complimentary effect when mixed with it, and therefore help hide the fact that the substance has been diluted. Substances which are not psychoactive, such as glucose and lactose, are more formally known as 'diluents'. These are added to a drug to increase the amount of drug available to be sold. It should be noted however that some substances which are found in street drugs will be the result of the particular manufacturing process used to make the drug. In this sense those substances might be more properly referred to as 'impurities'. 'Excipients' found in drugs (primarily pills/tablets) are the products used to bind the drug together. Common excipients are starch, gelatin or other gums (ISDD, 1994a).

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THE PROBLEM AS CONCEIVED

The notion that illicit street drugs, particularly heroin (and currently 'ecstasy') are full of dangerous impurities, likely to lead to serious harm or death is a common one. It is a common notion because there is hardly a source of authoritative or public information that does not subscribe to it and/or propagate it. Even within the drugs field, literature, failing to go into any great substantiating or contextual detail, provides throw away statements like, 'The adulterants that dealers use to cut heroin or cocaine may be anything from quinine to rat poison and can kill naive users who unwittingly inject contaminated substances' (Zackon, 1988: 62), or, 'street heroin may be adulterated with substances such as lactose, glucose, chalk dust, caffeine, boric acid or talcum powder and may be as little as 25% pure heroin' (NCIS, 1993: 13) or, 'but then milk powder and brick dust are not the best things to put into people's veins' (Fazey, 1991: 19). More often, even where the source may demonstrate a more considered approach, there is a tendency to attach the issue of adulteration onto other problems associated with drug purity without care to delineate levels of importance between them and their respective dangers. 'Users' ignorance about the identity, purity and potency of street drugs leads to greater and more frequent health related problems than can be attributed to the pharmacological actions and effects of the drugs themselves' (Coc *et al.*, 1987: 46). Examples of media (particularly television and film) representations of impurities being responsible for drug deaths are common¹ as are statements by members of the criminal justice and drug treatment systems. It is also used by many individuals in the drugs field who are supportive of substitute-prescribing approaches to treatment who often emphasise the impurity of street drugs to bolster their arguments as it is by proponents of absolute prohibition. Impure drugs are commonly conceived of as both widespread and dangerous. Little serious debate has taken place as to the nature of the dangers posed by the particular impurities considered to be the problem. This is somewhat surprising given the nature of those substances commonly perceived to be involved: Vim, Ajax,² ground light-bulb glass, brick-dust, talcum powder, rat poison (strychnine). The list is longer than that stated but the general drift I am sure is encapsulated in those shown. These are perceived as dangerous, health/life threatening substances. 'Vim in the veins' is in fact a common saying and clearly alludes to the belief that messing with street drugs means a serious gamble is being played every time they are used. It is also often believed that drugs such as Ecstasy and amphetamine are 'laced' with drugs such as heroin. The dual rationales given for this adulteration are (mimicking fears around the adulteration of heroin) that illegal drugs per se are necessarily laced with dangerous substances, and/or that pernicious dealers adulterate with substances like heroin in order to 'hook' unsuspecting users of

'soft' non-addictive drugs onto the more addictive heroin and thus secure a regular client base, or just because they are 'evil'. That adulterants represent a common and huge risk to the drug taker and that they are a particularly pernicious in nature is thus a prevalent position taken by many. Are these perceptions useful? What do we know about adulteration and drug impurities?

'VIM IN THE VEINS'—THE EVIDENCE

Simply put there is very little, if indeed any, evidence to substantiate anecdotal reports of the use of domestic cleaning agents such as Vim or Ajax or the use of ground light-bulbs or brick-dust to 'cut' heroin or other street drugs with. There is certainly no official documentation of which I am aware which shows that analysis of drug samples have contained such substances. On the other hand, formal analysis, for forensic purposes does not seek to find such substances as analysis is costly and in most cases, for prosecution purposes, it is only considered necessary to identify whether a sample contains a drug which is controlled by the 1971 Misuse of Drugs Act. Although analysis of drug samples does not look for the substances listed above the data which is produced is none-the-less a useful guide to the nature and type of impurities found in street drugs. It also enables us, when combined with the deductive coupling of other evidence to suggest that substances like ground glass, brick-dust or Ajax are unlikely to be common adulterants, if indeed used at all. The existence of substances such as quinine and the infamous 'rat-poison' strychnine, *have* been shown to be a common constituent, the latter, in heroin (known as Heroin No 3) distributed from Hong Kong and other centres of production/distribution over the years (Eskes & Brown, 1975; Griffith *et al.*, 1994). As we shall see, even the discovery of rat-poison in heroin is not as disturbing as we might at first believe, nor as big a risk to health as might normally be supposed.

Forensic Evidence: Heroin, Cocaine, Amphetamines and Ecstasy

Forensic analysis of drug samples over a number of decades, in different countries, locations within countries, and of different drugs does help us to understand more about adulteration patterns and about impurity/purity levels. The first point to make is that the vast majority of substances found in drugs which have been put there *after* the production of the drug i.e. with the specific desire to adulterate or dilute the drug are comparatively harmless. The second point to make is that many of the substances found are in fact added during production to manufacture a specific product and that the particular mixes involved may even change over time according to customer preference—of which more later.

Heroin

In heroin these 'other substances' generally consist of paracetamol, caffeine, sugars and other opiate alkaloids (acetylcodeine, papaverine, noscapine), (NCIS, 1994; Kaa, 1994; ISDD, 1994a). Recently, occasionally, but not normally, diazepam, methaqualone or phenobarbital are found (Kaa, 1994; ISDD, 1994a) although these substances may have been more popular in earlier periods. Although the purity levels (and thus the percentage of a sample which is impure) vary—between 1987 and 1993 the average purity of street heroin in the UK was 38% (range 27%–48%)—the samples almost always tend to be made up of a) heroin and other opium alkaloids made when synthesising the heroin (or produced during decomposition), and b) those substances named above (NCIS, 1994). Comprehensive analysis of heroin samples by the US Drug Enforcement Agency (DEA) since 1990 reveals numerous sugars, prescription drugs (primarily paracetamol), opium alkaloids and occasionally salts but none of the 'dangerous' adulterants/diluents commonly asserted or feared (DEA, 1990; 1991; 1992; 1993; 1994). Similarly, the German Federal Criminal Police Office (Bundeskriminalamt, BKA) which undertook a twelve year 'comprehensive characterization' (p7) of heroin found Caffeine to be the most frequently detected adulterant along with phenobarbital and paracetamol (listed as acetaminophen, as in the DEA reports) and other (largely prescription) drugs. No 'unusual' substances were reported (Neumann, 1994). In the UK in 1993 paracetamol was the most common cutting agent, found in 41% of cases where any adulterant was found, and caffeine in 33% of the cases tested by The Home Office's Forensic Science Service (Drug Abuse Trends, 1993: 19). These substances are relatively benign in health terms³ to the user and are there for the purpose of 'bulking' the drug out, and sometimes even to 'improve' it, sometimes both. For example, both caffeine and paracetamol, would, apart from increasing the quantity of 'heroin' through dilution, either bring about a psychoactive effect of their own (in combination with the primary drug) and/or improve the percentage uptake of the heroin (as does phenobarbital) to the user (Huizer, 1987: 209). The existence of caffeine (cut 1 to 1 with heroin) for example in heroin (base) which is to be smoked or 'chased' has been shown to enable a higher amount of the heroin (around 76%) to be *recovered* (i.e. the amount of heroin left available in the 'smoke' which is inhaled), after *volatiazation* (the heating, melting and then vaporization of the drug for inhalation or 'chasing') than when compared to pure heroin alone. Recovery after volatization for heroin alone was around 60% (Huizer, 1987: 209). Paracetamol is also useful for such adulteration because it has approximately the same melting point as heroin. Other adulterants also function with dual purposes. Quinine, for example, 'heightens the sensation of the *rush*' (Preble and Casey, 1969), and dilutes, and because of its bitter taste is well hidden. Customer preference also affects adulteration/dilution practices.

Strang (1990) usefully urges us 'to realise that contaminants in samples of heroin or cocaine are not all contaminants—many of them are active ingredients which may contribute to (rather than detract from) the overall effect. Thus the percentage purity of a heroin sample is not a complete indication of its perceived psychoactive effect or its appeal to the discerning heroin user. This is no doubt one of the reasons why Chinese white heroin is much revered by *afficiando* heroin addicts (as reflected by its higher market price) even though the brown heroin from South West Asia may have a higher actual heroin content. It may well be that these changes in the quality of the experience resulting from other opiate and non-opiate active 'contaminants', may well be similar to the difference between a fine claret or a malt whisky, when compared with equivalent solutions of ethanol' (p203). Thus much of the 'contaminants' are the result of the manufacture of an initial product not dilution for profit.

As with caffeine, in 'heroin No 3', Huizer (1987) also noted that *strychnine* was used to enhance the product through increasing the amount of heroin retrievable through 'chasing' (inhaling). Eskes and Brown (1975) after finding 57% (28) of 49 seizures contained a heroin, caffeine, strychnine mix concluded that the strychnine was present due to the intended manufacture of heroin prepared not for injecting but for smoking and that its presence was not related to dilution for profit (i.e. as a 'cutting' agent). In Eskes and Brown's sample the average content of strychnine was 2% of the sample with a range of 0.5 to 4.8 per cent. Although this heroin was being injected they suggested that because only around 5mg of strychnine would have been present in each injection 'The amount of strychnine in the strychnine-containing heroin samples is probably insufficient to be a threat to life' (p68). In fact the liver copes comfortably with such quantities of strychnine (Henry, 1995). Likewise, it is suspected (Clatworthy, 1995) that the paracetamol which is added to heroin is often likely to be *illicit* paracetamol and not diverted pharmaceutical supplies. This is because illicit paracetamol is suspected to be brownish in colour and would thus be less obvious in the heroin. It is also therefore likely to have been part of the production process and initial distribution process (i.e. before it reaches its country of destination) as opposed to part of the dilution process once it has hit the borders of its market destination. This is further supported by the fact that when the police raid heroin dealer's homes and other places of storage they tend not to find containers or boxes of adulterant/diluent material as might be expected (Clatworthy, 1995).

Cocaine Powder and Crack Cocaine

Strangely enough, cocaine is not a drug which has overly concerned too many commentators regarding its adulteration. This may be for a number of reasons. Likely explanations would be that the dangerousness in cocaine is seen to be in

itself (its supposed ability to bring on sudden heart-attacks—even in moderate doses—although even this has been subject to telling criticism (*cf* Alexander & Wong, 1990)), the fact that too many people are known to use cocaine experimentally and recreationally without too many health related complications (WHO/UNICRI, 1995), and, especially in relation to ‘crack’ cocaine the (mistaken) belief that this is a ‘pure’ form of the drug. Cocaine powder, in the UK, is, in general, adulterated to a greater extent than heroin. Whereas the average purity of heroin in 1993 was from around 55% (at importation) to around 46% on the street, for cocaine it was 81% (at importation) and 44% on the street (NCIS, 1994). The common adulterants/diluents in cocaine are caffeine, glucose, and mannitol, with lignocaine, benzocaine, paracetamol, and lactose also found (Drug Abuse Trends, 1993). Amphetamines, are a substance that users may expect to be a common adulterant of cocaine (given the similarity of effect and of appearance, and that it is comparatively cheaper) but forensic analysis does not tend to report amphetamine as an adulterant of cocaine. In this vein, Cohen (1989) in his study of *Cocaine Use in Amsterdam* found, despite the belief of 87% (160) of his cocaine using research subjects of the common existence of amphetamine (and the perceived negative effects of it), the samples he bought from them and tested did not reveal any of the substance. Crack cocaine, indicated by Customs seizures is not commonly imported directly into the UK. It is therefore after importation that the cocaine powder is converted into crack. The purity of crack seizures in 1993 averaged around 85% (NCIS, 1994). Although not adulterated/diluted for street sales crack cocaine is essentially ‘the converted base form of salt (cocaine powder) created by using an alkali. The active part of the drug remains unchanged . . . All the properties and the impurities in cocaine will therefore remain in crack, the only difference between crack and cocaine is the delivering system’ (Bean, 1993: 3). Thus the difference in crack and cocaine is not that all the impurities are ‘burnt away’ (although some are) leaving ‘pure’ cocaine as is commonly asserted but it appears likely that crack is produced direct from imported stock. The marginal ‘increase’ in purity between imported cocaine (which is in hydrochloride form—‘salt’) and that of crack stems from the hydrochloride residue being burnt away in the conversion process (King, 1995).

Amphetamines

Arguably, heroin is the drug around which fears of adulterants have surfaced most often, and from which our view of other drugs have then been partially coloured. In recent years this general fear around adulterants has been particularly acute with regard to amphetamines and other ‘dance drugs’ such as Ecstasy. At a recent conference, one Consultant Psychiatrist, generally well informed

about amphetamines and even practising (relatively radically) substitute prescribing of pharmaceutically prepared amphetamine for street amphetamine (to apparently positive effect), felt moved to exclaim in relation to the injecting of street amphetamine that '95% is not amphetamine, its something else—talcum powder or something' (Myles, 1995). Amphetamine is thus the ultimate 'dirty drug'. It has historically been a relatively impure drug but in recent years it has been even more so. In 1984 the average purity was around 20% whereas in the last few years it has settled at a low of around 5% (HOSB, 1993). But to state that 'that 95%' something else is a harmful or dangerous additive like talcum powder, is probably unhelpful. Amphetamine is implicated in relatively few deaths in the UK (and yet after cannabis it is easily the most used illicit drug (HOSB, 1993). If the problem was in the adulterants, health problems (unrelated to the primary drug) would be greater. Once again, analysis of cutting agents reveals that likely adulterants/diluents are going to be caffeine, glucose, ephedrine, paracetamol, and lactose (Drug Abuse Trends, 1993). Each either merely 'bulks' the sample or 'enhances' it. Inorganic substances reported to be found in amphetamine (of the limited analysis which has been carried out) rather than finding brick-dust or glass have only found trace elements of substances such as antimony, barium, strontium, zinc and copper (Marumo *et al.*, 1994) which would be found as trace elements in many substances, including food anyway. As we shall see later, it also appears that most amphetamine is cut once, high up the chain of distribution, and this would tend to mitigate against 'unusual' adulteration.

Ecstasy

Stories of heroin laced Ecstasy and deaths at raves caused by unknown contaminants have recently hit the headlines. One particular story 'Bitter pills' appeared in *Time Out* a widely read weekly 'events' London guide in 1993. This story claimed that, 'Ecstasy has turned to agony for thousands of E users as dealers spike tablets and capsules with heroin, LSD, rat poison and crushed glass', and that, 'Organised crime gangs, lured by the promise of vast profits, are widely thought to be behind the trend' (Flanagan 1993: 12–13). The story is perhaps typical of adulteration scares and an example of how the media need little evidence to produce sensationalised and fear invoking material. It was a relatively easy story to write as it was able to exploit both what is commonly thought to be present in street drugs such as heroin and because ecstasy related deaths have attained a high profile in the media. Evidence in the research literature however suggests these deaths bear no relation to adulterants but to the context in which they are taken (*cf* Henry, 1992). Detection work however found the story to have 'no supporting evidence such as lab tests or reports from doctors who had treated

drug users'. Moreover the source of the story proved to be anecdotal and unreliable (Saunders, 1994) as did a similar celebrated scare in 1995 about adulterated ecstasy cited initially as the cause of death of the 18 year old Leah Betts which practically took over the popular media for 10 days at that time. As regards heroin as an adulterant in ecstasy Saunders also reports that neither the Home Office Forensic Laboratory at Aldermaston, which analyses drugs seized by the police, nor the National Poisons Unit, which receives the blood of patients believed to have taken only ecstasy, have ever found heroin (which is easily detectable) in the samples. Recent, attention has also been paid to the Dutch *Drugs Advice Bureau*, which either at its offices, or at large raves, provides an immediate analysis of bought drugs, and according to the *Independent on Sunday* (1995) has 'virtually eliminated the dangers of taking the designer drug' in Amsterdam. The unit tests for various drug mixtures, heroin included. It has never, in the thousands and thousands of ecstasy and ecstasy related pills tested, found heroin to be present in them (personal communication, November 1995). Unfortunately, this fact was not reported. Rather, the article simply stated 'Matser mixes the pill with an acid-based liquid. If it goes blue-black it is all right, made mainly of "an Ecstasy-like substance". Orange indicates the presence of amphetamine; green heroin' (Daruvalla 1995: 14). The unfortunate impression given by the text is that heroin *is* found in such pills. That users *believe* that heroin may be found in ecstasy has been confirmed recently by Forsyth (1995: 201) who found that 37 of 319 'ecstasy' samples previously taken were believed by the users to have contained heroin. As regards the *Time Out* reference to organised crime gangs the idea assumes a level of absurdity often evident in media reporting of drug stories. Why would organised crime gangs crush light-bulbs, use rat-poison or other dangerous substances? They are involved to make money not kill off customers and scare potential ones away. The media rely on the existing fears of audiences to make such claims seem credible—organised crime gangs are dangerous and fearful and as such they do dangerous and fearful things—even if there is little other logic to it.

The Home Office Forensic Science Service has found that 'The 'ecstasy' drugs (MDMA etc) are almost always encountered as tablets. The content is typically 100mg with lactose as the major excipient.' (King, 1995). Henry (1993: 2) has further stated in relation to drugs sold as ecstasy 'These may contain amphetamine sulphate, MDA, LSD, ketamine, tiletamine, dihydrocodeine, codeine and many substances which have little effect on mental function [e.g. lactose]' and that 'Although the user may not experience the desired effect, *the toxicological safety profile of these agents is likely to be higher than that of MDMA.*' In other words if there is a problem with ecstasy, it is more likely to be related to the drug itself than the adulterants.

We can see then that with heroin, cocaine, and amphetamine the common substances other than the primary drug (drug as sold) are usually intended to dilute the substance and/or do so by detracting as little as possible from the drug itself, possibly enhancing it. In relation to drugs sold as ecstasy, substitutes may be encountered but these in the main attempt to mimic the drug (e.g. LSD + amphetamine) and are comparatively no more harmful, perhaps less so. Thus the existence of other substances than the primary drug often has a distinct and purposeful rationale which goes beyond the simple desire to increase the quantity by bulking the drugs out (like adding water to whisky). It is more involved than that.

LESS ADULTERATION THAN COMMONLY ASSUMED?

It appears that in the UK at least there is less adulteration, both in terms of the amounts of adulterants/diluents put in to many street drugs and the number of times adulteration/dilution takes place than is normally conceived. Information on purity of heroin at point of import shows that there is often less difference in the purity levels of those drugs seized by Customs (i.e. *before* they reach whatever level of distribution) and those seized at street level (drugs at the end of the distribution channel, the final product) than might be normally supposed. In 1991, 1992 and 1993 for example, purity of heroin seizures at importation were 52.5%, 59.3% and 55% (HM Customs and Excise, 1995). Corresponding average purities at street level were 45%, 46% and 39.25% respectively (NCIS, 1994). In other words average purity levels between imported seizures and street level seizures differed by only about 8–14% in these years. Lewis *et al.* (1995) also found in their study of the heroin market in London in the mid-1980s that 'The average level of dilution evident from fieldwork data, was not as great as might have been expected', and that 'On average, purity on point of import into Britain is in the region of 70 per cent and retail purity in the region of 45–55 per cent' (p175–6). In Denmark, Kaa (1994: 171) found that over a twelve year period although there was consistently a wide range of purity found in any one year 'The average purity of wholesale samples (45%) was only slightly higher than the purity of retail samples (36%)'.

We also need to bear in mind that even where the stated purity of a heroin sample is say 50% a significant proportion of what makes up the other 50% may well be other opium alkaloids created during the synthesising of the heroin, it will not all be adulterants. Gough (1991: 527) for example reported on a 30 kg seizure divided into 30 packages which consisted of an average diamorphine (heroin) content of 76%; accompanied by acetylcodeine at 6.4%; 6-acetylmorphine at 2.1%. Other opiate alkaloids, noscapine and papaverine also accounted for 17.6%

and 6% of the samples on average. In these instances we can see that a sample where the purity of heroin is formally recorded as being say 70%, the other 30% could be almost exclusively made up by products from the production process and other opiates but that the records merely give an impression that the other 30% was 'something else'.

Even in relation to amphetamine, where purity at importation may be around 60% as it has been for the last couple of years (HM Customs and Excise, 1995), the adulteration down to the current average of around 5% at the retail (street) level is likely to be the product of a *single* ('high level' i.e. the importer) 'cut'. There is a simple reason as to why this appears to be the case. Analysis by the Metropolitan Police Forensic Science Laboratory and the Drugs Intelligence Laboratory at Aldermaston only tends to find samples seized, post-importation, which have a purity of around 5%. This is regardless of the weight of samples seized. If there was cutting all down the line of distribution (from e.g. 1 kg seizures all the way down to 10g) then progressively weaker samples might be expected to be seized and a range of purities found by forensic labs (individual samples obviously show a wider range but on average the above statement holds). In other words, whatever point in the chain of distribution the seizure is made, the purity tends to always be roughly that found at the street level, indicating that once the initial dilution has been made down to around 5% that further cutting is probably negligible. A further complication to this picture emerges when we consider that amphetamine reported to be approximately 73% pure is in fact by another definition 100% amphetamine. This is because a sample containing 73% base amphetamine (isolated amphetamine is in fact liquid in form) will necessarily have been converted into a salt (the drug which appears on the street) through the use of sulphuric acid producing the commonly known amphetamine sulphate. The 'other 27%' is residual sulphate. Thus a 73% purity rating does not indicate any adulteration/dilution at all.

One final reason why less adulteration may sometimes occur relates to the fact that diluting the sample is not the only way of making it go further and enabling dealers at the lower end of the distribution chain to make a profit—the primary rationale put forward for adulteration. Simply by 'bagging' or 'wrapping' a given drug, that is, making say 28 wraps from an ounce of cocaine (there are approximately 28 grammes to an ounce⁴) enables a dealer to make an aggregate profit. The original ounce would cost significantly less than the cost of 28 separate gramme or half gramme deals which contain the mark-up. Supermarkets use the same method on most consumables. The profit from 'bagging' may be further enhanced by making up 'short counts' (e.g. selling just under a gramme for the price of a gramme). This is another way of realising profit without adulteration, as is the 'mark up' on initial costs (Preble and Casey 1995, Lewis *et al.*, 1985).

The Effect of Distribution and Production on Impurities

In the UK in recent years, as stated above, heroin seized by customs has not differed markedly with the purity found at street level. As stated this suggests that most 'adulteration' that had taken place was carried out by higher level traffickers, not street dealers. If true it would also suggest that 'professional' as opposed to 'amateur' adulteration from higher level distributors, perhaps more concerned about the business of distribution itself tends to mitigate against ignorant and dangerous adulteration. This is a different scenario than that traditionally perceived. Different contexts clearly impact differentially on adulteration practices. Preble and Casey (1995) for example, found that in the US (1960s) the highly structured and multi-layered chain of distribution involving organised crime syndicates in the heroin market created an ongoing process of adulteration/dilution all the way down to the street. This would often involve one to one cuts of the samples passed down the chain until the resulting purity was perhaps a tenth of its original imported strength. Even here however, samples would be tested for quality throughout the chain leaving little or no room for adulteration with obviously harmful substances e.g. 'The kilo connection pays \$20,000 for the original kilogram (kilo, kee), and gives it a one and one cut (known as hitting it), that is, he makes two kilos out of one by adding the common adulterants of milk sugar, mannite [mannitol⁵] (a product from the ash tree used as a mild laxative) and quinine' (Preble & Casey, 1995: 21). Preble and Casey describe each level (of which there were at least six) in similar terms, significant (one and one, two and one) cuts made all the way down. In the UK such structure and adulteration is *not* evident. Patterns do exist. London tends to have the highest levels of purity for most drugs but even then the difference may only be in the region of 3 or 4% (heroin) for the South East and South West of England and only dropping significantly once the North of England is reached (Drug Abuse Trends 1993: 18). On the whole however the UK drugs markets may be said to consist of 'flexible hierarchies and dynamic disorder' (Lewis, 1994), that is, 'The British market is notably more flexible than some continental markets, which have higher barriers to entry constructed by organized crime groups that assert territorial control, exclude competitors, and demand a share of all profits' (Lewis, 1994: 46). The net result is that less adulteration takes place because there is less well defined structures through which the merchandise passes and therefore less accepted practice as to what level of purity will be received. This, in all probability, is further enhanced by the existence (in the absence of more rigid structures) of greater 'competition' between suppliers and thus helps mitigate against too much adulteration/dilution as good purity in the market can help secure custom.

BELIEF IN HARMFUL ADULTERATION—LOGICAL PROBLEMS

Apart from the forensic evidence outlined above there are a number of reasons why we might doubt the basis of most fears about adulterated drugs and the particular form (brick-dust; Vim etc) they take. Primarily, the activity of drug selling is just that, the selling of a product. Whether the product has to go down a pyramid or not, the seller for the most part, does not want ill health or death to befall their clients.⁶ If they are regularly involved in the trade of drugs then they have no motive to use substances other than those outlined previously such as caffeine, glucose, lactose, and other useful pharmaceutical compounds. As stated above there may be a direct 'benefit' to the distributor in using these substances. Often they may 'enhance' a product by mimicking and even extending the effects of the primary drug (e.g. amphetamine in cocaine⁷), by increasing the amount of drug available to the user (e.g. caffeine, paracetamol in heroin), or simply by improving (subjectively so), through drug combination, the effects of the drug taking experience (Strang, 1990). Another logistical problem relates to the fact that most of the adulterants/diluents used are both readily available and even cheap. The financial incentive, even for the mythical⁸ desperate junkie prepared to do anything to get their next hit, is negligible. In any case, resorting to the grinding down of a light-bulb or a brick does not strike me as very likely, it is just as easy to grab a bottle of paracetamol, or even glucose, out of the cupboard. Following this logic we would have to ask *when* would *obviously* dangerous substances, likely to cause real harm be used. Arguably, such action may occur. But, statistics on drug fatalities, especially around drugs like amphetamine (95% impure) are very low (less than 10 a year (HOSB 1993) given the very high levels of use in the UK. Clearly such adulteration is not normal or even commonplace, or if it does take place not highly dangerous. For someone to knowingly mix a dangerous substance in a drug sample with the express intention to sell it on knowing it would cause harm is likely to happen for one of two reasons, both of which, I would argue represent a qualitatively different activity to what we would normally understand as drug adulteration/dilution. The first scenario is that the person cutting the drugs is psychopathic. This could also be the case of your local baker, brewer or fishmonger. It would be a chance relationship which produced a psychotic drug dealer who was at one and the same time willing to undermine his/her income by killing off their clients (and putting off future ones). He/she would have to be stupid as well as mad. The second scenario has more logic to it but is perhaps more reliant on particular structural situations to be more likely—revenge. It is not uncommon to hear anecdotes relating to revenge or grudge killings within the drugs underworld through the adulteration of drugs with poisons. The reporting of drug related deaths in the UK where poisons have been

recorded in addition to the primary drug are however virtually non-existent. One recorded example of strychnine poisoning in Dublin in the early 1980s cites how 'Eight young adults sniffed quantities of strychnine in the mistaken belief that it was cocaine .. [and that] It is not known how these patients acquired the strychnine, which was apparently inhaled by mistake for cocaine at a party' (O'Callaghan *et al.*, 1982: 478). A fatal (uninformed) mistake (one of the eight died) is as likely a cause here as is the supposition of attempted murder. There may be a number of reasons why we might suppose this. Often, drug related killings are intended to be much more visible. Those doing the killing will want to use the visibility of the killing as a symbolic warning to others. Also, the adulteration of drugs even with poisons such as strychnine is an extremely imprecise and sloppy method through which to cause harm or commit murder. Only one of the eight died, seven survived. The one who died may not have been a target at all. A drug user may share their drugs or even sell them on. They may also discover the adulteration, become aware of who is attempting to cause them harm and as a consequence perhaps effectively endanger the person who originally tried to hurt them. If such a method is used to deal with unwanted members of the drug world then it is perhaps more likely to happen in the organised crime infiltrated structures of drug distribution in the US but my suspicion is that it is in fact another part of drug mythology. Overall, the point to be made, whether or not this does or does not happen, is that it is a *very* rare event. It is not the result of normal drug adulteration/dilution practices and is unlikely to touch users on the street as such poisoning would be a targeted event. It is qualitatively distinct from an understanding of adulteration practices where the danger is thought to come from day to day methods of distribution because it needs to be understood as a direct attempt to do harm to specific individuals. If a car is used to murder somebody it would hardly be reasonable to understand the incident as an accident or even within the normal understanding of what dangers cars on the roads constitute to pedestrians.

Another, but perhaps even more unlikely scenario is where extreme ignorance on the part of the person cutting the drugs led to them using dangerous adulterants. There was a case in the last century in Bradford for example where the intended diluent of plaster of paris in peppermint lozenges was accidentally substituted with arsenic by a new apprentice and resulted in 30 deaths (Postgate, 1990). In a more contemporary vein it is possible that an occasional, ignorant, street level dealer may use talcum powder as a diluent instead of paracetamol, glucose or some other commonly used substance. This would possibly explain the rare occurrence of pulmonary granulomas in the lungs of drug users, consistent with exposure to starch or talc) who inhale their drugs (c.f. Johnson & Petru, 1991; Marschke *et al.*, 1975). It is likely however that unless a susceptibility exists occasional exposure to talc

would not result in such problems. The fact that such cases are not widespread would suggest that talc is *not* a common constituent in illicit drugs.

The point to be made is that none of the above scenarios happen often enough nor constitute a practice to usefully contribute an understanding of normal adulteration practices, adulterants or the dangers in them.

Problems with Purity not Adulterants

Another reason why drugs are commonly believed to be riddled with dangerous adulterants/diluents relates to occasional spates of sudden deaths (usually heroin) that become well publicised in the news media. It seems however that such deaths are primarily the result, not of adulterants, but of the occasional availability of heroin of very high purity. In recent years 'unusually strong heroin' has been associated with deaths from London, Bristol, Glasgow and Brighton (ISDD, 1994b: 19). Analysis of the suspect heroin in Brighton revealed that they 'contained eight to fifteen times this [the usual for that area] quantity—more than enough to cause the deaths', and that 'The problems had no connection with adulterants—they were entirely due to a simple and highly unusual case of heroin being sold much too strong and much too cheap' (Brind *et al.*, 1993: 12). This type of problem has led for calls by some for the introduction of street drug analysis services and to proposals on how the findings could be usefully disseminated amongst local drug using populations (Hughes, 1994; Brind *et al.*, 1993). Occasionally, the suspicion that problematic *impurities* have caused death and/or serious life-threatening outcomes in certain users can be found in the medical literature. Wolters *et al.* (1982) for example reported 47 cases of spongiform leuco-encephalopathy (a brain degenerative disease) amongst heroin users who inhaled heroin vapours. 11 of the 47 died. It involved only this group in the Amsterdam area and is an isolated occurrence of this type. The conclusion of the study was that an unknown impurity (which proved untraceable to extensive analysis of numerous heroin samples) was the cause of the reaction. This impurity however is unlikely to be an adulterant or diluent as no unusual substance likely to cause such a reaction were found. Any adulterant/diluent, properly classified, is not an impurity as such and would in all likelihood be found by forensic analysis. Such impurities may be the result of problems when synthesising or manufacturing the product which are then only exposed in the heating of the vapours.

Need for Further Research

There is clearly a need for further research on what substances actually make up street drugs. We need to know conclusively what substances, organic and inorganic, people are administering. Such information could provide the opportunity

to assess more credibly the effects of drug use, of potential health problems and alert us of the dangers of particular products if necessary. It could also potentially provide the basis, in a way similar to how the Drug Advice Bureau works in Amsterdam, to let drug users (and dealers) know if their drugs are safe and/or too pure. A further possibility would be to disseminate information which warned about adulterating or diluting different drugs with various substances and was able to inform of preferable alternatives liable to do less harm. Thus, we might imagine a harm-reduction scenario whereby 'users' bring their samples to be tested (we know from the Amsterdam experience that drug distributors posing as users also take advantage of this service) and as a matter of standard practice are given general information about drugs as well as advice/information on adulterants/diluents.

Designer Drugs

There have been some problems with so-called designer drugs in the US which have caused serious injury and death. Rather than being strictly related to adulterants, problems which emanate from designer drugs are the result of attempts to synthesise new psychoactive substances and the resulting compounds. One particular case in California in 1982 involving a 'synthetic heroin' containing the compound MPTP induced a disease analogous to Parkinson's disease in a number of those exposed to it and in seven cases it became severe and irreversible. Most of the 400 considered to have been exposed however were asymptomatic (Schneider & Gupta, 1993; Rutenber, 1991). The existence of designer drugs of this sort demonstrates the truism of the illicit market that you really do not know what it is that you are getting when you buy it. However, rogue drugs, likely to cause harm, for the purposes of this paper should not be confused with problems resulting from adulteration/dilution.

CONCLUDING REMARKS

The evidence presented above suggests that the picture of adulteration/dilution of illicit drugs in the UK does not match that which is commonly presented and even propagated by many, even those in the drugs field itself. Apart from the fact that there actually appears to be less adulteration/dilution than is often assumed we might remember that some of the common adulterants/diluents (e.g. caffeine, glucose, paracetamol) are even used in legal pharmaceuticals as a primary drug or to enhance the action of a primary drug and even to provide a 'lift' to the consumer. Talc is still commonly used in aspirin. Most of the other substances commonly

used appear to cause little obvious harm (excepting that there are attendant dangers to all drug use) and even where a particularly toxic substance does appear (such as strychnine) it is in a quantity which the body can deal with quite effectively and exists as a strategic 'enhancement' to the product not because dealers are evil. Substances such as ground glass, brick dust, Vim and Ajax appear to be more a part of drug mythology than a part of drug adulteration/dilution practices and it is therefore important to recognise this situation and not exaggerate it as it serves to divert attention away from more meaningful understanding of drug related problems. Moreover, by continuing to propagate the lethal adulterants myth, the media and others who do so with impunity, as well as misdirecting useful health education activities, attribute a character to the dealer which demonises them further than might otherwise be the case (quote from the mirror) perhaps impacting unfavourably (and thus unreasonably?) on sentencing policy.

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Notes

1. A recent episode of *The Bill* on Carlton television within seconds of a heroin addict dying in the programme had a police officer state 'It was smack. It looks like the heroin was cut with something and that's what killed him' (*The Bill*, September 28, 1995)
2. Vim and Ajax are the trade names of domestic cleaning agents. Traditionally, as today, they appeared in the form of a white scouring powder (although there are now a number of liquid scourers which are generic to the originals to be found under the same trade name). Constituents of Vim are as follows: approximately 95% plus, is made up of a non-soluble chalk, calcium magnesium carbonate, 1–5% (but closer to 1%) is a detergent powder chlorine release agent which accounts for approximately .3% bleach (Lever Industrials Ltd, 1996). The non-solubility of the chalk alone would not make it a good candidate for adulteration/dilution as it would be immediately obvious to a user that they had been sold poor quality goods.
3. Obviously, paracetamol is not a harmless substance per se but given the amounts found in heroin and the corresponding dose this would deliver, it is relatively benign when the risks it presents in this way are considered.
4. The exact weight of an ounce to a gramme varies marginally in practice. As the actual weight is 28.35 grammes (Avoisdupois weight) some 'round-up', some down.
5. Mannite is commonly known as mannitol (an alcohol-sugar of little health risk) in the UK.
6. This is, in a sense, largely a logistical position (apart from the forensic evidence which so far has failed to show the existence of the type of adulterant/diluents commonly feared). Statements of commercial intent and quality assurance are obviously less explicit and liable to less formal sanction in the black market of drugs. 'Proof' of the absence of malevolent behaviour is difficult to obtain. Ongoing research by the author whereby drug dealers have been interviewed about their adulteration/dilution practices however is showing that dealers actively avoid using dangerous adulterants/diluents not just for commercial but also for humane reasons. One dealer, not untypical of the responses, for example, stated when asked as to why they had not used certain adulterants/diluents 'Didn't want to harm anybody', another that it is 'too dangerous' and yet another that it was 'not good business practice'. Others demonstrated their less than malicious approach by using vitamin C and even a homeopathic nasal remedy.
7. Although research has suggested that amphetamine is not commonly used as an adulterant/diluent in cocaine (Cohen, 1989; Drug Abuse Trends, 1993) interviews by the author have revealed that at least one London based cocaine dealer regularly adulterates cocaine with amphetamine. Thus, whilst this practice is believed to be widespread (*cf* Cohen 1989) by users of cocaine there is insufficient evidence to suggest that it is more than an isolated practice, perhaps one that occasional user/dealers on the 'fringe' employ, for being essentially users, they like many other users, believe it commonplace and thus suitable?
8. One cocaine dealer recently interviewed by the author felt that it was only heroin 'junkies' who got desperate enough to use Vim or such substances. The scenario he gave as likely however demonstrated a lack of knowledge of both heroin users and its use. What his strongly held opinion more readily indicated was that dealers of certain drugs like cocaine may see themselves as dealing with a relatively 'clean' and non-problematic drug whilst retaining typical prejudices and stereotypes of heroin and heroin addicts.

Coomber, R. (1997b) 'The Adulteration of Drugs: What Dealers Do, What Dealers Think', *Addiction Research*, Vol. 5, No. 4, pp. 297–306

Following on from (Coomber, 1997a) this paper sought to investigate what those who supply drugs themselves thought about dangerous adulteration, what they did to the drugs they sold as regards 'cutting' and why. Specifically the research sought to provide some empirical evidence for some of the reasoned speculation presented in the previous paper. There, forensic evidence had suggested that dangerous substances were not used, that less cutting than often believed took place and that the reasons conventionally given for either dangerous adulteration or routine adulteration were unconvincing. This research involved interviewing drug dealers in South East London about their drug dealing practices and wider beliefs. Important findings from the research involved confirmation that most of the dealers rarely cut their drugs at all, that they were wary of doing so out of either concern for the user or for themselves (fearing reprisal), and that despite nearly all believing in dangerous adulteration reliable evidence for its existence was not forthcoming from this group.

THE ADULTERATION OF DRUGS: WHAT DEALERS DO TO ILLICIT DRUGS, AND WHAT THEY THINK IS DONE TO THEM

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The notion that street drugs have been adulterated/diluted by all sorts of dangerous substances such as Vim, Ajax, ground-glass, brick-dust and even rat-poison is a common one. Moreover, it is in fact a practice believed to be true by those involved with the researching of drug issues, the treatment and rehabilitation of drug users, the policing of drug users and the educating of drug users (*cf.* Coomber 1996) as well as by the users themselves. As this paper will show it is also thought to happen and be perpetrated by those who are deemed to be responsible for such adulteration/dilution, the dealers themselves. This however does not accord with the forensic evidence, or, as are the concerns of this paper with the practice or experience of individual drug dealers. This paper suggests, on the evidence of interviews with drug dealers at different levels of the drug distribution chain that less adulteration/dilution actually occurs than previously thought and that when it does happen 'on the street' it is of a relatively benign character.

Keywords: Adulterants; diluents; impurities; contaminants; dangerous adulterants; purity; drug dealers

INTRODUCTION

I have argued elsewhere (Coomber, 1996) drawing on the existing forensic and other evidence that in the UK there is sufficient reason to doubt that any where near as much adulteration¹ as is commonly thought to occur actually does takes place, and that where it does happen it is not with essentially dangerous substances. Adulterants and diluents such as paracetamol, caffeine and various sugars are common in drugs like heroin, not Vim,² chalk, and ground glass from light bulbs. Many of the substances that are found in fact actually 'enhance' the use of the drug involved, either through enabling a greater proportion of the drug to be used when e.g. prepared for smoking, or through adding a co-psychoactive effect of its own which in combination with the primary drug provides a cocktail which to some is preferable than the primary drug alone. Substances such as strychnine and quinine *are* found but again as enhancers to the drug. Strychnine for example has been found, like paracetamol, caffeine and other adulterants to enable greater retention of the heroin when volatized (Huizer, 1987) and at the dosages found represents no risk to health. It was the

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primary intention of this research to bolster the findings of the forensic evidence stated above by looking at what adulteration/dilution takes place at what point in the chain of distribution and through what methods by interviewing those responsible for adulteration/dilution and drug distribution/selling. This was considered important for while the forensic evidence is *indicative* much analysis merely confirms the presence or absence of a particular primary drug e.g. heroin and sometimes its purity. It does not determine either how often adulteration/dilution actually takes place or, in the vast majority of cases with which substances.

METHODS

Making contact—accessing those who supply drugs in order to interview them in relation to their practices of adulteration and selling was not a straight forward exercise. It is more difficult than the accessing of users (to be researched as *users*). Primarily this is because snowball research techniques and exposure as a user are not particularly threatening whereas to be contacted as a supplier of illegal drugs is potentially more problematic. The supply of drugs is by law a very serious offence whereas being merely a user is often far less problematic, especially if in treatment. The perception of individual vulnerability of someone sought out as a drug supplier is far greater than being sought out as a user—even though the two often combine. In all, 31 drug dealers/sellers,³ primarily from South East London, were contacted and interviewed (28) or given a questionnaire to post (3). Contact was made in a variety of ways. Initially, personal contacts who sold drugs who knew and trusted me as a researcher (number: 3) were accessed. Secondly, I was fortunate to be carrying out some unrelated research which gave me access to ex-heroin users who had also sold drugs to varying levels and these were included in the study and were happy to provide information, at interview, on their *past* adulteration/dilution practices (number: 13). There is no reason to believe that their information was in any sense less salient than my other contacts. My third means to access dealers was to enquire to personal, non-dealing contacts who knew me as a researcher and could thus vouch for my trustworthiness, if they could put me in touch with any dealers they knew. This proved to be relatively unsuccessful (number: 3) and awkward. Often, the individual concerned either sold my contact drugs or sold common acquaintances drugs. They were therefore potentially reticent about telling them how much they effectively cheated on their sales through short counts or adulteration. I designed a second questionnaire which could be filled in by the dealer alone and then posted back to myself with an attached post-paid and self-addressed envelope. Finally, my fourth method of accessing dealers was to interview individuals convicted or charged with supplying drugs whilst detained at Her Majesty's pleasure in a South East London Prison (number: 13). This latter method enabled access to those with a broad spectrum of involvement in drug distribution and thus provided me with a good spread of individuals involved with drug selling.

The sample is a variegated mix of those involved at different levels of drug distribution. Their involvement in the drug scene differs significantly between respondents and over time. Their involvement in selling may be seen to be akin to the processual paths outlined

by Moore (1992; 1993) in relation to drug use/addiction and general involvement, whereby circumstances over time influence their involvement in selling and the level at which it took place. They are clearly not a literally representative sample (whatever this may look like) but none-the-less, given the background forensic evidence, do not appear to be unrepresentative towards their practices of adulteration/dilution.

FINDINGS

Belief in Dangerous Adulteration

Perhaps the most interesting finding was that the vast majority of the dealers 27 (90%) believed that dangerous adulterants/diluents are used but that they had no personal knowledge of this having been done. None of those interviewed (as we might expect) admitted to adulterating/diluting their drugs with the infamous (dangerous) substances outlined earlier but more importantly only 3 of them sought to legitimate their belief that it took place by saying that they had first hand knowledge of anyone who had actually done it. This second line of enquiry would have been the ideal opportunity for an individual guilty of the practice who had said that it does occur and who did not want to admit to it personally to project it onto a mythical 'other'. Of the 3 who claimed to have first hand knowledge of the practice, at least two, if not all three, are open to serious doubt to their authenticity.

Of the 3 who stated that they did have first hand knowledge of dangerous adulteration/dilution the difficulty was separating out those who had seen it done or had been told by the perpetrator (or a common acquaintance who had witnessed it) that it had been done from those who just believed it so much that they therefore 'knew' that it took place (e.g. from unsubstantiated rumour about a particular local dealer 'Jimmy's so desperate he'd put rat poison in it'). In practice, in the opinion of the author, this did not prove too problematic. Certain inconsistencies in responses often suggested the 'I know it happens' as opposed to the 'I have first hand proof and therefore I *know* it happens'. One prison inmate for example (cocaine and heroin addict/dealer) who initially and with great confidence stated that he believed brick-dust, talcum powder, Ajax, Vim, strychnine and other dangerous substances were adulterants/diluents in drugs sold on the street and in prison when pushed for details of his proof became far less coherent and then contradictory. New (weak) inmates to prison he assured me, 'still clucking' (withdrawing) would be given 'dust off the floor mixed with a little bit of heroin' by the unscrupulous prison dealers. When returned to the topic later on he said that this weak heroin was in fact probably cut with Anadin or paracetamol (neither of which are easily available). Finally, he acknowledged that the adulteration/dilution of the drug was probably all done 'outside' by the suppliers to those selling inside (and would thus be unlikely to be any different to that found outside). Another respondent reported that they had known someone who had boasted that they had used brick-dust in place of heroin but on closer examination were unsure as to whether this person had in fact been lying or not 'because he was an idiot'. The third respondent who stated that 'Ajax was substituted for smack [heroin]' (and had no knowledge of anything else) was quite clear that this had taken place as a narrowly targeted 'revenge' hit on one individual. As argued in Coomber (1996) such practices should not

be confused with a normal understanding of adulteration/dilution nor to contribute to a normal evaluation of the dangers based therein.

Prison, whilst being perhaps the most likely scenario for strange and/or dangerous adulteration/dilution due to the supposed lack of access to reasonable materials to use and a supposed enhanced level of desperation, may in fact, logically, be no more likely to result in the use of dangerous adulterants/diluents than outside. Access to sugar for example, which is soluble—unlike much floor or brick-dust, is relatively unproblematic. It is the suspicion of the author that beliefs which are prevalent outside of prison may become amplified in the structural conditions which pertain within prison and thus add to the conviction of the belief of those inside that dirty practices are afoot.

According to these findings it appears that the adulteration/dilution of illicit drugs with substances such as Vim, Ajax, brick-dust, ground light bulbs and other heinous substances, is, as also indicated by the forensic science literature, not a common practice (if indeed it is practised at all) of those who supply drugs, even by those euphemistically known as 'street dealers'. We can also say that despite such practices not being a part of the direct experience of those involved in the research such practices are widely believed to occur and to be a common occurrence. The particular form/s this tended to take are explored below.

Mixing Knowledge and Beliefs with Myth?

A few of the dealers interviewed, although clearly knowledgeable about *their* involvement in drug supply and adulteration/dilution, appeared to perpetuate particularly detailed ideas on adulteration which had greater levels of inconsistency and apparent willingness to refer to common mythologies than their other responses when it came to more speculative knowledge. One cocaine dealer (who saw himself as a cocaine dealer although he also supplied amphetamine, LSD, and ecstasy) for example, had much to say about the adulteration/dilution of cocaine (mainly with the sugar mannitol at the higher level) but also with glucose, caffeine, or any white crushable Over The Counter (OTC) drug. However, when it came to heroin and heroin dealers these were considered types that you do not mix with. He had an image of heroin as a 'dirty' drug (whereas cocaine was a 'clean' non-problematic drug) and of heroin users/dealers as desperate and dirty. In fact it was this desperation which meant that these individuals were the ones who used Vim and Ajax—because of the desperate state they had been reduced to. Ironically, he readily dismissed the idea of dangerous adulterants in cocaine as unlikely due to the discerning nature of the user, 'word of mouth' being very effective in highlighting a dealer who was selling poor quality drugs, and, that such rumours were in reality unreliable, often started by rival 'firms' seeking to undermine competition. He furthermore subscribed to the unsubstantiated myth of heroin dealers enticing school kids by mixing speed with heroin to get them hooked, another clear sign that some of his beliefs about adulteration/dilution and heroin were based on the type of prejudice and relative ignorance found in and perpetuated by the tabloid press (*cf* Lindesmith 1941, Kaplan, 1987, Coomber, 1995a,b). The theme of desperation in fact was a common link to each of those who believed dangerous adulteration to take place. A second cocaine and amphetamine supplier who was also on occasion an importer whilst claiming not to have ever adulterated/diluted these drugs himself, again did believe it happened but only by the 'desperate'. These desperados he believed

used talc and amphetamine in cocaine, and, brick-dust in heroin. Yet another 'importer' (mainly of cannabis, but occasionally of cocaine and amphetamine) whilst showing enough knowledge to suggest that he knew what he should, when asked to elaborate on the likely adulteration/dilution of amphetamine down through the chain of distribution he suggested that it would always be 'stepped on' (adulterated/diluted) at each level. This is inconsistent with findings from forensic analysis on amphetamine sulphate which tends to show that a very large single 'cut' is made at the stage of importation and that purity then differs little regardless of the weight seized⁴—differing weight i.e. Kilos, half-kilos, ounces etc normally indicates differing levels of distribution (Coomber, 1996).

A Desire to Know and Be Seen to Know?

A number of respondents did make replies which at times seemed quite at odds with the majority of the responses. Accepting these responses at face value however would have been problematic. The feeling of the author is that some of the respondents, particularly those being interviewed, saw themselves as having the job of enlightening the poor ignorant researcher on all aspects of the drug scene. This led to them on occasion to 'inform' me about aspects of adulteration/dilution at different parts of the distribution system which were outside their normal experience. Often this information contradicted some of the forensic evidence (whereas their information on what they did, did not) and sometimes it contradicted what I was also learning from other dealers located at a different point in the system. The importer mentioned in the previous section is one such example as is the cocaine dealer who confidently related his knowledge about heroin junkies/dealers.

What this perhaps demonstrates, along with the great variability in practices and in beliefs of the practices of 'others' is that drug selling in the UK is fragmented both in terms of organisation (Lewis *et al.*, 1995) and in terms of knowledge. Combined, these two situations permit a greater level of mythology to permeate even the ranks of drug sellers, about each other, than might be the case in other situations.

LESS ADULTERATION?

Heroin

Out of the 17 who supplied/dealt in heroin 11 (65%) said that they *never* adulterated/diluted it at all (although 2 who also sold other drugs did adulterate/dilute those), and 1 said they did it very rarely claiming to have adulterated/diluted only 6 times in 10 years. Only 1 heroin dealer, who was dealing 4 to 5 ounces a month, said that he always cut the heroin (glucose) and that this would be by around 10–20% depending on the initial strength. This can be usefully compared however to a dealer of 15 years who described himself as at the 'bottom' of the drug distribution hierarchy. He reported selling a roughly comparable 1 kilogramme monthly but had never adulterated/diluted.

The 4 who 'sometimes' adulterated/diluted the heroin (usually depending on their subjective perception of the strength of the sample—determined through 'tasting—it' or trying it out) tended to be dealing larger quantities of heroin⁵ than those who 'never' adulterated/diluted it although this was not always the case. The variability in how much

adulteration took place however demonstrates the lack of structure to drug distribution in the UK. One respondent, dealing on average 20–30 ounces of heroin each month stated that it [adulteration/dilution] ‘varied depending on how good the gear is. No point making it weak no—one wants it’, whereas a 5 ounce a month dealer who believed ‘All my drugs [received] were pure’ stated that a standard 25% adulteration/dilution was generally applied to heroin, cocaine and amphetamine before selling on.

All of those that sold heroin responded that the substance they used to make dilute the sample was a sugar, usually glucose or lactose. If the fact that the ‘smaller’ heroin dealers (potentially the most desperate?) in this sample were less likely to adulterate/dilute at all is in any way generalisable then the idea of the *desperate* street heroin dealer being the most likely to adulterate/dilute with harmful substances (if and when it happens) is undermined.

Amphetamine Sulphate

As stated previously it seems likely that amphetamine sulphate tends to be adulterated/diluted at time of importation (or production, for domestic samples). As explained above apart from a purity of say 65% at importation (1993 figures, HM Customs & Excise, 1995) the purity found after that, regardless of weight tends to be similar, an average of 5–6% since 1990 (NCIS, 1994). In the sample, of the 15 that sold amphetamine only 4 (27%) said that they adulterated/diluted it. The ranges of dilution were stated as follows: 40%, 25%, ‘5 grammes to the ounce’ (about 17%), and ‘depended on strength’.

If we hypothesise the initial large adulteration/dilution down to 5 or 6% as in recent years, we also need to acknowledge that this average will be made up of quite a lot of variability. In 1991 for example the average over the year was 6% but the ‘typical range⁶’ in that year was between 1 and 9% (HOSB, 1995). A sample that has been already diluted by around 95% can actually suffer a reasonably large further cut, in the region of those stated by the dealers above, without affecting the level of purity significantly. For example a 25% dilution of a sample only 7% pure will have the effect of reducing the purity to 5.6% and even a dilution of 40% would only reduce it to 5%, keeping the sample in both cases close to the average.

Those that did dilute their samples claimed to use either glucose (2); Paracetamol (1); or, Bicarbonate of Soda (1).

Cocaine

Out of the 11 who sold cocaine 5 said that they did not adulterate/dilute it at all. One of these claimed to be an occasional cocaine importer from the US (but dealt/imported more seriously in cannabis) who always dealt in kilos. One was a long term user who mainly sold to friends and relied solely on the profit from ounces bagged into grammes. One had sold rarely but was a long time amphetamine seller and manufacturer. The other two were ‘street dealers’ who did not adulterate/dilute any of the drugs they sold.

Of the 6 that did claim to dilute the cocaine they sold, 1 said he diluted it by ‘5 grammes to the ounce’ (about 17%); a second between 10 and 20% ‘max’; a third and fourth by 25%; a fifth, depending on the purity stated that ‘imported at 80–85% passed on to whole-

salers pure then on to dealers where 4 grammes would be added as a matter of course, then up to say 7. 8 or 9 grammes depending on purity . . . if the cut is too high the batch is wasted'.; the sixth who only bought 'rocks' (crack cocaine) which he believed ensured it was pure (i.e. 80–90%) diluted by 10–20%.

The substances stated as diluents were glucose (4); paracetamol (1); amphetamine (1).

Alternative Means to Make 'Profits' on a Sale

As speculated in Coomber (1996) one of the reasons that less adulteration/dilution is likely to take place is because the so-called 'street' dealer ('street' meaning that this individual sells on primarily to users, sometimes on the street but more commonly in their own home, or at pubs/clubs/other locations) has other means through which to procure a profit from the drugs they have acquired to sell on. The first means, the 'bagging' or 'wrapping' of the initial bought weight e.g. 2 ounces of cocaine into 60, single gramme 'bags' or 'wraps' (there are approximately 28–30 grammes to an ounce) and charging a slightly higher price for a gramme or half-gramme of cocaine than is equal to one thirtieth of an ounce (in the last quarter of 1993 the average wrap size for heroin was 200mg (a fifth of a gramme), for cocaine 375mg, for amphetamine 600mg, and for crack 200mg). In other words selling small amounts at an price which is more than there initially divided worth. All street dealers that intend to gain from the enterprise of selling drugs increase the aggregate worth of their supply in this way as a matter of course. Profit is therefore inherent in the sale of drugs down the chain of supply.

The second means to realising a profit for the street dealer other than through adulteration/dilution is through 'short counts' or by skimming a small amount off of the individual sample. It is evident from the respondents that some take more care over this than others. One long term drug dealer (10 years) who earned all of his income from selling drugs since leaving school was clear that he received most of his profit from the mark-up on small sales not from 'stepping on it' (dilution—although he would *sometimes* do this to amphetamine). Moreover he suggested he was lazy when it came to wrapping it up and often did not bother with short counts and when he did the amount of skimming was arbitrary and negligible—except with ecstasy where he would skim a few tablets off the top of a 'parcel' of 200–300 for personal use. Otherwise, an ounce of whatever drug was being divided up would be split into the approximate weights by eye e.g. 56 roughly equal bags for half gramme deals and then wrapped. Selling short on weight was not commonly mentioned by the respondents. The impression gained overall was that profit was *primarily* gleaned from selling in smaller weights at proportionately higher prices, and secondly by dilution which is another way of producing an effective short count but providing the expected weight.

Why They Said They Didn't Do It

The dealers were asked to comment on why they would not, given that none had admitted to such a practice, adulterate/dilute with substances such as Vim, Ajax, brick-dust etc. The responses tended to fall into two essential categories: first, the humanitarian, that it 'wouldn't be ethical . . . seems ridiculous', 'because you would have

to be crazy', 'because it is dangerous', 'I don't want to kill anybody' type of response (17), and second, the rational calculative, 'the comeback', 'would be sussed', 'bad for business' type of response (6). Some combined both forms of response (5). One response combined the humanitarian with the ruthlessness of doing business to those he did not fear reprisal from 'I sold 16 year olds aspirin and they believed it was 'E'. It didn't hurt me or them. I'd never use worming tablets—that's evil'. Three were also concerned to stress that they believed they had a good name on the street for quality drugs and suggested they took great pride in preserving this status. These responses tend to support the rationale outlined in Coomber (1996) whereby it is suggested that logically it is unlikely that dealers would knowingly put dangerous substances in the drugs they supply unless they were psychotic and that it would be bad business to poison your customers as you soon would not have any and/or they might reap revenge.

DISCUSSION

As stated earlier the belief that street drugs are adulterated/diluted with dangerous substances particularly by 'street dealers' is prevalent. That it is also prevalent amongst those who actually sell the drugs is significant but apparently not as an indicator from a more informed source. The research indicates that drug suppliers and street dealers do not adulterate/dilute as a matter of course, that when they do they use relatively benign substances such as glucose. Also, despite having no first hand knowledge of dangerous adulteration/dilution, predominately they *believe* it to take place as common practice. It may be speculated that the predominate and general perspective on drug adulteration/dilution has been historically informed by popular imagery about the drugs scene in general and the 'type' of person who sells drugs. Lindesmith (1941) over fifty years ago wrote of the ' "Dope Fiend" Mythology' which had grown up in the United States around drug addicts and 'dope peddlers'. One of the longest running myths perhaps, which at once demonstrates the 'evil' of the drug dealer, and thus at the same time rationalises the possibility of other evil acts (like adulteration with poisonous substances) is the idea that soft drugs are adulterated with more addictive ones like heroin, or that free samples are given away to entice the vulnerable, hook them and thus secure new custom. In 1996, as in 1941, there is no evidence that dealers use so-called hard drugs in soft ones or that they stand on street corners or in ice-cream vans enticing the young and vulnerable, fagin like, to try their free wares. Moreover there is good reason for why they would not (*cf* Coomber, 1995b). Other situations also produce a need for explanation which makes speculation about poisonous adulteration possible. Occasional sudden deaths of experienced as well as inexperienced addicts may lead users to suspect poisonous adulterants. But such cases are nearly always the result of either high purity, use of too high a dose after tolerance has been reduced, poly-drug use complications, and perhaps changed situational circumstances.⁷ None-the-less, a user population needs, in the absence of other evidence, to rationalise how and why an experienced drug user would suddenly die from a drug overdose. Rumour is a powerful mythologising device in any circumstances and in the drugs world, where people are forced to operate clandestinely and deal with people they

neither trust nor would normally mix with, they are perhaps even more pervasive. Gossop (1996: 184) for example refers to those heroin addicts who accept much of the mythology attached to heroin addiction and that 'The myth of the dope fiend is just as firmly entrenched in the junkie sub-culture as it is in straight society'. As is revealed by a number of the respondents in this research some non-heroin drug dealers/users (*and* indeed some of those who do deal/use heroin) have similar prejudices (dirty, desperate, degenerate) against (other) heroin addicts/dealers as the non-drug using/selling population. Such prejudice, in both the using/dealing population as well as in the 'drugs field' helps to recreate a perspective on drug adulteration which ultimately helps to buttress perspectives on 'evil drug dealers' which must be seen to impact on public policy towards those who supply drugs.

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Notes

1. The term adulterant is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Adulterants proper, are in fact other psychoactive drugs (like caffeine, or paracetamol) which are much cheaper than the main substance, have a similar or complimentary effect when mixed with it, and therefore help hide the fact that the substance has been diluted. Substances which are not psychoactive, such as glucose and lactose, are more formally known as 'diluent'. These are added to a drug to increase the amount of drug available to be sold. It should be noted however that some substances which are found in street drugs will be the result of the particular manufacturing process used to make the drug. In this sense those substances might be more properly referred to as 'impurities'. 'Excipients' found in drugs (primarily pills/tablets) are the products used to bind the drug together. Common excipients are starch, gelatin or other gums (ISDD, 1994).
2. Vim and Ajax are the trade names of domestic cleaning agents. Traditionally, as today, they appeared in the form of a white scouring powder (although there are now a number of liquid scourers which are generic to the originals to be found under the same trade name).

3. The terms dealer and supplier will be used in the text to designate an individual involved in the selling and supply of illicit drugs. A supplier will normally denote someone who supplies drugs to others (e.g. importers, wholesalers) who will then sell them on to other distributors. A dealer will normally denote an individual who sells to users. In practice these two often overlap.
4. As we shall see *some* 'street dealers' do dilute amphetamine further, but this is after the initial large cut. If the amphetamine was being progressively diluted as it passed down the system percentage purity would vary much more e.g. 60% to 40% to 20% etc. This does not tend to be found by seizures regardless of weight seized.
5. Those who may have been dealing in a relatively small weight of heroin in any one month were often dealing larger weights of other drugs.
6. The 'typical range' is found by excluding the 10% of seizures with the highest purity values and the 10% with the lowest purity values.
7. Sudden deaths of heroin addicts have been speculated to occur when there is change in the context or environment where the drugs have been taken (Bucknall and Robertson, 1986). It is thought that this relates to the psychological aspect of tolerance whereby tolerance to effects is partly inclusive of set and setting as well as drug. In this way an experienced addict who uses heroin in unfamiliar circumstances may be relatively less tolerant because familiar cues are missing resulting in overdose from a 'normal' dose. The notion of literal high purity or poisonous adulteration is often unsupported by the fact that other users also participated in the use of the same drug at the same time and that forensic analysis sometimes shows the drug to have no unusual characteristics, even high purity. The combined use of other drugs, particularly alcohol, is also often hypothesised to be a contributing if not causal factor.

Coomber, R. (1997c) 'Dangerous Drug Adulteration – An International Survey of Drug Dealers Using the Internet and the World Wide Web (WWW)', *International Journal of Drug Policy*, Vol. 8, No. 2, pp. 18–28

This paper sought to replicate (as far as possible) important aspects of the research into drug dealing practices that had been carried out in South East London into research via the Internet and World Wide Web (WWW) on an international scale. Apart from the innovative nature of the methodology involved, which is discussed more fully in a later paper, the research was unusual in that it contacted a target group that went beyond national borders, continents and even languages. 80 drug dealers from 14 countries largely confirmed the findings reported on the research undertaken in South East London. Whilst the findings need to be taken with some caution and can only be considered indicative they were consistent with and supported the research that had preceded it and importantly the later research that was to be undertaken on North America.

DANGEROUS DRUG ADULTERATION

– AN INTERNATIONAL SURVEY OF DRUG DEALERS USING THE INTERNET AND THE WORLD WIDE WEB (WWW)

Ross Coomber

An international sample of 80 drug dealers from 14 different countries were accessed and surveyed via the Internet on their practices of 'cutting' (adulterating/diluting) the drugs they sold. Having already established in prior research based primarily on the UK that the cutting of street drugs with dangerous substances is rare (if indeed it happens at all) and that in fact far less cutting of drugs with any substance by drug dealers actually occurs than is commonly thought this research sought to explore the generalisability of these findings across borders and continents. Indicative, and supportive findings, almost wholly consistent with the UK research which preceded it suggest that this is indeed the case. The issue of how to ensure anonymity on the Internet from vulnerable research groups is also briefly discussed.

There are a lot of smackheads turning up [dead]. A junky runs out of funds for his habit so he peddles whatever . . . instant coffee as cheeba, baby laxative as china, draino (in the 70's) as skag . . . to make enough \$\$\$ to cop real dope. This time its some bug shit . . . all he could find. 'Hell', he figures, 'that cat will surely taste it before he cooks and slams it'. Well, I guess he didn't make the guy for being as sick as he was . . . dude couldn't take the time for a test . . . fellow's blue, works hanging outta his arm, and he didn't even get the plunger all the way down.'

(Internet posting on the alt.drugs.hard newsgroup responding to a discussion started by the posting of the questionnaire related to this research)

BACKGROUND TO STUDY

In Coomber (1997a), forensic evidence relating to drug purities, the constitution of 'street' drugs, and when drug adulteration/dilution took place, was reviewed.¹ It was argued that the conventional notion that drugs such as heroin (but also, cocaine, amphetamine and ecstasy) are commonly adulterated ('cut') with dangerous substances such as brick-

dust, domestic scouring powders ('Vim in the veins'), rat-poison, ground light-bulb glass and other harmful substances appeared to be unfounded.² First, the forensic evidence does not report such substances as constituents of illegal drugs, and second, the types of adulterants/diluents commonly used for cutting drugs, such as glucose, lactose, paracetamol, and caffeine, are often not just 'fillers' but may in fact

enhance the amount of drug retained. Both caffeine and paracetamol for example, increase the amount of heroin retained in the volatisation (the heating, melting, and then vaporisation of the drug for inhalation or 'chasing') process. The purposive use of certain adulterants, at the time of manufacture, thus suggests that adulteration/dilution is not always usefully understood as only a bulking out exercise. It was further reported that the difference in heroin purity levels between Customs seizures (UK) and street seizures differed far less than might be expected if the classical model of cutting taking place down through the chain of distribution was a reliable way of understanding such practices. In fact, in the years 1991, 1992 and 1993 the average difference between Customs seizures and street seizures was only between 8–14%, with the average purity of street heroin being 45%, 46% and 39.25% respectively. It was thus speculated that not only does a common belief in *dangerous* adulteration/dilution appear to be mistaken but that the practice of adulteration/dilution itself may be far less common than is also thought to be the case. In fact, even in relation to amphetamine (often only 5% pure or less) evidence was presented to suggest that this drug tends to be diluted once, and very high up the chain of distribution, as opposed to at 'street' level.

Further, discussion concerning the logic of drug markets suggested good structural reasons as to why dangerous drug adulteration was unlikely, and an eval-

uation of the various stereotyped rationales, of the type which heads this paper, were also considered essentially faulty. In Coomber (1997b) 31 drug dealers from South East London were interviewed about their dealing practices in general, and their adulteration/dilution practices in particular.³ Seeking to add more substance to the indicative forensic data, the research sought to explore what drug dealers do to the drugs they sell prior to selling them, if anything. The research also sought to examine what drug dealers believed were common adulteration/dilution practices.

The findings from this research supported the picture drawn by the forensic evidence – that reliable (as opposed to anecdotal) evidence of dangerous adulteration/dilution was not forthcoming (although widely believed), and that the actual practice of adulteration/dilution, with any substance, was much rarer than expected. Indeed, many of the dealers interviewed *never* adulterated/diluted the drugs they sold and others did so only rarely. A very small minority 'always' adulterated/diluted the drugs they sold, e.g. only one heroin dealer out of the 17 who sold heroin 'always' diluted the drugs he sold (10–20% depending on initial strength) and 4 'sometimes' did. Whilst those selling greater quantities did tend to be slightly more likely to adulterate/dilute, this was not always the case. One street level dealer of 15 years, interviewed in prison, who sold around 1 kilogramme of heroin monthly, reported 'never' having cut his drugs but relied on the

¹The term adulterant is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Adulterants proper, are in fact other psychoactive drugs (like caffeine, or paracetamol) which are much cheaper than the main substance, have a similar or complimentary effect when mixed with it, and therefore help hide the fact that the substance has been diluted. Substances which are not psychoactive, such as glucose and lactose, are more formally known as 'diluents'. These are added to a drug to increase the amount of drug available to be sold. It should be noted however that some substances which are found in street drugs will be the result of the particular manufacturing process used to make the drug. In this sense those substances might be more properly referred to as 'impurities'. 'Excipients' found in drugs (primarily pills/tablets) are the products used to bind the drug together. Common excipients are starch, gelatin or other gums (ISDD, 1994a).

²Strychnine is sometimes found in a particular variant of heroin (Chinese white heroin, or 'heroin No 3') but it occurs in quantities which are of no particular risk to those using the drug and appears to have been put there purposively to enhance the amount of heroin available to the user when 'chased' (inhaled) (Eskes and Brown, 1975; Huizer, 1987). It is thus not an example of dangerous adulteration but purposive, and perhaps market sensitive, manufacture.

³In all, 31 drug dealers/sellers, primarily from South East London, were contacted and interviewed (28) or given a questionnaire to post (3). Contact was made in a variety of ways but 13 were individuals convicted or charged with supplying drugs whilst detained at Her Majesty's pleasure in a South East London Prison (number: 13). This latter method enabled access to those with a broad spectrum of involvement in drug distribution and thus provided me with a good spread of individuals involved with drug selling. The other 18 were either ex-dealers or were currently involved with selling drugs who had not been detained.

inflated prices of small sales. Adulterants/diluents reported used were, (consistent with that found and reported by forensic analysis), sugars such as lactose and glucose, Over The Counter (OTC) drugs such as paracetamol, and substances such as caffeine and bicarbonate of soda. As was speculated in Coomber (1997a) less adulteration/dilution primarily occurred in this sample due to alternative ways of securing profit from their drug sales. Overwhelmingly, the methods utilised to realise a profit from drug sales were, firstly, the 'bagging' and selling of smaller (e.g. gramme, half-gramme) sales from the larger weight bought in. Thus, 56 half-gramme bags are sold individually at a significantly higher price than the ounce from which they came.⁴ Second, the use of 'short counts', the skimming of small amounts off the weight to increase the number of sales (e.g. getting 58 half-gramme bags from an ounce instead of just 56) was also commonly, though not always, used.

Overall, the research indicated that, in the UK at least, the perception of illicit drugs being commonly 'cut' with dangerous substances was unuseful. Whilst street drugs do commonly contain substances other than the primary drug e.g. heroin it seems that this adulteration/dilution, when found, often takes place prior to importation and/or at the time of manufacture and that these substances are relatively innocuous. It should also be noted that a sample of heroin recording 60% purity is unlikely to be a further 40% adulterant/diluent but may in fact be made up of other opium alkaloids produced during manufacture.⁵ Some new evidence in fact (and supportive of the findings outlined here) may suggest that nearly 50% of heroin sold on the 'streets' in the UK contains no adulterants/

diluents at all,⁶ again supporting the findings where for many of those interviewed the practice of cutting the drugs they sold was not considered necessary or appropriate.

The research undertaken on the Internet was both exploratory (in terms of method and information sought) and undertaken with the intention to add a further international dimension to the issue of dangerous adulteration/dilution, and even the practice/s of adulteration/dilution in general.

METHODS

Accessing drug dealers across countries and even continents is not a straight forward exercise. Until the advent of the Internet in fact it was prohibitive in all manner of ways. Moreover, accessing what is a vulnerable group (in criminal justice terms) makes contacting dealers more difficult than it does when it is only drug users who are being sought even when sometimes they may be the same individuals.⁷ The Internet, provides to those with access, world wide connectivity and communication to each other, and therefore also offers new opportunities for the research community, particularly into groups which are often hard to access and into issues of particular sensitivity (Coomber, 1997d).

For the purpose of this research it was decided to access drug dealers through posting a message on the drug related newsgroups which attract people from all over the world interested in many facets of discussion about drug use and its related experiences. A rough search of the English language drug related newsgroups will turn up around 25 such groups ranging from groups such as *alt.drugs.hard*, *alt.drugs.psychedel-*

⁴The exact weight of an ounce to a gramme varies marginally in practice. As the actual weight is 28.35 grammes (Avoirdupois weight) some 'round-up', some down.

⁵Even where the stated purity of a heroin sample is say 50% a significant proportion of what makes up the other 50% may well be other opium alkaloids created during the synthesising of the heroin, it will not all be adulterants. Gough (1991: 527) for example reported on a 30 kg seizure divided into 30 packages which consisted of an average Diamorphine (heroin) content of 76%; accompanied by Acetylcodeine at 6.4%; 6-Acetylmorphine at 2.1%. Other opiate alkaloids, Noscapine and Papaverine also accounted for 17.6% and 6% of the samples on average. In these instances we can see that a sample where the purity of heroin is formally recorded as being say 70%, the other 30% could be almost exclusively made up by products from the production process and other opiate alkaloids but that the records merely give an impression that the other 30% was 'something else'.

⁶Coomber (1997e) reports that in a random sample of 228 street seizures analysed in the UK in 1995/96 no adulterants/diluents were found in nearly 50%.

⁷Whilst drug users may be willing to take part in research and become visible as drug users, to admit to a crime where the potential for punitive repercussions is extremely severe, that of supplying drugs, the same persons may be less willing to expose themselves as the latter.

ic, to *rec.drugs* and *alt.drugs.chemistry*. These were the groups posted to.

Obviously (and rightly so), drug dealers are suspicious individuals and I had to take serious steps to both ensure that respondents would be anonymous in the research and importantly that I could convince them that this was the case. It was also important to protect myself (and thus my respondents) from possible subpoena to disclose respondents electronic addresses under sharing of information pacts on criminal activity practised by the UK and the US in particular. In fact, one concerned US lawyer (unaware of my precautions) did e-mail me that I was likely to fall foul of such legislation. To avoid this I took a number of precautions. First, I had a questionnaire located on a Web Page. The questionnaire had 'behind' it a database which stored all of the incoming data but did not store information on the sender's address which is normal for the sending of electronic messages. I personally therefore had no knowledge of where these messages came from.⁸ For those potential respondents who would not be convinced of this (perhaps believing I was the DEA or CIA) I suggested that they should fill in the questionnaire from a 'public' terminal such as a local library, a university library or even a 'cyber-cafe'. For those who needed even more reassurance I suggested they print off the questionnaire and post it to me by conventional postal methods.

Because over time, postings on newsgroups 'fall off the end', that is, they have an expiry date, and because new postings will move an old one down the line it was necessary to re-post the request to take part in the survey on a weekly basis. Each posting brought in a new tranche of respondents. The research came to an end when it did, not because the numbers responding had dried up, but because newsgroups

operate on protocols of goodwill and too many postings on an 'old' matter uses up that goodwill.

In all, 80 genuine responses were received. It is important to note that the indicative findings of this research would have had far less meaning if it had been undertaken as initial or purely exploratory research. First, familiarity with the research area was important enabling the two disingenuous responses to be easily spotted. Second, being part of on-going and cumulative research into the area these, largely indicative, findings could be usefully compared to a growing body of evidence on practices of adulteration. Without this existing information the findings would be of far less importance. As it is, the findings strongly suggest that much of the more localised research which has gone before may be more generalisable on an international level.

Problems of sample bias?

Clearly, when targeting groups in this way, there will be a commonality bias in terms of who is responding and a lack of representation of those who do not have access to the Internet. Those responding will be users of advanced information technology and all that that broadly suggests in terms of class/stratification, education, personal, and life resources. This does not always matter and in fact access to such groups may open up areas of research into drug related areas previously of comparative difficulty to research.⁹

As regards this research, an investigation into the adulteration/dilution practices of drug dealers, it is important to consider what effects that supposed bias may have. If the respondents were predominately 'middle-class' friendship dealers for example, due to access via the Internet, would this make them less likely to adulterate/dilute and thus present a distorted picture?

⁸Although this is true, institutions which provide Internet services (including the University of Greenwich server I had the data sent to), do log the address of the host machine although this information is rarely accessed, or used. The trick is to send it via a 'public' host machine, and thus make it impossible to be traced to an individual.

⁹There are two main ways in which the supposed commonality of those accessible through the Internet may be either of added benefit, or, relatively unimportant. In the first instance, new research into drug use and/or addictions of those who are comparatively well resourced (and who are often less visible/accessible?) may be easier through the Internet. Research into cocaine use/addiction by 'high-flyers' in the 1980s for example may well have been usefully helped if access to such individuals through the Internet had been available then. In the second instance, it may be that contacting drug users is more important than consideration of broader 'representiveness'. If we think of Zinberg's (1984) famous work on controlled drug use for example we can see that such research would have been usefully embellished through access to users in this way as opposed to relying on adverts in newspapers and the like.

Initially, we need to acknowledge that there are numerous types of drug dealer/trafficker. They vary from importers, mid-range distributors, through to 'house' or 'street' dealers and 'runners' and exact typologies are often difficult to outline as the drug market is characterised by fluidity not rigidity (Dorn, Murji and South, 1992: xii). There are also circumstances we might hypothesise that make the occurrence of drug adulteration/dilution more likely than others. Arguably, this rests less on the positioning of the individual in terms of class or relative privilege than on the positioning of them in the drugs trade.

As regards the cutting of drugs, it is this researchers opinion that rather than 'class' being a particularly important variable on the likelihood or not of dangerous adulteration or indeed the practices of if, why, and how often, dealers cut their drugs, that *level of involvement* would be of more importance. How experienced a dealer was, where they were in the chain of distribution, whether they had a drug habit, whether profit from drug sales was their sole supply of income, these it seemed to me would impact more systematically on adulteration/dilution practices rather than 'class'. There are two other primary reasons for this. As regards *dangerous* adulteration, this is predominately thought to occur, as both those interviewed in Coomber (1997b) believed and the quote which heads this paper suggests from the 'desperation' of junkies. Middle class addicts selling their drugs would be just as vulnerable to such a set of conditions (and supposed temptation to add 'anything' to hand) as a working class dealer. Otherwise, it would be to assume that there is something essentially more desperate (and depraved) or generally uncaring about the working-class drug dealer deriving from their 'working-classness'. Thus to suggest the working class dealer, of equal level of involvement, is more likely to cut their drugs than the middle-class dealer with dangerous substances belies a certain amount of logic. Moreover, much working-class dealing is also the stuff of friendship networks. For research relating to general practices of adulteration/dilution we would be looking to assess where

and by whom such practices are more consistently carried out, if indeed there is such a consistency. We might reasonably speculate therefore that for 'friendship dealers' where profit is not a motive in the supply of drugs that adulteration/dilution, is unlikely to occur.¹⁰ On the other side of the coin would be the dealer/trafficker who receives the bulk, if not all of their income, from drug sales. This individual has most need to secure profit from their sales. Likewise, those who seek to supplement their income rather than just cover their costs from drug sales it might be thought would be more likely to adulterate/dilute the drugs they sold. Level of involvement then is taken as an indicator of how useful this sample may be to inform on adulteration/dilution practices.

In the 31 interviews undertaken in Coomber (1997b) 10 received the bulk of their income from drug sales of which 3 were wholesalers,¹¹ 6 categorised themselves as 'street' dealers and one was a 'runner'. Of these individuals, only one of the wholesalers reported 'sometimes' adulterating/diluting the drugs he sold, 2 of the street dealers did so 'sometimes' and one did so 'mostly'. A further 14 supplemented their income in this way through drug sales. Four of those who reported only supplementing their income were again 'wholesalers' who sold on to others who were interested in shifting smaller amounts of drugs. Only one of these wholesalers reported ever adulterating/diluting their drugs. Three of the 6 'street' dealers did so (1 'always', 2 'sometimes') the other 4 may be best described as user/dealers selling to friends and acquaintances of which 1 reported 'sometimes' and 2 as 'rarely' cutting the drugs they sold. As explained previously, the primary route to realising profit was to sell the drugs on at a relatively inflated price after bagging into smaller sales. Level of involvement then did not provide a predictor of adulteration. 'Street' dealers, in this sample, or those who received the bulk of their incomes from selling drugs were not likely to adulterate/dilute the drugs they sold with any consistency when indeed they did adulterate/dilute at all.

Of those responding to the Internet survey (No

¹⁰Occasionally however, as reported to this researcher in the South London interviews a dealer may dilute their own drugs even though they do not dilute those they sell.

¹¹One was at times also a manufacturer (amphetamine) and the another an importer (cocaine, amphetamine, ecstasy). Thus actually bracketing these individuals is problematic as their involvement is fluid not fixed.

80) 19 received the bulk of their income from selling drugs. Fourteen 'never' (10) or 'rarely' (4) cut the drugs they sold. Only 1 'always' did so. The majority 'supplemented' their income through drugs sales. Those classified as 'street' dealers numbered around 17 of which 12 'never' (8) or 'rarely' (4) cut the drugs they sold.¹² Three did so 'sometimes' and only 2 did so 'mostly'. There were at least 8 'middlemen' at the wholesale level, two who responded that they were importers, and one had been a manufacturer (MDA, MDMA). The majority of those remaining were relatively less involved and reported selling mainly to friends and acquaintances. My original speculation that friendship dealers not concerned to make profit would not adulterate/dilute the drugs they sold was not borne out by the research simply because only one of the respondents replied that they did not make a profit when supplying to friends and sold the drugs on at cost.¹³ In fact, of the 16 respondents who said that they only sold to 'friends and acquaintances' and only sold drugs to 'cover the costs' of their drugs nearly all (15) reported making a profit from 'bagging' and 'skimming' or selling at inflated prices. Of these, 4 also reported 'rarely' and 1 'sometimes' cutting the drugs they sold. 10 'never' did.

Getting a 'representative' sample of drug dealers/traffickers is difficult, not least because we do not know what a representative sample would look like.¹⁴ Nonetheless, the sample which was attained for this research has a reasonable spread of individuals that have been involved across the levels of drug distribution. The findings are obviously indicative and should be read with necessary caution (accepting the

relative sample bias). However, given that the findings tend to support both the forensic evidence and the more localised, terrestrial research which preceded it, it seems reasonable to suggest that the picture of adulteration/dilution practices built up for the UK may be more generalisable on the international level. Thus it usefully provides another important segment of the jigsaw puzzle about adulteration practices and how the drug trade functions during the 1990s. If it had contradicted the research this also would have been a significant indicator demonstrating both that important differences in adulteration practices take place in different locations and that the Internet was a valuable resource to finding such things out. In the not so distant future of course, as the Internet becomes available on common telecommunication systems (such as televisions) the relative (un)representativeness of those on the Internet will diminish.

FINDINGS

In total there were 80 respondents to the requests placed on the various drugs related newsgroups. Given the method employed which required the posting to both be seen by drug dealers and for those dealers to feel safe enough to respond it could be argued that this is an impressive response overall. We should not get carried away with visions of the Internet opening up access to potentially thousands of respondents just because *potentially* there could be thousands of the target group who are exposed to the research.

¹²I state 'around' 17 because it is clear from a perusal of the data that many of those who said that they sold only to friends and acquaintances are not reasonably put in the friend-dealer category. For example, it is clear that 'acquaintances' was interpreted very broadly and often essentially meant that drugs were sold to individuals they trusted. Thus whilst these respondents were not selling to anyone who asked them they were also not only selling to friends as it is normally understood.

¹³Two respondents who only sold cannabis, and who were thus excluded from the sample, did report that they were not interested in making profit and that they did not.

¹⁴A further problem with assuming that the Internet is unrepresentative in relation to drug dealers relates to the problematic method of accepting 'class' at a 'snap-shot' moment in time. It was clear from the respondents who contributed to this research that many of them had previously sold drugs, some had been prosecuted for selling drugs, many still sold drugs. Level of involvement in selling was often significant. Attributing them a comfortable middle-classness merely because they now use the Internet or e-mail is to belie the transitional nature of human existence. It may be reasonable to hypothesise that for many of these respondents, at the time of their selling drugs, they would not have fitted into the 'snap-shot' homogenised characteristics that simple surveys of who Internet users are might suggest they should. The idea the drug users and thus many drug sellers are from impoverished (and/or remain in impoverished) backgrounds is, quite simply, unuseful.

The international flavour of the research was extensive, with respondents from 14 different countries, although it tended to reflect the US domination of the Internet and of newsgroups in general. For the sake of this research however, it is useful that 40% of respondents were from the US as it is this continent that, arguably, would expect to see some of the worst (or at least, routine) practices of adulteration/dilution given the classical model of adulteration practices (see Preble and Casey, 1969) largely assumed in the US.

As Table 1. demonstrates the research reached drug dealers on a number of different continents albeit in many cases in small numbers. The level of consistency in the reporting of the issues investigated however suggests that distinctions across borders and even continents are likely to be small.

Belgium, Finland, Mexico, New Zealand, South Africa, Switzerland also provided one response each. One respondent stated 'All over Europe', another 'Many countries'. Four did not provide an answer to the question regarding location.

Heroin adulteration/dilution

Arguably, heroin is the drug over which most concerns around adulteration/dilution have been located historically. Like the quote at the beginning of this paper images of instant death due to 'dirty' drugs – 'there must have been something in it' – combined with sinister notions of what desperate 'junkies' and 'dope-fiends' are capable of once addicted and transformed by heroin addiction in order to ensure profit for their next hit (see Coomber 1997c for discussion

of the construction of the dope-fiend and how related notions adulteration are intertwined). Because heroin has long been heralded as a drug of suspect 'purity' it is perhaps important to pay special attention to this particular drug. In Coomber (1996b) it was found that 65% (11) of those who reported that they sold heroin *never* adulterated/diluted the heroin they sold. Only 1 reported 'always' adulterating the heroin they sold. Four others cut the drugs they sold only sometimes. As stated earlier, for the UK this seemingly low level of adulteration/dilution has also been bolstered by the more recent evidence that nearly 50% of the heroin that was seized at 'street level' by police in 1995/96 were found to have no adulterants at all (Coomber, 1997e). Are such low levels of adulteration/dilution only to be found in the UK? In this survey, of the 13 drug dealers who reported selling heroin, only 1 reported that they 'always' cut it. Not too dissimilar to Coomber (1997b) 54% (7) said they 'never' adulterated/diluted the heroin they sold. Five others reported 'sometimes' (3), 'mostly' (1), and 'rarely' (1) cutting the heroin they sold. As in Coomber (1997b) sugars such as glucose and lactose were used as the predominating cutting agent.

General levels of reported adulteration/dilution – all drugs sold

Of the 80 respondents 79% (63) reported that they 'never' (59%) or 'rarely' (20%) adulterated/diluted the drugs that they sold. A further 14% (11) reported that they did only 'sometimes'. Only 4 (5%) reported that they 'always' did and a further 5 (6%) that they 'mostly' did.

As might be expected, both cocaine and amphetamine tended to be cited as the 11% under the 'always' and 'mostly' categories listed above. Even for these two drugs though the picture is not so clear cut. Of the 29 who sold amphetamines, (often considered the 'dirtiest' drug? – the average purity of amphetamine in the UK is around 5%) as many as 76% (22) either 'never' (45%) or only 'rarely' (31%) cut the amphetamine they sold. Only 3 (10%) 'always' (1) or 'mostly' (2) cut the amphetamine they sold.

Of the 21 who sold cocaine 67% (14) either 'never' (29%) or 'rarely' (38%) cut the amphetamine

TABLE: Respondent's Country of Origin*

USA	21 (40%)
UK	10 (13%)
CANADA	9 (11%)
AUSTRALIA	5 (6%)
GERMANY	3 (4%)
FRANCE	3 (4%)
NETHERLANDS	3 (4%)
NORWAY	2 (3%)

*The numbers may add up to slightly more than the total as a small number of respondents stated more than one country in which they sold drugs e.g. Mexico and US. Both countries were included in the count.

they sold. However, 24% (5) either 'always' (2) or 'mostly' (3) cut the cocaine they sold.

For the US, 58% of drug dealers who responded said they either 'never' (38%) cut the drugs they sold or did so only 'rarely' (20%). Another 2 (5%) did so only 'sometimes' whilst 3 (8%) said they always did, and 4 (10%) did so 'mostly'.

For Canada, 89% (8) of drug dealers who responded said they either 'never' (67%) cut the drugs they sold or did so only rarely (22%). The remaining dealer responded that they only 'sometimes' cut the drugs they sold.

Indications then, from this and previous research, are that the practice of adulteration/dilution once drugs have been imported into all countries, including the US may be far less common than is often supposed.

Dangerous adulteration – its mythological status confirmed

In Coomber (1997b) one of the primary concerns was to explore the common-place notion that street drugs, particularly heroin, were cut with substances such as Vim, Ajax, brick-dust, talcum powder, rat-poison, and even ground light-bulb glass.¹⁵ As we have seen the forensic evidence had already suggested this was not likely (Coomber, 1997a). Thirty-one drug dealers were asked if they had ever cut their drugs with any of those substances listed above. They were also asked if they believed that street drugs were cut with such substances and if they did if they had any first hand evidence with which this belief could be substantiated. Almost all (27 of the 31) believed that street drugs were cut with one or other of these substances. None, as we might expect, admitted to using any of these substances. If there had been a dealer guilty of such practice but not willing to admit it directly, the opportunity to substantiate their claim to believe in such a practice was offered by the enquiry about knowing it to have been done. Significantly, only three sought to substantiate their beliefs in dangerous adulteration through claiming first

hand knowledge. In the end, after further investigation, at least two, if not all three were open to serious doubts as to their authenticity. The further questioning of the authenticity which was open to the interviewer for Coomber (1996b) was not available for this research and thus responses where first hand knowledge is claimed is difficult to differentiate from where dealers feel confident enough in their belief system to 'state' their belief as fact 'I know it happens' despite not having seen it or having done it themselves.

Results from the international survey were once again very consistent with those from the UK sample. The international sample however, perhaps less cynical, did not tend to believe with such alacrity stories about dangerous adulteration. The fact that (unsurprisingly) none of the respondents reported using any of the dangerous substances listed was then surprisingly (to this author) followed by the claim from 31 (39%) of the drug dealers in this survey that they did not even believe the stories. One individual further responded:

No. A drug dealer needs a client base, as do all businesses. These are, for the most part, scare stories or isolated incidents. It only requires the smallest amount of logical thinking and a few minutes respite from Murdoch newspapers to realise the answer to this question.

As in Coomber (1997b) the substances that were listed as substances used by the dealers to cut their drugs were relatively benign in character and in some cases even potentially beneficial. The vast majority (76%) reported using a sugar of some sort (mannitol, glucose, milk sugar, baby laxative etc). All but two of the heroin dealers reported using only sugars. One reported having used quinine and one other aspirin. Others (16%) reported using substances such as vitamin B powder, vitamin C powder, other vitamin supplements or quinine (1), bicarbonate of soda (2), or amphetamine (1). That amphetamine is used as an adulterant in cocaine is a common belief by those who use cocaine. It is however, as this survey suggests, and consistent with the forensic evidence and that found in Coomber (1997a,b) and Cohen (1989) not a commonly used agent.¹⁶ In fact it has been

¹⁵ Vim and Ajax are the trade names of domestic cleaning agents. Traditionally, as today, they appeared in the form of a white scouring powder (although there are now a number of liquid scourers which are generic to the originals to be found under the same trade name).

hypothesised that it is likely that only comparatively inexperienced drug dealers would adulterate with this substance (see Coomber, 1997b). This was partially confirmed in this survey where the dealer who cited using 'speed' as a cutting agent in cocaine (although they claimed to 'mainly' use 'teething powder' described themselves as an 'amateur' who only sold drugs to cover the costs of their own drug use and only to 'friends and co-workers'. In Coomber (1996b) the single dealer who adulterated cocaine with amphetamine was also a comparative novice who dipped in and out of scene when it suited him.

As in Coomber (1996b) a number of respondents were clearly unwilling or unable to distinguish what they believed to be true from what they had true first hand experience or knowledge of. Thus, of the 10 who said that they had first hand knowledge of dangerous adulteration 7 were highly suspect containing either contradictory information or none of any substance at all. For example, one respondent stated 'people cut most ACID with strychnine to get more acid out of a vial'. The belief that strychnine is found in LSD is a common one amongst users, supposedly explaining some of the physical discomfort that may accompany its use. Strychnine however, is not a substance which forensic analysis has found in LSD. Another stated, 'ground glass, always, to get a higher profit-XTC (MDMA) is always cut'. Whilst it may not be uncommon for counterfeits such as Ketamine mixed with amphetamine or amphetamine combined with LSD to be sold off as MDMA analysis tends to show that MDMA itself is often not cut with any adulterants especially those substances often believed to be the agent involved such as heroin and cocaine (see Coomber, 1997a; Forsyth, 1995). The Home Office Forensic Science Service for example has found that 'The "ecstasy" drugs (MDMA etc) are almost always encountered as tablets [and that] The content is typically 100 mg with lactose as the major excipient' (King, 1995). Another respondent provid-

ing little substantiation merely stated 'Like I said its common'. The fine distinction between this category of respondent and those who believed in dangerous adulteration but acknowledged that they had no first hand knowledge could perhaps be typified by this example 'Don't know the cutter, know victims of Rat Poison (including myself)'. This person clearly believes that they 'know' that rat poison is used but is unable to state it unequivocally.

In the end, only five were considered to be reporting what were potentially 'true' examples of problematic cutting. Of these four referred to talcum powder. Talcum powder, if it was a common cutting agent (and it isn't, being hardly ever found in analysis, see DEA 1990, 1991, 1992, 1993), and if it was repeatedly administered regularly over time under specific conditions it may cause problems to susceptible individuals.¹⁷ It does not however, as an occasional diluent, present significant health risks to the drug using population in general. Moreover, it is clear by the responses to the question asking them why they would not use a dangerous substance that those using talc did not conceive of it as such. It is after all still found as a 'filler' in some over the counter drugs such as some brands of aspirin. One respondent reported using 'A very small amount of strychnine to teach a guy not to bull-shit to us' however, as argued elsewhere (Coomber, 1997a), the purposive use of a poison to harm a targeted drug user cannot be seen to be indicative of, or meaningful for, a normal understanding of drug adulteration/dilution practices any more than can the use of a car to purposely injure someone be seen as indicative to a normal understanding of road hazards and related accident statistics.

Again, consistent with Coomber (1997b), the reasons given as to why dangerous adulteration was not seen as an option by these respondents could be essentially split into a humanitarian/ethical or the 'rational calculative' positions. In the former, typical

¹⁶Indeed, Cohen, in his study of Cocaine Use in Amsterdam found, despite the belief of 87% (160) of his cocaine using research subjects of the common existence of amphetamine (and the perceived negative effects of it), the samples he bought from them and tested did not reveal any of the substance.

¹⁷This would possibly explain the rare occurrence of pulmonary granulomas in the lungs of drug users, consistent with exposure to starch or talc) who inhale their drugs (see Johnson and Petru, 1991; Marschke et al., 1975). It is likely however that unless a susceptibility exists occasional exposure to talc would not result in such problems. The fact that such cases are not widespread would suggest that talc is not a common constituent in illicit drugs.

responses were 'the drugs are dangerous enough. I'm not out to kill anyone', 'I believe it is ethically wrong', 'Firstly, I Can't. Secondly, I ain't evil', or 'I just wanted to pay for my habit and have fun, not hurt anyone'. In the latter, typical responses were 'seen the price of strychnine? Seriously – why should anyone want to?', 'I felt that I was a type of business man, out to make a profit (cust. service)', 'Cause it would give me a bad reputation', 'Don't be greedy, so customer will come back to you', or, 'Because my products were known for quality . . . the above can hurt people'.

Beliefs in Dangerous Adulteration

It is interesting that the vast majority of drug dealers believe that dangerous adulteration to be a real threat when buying illicit drugs despite not doing it themselves and not knowing it to be done. Elsewhere (Coomber, 1997c) I have attempted an explanation as to how this 'street myth' came into being and how and why it continues to be perpetuated along with other drug myths. In part at least, it appears to be reliant on a certain amount of 'dope-fiend' mythology which attributes all sorts of heinous behaviours to (particularly, heroin) 'junkies'. Once deprived of their essential humanity by the drug, and lacking in decency and desiring only where their next hit is coming from they become capable of lacing a drug with anything the right colour that comes to hand. Along with highly publicised 'overdoses' of experienced addicts, which need 'explanation' and where poisoning is a convenient scapegoat, and with the general mistrust that pervades any illicit market, belief in dangerous adulteration is perhaps simple to understand.¹⁸

DISCUSSION

As in the UK (Coomber, 1996a, 1996b; 1997b), the evidence suggests that far less adulteration/dilution takes place after importation than has historically been assumed. Respondents from the USA (40% of sample) did not provide responses to contradict this indication that such practices are neither routine nor predictable down and throughout the chain of distribution as was once believed. It is probably true for the US however, that some States have a greater level of cutting activity than others, although even this should not be assumed to take place predictably and throughout the chain of distribution.¹⁹ The responses from Canada further indicate that such practices may also not be the norm there. Given that this is apparently so in both the UK and the US and Canada those responses from the other countries which also tended to show little adulteration/dilution, despite being very marginal in numbers of responses, are perhaps also indicative of less cutting throughout the distribution chain than commonly suspected.

This growing body of evidence which turns conventional thinking about adulteration/dilution practices on its head also potentially impacts on policy. Images of evil deeds (dangerous adulteration) permit the perpetuation of the demonisation of both drugs (as being more dangerous than they already are) and of the drug dealer as being a self-serving depraved individual capable of any act. The widespread belief in, and assumed existence of dangerous adulteration with substances such as strychnine, brick-dust, ground light-bulb glass and domestic cleaning powders de-facto proves the evil-

¹⁸Sudden deaths of heroin addicts have been speculated to occur when there is change in the context or environment where the drugs have been taken (Bucknall and Robertson, 1986). It is thought that this relates to the psychological aspect of tolerance whereby tolerance to effects is partly inclusive of set and setting as well as drug. In this way an experienced addict who uses heroin in unfamiliar circumstances may be relatively less tolerant because familiar cues are missing resulting in overdose from a 'normal' dose. The notion of literal high purity or poisonous adulteration is often unsupported by the fact that other users also participated in the use of the same drug at the same time and that forensic analysis sometimes shows the drug to have no unusual characteristics, even high purity. The combined use of other drugs, particularly alcohol, is also often hypothesised to be a contributing if not causal factor.

¹⁹If we compare the purity of heroin in Dallas for example with that of New York or Boston we find some consistent disparities. Between 1991 and 1994 (inclusive) the national purity average for this period was around 35%. The average purity of heroin seized in Dallas was 9.4% with a range between only 6.6% and 10.7%. In New York the average was 60.7% with a range between 50.6% and 66.1%. Similarly for Boston the average over the four years was 65.3% with a range between 58.1% and 73.7% (DEA 1991; 1992; 1993; 1994). In the case of New York and Boston, depending on the country of origin it is conceivable that practically no cutting agents would be present and that other opiate alkaloids would make up the remainder (see Coomber, 1997e)

ness and depravity of the drug dealer. Acknowledging that the practice of cutting among drug dealers is often either absent or rare, and that when it does take place it is done with relatively innocuous substances is important. Once again we are reminded that much of what takes place in the drugs world is in fact often mundane and logically predictable – as a rule, dealers do not want to harm people, either because they are not that way inclined or because they want to preserve their business or both. In this way we are reminded that dealers are often ordinary and that their drug use does not transform them, in contradiction to much sensationalist reporting, into irrational psychopaths. Sugar sits on most peoples shelves, and this is what we see going into most of these drugs, when indeed, anything extra goes in it at all. Without demonisations like these holding such sway policy debate must be encouraged to adjust, albeit moderately, in accordance to reasoned analysis of drug dangers/risks.

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This paper had three primary objectives: to communicate that valuable research on hard to reach and vulnerable populations could be undertaken using the Internet and WWW as a research tool; to argue and demonstrate that 'non-representative' samples were legitimate research populations in particular circumstances, and to provide a description of how such research could be done on the Internet and WWW by others who wished to. At this time, and it remains the case, almost all research undertaken on the Internet and WWW was concerned with the representativeness of its sample and uses the kind of social survey where this would be of paramount importance. The research referred to in this paper was, to the author's knowledge the first published survey of a hard to reach group that had been carried out through this method.

suggests in terms of class/stratification, education, personal and life resources. A number of surveys into the demographics of Internet users have consistently found that Internet users are more likely to be white, male, first world residents, relatively affluent and relatively well educated in comparison to any more general population (Nielsen & CommerceNet, 1995; Kehoe & Pitkow, 1996). This obviously makes generalizing about research findings from Internet users to the general population highly problematic. Importantly however, the demographic research suggests that significant changes are occurring which move the user group in the direction of greater representativeness: 'While Internet users still tend to be upscale, their overall characteristics are coming more in line with general population averages', and, 'Internet access and use are becoming increasingly mainstream' (CommerceNet/Nielsen, 1996), also see Fisher et al (1996); Boncheck et al (1996) and Kehoe and Pitkow (1996). Good news for the future perhaps but a range of difficulties remain in the mean-time. Moreover, doing research via the Internet also presents its own specific issues regarding sampling which go beyond the representativeness or otherwise of the aggregate user population.

- 5.2 Work on Internet demographics has demonstrated that the Internet can be used to sample effectively to a point, and particularly that it can be used to produce relatively informative and reliable data about Internet users. Moreover, technical methods to improve the reliability of such first level research are constantly being theorized and refined (Urken, 1996; Kehoe & Pitkow, 1996). However, once we go beyond this, to use the Internet as a means to investigate beyond the use of the Internet, problems regarding sampling are exacerbated. There has however been little published to date about this, in particular because of a lack of appropriate exposure to and expertise regarding the Internet in the social science research community. Where such attempts have been made, there is some useful discussion of the pros and cons of using the Internet as a medium for accessing research subjects.
- 5.3 Fisher et al (1996) for instance, whilst investigating 'how citizens are using the Internet to participate in civil life' quickly realized that getting a representative sample was, even from a sample where Internet use itself was a defining parameter, a 'virtual impossibility'. Despite the significant survey research experience of the team, consultation with colleagues at the University of Cincinnati and other institutions and with those at the Public Opinion Research mailing list, no comprehensive solutions to the sampling issue emerged. The problem, simply put, was this:

There is no comprehensive list of individuals who use the Internet, nor is there any certainty about how many users log on from any particular node. ... Complications stem not merely from individuals having multiple accounts at various nodes or multiple memberships in various Internet groups (something analogous to having multiple phone lines) but also from the ability of 'lurkers' to read and reply to messages posted for groups to which they may not formally be registered (Fisher et al, 1996: p. 16).

And so, rather than trying to sample individuals 'out there', they decided to target a range of USAENET newsgroups and LISTSERV (email) mailing lists. Within this, they further stratified their samples by selecting obviously political and non-political groups. By sampling from a large enough number of groups of each type (30 or more) they assumed, utilizing the central limit theorem, that their samples would be of a reasonable spread.

- 5.4 In light of their experience, Fisher et al (1996) have suggested a range of procedures to improve the representativeness of samples when surveying on the Internet. These include 'a combination of political and technical strategies' (p. 22), such as gaining the confidence of the managers of the lists that are to be posted to and thus (perhaps) 'official' approval of the project, and the use

of screening techniques to improve feedback about where the responses originated, amongst others. Importantly, they concluded that, despite the problems relating to survey research via the Internet and the need to develop more sophisticated techniques (and on this point also see Urken, 1996; Pitkow and Kehoe, 1996) in relation to the collection of data which could test formal hypotheses or models the mailing of surveys to 'mailing lists and newsgroups can produce data suitable for *exploratory analysis*' (p. 22, my emphasis).

- 5.5 Similarly, undertook a survey of those receiving political information direct from the White House (to email addresses and from the WWW) in order to assess how this affected the 'flow of political information' to civil society given that the media and other established institutions of mass communication were being partially by-passed. Again, their research had a particular population in mind, those who received political information via the White House, and these were contacted either direct to the email lists or through their visitation to the White House Web-Site. Responses to their survey suggest that there is evidence that those who utilize the WWW to access political information unmediated by the news media are 'changing the way that people feel about and participate in politics' (Boncheck et al, 1996: p. 6). Concern over representation, particularly in regards to voluntary response and non-response, was highlighted by Boncheck et al as a problem and discussed by them. The demographic status of their respondents, however, closely resembled those that derived from demographic surveys of Internet users in general, including no bias towards heavy users, leading them to conclude that: 'the demographic profile for individual users approximates the profile of that produced by a random sampling of users, if that were possible' (p. 4). For Boncheck et al, the data collected by means of the Internet can be considered useful indicative data upon which further research may build and information regarding the changing nature of political communication considered.
- 5.6 Surveys of particular Internet users raise somewhat different issues. The many USAENET newsgroups offer the opportunity to access populations with a wide range of interests. Some of these groups may be explicitly for individuals who have an interest, have taken part, or are taking part, in particular behaviours (eg. newsgroups on kite-flying, prostitution or heraldry), or who have a particular orientation towards certain ways of thinking and/or behaving (Alcoholics Anonymous; entrepreneurship; republicanism). Although there is a paucity of information regarding the surveying of particular newsgroups via the Internet, it is clear that many of the problems outlined earlier for more general surveys also apply here although in a different form. More specifically, a questionnaire posted onto one newsgroup may be posted onto numerous other newsgroups (as happened to Fisher et al, 1996), and this can cause immense problems unless some means of identifying where the response came from exists, and which is not always easy to ensure. Moreover, depending on the research population, this may be ethically prohibitive: for instance in my own research outlined earlier on drug dealers, the tracing or monitoring of respondents to any degree might have jeopardised the research itself and/or render the respondents open to prosecution.
- 5.7 If the concern of the survey is to contact members of a particular newsgroup only, then the occurrence of this could be extremely problematic, as the sample would be difficult or impossible to control. If, however, the primary concern is to contact individuals who are, say, kite-flyers, as opposed to members of the kite-flyers newsgroup, then it may not be. Kite-flyers may be expected to cluster around the kite-flyers newsgroup and thus a strategy of posting there is bona fide, but might not wish to be exclusive of kite-flyers from elsewhere. When looking for general group opinions, beliefs or other characteristics of populations who are members of specific USAENET groups, then concern over the difference between those who do respond and do not respond may be very important. Those who do not respond may predominately hold different opinions, beliefs or other characteristics from those who volunteered their responses, and this of course would significantly affect the research. It is,

approaches may be applied to cyberspace communities, see Paccagnella (1997).

- 6.2 There are a number of ways of attracting people who use the Internet to your research and some will be more successful than others. Simply having a Web page, for example (a 'location' on the Internet at which you can put information, a questionnaire or a link to other sites), will not be sufficient. This is analogous to waiting for people to come to you, and while some will (maybe), many will not. In my research, I decided to exploit those areas where it was self evident that those interested in drugs, and those who use or have used drugs, spend some of their cyberspace time - the drug related newsgroups. A rough search of drug related newsgroups (English language) turned up 23 main groups. These ranged from the *alt.drugs.hard* newsgroup where those interested in the so-called 'hard' drugs post questions, pose queries, answer questions and provide information, to *rec.drugs.misc* where issues around the so-called 'smart' drugs, stimulants and sedatives and other miscellaneous items are aired. Whilst it is true that drug dealers are potentially anywhere (and therefore posting to the thousands of different interest related newsgroups was a possibility), it made more sense (and conformed more closely to Net-etiquette - of which more later) to concentrate my effort around these groups. As such, my request to take part in the research was posted to each of the many drug related groups. Getting people to take part was less straight forward.
- 6.3 As previously discussed, accessing illicit drug sellers is a difficult business. This is made more problematic when the means used to receive responses - communication from one registered user to another - means that the sender is potentially (and normally) traceable: Email, for example, provides a sender's unique address. Concerns about anonymity were paramount in the minds of many of those I was trying to contact. One USA lawyer who had noticed my posting emailed me that, as the USA and the UK had arrangements for sharing of information involving criminal activity, I was unwittingly laying myself open to being subpoenaed to present the identities and/or electronic mail addresses of those contributing to my survey. Other 'surfers'^[6] also expressed their concerns as to how I could be sure that the USA Drug Enforcement Administration (DEA) or other such organizations were not 'tapping' my line and thus tracing back information to where it came from, leaving me open to accusations of unwittingly entrapping others. These are serious issues and may concern others wishing to undertake sensitive research on the Internet (Lee, 1993; Frankfort-Nachmias & Nachmias, 1992). Such problems, however, are largely resolvable.
- 6.4 There are a number of ways that a researcher can protect their respondents and themselves from potential prosecution/subpoena. By effectively protecting our respondents and demonstrating to them that we can protect them, we are also more likely (logic suggests) to attract a greater response from what may be (and was in this case) a very vulnerable group.
- 6.5 Ideally, especially if you are expecting a potentially large number of responses you will have a questionnaire (for example) located on a Web Page which respondents can 'fill-in' on-line at a terminal. Included in the posting will be a 'click-on' address for the Web Page which will whisk them to the questionnaire which is set up there waiting to be filled in. 'Behind' this questionnaire there will be a programme (preferably on a secure server^[7]) that will store the data being sent through. This may be a database or an appropriate statistical package^[8]. This will have the double benefit of (a) providing inputted data ready for analysis, and (b) as these packages will store only the fields specified, information on where the data came from is not stored nor available. Thus, even if a researcher was to be asked for such data, they would have no information on who had sent it^[9]. These facts should be (briefly) explained to potential respondents.
- 6.6 For the benefit of those potential respondents who may feel that such procedures (being

invisible to them and needing to be taken on trust) are insufficient, the following two options should also be suggested: first, that they use an anonymous terminal (eg. in a public library, university laboratory, cyber-cafe) where the response cannot be traced to an individual. Second, that they print off the questionnaire (of which a text copy version is to be included at the bottom of the newsgroup posting) and return it by post (colloquially known by email users as 'snail-mail').

- 6.7 These precautions are somewhat onerous but when dealing with an (understandably) vulnerable and thus relatively more suspicious group, they are also essential.
- 6.8 But of course, any research posting must be interesting enough to get noticed and secure responses. My research experience suggests that a description of the research should be provided which will catch the eye of those being targeted. In the case of my research the Subject Heading used to advertise the posting on the newsgroup was: *Have You Ever Sold Powdered Drugs? If So, I Would Like Your Help*. If people's curiosity was raised by this heading then a simple 'click' on it would take them to the posting which explained in more detail what the research was and why it was being carried out. If still interested, a click on the posting then whisked people to my Web Page and questionnaire.
- 6.9 Because newsgroup postings are removed after a period of time a researcher using the Internet will benefit by re-posting the message regularly. New visitors are accessing the site all the time. As a posting moves down the list it may fall off the end (some people only look at the first 50 postings for example, and many newsgroups have literally thousands of postings). 'Re-post the message on a weekly basis' is the best advice here.
- 6.10 Having concentrated on the newsgroup which is pertinent to a piece of research, the researcher may then, depending on their resources (essentially, time), target more closely. This may be done by mailing to the individuals who have posted onto the newsgroup. Postings automatically record the email address of the postee unless they purposely do not provide it, although the vast majority do. For example, a hypothetical research project wanting to access individuals who have experience of *using* psychedelic drugs can by targeting more specifically individuals who have readily admitted (to a world wide audience) to have used such substances in their discussion postings. Newsgroups such as *rec.drugs.psychedelic*, *alt.drugs.psychedelic* or even plain old *alt.drugs* have numerous discussions on such issues. Emailing these individuals directly and politely asking them if they would be willing to contribute to the research is not unreasonable - they have already declared publicly their willingness to discuss issues around drug use and have provided an address for personal contact. Depending on the nature of the research and concerns around anonymity, many of these users (as was the case for my research) will be willing to contribute in a more in-depth way.
- 6.11 Not everyone who accesses newsgroups has what is known as a graphical interface (eg. Netscape), on their computer, and therefore these individuals will not be able to access easily^[10] or fill in a Web Page based questionnaire. This problem will of course diminish over time, but at present it affects a large group of people world-wide. Accessing newsgroups on the Internet, however, only requires the ability to use email. Thus having a text copy of the questionnaire on the posting enables these individuals to take part if they wish to do so.
- 6.12 Whilst the Internet is overwhelmingly English speaking (and USA dominated) there are numerous foreign language newsgroups covering a vast number of countries. Here all that is required is a translation of the research posting into the appropriate language, and a posting to the appropriate newsgroups. The vast number of (often narrowly) differentiated newsgroups that are found in the English speaking groups may not be replicated in the non-English groups.

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Coomber, R. (1997e) 'Adulteration of Drugs: The Discovery of a Myth', *Contemporary Drug Problems*, Vol. 24, No. 2, pp. 239–271

The aims of this paper were to understand how and why the idea of dangerous adulteration came about and how and why it continues to be perpetuated given that there is little or no evidence for its existence. The paper suggests that belief in dangerous adulteration is so widespread and accepted that it has assumed the status of an almost uncontested fact. This is demonstrated by media, professional and academic reporting around the dangers of street drugs but also, as demonstrated in Coomber (1997c) by drug dealers. A later paper surveying beliefs of a lay population further supported this contention (Coomber, 1999c). It is argued that the 'myth' of dangerous adulteration should be located and understood within other co-existing drug myths. Specifically, it is suggested that the myth of dangerous adulteration does much to provide support for the continued belief that a number of those other myths, such as the 'dope-fiend' critiqued by Lindesmith as early as the 1940s, do have in fact have some truth to them. Likewise, dope-fiend mythology does much to support the rationale, potential and existence of dangerous adulteration. These are circularly reinforcing myths. An attempt is further made to locate particular fears around drug adulteration to wider concerns about mistrust in all sorts of legitimate and illegitimate trading and also to historical fears around the malicious poisoning and 'spiking' of foodstuffs we consume. It is contended that given that there is a historic sensitivity to the *potential* vulnerability to substances hidden in things we consume it is unsurprising that in relation to the clandestine nature of drug dealing there is significant suspicion attached to it.

The adulteration of illicit drugs with dangerous substances—the discovery of a “myth”

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*Ah score some gear fi Johnny.
—Pure as the driven snow, this shit, he tells us.
That meant thit it wasnae cut too much, wi anything too toxic.
Irvine Welsh, *Trainspotting**

The notion that illicit street drugs, such as heroin, are routinely adulterated or diluted with *dangerous* substances is a common one. Elsewhere (Coomber, 1997a, 1997b) I have shown that it is in fact a common view of those involved in the treatment of drug users, the policing of drug users, and the research of drug use and related issues, as well as by the users themselves. More importantly, perhaps, it is also believed to be true by the vast majority of those who are deemed to carry out this adulteration/dilution, the drug dealers themselves. The adulteration/dilution¹ of street drugs with

dangerous substances is thus, arguably, in normative discursive terms relatively uncontested. It is an assumption that attains the status of a "fact." Within an area (discourses around drugs, their effects and dangers) that is littered with contested meanings and stereotypes, it is one that elicits little discussion or opposition. Recent research, however, suggests that dangerous adulteration/dilution with substances such as brick dust, talcum powder, rat poison, ground lightbulb glass, Vim and Ajax,² and numerous other such substances is in fact not a common occurrence, if indeed it happens at all—as opposed to the relatively common practice of adulteration/dilution of drugs with relatively innocuous substances such as glucose, caffeine and paracetamol.³ Even the widespread belief that drugs such as Ecstasy are adulterated with "harder" drugs such as heroin is not supported by the forensic evidence or other evidence (Coomber, 1997a, 1997b). Moreover, the actual practice of adulteration/dilution itself (with any substance) appears not to occur as often as is commonly thought. This paper is concerned with examining *how* the belief in dangerous adulterants/diluents came into being, why it continues to be assumed at just about all levels of involvement and reporting on drug issues, and how this relative "truth" helps to reinforce other already existing but contested myths upon which it itself is reliant and through which it partially emerged.

The evidence and the logic behind adulteration/dilution

Although it is known and relatively uncontested that illicit drugs do commonly contain substances other than the drug that has been bought, little (informed) discussion outside of the forensic literature has taken place on this subject. In fact much of the discussion that takes place within the forensic science literature itself is often more concerned with the methods used for analysis (e.g., gas chromatography, mass spectrometry, or NMR spectroscopy) and the stark reporting of what was found than with discussion about broader issues,

including, for the purposes of this paper, what is *not* found and how findings of forensic analysis may impact on perceptions of drugs, on their use, and on those who sell them. Coomber (1997a) attempted to pull together the diverse forensic literature relating to the purity and constituents of illicit drugs and make comparative sense of it. In particular, there was a concern to relate beliefs about *dangerous* substances being put into street drugs in order to bulk them out, to increase profit, with the forensic evidence. What emerged was a picture of illicit drug adulteration/dilution that differed significantly from common perceptions of it. To begin with, although adulteration/dilution is a common practice, forensic evidence does not reveal adulteration/dilution with *dangerous* substances such as those listed earlier. Where adulterants/diluents are found, they are commonly substances such as glucose and other sugars, paracetamol and other prescription or over-the-counter drugs, and caffeine (NCIS, 1994; DEA, 1990–1994; Drug Abuse Trends, 1993; Kaa, 1994). Moreover, when substances are used to adulterate or dilute, rather than being the result of haphazard, unpredictable, and belligerent activity desperate to increase profit at any cost, forensic analysis reveals rational, strategic, and at times market-sensitive activity. Substances such as paracetamol (known as acetaminophen in the US), caffeine, and phenobarbital, when found in heroin used for smoking, all help retain a higher percentage of the heroin (in the fumes inhaled) than if the heroin were purer. Strychnine *has* been found in heroin (but in nothing else⁴), but again, it appears to be a strategic and purposive manufacture of a particular and specialized variant of smoking heroin; the strychnine is added to increase (and it does) the amount of heroin available to the user as opposed to its being the result of an attempt to increase profit by dilution (Huizer, 1987; Eskes and Brown, 1975). The amount used is not problematic to the user (Eskes and Brown, 1975; Henry, 1995⁵). At other times the substances used are relatively inert (such as the sugars found in cocaine and amphetamine) (NCIS, 1994; DEA, 1990–1994; Drug Abuse Trends, 1993) or mimic or complement the action of the

primary drug (such as caffeine in the stimulants). In many cases these adulterants/diluents are present in the drugs prior to importation and therefore are added either at the time of manufacture or by those at the high end of the chain of distribution. In relation to heroin, the types of substances found in samples and in what proportions, along with the general make-up of the heroin (relative proportions of the various opiate alkaloids), provide reasonably consistent clues to the source country of the drug (*cf* Gough, 1991; H.M. Customs & Excise, 1995b; DEA, 1990–1994). The addition of substances such as caffeine, paracetamol and phenobarbitone to illicit heroin prior to importation in relatively consistent fashions suggests that the adulteration/dilution is purposive and controlled as opposed to reckless. What then happens to illicit drugs after importation? The classical image, outlined to great effect in Preble and Casey (1969), is one where drugs are deemed to be routinely adulterated/diluted throughout the chain of distribution. However, there is also increasing evidence that the actual practice of adulteration/dilution with any substance occurs less often than is normally supposed. First, the difference in heroin purity levels between Customs seizures (UK) and street seizures differed far less than might be expected if the classical model of cutting taking place down through the chain of distribution was a reliable way of understanding such practices. In fact, in the years 1991, 1992 and 1993 the average difference between Customs seizures and street seizures was only 8%–14%, with the average purity of street heroin being 45%, 46% and 39.25% respectively (H.M. Customs & Excise, 1995a; NCIS, 1994). In the US, some cities have very high heroin purity levels with little evidence of adulteration/dilution, whereas others consistently have very low purity levels and higher evidence of cutting (DEA, 1994; 1995). In fact, even in relation to amphetamine (often only 5% pure or less) evidence was presented in Coomber (1997b) to suggest that this drug tends to be diluted once very heavily, and very high up the chain of distribution, as opposed to at “street” level.⁶

The forensic evidence, however, although indicative, was primarily limited by the fact that little systematic, comprehensive profiling is undertaken of illicit drugs.⁷ Ordinarily drugs are tested (for prosecution purposes) only for the primary drug and do not undergo what is an expensive profiling or even a purity analysis. In Coomber (1997b) 31 drug dealers in the South East London area were interviewed in an attempt to gain further insight into the general adulteration/dilution practices of drug dealers to which the forensic evidence could only allude. The sample included a range of dealers from different parts of the drug distribution chain,⁸ both in prison and outside of it. As the forensic literature had suggested, the findings from the interviews into actual practice portrayed a picture of unpredictable (that is, non-routine) adulteration/dilution with any substance, and no substantial evidence of the use of *dangerous* adulterants/diluents (although the vast majority believed it to be commonplace). Sixty-five percent of those selling heroin and 73% of those selling amphetamine in Coomber (1997b) said that they “never” adulterated or diluted the heroin/amphetamine they sold. A very small minority “always” adulterated/diluted the drugs they sold—e.g., only one heroin dealer out of the 17 who sold heroin “always” diluted the drugs he sold (10%–20%, depending on initial strength) and four “sometimes” did. Although those selling greater quantities did tend to be slightly more likely to adulterate/dilute, this was not always the case. One street-level dealer of 15 years, interviewed in prison, who sold around one kilogram of heroin monthly, reported “never” having cut his drugs but had relied on the inflated prices of small sales. Adulterants/diluents reported used were (consistent with those found and reported by forensic analysis) sugars such as lactose and glucose, over-the-counter (OTC) drugs such as paracetamol, and substances such as caffeine and bicarbonate of soda. As was speculated in Coomber (1997a), less adulteration/dilution primarily occurred in this sample due to alternative ways of securing profit from their drug sales. In particular, less adulteration/dilution takes place because many drug dealers are

not reliant upon it as a way of increasing their profit. Just selling in small samples (e.g., 56 half grams from an ounce) and slightly light weights (perhaps increasing 56 to 58 half grams) realizes significant profit. These findings were also replicated in a recent survey of drug dealers via the Internet. Eighty drug dealers, again from varying points in the chain of distribution, and from 14 different countries (40% from the US) again reported non-routine and relatively low rates of adulteration/dilution and no evidence for dangerous adulteration/dilution (Coomber, 1997c). Evidence for dangerous adulteration practice relied primarily on asking the dealers about their beliefs on dangerous adulteration/dilution. Almost all in Coomber (1997b) and 61% in the survey conducted through the Internet believed that dangerous adulteration/dilution with a range of substances took place. They were also asked if they themselves used such substances. Not surprisingly, none admitted to doing so.⁹ They were also asked, however, if they had any firsthand knowledge of such practices by others. This gave those dealers who might have used such substances (but did not want to admit it), a chance to demonstrate that their stated belief in it was well founded and displace it onto a mythical "other." Few claimed firsthand knowledge of any such practices. In Coomber (1997a) the further inquiry that was possible in this study found that this "firsthand" knowledge was in fact anecdotal. From the research conducted via the Internet, firsthand evidence was again highly suspect, with the line between knowing and believing being unreasonably blurred.¹⁰

It was further suggested in Coomber (1997a) that there is a range of logical problems that when thought through would suggest that dangerous adulteration/dilution is unlikely. I shall elaborate initially on the two main ones (for a broader discussion, see Coomber (1997a)). First, it is not good commercial practice to poison your customers—you will soon run out of customers, and, as testified in Coomber (1997b; 1997c), the dealers would fear reprisals. Second, it is in fact often easier and even cheaper to use readily available sub-

stances that are relatively harmless—sugars, caffeine, paracetamol, herbal tablets—than it is to grind down a lightbulb or a brick or to get access to and use rat poison! Anyhow, substances such as Vim, Ajax, lightbulb glass, and brick dust are not soluble in water and would “be easily sussed” by customers.

Apart from these structural and logical reasons as to why dangerous adulteration/dilution was unlikely or indeed even why less adulteration/dilution might take place, one other highly significant finding provides a further clue. When asked *why* they (the dealers being interviewed) would not adulterate/dilute with dangerous substances, the responses fell into two essential categories: the rational calculative (fear of reprisal) and the ethical or humanistic (concern not to harm the user). In direct contradiction to the conventional image of the evil drug dealer, 81% (25) of the dealers interviewed in Coomber (1997b) responded that they wouldn't adulterate/dilute (either at all or with dangerous substances) because of concern for the users' health (the rest cited fear of reprisal as stated above). “No need, it's dangerous,” “Why would I want to hurt someone?” or “Duh! It's not nice to do that to people.” In addition, a number of dealers wanted to stress that they felt they had a reputation for quality merchandise (and took pride in that fact) and would not jeopardize that reputation in such a way. One respondent, for example, stated that he did not adulterate/dilute his drugs “because my products were known for quality . . . the above can hurt people,” and another, “to maintain the purity of my drugs and the respect of my customers.”

Seeing drug dealers as having concern for their clients or taking pride in the quality of the drugs they provide (particularly their safety) is somewhat anathema to the conventional image. But how distorted, exaggerated, and unreasonably homogenous is that image? In one drug agency in London, for example, 98% of all referrals for help are from other users or *dealers*. “People often ask why dealers should want to

refer people on to us . . . well, they're human, and they're users themselves—they're not Colombian drug barons. People have got tied up in their comic-book fantasies of drug dealers. By networking into the right dealers, we were able to access people" (Platt, 1995).

That adulteration/dilution is not a routine practice for those dealing in drugs in the UK is further supported by important new data on 228 random samples of "street" heroin seized in the UK during 1995/96. No adulterants/diluents were found to be present in nearly 50% of them (King, 1997). It thus appears increasingly clear that many of the drugs on sale in the UK and parts of the US traverse the chain of drug distribution networks receiving no further adulteration/dilution as they are resold.

It might be speculated that some opportunistic "street" dealers who sell on a more *ad hoc* basis and who never intend to see their clients again may be less constrained by the logical concerns outlined above. However, to use dangerous adulterants as opposed to, say, sugar would necessitate their actively choosing to do so. Presumably this would occur out of having access only to, say, scouring powder as opposed to sugar or flour or some other relatively innocuous substance *and*, importantly, their not caring that they are using it; otherwise there is no rationale to assume that they would do it even if they did not fear likely reprisal. The motivation for them to do this, unless they are acting out of sheer nonspecific malice or psychosis, is probably minimal, and would most certainly be rare.

Existing beliefs

As we have seen, the majority of those in Coomber (1997b and 1997c) believe dangerous adulteration to take place, despite having no evidence for it. Forsyth (1995) found that many Ecstasy users believed their purchases to be adulterated

with substances such as heroin, cocaine, amphetamine and ketamine, but this is not found in analysis.¹¹ I have also outlined before (Coomber 1997a) that even those working “in the field” (such as drug educators, doctors, researchers, pharmacologists, drug service workers), aware of many of the other “drug myths” that permeate discourses around drugs, also report/believe adulterants/diluents to be a significant health risk. The general public are more reliant on their views of drugs and the risks therein from the news and popular media. That street drugs are necessarily an unknown quantity, that “you could be buying anything” is of course a truism, but one that tends to unreasonable exaggeration in the reporting of drug dangers and the use of speculative assumption as fact. Items in the news and popular media dealing with drugs, their effects and their dangers almost always allude to or state with impunity (especially after a drug-related death) that one of the reasons street drugs are unsafe is because they contain dangerous impurities put there by the dealers. As we shall see, this was the specific reaction to one story outlined below. Commonly unsubstantiable, “facts” are sensationally bandied about without hesitation: “*Many drug dealers mix their supplies with all sorts of awful things—rat killer, toilet cleaner, etc.—to make it go further*” (*Mizz*, 20.12.95, my emphasis) or “Ecstasy has turned to agony for thousands of E users as dealers spike tablets and capsules with heroin, LSD, rat poison and crushed glass” (*Time Out*, 1993). Such reporting, however, is not restricted to the media with lesser journalistic credibility. *The Observer* (19.11.95) confidently declared in relation to adulterated Ecstasy “. . . ‘cut’ with anything ranging from caffeine to aquarium cleaner to rat poison—can kill.” In terms of frequency of occurrence, it is clear that dangerous adulteration is deemed commonplace: “. . . (remember, it could be cut with anything), so it’s like playing Russian roulette with your life each time” (*Mizz*, 20.12.95) or “Es are *more often than not* cut with other drugs, sometimes placebos, but often acid, strychnine, amphetamines . . . or even heroin” (*London Student*, 29.2.92). The public rarely have recourse to a more informed perspective.

What follows is perhaps an archetypal example of how drug fears and commonplace beliefs about drugs, dangerous adulteration and drug dealers are raised, reported, and perpetuated. This particular high-profile event sparked off a national scare around Ecstasy use in the UK in late 1995. Leah Betts took Ecstasy on her 18th birthday. A few hours later she fell into a coma. Her parents, incensed by the horror of the event and angry with “drugs” and those who had anything to do with them, invited the mass media into the intensive care unit where Leah lay unconscious so that others could see for themselves the devastating effects of taking Ecstasy. Sensational pictures of the unconscious teenager with tubes up her nose were plastered over the front pages of national newspapers, as they were again when she died a few days afterwards. Soon after her death, huge roadside advertising hoardings across the country carried her picture as a warning against Ecstasy use. Five months later, at the time of writing, her image still has not vanished from our front pages, despite the disclosure that Leah Betts died of hyponatremia, a swelling of the brain due to massive short-term over-consumption of water,¹² with Ecstasy implicated relatively tenuously in the end. Initial speculation, however, was straightforward. After all, what other than the existence of a noxious poison would cause such a violent, powerful and unusual reaction to a drug. The first explanation put forward by police and the media was that of dangerous contaminants: “Police said a binding agent such as bicarbonate of soda or scouring powder could have been responsible for the contamination” (*The Guardian*, 14.11.95). The day after Leah’s picture was presented to the nation, the national tabloid *The Daily Mirror* (15.11.95) ran a two-page story on contaminants purposely put into drugs such as Ecstasy by “evil” dealers. I DEALT KIDS PURE POISON ran the headline from the words of an [alleged] Ecstasy dealer, quickly followed by a confession: “The E is cut with rat killer, toilet cleaner or guitar wax . . . then coated in hairspray.” He also claimed, “I’ve bought Contact cold capsules, emptied them out, and filled them with a bit of “speed”

(amphetamine) and heroin and sold them as E tabs." *The Daily Mirror* also claimed that "According to the police, toilet cleaners such as Harpic and Ajax are also used to 'bulk out' the tablets." A day later the whole contaminants theory went out of the window when forensic analysis revealed the drug to be "pure MDMA" or Ecstasy. The focus then changed to the dangers of "pure" drugs, and then, when it was found hyponatremia was the cause, to the dangers of drug use in general. Importantly, not only did the tablet that Leah Betts took not contain a poison, but *The Daily Mirror's* confidant and drug dealer "Pusher Peters" revealed his (self-confident) ignorance in a number of key passages: "They also mix it with ketamine, an asthma drug also used as an anaesthetic by vets. That stuff is double-deadly. A tiny amount can kill you." He offered an opinion on Leah Betts: "I suspect from what I've seen she may have taken a tab laced with rat poison, because that causes your brain to swell up and you go into a coma." Ketamine is an anaesthetic analgesic available as a prescription-only drug in the UK. It "has a significant recreational usage in the UK" and, like all illicit drugs, has attendant dangers, but "deaths appear to be rare; only one case is cited anecdotally in the literature, with no precise reference given" (Shapiro, 1992). Rat poison moreover, is not reported in the blood or urine of those who have attended emergency units at hospitals, and even if it did, it would not manifest itself in the way described (Farrell, 1992). Finally, heroin has not been found in the analysis of Ecstasy or other "dance drugs," although it is widely believed to be by users (*cf* Coomber, 1997a). "Pusher Peters" was not a reliable informant, but he did tell the *Daily Mirror* reporters what they wanted to hear (and, I suspect, what he felt he was being paid to say), and, as with those interviewed in Coomber (1997b), he probably even believed some of it himself.

The common act of dangerous adulteration (through either malice or thoughtlessness) is therefore a relatively uncontested assumption throughout the various groups involved in or interested in drug issues, as well as by the general popula-

tion—who after all are reliant upon each of these sources for their information.

The myth that was not

What we find, then, is that the assumption of dangerous adulteration as either a common or even a likely occurrence has little if any evidence to substantiate it in the current drug distribution setting in the UK, if indeed it ever did.¹³ It is an assumption that must now become a contested notion and thus enter into the realm of “myth.” A myth in this sense¹⁴ may be understood as a belief that has common currency but is contested by empirical evidence and by a significant proportion of those involved in investigating the belief. Its continued currency despite significant evidence to the contrary says much about the investment in the belief for the individual or group from which it continues to have advocates. Myths of this type are often, but need not be, stereotypes of persons or groups imbued with prejudice and bigotry. Such myths may refer to the supposed (often pejorative) inherent characteristics of “others”—unscrupulous Chinese; lazy blacks; dirty gypsies; neurotic women. Others relate to the superiority of some groups over others—Aryanism, for example. Another instance, common in the “drugs world,” is to attribute to particular drugs particular powers that they do not in reality possess.

A belief or a set of beliefs can become mythical only if it/they is/are (a) still widely believed and (b) contested as an untruth and the basis for the contestation demonstrates that there is no evidence that can be reliably called on to substantiate the myth. In the case of dangerous drug adulteration/dilution there is thus a movement in status from an uncontested, widely held assumption of its application and existence to a position whereby its status is beginning to be questioned through an absence of empirical evidence and rational theoretical basis. The widely held assumption is now

contested and lacking in empirical substantiation. It was, in all likelihood, always a myth—in the sense that it never had any greater truth content than it does now. It was, however, not perceived as such, and it managed a status of relative uncontestedness.¹⁵ As such, it was a myth that was not.

The construction of drug myths and “truths” within them

Understanding how the idea of dangerous drug adulteration/dilution achieved the status of being relatively uncontested is undoubtedly complex. What now follows is an attempt to unravel some of the primary tensions and discourses around drugs, drug users, and drug sellers that permitted such an idea to emerge, be perpetuated, and become relatively uncontested.

The distortion
of drugs’
effects and
their dangers

Perceptions of drugs’ effects and the dangers inherent in their use are replete, historically and contemporarily, with outlandish distortion, exaggeration and misunderstanding. Extraordinary—but imaginary—powers are often attributed to drugs. Cannabis was once demonized as likely to turn the sane mad, and the mild into frenzied violence (*cf* Woodiwiss, 1997; Gossop, 1996; Musto, 1987), a perspective now completely discredited. Nonetheless the view of drugs as having the capability to transform persona and physiology is well ingrained. In 1924 Dr. Dana Hubbard of the New York City health department was recorded in a Foreign Policy Association pamphlet as stating: “Heroin used by a human being produces an unmoral savage. The boy or girl, man or woman, driven by heroin’s influence becomes cold-blooded, the personality is inflated to a state of paranoic [sic] egoism, and the individual is capable of committing any crime” (quoted in Trebach, 1983:48). In the early part of this century “cocaine was supposed to enable blacks to withstand bullets which would kill normal persons and to stimulate sexual assault” (Musto, 1987:244). Likewise, in a 1980s and 1990s version of this form of narrative, PCP or “angel dust” (phencycla-

dine) was believed to increase a person's strength and make him/her violent, impervious to pain, and able to withstand numerous bullets (Falk, 1994). Such a view was put forward as a considered defense in the trial of four Los Angeles police officers for the savage beating of black motorist Rodney King, which acted as the catalyst for the 1991 LA riots. The officers, who stated that they believed him to be high on PCP and that they were therefore confronted by a person of abnormal strength, aggression and imperviousness to pain, justified their acts on the basis that King would have been perceived to be more difficult to bring under control than a normal (nonintoxicated) man. As no expert evidence was presented by the prosecution to refute the "myth" of PCP's transformative powers (presumably this pharmacological transformation was deemed possible by the prosecution), it was accepted as reasonable by the jury (Reed, 1992). Falk (1994:48), in a more reasoned understanding of PCP, concludes, in the light of broad research evidence, that "violent behaviour in connection with PCP use occurs upon a personal and social background and out of situational events" [and that, quoting Siegal] "it does not magically produce violent, assaultive or criminal behaviour" of the types often described. Crack cocaine is perhaps the primary current example of a demonized drug whose widely publicized and widely accepted effects are either wrong, misleading, or exaggerated to an extent to make useful understanding difficult or nigh impossible for the lay public. Notions of instant addiction, inevitable addiction, that occasional or recreational use is not possible (never mind prevalent), that it turns users violent, even its danger to health, all are attributed to crack cocaine, but all are either untrue, uncontextualized, or unreasonable exaggerations (WHO/UNCRI, 1995; Ditton and Hammersley, 1994; Newcombe and Matthews, 1989; Miller, 1991; Kaplan, 1983; Alexander and Wong, 1990; Greider, 1995) that merely continue a theme that goes from one drug to another (and sometimes back again) over time.

Such perspectives on drugs' powers have often been combined with (and reinforced by) connections with "others" such as the Chinese (UK & US), the Chicanos (US), blacks from the South (US), the "working" (or dangerous) class(es) (UK & US) (Musto, 1987; Kohn, 1992; Parssinen, 1983; Berridge and Edwards, 1987; Bean, 1974; Mott and Bean, 1996; Gossop, 1996; Woodiwiss, 1997; Saper, 1974). Images of drug-induced "threats" to individuals (violence, unpredictable behavior) and society (behaviors and threats from those "outside" normal society) are often evoked, along with images of epidemics and inexorable growth of the problem if it is not checked by the strongest possible means (Trebach, 1987; Wisotsky, 1990). Kohn (1992:2) in *Dope Girls* elaborates on one particular constellation of fears: "Variations on this scene [racial contamination] set the tone of the British drug panic of the 1920s, firing on the potent juxtaposition of young white women, 'men of colour' (the term was current), sex and drugs. If the ultimate menace had to be summarized in a single proposition, it would be that they facilitated the seduction of young white women by men of other races." Thus the unscrupulousness of the Chinese, the mistrust and fear of the blacks, the fear of the dangerous classes, all lend a hand to a perception of particular drug usage (opium and cocaine primarily) as something practiced by "others" already the subject of concern and the cause of fears and anxiety.

Dope-fiend mythology

The combination of the two threats—both exaggerated, if not wholly constructed, in terms of their real dangers (transformative, degenerative)—permitted the emergence of a central figure around which much drug mythology continues to rely, the "drug fiend" or "dope fiend." Contemporary terminology and euphemism may utilize a different vocabulary ("junkie," "dope addict"), but the essence of what is feared in today's drug scene, as before, is characterized by earlier conceptions of the dope fiend. The dope fiend, as Lindesmith (1941: 199) critically pointed out, was commonly thought to be one of "the most dangerous and heinous criminals . . . linked with killing and rape," that [he] "becomes a moral degener-

ate, liar, thief, etc., because of the direct influence of the drug" (p. 202) and will "attempt to induce non-users to try the drug" (p. 205) to create a market for his custom. The constitution of the dope fiend was possible only through the exaggeration and distortion of the powers inherent within heroin, as an essentially transformative drug that stripped the user of his humanity, of the essences that make us "human." Such essences would include self-control, rational thought, and humane behavior toward others. Deprived of these important essences, the subject thus becomes dehumanized, depraved and unpredictable. Schlesinger et al. (1983) have argued that a similar dehumanizing, and thus de-legitimizing process occurs in the way "terrorists" are publicly presented by government and the media. Once this transformation has been considered to take place, in both the drug user/addict and in the public mind, all manner of heinous behavior is easily attributable to and expected of those transformed. Mythical but nonetheless pervasive (at least in the common imagination—which often includes the media) behaviors commonly associated with the dope fiend are numerous, but they tend to rely on rumor, hearsay, and unsubstantiated (and unsubstantiable?) information countered by much of the drug research literature. Even simple theft, as in the UK government's "Heroin Screws You Up" campaign, where a teenager is depicted as having stolen his mother's wedding ring to buy heroin, evokes the transformative process from normal to degenerate—both physically and morally (Rhodes, 1990). More serious, more threatening behaviors such as the "evil" drug dealer who entices children to buy drugs from ice cream vans ("Deadly dangers as drug dealers set out to target the young"—*Worthing News*, 12.8.93), who "laces" soft drugs (or even sweets) with hard drugs to get them addicted, or who sells drugs at or even within the school gates ("Playground pushers are selling amphetamines disguised as jelly beans to schoolkids"—*The People*, 17.10.93) or on street corners, all depict the image of a person so depraved (preying on the most vulnerable) that he is reduced to some of the most inhuman of acts. From here it is a short step to imagine the adul-

teration of heroin and other drugs with dangerous poisons or other substances. Sometimes, as with the reporting above, such leaps of the imagination are helped along a little. The "Blue Star Hoax" is one very prominent and international example. Formally acknowledged as a hoax with absolutely no substance by the Drug Enforcement Administration (a body not associated with the playing down of drug dangers) the claim has been widely made and disseminated (often in the form of a printed flyer) that a children's washable transfer "tattoo" with a picture of a blue star on it contains LSD that would be absorbed into the child's skin. Claims of the tattoos having already caused injury and even death to children are also made. The flyers, often citing numerous authoritative sources, have been sent to schools and police forces in a number of states in the US and to other countries, resulting in many such recipients sending out further warnings to parents and the local media. The DEA says that "hundreds of incidents of the 'Blue Star Hoax' have been documented" but that "no LSD-laden 'tattoo' incidents have *ever* been documented" (DEA, 1992, my emphasis). The flyers often link in to other related myths that have surfaced around LSD regarding the targeting of children. In England, *The Times* (18.9.93) ran the statement "Drug dealers are luring youngsters by selling cut-price LSD with pictures of comic characters such as Dennis the Menace drawn on the hallucinogenic tabs, West Midlands police say." But the DEA, in the US context and comparatively more informed than the West Midlands Police, is also willing to play down rumors such as "The cartoon characters go all the way back in the history of LSD. . . . Obviously Bart Simpson is new, but we don't see any evidence of an effort to market this to young children" (*Los Angeles Times*, 18.4.92). The blue star LSD tattoo sums up much of dealing mythology. Many people's fears about drugs resonate most strongly in relation to children. The existence (albeit mythical) of such a product (a children's transfer, clearly aimed at getting them "hooked") *proves* that dealers are evil. Kaplan (1983) has adequately dealt with the misconceptions and contradictions that such beliefs entail in relation

to heroin, but much of the logic also applies to the Blue Star Hoax. Why target children if they do not know they are taking the drug? LSD is not a drug that induces addiction, and thus “hooking” a new clientele is not going to result by merely exposing children to it. Moreover, unknowing use of LSD is likely to lead to a “bad trip,” again, not conducive to encouraging a market. Children have little money and are therefore an unreliable source of income; providing them with cheap “tasters” is inherently uneconomical. Many drug rumors, however, run as they do because ignorance of drugs’ effects is widespread, and fear often overcomes reason—and, of course, as we have seen, they are given authority by schools, the police and the media.

The arguments and rumors are consistent. The black market has no regulation; these people (the dealers) cannot be trusted—even if they once could, they are transformed. To make a profit, drugs *will* be diluted. Desperate¹⁶ and out-of-control “junkies” who have neither the time nor the inclination to use safe substances will put in anything that comes to hand; they simply do not care.

Fear and loathing of black-market transactions

As suggested by the quotation from *Trainspotting* at the beginning of this paper, “scoring gear” is perceived as a risky business. We can speculate that certain consistent structural conditions in which users are obliged to engage are also likely to provide encouragement for the ready belief in dangerous adulteration/dilution. Drug users are often forced into economic transactions (to obtain drugs) with people they neither trust nor would be involved with in other circumstances. Such conditions are placed under increased strain when users are forced to buy their drugs from a dealer who is not their normal source¹⁷ or when experience of, or rumor about, an unexplained death in the drug-using community (especially the death of an experienced user) needs an explanation.¹⁸

These explanations are potentially furnished on occasion by the market itself. In Coomber (1996b) one cocaine dealer tes-

tified that spreading rumors about the quality of other “firms” drugs was one way of trying to capture a bigger share of the market. Rumors are a powerful instrument in any circumstances, but in a context already riddled with mistrust and perceived vulnerability their power is probably enhanced. One participator in a debate in the *alt.drugs.hard* newsgroup stimulated by the posting of the questionnaire relating to Coomber (1997c) on the Internet relayed one position on the uncertainty of the market: “There *are* a lot of smackheads turning up [dead]. A junky runs out of funds for his habit so he peddles whatever . . . instant coffee as cheeba, baby laxative as china, draino (in the 70’s) as skag . . . to make enough \$\$\$ to cop real dope. This time it’s some bug shit . . . all he could find. ‘Hell,’ he figures, ‘that cat will surely taste it before he cooks and slams it.’ Well, I guess he didn’t make the guy for being as sick as he was . . . dude couldn’t take the time for a test . . . fellow’s blue, works hanging outta his arm, and he didn’t even get the plunger all the way down.” Another “ex-junkie” now providing anti-drugs sessions to schoolchildren casually expresses the truism that users “never know what they are taking” but also that “the economics of the drug market dictate that addicts are buying a great deal of poisonous trash for every precious fix” (*Observer*, 21.6.87). As the beliefs of even drug dealers themselves (who were also users) in Coomber (1997b; 1997c) show, belief in “dirty” drugs is common among those who buy and sell drugs. The very act of buying drugs thus constantly raises for buyers the spectre of distrust and their own comparative vulnerability.

The “lacing”
of drugs

In fact, the fear of our food or drink, or anything we consume, being “laced” (adulterated) with poisons or stupefying potions is an age-old one. Roman nobles and emperors used slaves as food and drink “tasters” or testers to try to avoid assassination through poisoning. Numerous Greek and Roman legends contain acts of or attempts at poisoning or doping in their story lines, as do many “classical” (*cf* Shakespeare’s *Hamlet*; Dickens’ *Mystery of Edwin Drood*; Bernard

Shaw's *Passion, Poison and Petrification*; Robert Louis Stevenson's *Treasure Island*¹⁹ and contemporary (cf Caleb Carr's *The Alienist*; Disney's *Snow White*; Irvine Welsh's *Trainspotting*) plays and novels.²⁰

Historically, many customers at public houses have feared being drugged before being "shanghaied" or kidnapped and forced to become sailors at sea. As with adulteration/dilution, such tales are likely to be exaggerations of the real risk involved, but they do nonetheless suggest a historic sensitivity to the *potential* vulnerability to substances hidden in things we consume.

This broader awareness of our vulnerability is in fact widespread, part and parcel of our everyday involvement in being consumers. It of course applies to secondhand cars (What is going to go wrong? Is there sawdust in the engine?) and applied to lame horses before that; black-market televisions or video recorders, in fact any product that does not carry a guarantee and/or is received on "dodgy" grounds involves a subjective feeling of vulnerability and mistrust. As consumers we are even unsure (and often justifiably so) whether "legitimate" products making claims of purity, such as "100% beef," mean what they imply as opposed to saying what they mean ("beef" sometimes meaning parts of the animal consumers would not be impressed with). We should not be surprised that the more clandestine the activity, the greater the feeling of vulnerability.

Investments
in the belief of
drug dangers

For drug users, beliefs about certain dangerous aspects of drug use, such as the possibility of dangerous contaminants in their drugs, may in fact also add to the "glamour" of drug use itself. In this sense it should not be ignored that many drug users may *invest* in the beliefs of certain stereotypes about themselves and the drug scene. The alternative may be to acknowledge drug use as something predominantly mundane and less risky and therefore less of an investment in self-esteem. On a related but distinct theme, concern over adulter-

ants/diluents and “purity” has long been used as a justification for the introduction of numerous legal controls over the production and sale of various products, including foodstuffs and medicines (*cf* Berridge and Edwards, 1987; Woodiwiss, 1997), including opium. Moreover, these controls, while ostensibly concerned with ensuring quality products for consumption, were ultimately more far-reaching in terms of legislation and their effect on using populations than they at first appeared. They helped provide a basis for publicizing fears around poorly prepared (uncontrolled) and dangerous medicines or poisons, finally resulting in new conceptualizations of those drugs and punitive frameworks around their uncontrolled dispensation and use. Additionally, the original controls over drugs such as opium (which was self-administered, widely used, and sold from all manner of premises) were often rationalized and justified as necessary in the name of safety and the public health. As has been shown (Berridge and Edwards, 1987) such interpretations of the dangers inherent in the unlicensed supply of opium at this time cannot be divorced from the growth of the pharmaceutical and medical professions and/or public (predominantly “middle-class”) morality on its usage. Nevertheless the impact on the public mind of finally introducing legislation to ensure “quality” of product was arguably far-reaching.

Lack of
alternative
scientific
evidence to
counter beliefs

There has been little access to scientific information that would counter the idea of dangerous adulteration. Disparate forensic evidence, mainly referring to basic purity but sometimes to broader comprehensive sample profiles, does exist, but little attempt has been previously made to “pull together” this information and build up a picture of what street drugs are actually made up of—or, more importantly, what they are *not* made up of. As related earlier, this is in part a result of the way such information is produced and disseminated. Often the profiling of illicit substances is reported in the forensic science literature as a by-product of the reporting on the reliability of the analytical procedures being used (King, 1995). Interest in the profile of what is in the drug being ana-

lyzed has thus often taken second place to the development of the methodology and perceived accuracy of the technique and equipment involved. Where reporting on adulterants/diluents has taken place, it (again) has largely been a by-product of the relatively few comprehensive analyses (as compared with the total tested for drug only). The Drug Enforcement Administration (DEA) in the United States does undertake regular profiling of heroin and reports in larger numbers on the adulterants/diluents found, but it merely lists them with little or no discussion of their meaning, making a connection to a broader picture difficult to ascertain (DEA, 1990-94).

The point to be made, then, as regards the forensic evidence is that there is generally little attempt to find "what else" is in street drugs; when there is an attempt, little is done with the evidence. An absence of dangerous adulterants is not met by discussion but one assumes by a silence that has either not recognized its significance or deemed it impolitic to acknowledge it. Perhaps it is informally considered not unreasonable for such a myth to be perpetuated. It would not be the first time that the argument that some exaggeration of drug dangers may be no bad thing (based on the idea of it as a deterrent) has been expressed to this researcher.

An alternative view is to acknowledge that just as the drug user may "invest" in the idea of dangerous adulteration/dilution, so may drug commentators of varying persuasions. To those in favor of drug prohibition, dangerous adulteration/dilution (among other dangers to the individual and to society) is indicative of why drug use and the trade in drugs must be prevented. For those committed to certain harm-reduction approaches, and to those erring toward or committed to drug legalization, it represents a rationale for the provision of clean, consistent (strength, purity) drugs (supplied either through the state or through commerce) to enhance the safety of those who do and will use drugs.

Adulteration as a reinforcer of other myths and thus of its own credibility

The idea of dangerous adulteration/dilution is a myth that is essentially reliant upon a number of other drug myths for its origin and perpetuation. Without the myth of the evil drug dealer, which itself is partially reliant upon the image of the depraved drug fiend, which in turn is partially reliant on the unreasonable exaggeration of the degenerative powers of drugs like heroin, the rationale for its existence would be difficult to maintain. There is, however, also a circularity and perpetuity about the interrelationship of the myths and the relatively uncontested truth about dangerous adulteration/dilution. While dangerous adulteration/dilution is uncontested it gives greater credence to those who choose to believe and perpetuate the other myths—dangerous adulteration could occur only if these other myths were true. Without the status of “truth,” dangerous drug adulteration/dilution becomes another contested image that in turn further weakens the credibility of the other myths.

Consequences of drug dealer and drug mythologies

The impact of the various drug-dealer/dope-fiend mythologies on public policy can only be speculated upon. At present, however, drug dealers are dealt with in a comparatively harsh way within most criminal justice systems.²¹ A conviction for drug trafficking or drug dealing in the UK can result in the law being applied more severely than for almost any other offense, including terrorism, and proposals are in hand to increase the severity of sentencing even further (Campbell, 1996). Even in the Netherlands (normally assumed to be “soft” on drugs) the trends for prison terms have been upwards even though for other offenses they were going down (Dorn, Murji & South, 1992). In fact, this is representative of a more general trend in which “the escalation in the

use of imprisonment for drug trafficking runs counter to the general trend in the twentieth century for the relative decline in the use of custody" (Dorn, Murji & South, 1992:199). In the US, increasingly severe penalties have been imposed on those convicted of drug dealing in recent years. Consider the imposition of the comparatively harsh "mandatory minimum" sentences, where federal judges have been compelled to give fixed sentences (with no parole) for particular drug crimes, and the "100 to 1" rule, whereby the weight of crack cocaine is multiplied by an arbitrary 100 compared to the same weight of powdered cocaine for sentencing purposes. It is also significant that the structuring of these laws in this way has resulted in a massive imbalance in the way white and black offenders are dealt with. "Powder cocaine offenders in prison are predominantly white (32 percent) or Latino (39 percent). But 94 percent of the 3,430-plus crack defendants in federal court last year were black" (Morley, 1995).

The severity of legal sanction against the dope fiend is thus often quite extreme, and as Saper (1974:183) suggested more than 20 years ago, many existing "policies have been developed largely through myth, fantasy, and historical accident, interwoven with occasional rationality." We should perhaps consider whether laws such as those mentioned above would be seen as being as credible and as necessary without the perpetuation of images of activities such as dangerous adulteration/dilution or of evil dope fiends preying on children, or without (dehumanizing) beliefs of moral and physical degeneration supposedly inherent in some drug use.

Conclusion

The primary contention of this paper is that the widely accepted phenomenon of dangerous adulteration/dilution of illicit drugs has until recently assumed the status of uncontestedness of a truth, but now is moving into the realm of myth. Its status has become contested due to the absence

of empirical evidence to substantiate its existence, and because reasoned inquiry suggests that such practice is logically contradictory and not consistent with the practice of drug markets and those who operate within them. It has been suggested that the emergence of, the perpetuation of, and the assumed verification of beliefs of dangerous adulteration/dilution practices were/are the result of a complex interplay of various historical and structural circumstances. Distortion and exaggeration of drugs' effects, primarily the transformative powers of drugs such as heroin, and the closely related fear of "others" enabled the image of the "dope fiend" to emerge. These factors combined with various other factors: lack of alternative proof, lack of trust inherent in drug markets, and the circular reinforcing action of the other often believed myths. Each of these factors helped produce a scenario where belief in dangerous adulteration/dilution could flourish and bloom, ultimately perpetuating an image of drugs and drug dealers that remains unhelpful.

Notes

1. The term "adulterant" is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Adulterants proper are in fact other psychoactive drugs (like caffeine or paracetamol), which are much cheaper than the main substance but have a similar or complementary effect when mixed with it and therefore help hide the fact that the substance has been diluted. Substances that are not psychoactive, such as glucose and lactose, are more formally known as "diluent." These are added to a drug to increase the amount of drug available to be sold. It should be noted, however, that some substances found in street drugs are the result of the particular manufacturing process used to make the drug. In this sense those substances might be more properly referred to as "impurities." "Excipients" found in drugs (primarily pills/tablets) are the products used to bind the drug together. Common excipients are starch, gelatin or other gums (ISDD, 1994).
2. Vim and Ajax are the trade names of domestic cleaning agents. Traditionally, as today, they appeared in the form of a white scouring powder (although there are now a number of liquid scourers generic to the originals to be found under the same trade name). Constituents of Vim are as follows: approximately 95% plus is made up of a non-soluble chalk, calcium magnesium carbonate; 1%–5% (but closer to 1%) is a detergent powder chlorine release agent that accounts for

approximately .3% bleach (Lever Industrials Ltd, 1996). The nonsolubility of the chalk alone would make it a poor candidate for adulteration/dilution, as it would be immediately obvious to users that they had been sold poor-quality goods.

3. While it is recognized that drugs such as paracetamol and phenobarbitone are not innocuous substances, they do not tend to be present in street drugs in amounts that render complications over and above those of the primary drug itself.
4. The belief of the presence of strychnine in a range of street drugs is commonplace. Apart from heroin, where, as we know, strychnine *does* appear in one particular manufactured variant (China White), at the point of manufacture, but not as an adulterant/diluent resulting from cutting for profit, it has also been thought to be commonly present in LSD. Strychnine however, is not a by-product of the synthesis of LSD, nor has it been found to be present in street LSD (Shulgin, 1996).
5. John Henry of the National Poisons Unit (England) has related that the liver deals comfortably with the levels of strychnine found in heroin.
6. *Some* "street dealers," as we shall see, do dilute amphetamine further, but this is after the initial large cut. If the amphetamine was being progressively diluted as it passed down the system, percentage purity would vary much more, e.g., 60% to 40% to 20%, etc. This does not tend to be found by seizures regardless of weight seized.
7. While this is true of the UK, in the US the Drug Enforcement Administration does undertake limited but comprehensive profiling of heroin in its *Heroin Signature Program* on an annual basis.
8. In the 31 interviews undertaken in Coomber (1997b), 10 received the bulk of their income from drug sales; of these, three were wholesalers, six categorized themselves as "street" dealers, and one was a "runner." Of these individuals, only one of the wholesalers reported "sometimes" adulterating/diluting the drugs he sold, two of the street dealers did so "sometimes," and one did so "mostly." A further 14 supplemented their income in this way through drug sales. Four of those who reported only supplementing their income were again "wholesalers" who sold on to others who were interested in shifting smaller amounts of drugs. Only one of these wholesalers reported ever adulterating/diluting drugs.
9. In the survey conducted over the Internet, one respondent did in fact report having used "a small amount of strychnine to teach a guy not to bullshit us." However, as argued in Coomber (1996a), the specific use of strychnine not to bulk a product but to use it to hurt specific individuals is qualitatively distinct from an understanding of adulter-

ation where the danger is thought to come from the day-to-day methods of distribution, because it needs to be understood as a direct attempt at specific harm. If a car is used to murder somebody, it would hardly be reasonable to understand the incident as an accident or even within the normal understanding of what dangers cars on the roads constitute to pedestrians.

10. Of the 10 who said they had firsthand knowledge of dangerous adulteration, seven were highly suspect, giving either contradictory information or none of any substance at all, despite this information being specifically requested. For example, one respondent stated, "People cut most *acid* with strychnine to get more acid out of a vial." The belief that strychnine is found in LSD is a common one among users, supposedly explaining some of the physical discomfort that may accompany its use. Strychnine, however, is not a substance that forensic analysis has found in LSD (see note 4). Another stated, "Ground glass, always, to get a higher profit—XTC (MDMA) is always cut." Again, as we have seen, ground glass is not found. Another respondent providing little substantiation merely stated, "Like I said, it's common." The fine distinction between this category of respondent and those who believed in dangerous adulteration but acknowledged that they had no firsthand knowledge could perhaps be typified by this example: "Don't know the cutter, know victims of rat poison (including myself)." This person clearly believes he "knows" that rat poison is used but is unable to state it unequivocally.

In the end, only five were considered to be reporting what were potentially "true" examples of problematic cutting. Of these, four referred to talcum powder. Talcum powder, if it were a common cutting agent (and it isn't—being hardly ever found in analysis (*cf* DEA 1990–1993), and if it was repeatedly administered regularly over time under specific conditions, might cause problems to susceptible individuals. It does not, however, as an occasional diluent, present significant health risks to the drug-using population in general. Moreover, it is clear by the responses to the question asking them why they would not use a dangerous substance that those using talc did not conceive of it as such. It is, after all, still found as a "filler" in some over-the-counter drugs, such as some brands of aspirin. One respondent reported using "a very small amount of strychnine to teach a guy not to bullshit us"; however, as argued elsewhere (Coomber, 1996a), the purposive use of a poison to harm a targeted drug user cannot be seen to be indicative of or meaningful for a normal understanding of drug adulteration/dilution practices any more than can the use of a car to purposely injure someone be seen as indicative to a normal understanding of road hazards and related accident statistics.

11. The Home Office Forensic Science Service, however, has found that " 'ecstasy' drugs (MDMA, etc.) are almost always encountered as tablets. The content is typically 100 mg, with lactose as the major excipient" (King, 1995).
12. The real issue surrounding this death is whether it is pertinent to blame the drug or the information and practices that surround its use (ISDD, 1996). Many individuals consume large amounts of water because they believe this will alleviate the effects. If Leah Betts had not consumed the water, she would not have died. The amount of water she consumed was sufficient to produce hyponatremia regardless of any pharmacological effects from the MDMA. To blame the drug alone in such contexts is clearly unuseful and smacks of scapegoating. If she had not believed the drug's effects to be alleviated through drinking water, she would not have consumed so much so quickly. The inquest of Leah Betts's death recorded a verdict of accidental death caused by nondependent use of drugs. Although hyponatremia was the literal cause, it was deemed that if Leah Betts had not taken Ecstasy, she would not have died. The reporting of the inquest findings showed a picture of Leah Betts with the caption "Poisoned by drug" (*The Independent*, 1.2.96), and subsequent media reporting (which has been copious) almost without deviation refers to her as someone who died after taking one Ecstasy tablet.
13. Indications are that in all probability this now also holds true for the US and elsewhere too (*cf* DEA 1990–1994).
14. The sense in which "myth" is being used here is consistent with modern colloquial usage, which is closer in its approximation to a widely held falsity like those stated in the text. Myths proper, in the academic understanding of them, have been discussed more usually as "a narrative of events; the narrative has a sacred quality; the sacred communication is made in symbolic form; at least some of the events and objects which occur in the myth neither occur nor exist in the world other than in the myth itself; and the narrative refers in dramatic form to origins or transformations" (Cohen, 1969:337). Thus, in this paper at least, I am not attempting to unravel the deeper meaning that the belief in dangerous adulteration has for society. Rather, I am concerned with the more narrowly focused problem of demonstrating its falsity and how it may have originated. For further discussion of myths and their meanings, see Samuel and Thompson (1993).
15. Relative, that is, to most other contested notions. I of course accept that almost *nothing* is completely uncontested. Also, because almost everything, including scientific "laws" (witness evolution vs. creationism), is often contested, most things are a "myth" to a significant proportion of people. Sometimes this contestation is derived

from an ideological position. In relation to dangerous adulteration, contestation is rare, especially in the scientific literature.

16. The theme of desperation in fact was a common link to each of those interviewed in Coomber (1996b). It was the desperate "junkies" (usually heroin) who were considered to be likely to adulterate/dilute the drugs they sold, removed of any care of the way they diluted their samples.
17. Regular users will tend toward having a regular supplier whom they trust. When this supply is unavailable, users are forced to look elsewhere for their drugs. In contradiction to much dope-fiend mythology, rather than seeing an alternative provider as likely to provide drugs with incentive (i.e., in an attempt to boost custom, provide good-quality drugs), users often expect to be given a raw deal by the "other" dealer.
18. Sudden deaths of heroin addicts have been speculated to occur when there is a change in the context or environment where the drugs have been taken (Bucknall and Robertson, 1986). It is thought that this relates to the psychological aspect of tolerance whereby tolerance to effects is partly inclusive of set and setting as well as drug. In this way an experienced addict who uses heroin in unfamiliar circumstances may be relatively less tolerant because familiar cues are missing, resulting in overdose from a "normal" dose. The notion of literal high purity or poisonous adulteration is often unsupported by the fact that other users also participated in the use of the same drug at the same time and that forensic analysis sometimes shows the drug to have no unusual characteristics, not even high purity. The combined use of other drugs, particularly alcohol, is also often hypothesized to be a contributing if not causal factor.
19. These are but a few. Others could include Congreve's *The Morning Bride*; Chaucer's *The Arcadia*; Wilde's *Lord Arthur Savile's Crime*; Shirley's *The Cardinal*, but again, this list is only a small and indicative selection of the way poisoning has permeated a broad range of literature.
20. While this imagery has often represented such activity as one-dimensional and descriptive, at times it is clearly a metaphor for much more. Alexander (1971:19) has further alluded to the often suggested idea that in *Hamlet* "poison" is portrayed both literally and as a metaphor for a kind of "enemy within," a hidden corruption that disguised from that around it will insidiously bring it down. Thus the fear of adulteration is part of a broader fear of that which we hold dear being destroyed (sin of sins) by that which we hold dear. We fear, but what we fear most is our fears being realized through betrayal.

21. And indeed outside of criminal justice systems. A number of murders in Northern Ireland in 1985 and 1986 have been linked directly to the Irish Republican Army (IRA). Direct Action Against Drugs is reputedly acting on behalf of the IRA. They "have occasionally issued threats of direct action against drug dealers, which they claim is popular in communities which suffer the most from the consequences of drug dealers' activities" (Sharrock, 1996).

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Coomber, R. (1997f) 'How Often Does the Adulteration/Dilution of Heroin Actually Occur: An Analysis of 228 'Street' Samples Across the UK (1995–1996) and Discussion of Monitoring Policy', *International Journal of Drug Policy*, Vol. 8, No. 4. pp. 178–186

This paper sought to extend what was known about the heroin that was sold on the streets of the UK beyond conventional forensic analysis and reporting. Due to the limitations in the extant procedures for the forensic analysis on street drugs it was impossible to tell by this method what percentage of samples contained adulterants and in what proportions. By special arrangement 228 'street' heroin samples from across the UK were analysed for the existence of adulterants. Nearly half were found to contain none at all. A significant finding. Secondary analysis of previously unpublished figures from H.M. Customs and Excise further revealed that the proportions of cutting agents found in heroin prior to importation were often quite small. It was thus confirmed that the cutting of heroin was not a routine practice by suppliers *either* before or after entry to the UK. Where cutting agents were found, the practice was significantly correlated with particular source countries and cutting agents often constituted only a small proportion of those samples where they were found. It was further argued that the existing procedures for the collection of samples and of the reporting of findings was insufficiently systematic and was non-strategic. Suggestions for improvements to this process were made.

HOW OFTEN DOES THE ADULTERATION/DILUTION¹ OF HEROIN ACTUALLY OCCUR ?

AN ANALYSIS OF 228 'STREET' HEROIN SAMPLES ACROSS THE UK (1995-96) AND DISCUSSION OF MONITORING POLICY

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Recent research has suggested both that illicit heroin in the UK may not be adulterated/diluted ('cut') with dangerous substances and also that it is actually adulterated/diluted far less than is often believed (Coomber, 1997a, 1997b, 1997c). Forensic evidence does not report on the proportion of samples where no cutting agents are found but merely presents evidence of when they are and what they are, making judgements about how often the cutting of drugs takes place reliant upon other less definite data. Moreover, from the presentation of existing forensic data on cutting agents the impression can be formed that the adulteration/dilution of heroin is the norm. A specially arranged analysis of 228 'street' seizures to test this assumption, however, suggests that nearly half of the heroin which was sold for use in the UK in 1995-96 may not have been adulterated at all. Comparison of this new data with previously published data on 'cutting agents' suggests that much less adulteration has probably also been common in previous years. When compared with other new data from Customs seizures, the argument put forward by Coomber (1997a) that most adulteration/dilution is professionally managed (as opposed to the work of a strung-out 'junkie') prior to importation and that only a relatively small proportion of heroin sold is adulterated/diluted by those believed to do so - the 'street' dealer - is strengthened. Current monitoring procedures are unsystematic and insufficient. At the very least, effective monitoring of the make-up of illicit drugs would improve understanding of trafficking and production trends as well as provide evidence of what happens to drugs after they reach the street. On this basis, policy recommendations are made for improved strategic recording of future forensic data for, in the first instance, the UK, and then for the possibility of a Europe-wide approach to such monitoring.

¹The term adulterant is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Adulterants proper are in fact other psychoactive drugs (like caffeine, or paracetamol) which are much cheaper than the main substance, have a similar or complimentary effect when mixed with it, and therefore help hide the fact that the substance has been diluted. Substances which are not psychoactive, such as glucose and lactose, are more formally known as 'diluents'. These are added to a drug to increase the amount of drug available to be sold. It should be noted, however, that some substances which are found in street drugs will be the result of the particular manufacturing process used to make the drug. In this sense those substances might be more properly referred to as impurities'. 'Excipients' found in drugs (primarily pills/tablets) are the products used to bind the drug together. Common excipients are starch, gelatin or other gums (ISDD, 1994).

LESS ADULTERATION/DILUTION: BACKGROUND INFORMATION

After reviewing the forensic evidence in Coomber (1997a), it was speculated that less adulteration/dilution of street drugs actually takes place than is commonly perceived. Less adulteration/dilution was suggested to occur in two distinct senses: first, that the actual amount or percentage of adulterant/diluent generally found in heroin was lower than expected; second, that this was a likely consequence of less adulteration/dilution actually taking place down through the chain of distribution than previously thought. In relation to heroin it was noted that when 'street' seizures were compared with Customs seizures that there is often less difference in purity levels between the two than might be expected.² This relative lack of disparity had also been noted by Lewis et al. (1995) (also UK) and Kaa (1994) in Denmark over a 12-year period, and recently by De la Fuente et al. (1996) in Spain. Respectively, it was noted that average differences were found of around 8–14% (Coomber, 1996a); 15–25% (Lewis et al., 1995) and 9% (Kaa, 1994). Coomber (1997b) noted that information gleaned from 31 drug sellers at varying points in the chain of distribution supported the proposition that adulteration/dilution is not a predictable outcome of various drugs³ working their way through the chain of distribution. In relation to those who supplied/dealt in heroin, 65% (11) said that they never adulterated/diluted it at all. Only one heroin dealer (dealing 4 to 5 ounces a month) said he always diluted the heroin (glucose, by around 10–20%). Four others adulterated/diluted only 'sometimes'. No direct relationship appeared to exist with the level of involvement, i.e. how much they sold, how long they

had been selling for or what proportion of their incomes depended on drug sales. Data from 80 drug dealers from 14 different countries, responding to research mediated through a questionnaire on the Internet,⁴ and partially replicating the research of Coomber (1997b), indicated strongly that those findings can be applied, albeit with proper caution, internationally (Coomber, 1997c). Evidence was also submitted to suggest that less adulteration occurs (i.e. the number of times each sample of drugs is adulterated/diluted) than is commonly thought to take place with all 'street' drugs.

A further issue which was raised by Coomber (1997a) related to the fact that 'purity' is often not what it seems when considering issues around adulteration/dilution. Analysis reveals that a heroin sample, apparently only 65% pure, may in fact have no adulterants/diluents present (Gough, 1991; HM Customs & Excise, 1995). Depending on country of origin, and thus on method of manufacture, the production of the heroin itself produces a more or less 'pure' product. In some cases, various other opiate alkaloids, such as noscapine and papaverine and acetylcodeine (which is a by-product of heroin manufacture), may account for the bulk of the other 35%. In the reporting of drug purities this important fact almost invariably remains unstated, inadvertently giving the impression that the other 35% in fact comprises adulterants/diluents put there by those who sell them.

PRESENTATION OF FORENSIC EVIDENCE: CUTTING AGENTS

As stated above, normal reporting of heroin purity profiles may be inadvertently misleading by giving the impression that 65% purity means the sample

²Whilst it is true that forensic scientists might not expect the difference to be great, the general rationale for how street drugs become adulterated is heavily bound up in the mythology of the dope-fiend which suggests that most adulteration/dilution is carried out by the 'street' dealers themselves (see Coomber 1997a for elaboration). Moreover, the reporting of these relatively narrow differences as being important as an indicator of drug distribution practices is not something which has been of concern to forensic scientists.

³The point to be made here is that whilst drugs such as amphetamine are heavily diluted it appears that this is normally the result of a very large initial 'cut' down to a low purity. That seizures rarely find gradations of purity (e.g. 60% pure, 40% pure, 20% pure) suggests this is true. If amphetamine were diluted down through the hierarchy of distribution (as in the classical model) then it is likely that such gradations would be found.

⁴See Coomber (1997c) for further information on this research and the methodology which enabled it to take place.

contains 35% 'impurities'. Again this will not necessarily be assumed by the forensic science community but others who consume these figures may not be as well informed. In fact, a senior forensic scientist related to me that he has constantly to remind even his own staff of this point (King L, Head of Drugs Intelligence Laboratory, Forensic Science Service, UK, personal communication, 1996). The public reporting of drug purities certainly gives no indication that 65% purity may in fact also refer to drugs with no adulterants or diluents found.

A second problem lies in the way 'cutting agents' found in illicit drugs are commonly presented. For example, in 1993 the substances listed in Table 1 were presented to be the cutting agents reported in heroin (*Drug Abuse Trends*, 1993, p. 19) which also contributed to public information on drug purity.

TABLE 1: Cutting agents reported in heroin during 1993

Agent	Percentage
Paracetamol	41
Caffeine	33
Benzocaine	7
Diazepam	5
Procaine	4
Phenobarbitone	3
Others	7

Note: Percentages refer to the proportion of all cutting agents notified. In some cases, more than one agent was found. No quantitative data were available.

In both the UK and USA reporting of adulterant/diluent content of illicit drugs, as in the example above, data are given only where substances are actually found. No data are given on the proportion of samples where no adulterant or diluent was found.⁵ It is not uncommon for an adulterated/diluted sample to contain more than one such substance. Given this, and the way that the data are presented, it is not entirely implausible for Table 1 to be interpreted as showing 41% of the samples to have one or more

adulterant/diluents and the remaining 59% to be 'pure' heroin. As it is, the percentages, which add up to 100%, certainly do not tell us that 100% of the samples had an adulterant/diluent added – although it may be argued that, perhaps unintentionally, they suggest that a very high percentage did.

ANALYSIS OF THE 228 HEROIN SAMPLES FROM ACROSS THE UK

Methods

To date it has not been normal practice for the disparate forensic services in the UK to collate information on drug purity, drug adulterants/diluents and impurities in any nationally coordinated or even consistent manner as regards type or method of analysis for the purpose of monitoring. As such, many of the data which inform bodies such as the National Criminal Intelligence Service (NCIS) and the Home Office on purity and cutting agents result from a mixture of procedures and approaches. Little comprehensive profiling of drugs is undertaken and none is done as a matter of considered policy in the interest of monitoring. Over any given year, for different reasons, a number of heroin samples will be analysed for purity and profiled for adulterants/diluents. This information will then be collated (as a rough guide to trends) for publication in Home Office Bulletins and other such public (and restricted) publications.

In collaboration with the Forensic Science Service at Aldermaston in England, it was arranged for information on all heroin samples that had been tested for adulterants using gas chromatography and mass spectrometry in UK laboratories (1995–96) to be collated and brought together at Aldermaston. A total of 228 samples made up the newly collated information. All samples were police seizures and were designated as 'street' seizures by the Forensic Science Service.

Because of the nature of drug seizures, and of the way that such profiling is carried out, the samples analysed represent a fairly random selection of heroin sold in the UK during this period.

Confirmation of less adulteration

The most important finding revealed by the analysis is that in 44% (100) of the samples no adulterants were

⁵In the USA information on the percentage of analysed street samples which contain no adulterants/diluents is available through the Drug Enforcement Agency's Domestic Monitor and Heroin Signature Programmes. It is not, however, contained within the information which is released for public perusal or even within the DEA itself.

found. Whilst we might expect a percentage of illicit drugs to be adulterated prior to importation this finding appears to support the findings of Coomber (1997b) where only a minority of those who sold heroin stated that they adulterated/diluted the heroin they sold. Thus, of 228 random street seizures of heroin nearly half contained neither paracetamol nor caffeine (the predominating adulterants of heroin) or any other such agent. As we can see from Table 2, these two substances still predominate, as in Table 1, but dissimilarly here we can see that a maximum of 56% of the 228 samples contained cutting agents.

Perceived differences between the 1993 representation of the proportion of cutting agents and the present sample

If we now restructure Table 2 and, like the table from *Drug Abuse Trends*, exclude those samples where no cutting agent was found, we see that the percentage figures change in a potentially significant way. Percentages for the 1995-96 samples (taking the 186⁶ maximum which did contain a cutting agent) now refer to the proportionality of appearances of cutting agents in samples where cutting agents appeared. Once this recalculation has been carried out we can see that the figures begin to look remarkably like those presented in *Drug Abuse Trends* (1993). Respective percentages thus become those given in Table 3.

The predominating cutting agent, paracetamol, at 40% is almost identical to that in the table from *Drug Abuse Trends* (1993). The percentage with caffeine is slightly higher but still well within reasonable comparable limits and the rest tail off in almost the same proportions. Slight differences no doubt reflect minor changes in either trends of production or in origin of samples. We might reasonably speculate, then, that in 1993 a similar percentage of street drugs did not contain any cutting agents. As we shall see below this proportion varies owing to different contingencies but, as we have seen in relation to 1995-96, much heroin that is sold is not adulterated at all and there is little reason to believe this figure would differ dramatically for other years. For example, and as we shall see below, only 36% of those samples seized at importation in 1993 were adulterated. This figure may under-represent the actual percentage of drugs imported in 1993 that found their way on to the streets which had adulterants, owing to the vagaries of drug seizures. We can see that the gap between 36% and that speculated as possible (in and around 50%) could easily be closed, with the need for little extra adulteration to occur once in the country. As will be discussed below, it is not suspected that too much adulteration does occur after entry.

At the very least, it would be useful for monitoring purposes if future reporting on cutting agents

TABLE 2: Existence and occurrence of adulterants in heroin 1995-96

Cutting agent	Percentage of all 228 samples*
None found	44 (100)
Paracetamol	33 (75)**
Caffeine	32 (73)
Procaine	5 (11)
Bupivacaine	5 (11)
Phenobarbitone	4 (9)
Others	3 (7)***

Notes: *The total is greater than 100% because some samples contained more than one adulterant (the most common mixture was caffeine plus paracetamol).

**Paracetamol includes acetylparacetamol, an artefact produced by transesterification during analysis.

***Other substances found in isolated examples were: griseofulvin, diazepam and methaqualone.

⁶The maximum number of samples which could contain an adulterant is 186. This figure assumes no samples had more than one adulterant present and reflects the aggregated number of samples for each adulterant, e.g. 40%.

TABLE 3: Comparison of 1993 and 1995-96 data on cutting agents (%)

1993 sample (<i>Drug Abuse Trends</i>)		1995 sample (228 'new' analysis)	
Paracetamol	41	Paracetamol	40
Caffeine	33	Caffeine	39
Benzocaine	7	Procaine	6
Diazepam	5	Bupivacaine	6
Procaine	4	Phenobarbitone	5
Phenobarbitone	3	Others	2
Others	7		

were also to include reference to those samples where none was found. Although quantitative data were not available it should also be noted that in some cases cutting agents were present in trace (minuscule) amounts only.

Findings from samples seized by HM Customs and Excise 1990-1993: new material

Between 1990 and 1993 HM Customs and Excise commissioned a relatively extensive analysis of most of the imported illicit heroin seized by Customs. Being a privately commissioned report the data have not been available for public scrutiny. The information in the report does, however, once compared with the findings from the 228 heroin samples which are of 'street' seizures, provide valuable insight into certain aspects of how much adulteration/dilution takes place, when and where. Furthermore, it also illustrates that levels of adulteration/dilution and thus purity probably reflect less any trend in drug dealing than they do in predominating sources of production/supply.

The analysis and subsequent profiling of all heroin seizures by Customs and Excise between 1990 and

1993 (inclusive) provides data on a range of important trends in drug trafficking. By carrying out a profile analysis of a sample it can be determined (with reasonable accuracy) the source region from which the heroin originated, e.g. Turkey, Pakistan, Nigeria, as each source country or region tends to produce a particular configuration, or profile, of heroin.

One sample configuration of Turkish heroin for example (1992) looked as set out in Table 4.

The proportions of the various alkaloids may vary but the profile is relatively distinctive. The absence of methaqualone, caffeine and paracetamol, phenobarbitone and other miscellaneous substances is notable. Other alkaloids, particularly narcotine, are present in significant amounts.

If we look at an example of heroin of Kenyan origin (1993) (Table 5) we can see an immediate contrast, particularly regarding the alkaloids.

In recent years in the UK, heroin from Turkey has been prevalent, followed by that from Pakistan and India. When it comes to adulterants we find that Turkish heroin rarely contains any, for example in 1990 there were no adulterants found in 103 samples, in 1991 none was found out of 12 samples, in 1992 only four of 92 samples contained an

TABLE 4: Turkish heroin sample (Customs seizure) 1992 (5)

Methaq	Narco	Papav	Caffei	A-Cod	Diam	A-Mor	Parac	Pheno	Misc	Form
0	27.6	3.8	0	5.2	36.9	20	0	0	0	Base

Notes: Methaq = methaqualone; Narco = narcotine; Papv = papaverine; Caffei = caffeine; A-Cod = 6-acetylcodeine; Diam = diamorphine/heroin; A-Mor = 6-acetylmorphine; Para = paracetamol; Pheno = phenobarbitone; Misc = miscellaneous.

TABLE 5: Kenyan heroin sample (Customs seizure) 1993 (5)

Methaq	Narco	Papav	Caffei	A-Cod	Diam	A-Mor	Parac	Pheno	Misc	Form
0	1.4	0	0	4.9	58.4	3	0	0	0	Base

Notes; Methaq = methaqualone; Narco = narcotine; Papv = papaverine; Caffei = caffeine; A-Cod = 6-acetylcodeine; Diam = diamorphine/heroin; A-Mor = 6-acetylmorphine; Para = paracetamol; Pheno = phenobarbitone; Misc = miscellaneous.

adulterant (phenobarbitone in each case, with a range of 1.7% to 2.1%) and in 1993 only four from 50 samples had low levels of adulterant (three included paracetamol, one griseofulvin). Thus, of the 257 samples tested only 3% contained (small) quantities of adulterant.

Other source areas such as Africa, which fluctuates in terms of how important it is as a supplier to the UK, supply drugs with greater levels of adulteration. Of the 48 analysed over the four-year period, 40 (83%) contained adulterants. This was also reflected in a comparatively lower average heroin purity of around 34% compared with the average of 66%.

Table 6 shows the proportions of samples from all sources analysed for Customs and Excise which were found to have adulterants present.

In 1990 Turkish heroin (almost no adulteration) accounted for 37% of the seizures and consequently the figure of 17% reflects this. In 1991, where the percentage of samples found to be adulterated was 41%, Turkish heroin accounted for only 6% of the overall samples analysed that year. In 1992, when the number found to contain adulterants was back down to 20%, Turkish heroin was again the predominant supply constituting 55% of samples. In 1993 when the proportion of samples found with adulterants rose to 36%, Turkish heroin did constitute a healthy 49% of the samples but Pakistani and Indian heroin constituted 30% as opposed to 24% in 1992; Pakistani heroin samples in particular exhibited a rise from 42% in

1992 to 71% where adulterants were recorded.

It seems clear that if Turkish heroin were to monopolise the market then adulteration/dilution of heroin prior to importation would be negligible. As it is, the UK market is serviced by numerous source countries. In 1993 for example, around half of the seizures analysed by Customs and Excise came from sources outside Turkey, of which 70% were found to have adulterants present. Those which were designated as illicit heroin from Europe (meaning predominantly Holland, France and Belgium) were found to have adulterants in 100% (10 out of 10) of samples, sometimes (and unusually compared with other sources) in quite significant amounts.

In the 228 samples from 1995-96 we know that 56% had one or more cutting agent(s) present. Figures for 1995 Customs seizures are not yet available but if we hypothesise a similar proportion of adulteration (and non-adulteration) to that of 1993, as was previously speculated might not be unreasonable (see Table 3), we would need to explain a difference between 36% found at the point of import and the speculated band (around the figure of 56%) once on the street. Clearly, seizures at import (in terms of overall profiles/proportions) are not going to reflect exactly the drugs which reach the street. In fact a large Customs seizure from one source country may allow street heroin source prevalence to be shifted. Given this, we need only recognise a broadish percentage band within which we would need to

TABLE 6: Proportions of Customs seizures where adulterants were found 1990-93

1990	1991	1992	1993
17%	41%	20%	36%
49 out of 282 samples	77 out of 188 samples	33 out of 168 samples	37 out of 102 samples

approximate extra cutting to occur after import. The 20% difference is therefore potentially quite a bit lower once this has been fully considered, and when we consider that the 56% may in fact be less as well the gap may not be so great in reality. In fact, as we shall see, the difference may in fact be negligible. We need, then, to consider how much adulteration/dilution results from the practice of drug dealers once the heroin is in the country.

In Coomber (1997b) around 35% of the 17 heroin-sellers indicated that they sometimes (4); rarely (1) – once in 10 years; and always (1) adulterated/diluted the heroin they sold. If this is any way representative of UK heroin sellers then most (almost all) heroin passes through their hands without having any extra cut added. Some of those who do add adulterate/dilute the heroin they sell will of course be adding a cut to a sample which has already been adulterated/diluted rather than simply contributing to the overall percentage of those samples which have a cut in them. None of those who adulterated/diluted the heroin they sold as noted by Coomber (1997b) did so in excess of 25% of the sample. Most did so with a range of 10–20%. Although only 35% admitted to cutting the heroin they sold, the vast majority (94%) either never cut it, did so rarely or did so sometimes. If this is in any way representative of how much cutting occurs to heroin once it is in the UK then we can see that there should be little difference (in a perfect comparative world) between the percentage found to have been adulterated by Customs and the police and/or the purities of these respective samples. Without exception, those who did adulterate/dilute claimed to use sugars (glucose or lactose) to dilute the heroin they sold. We might thus expect that most dilution which occurs to heroin once it enters the UK is carried out with sugars.

Sugars as a common cutting agent in heroin

The table which appeared in *Drug Abuse Trends* (1993) does not mention any sugars as being found as cutting agents in heroin. In cocaine, the same publication lists glucose as appearing in 21% of samples analysed, mannitol in 16%, lactose in 7%. For amphetamine, glucose was found in 10% and lactose in 3%. Although the 228 heroin samples being considered here were not analysed for sugars it was the

general opinion of the various forensic laboratories involved that when heroin in the UK is tested for sugars these are rarely found. When they are, the most common substances are the sugars mannitol and glucose. If, as stated earlier, those reported by Coomber (1997b) as selling heroin and who also admitted cutting the drugs they sold all said they used a sugar (glucose or lactose) to cut the heroin with, then we would expect to find sugars at about the rate of cutting that occurs. As stated, sugars are not commonly found in heroin, possibly supporting the evidence that the cutting of heroin by drug sellers, whilst occurring, is neither prevalent nor probable.

Arguably, sugars would have been expected to occur more often than they actually do, not only in heroin, but also in cocaine and amphetamine. That it is paracetamol (41%) and caffeine (33%) that are predominant in heroin, caffeine (24%) in cocaine, and caffeine again (75%) which greatly predominates in amphetamine (the next closest being glucose at 10%) suggests that the bulk of the cuts are added high up the chain of distribution and that less cutting goes on once the drugs work their way through the chain. This may be presupposed for two reasons. First, it is widely suspected by forensic agencies that the paracetamol found in heroin is not commercial paracetamol but a brownish illicitly manufactured one, and caffeine in powder form is not easily available in bulk and costs more than substances like glucose. Second, and consistent with the findings in Coomber (1997b), those who did cut the heroin they sold without exception said they used sugars such as glucose and lactose. In fact the existence of mannitol, as with caffeine, is likely to indicate higher-level cutting of the drug as opposed to street-level cutting. Both mannitol and caffeine, when compared with glucose and lactose, are relatively expensive products but provide better 'quality' cuts than the latter. The general absence of sugars in heroin therefore probably correlates with the amount of cutting which takes place after importation, i.e. comparatively little.

Some forensic scientists believe that a time-lagged histogram of the purity of Customs seizures and police ('street') seizures would in fact match, indicating that little or no adulteration/dilution takes place once the drugs are in the UK.

Considerations such as these would be easily resolved if more profiling was undertaken of both Customs and street seizures.

'Purity' as an indicator

If we compare the purity of Customs seizures with that of street seizures during this period we will see that there is a spread of between 2% (1989) and 20% difference between average Customs seizure purity figures (always higher) and street seizure purity figures (always lower) (see Table 7).

TABLE 7: Average purities for Customs and police seizures 1988-93 (%)

Year	Customs	Street
1988	40	37
1989	40	38
1990	60	40
1991	53	45
1992	59	46
1993	55	35

The spread may differ widely due to a number of factors, not least the fact that single (or a number of single) large seizures of either high- or low-purity heroin from a particular source in any one year may distort the overall picture. It may indeed be the case that for the years 1988 and 1989 the 2% and 3% difference is a result of either a good match between Customs seizures and police (street) seizures and thus reflects that little adulteration/dilution took place at all during this period, or a coincidence which was corrected in subsequent years. Improved monitoring strategies and recording of information would enable such pictures to be more transparent.

DISCUSSION

Knowledge about how often adulteration/dilution of illicit heroin takes place and when is currently hampered by the absence of a strategic and coordinated approach to drugs analysis. The foregoing discussion, however, suggests that a more strategic approach could offer new and important information on drug purity and the constituents of illicit drugs. Current presentation may be inadvertently misleading. The analysis of

the 228 UK heroin samples for 1995-96 revealed, importantly, that nearly 50% of the drugs seized by police did not contain any adulterants. This is probably a figure which is at variance with most common perceptions of heroin sold in the UK. Moreover, it appears that most adulteration, where it has occurred, takes place prior to importation and is less the result of a haphazard throwing in of anything which comes to hand but rather a reasoned and not particularly unsafe process. When heroin is cut after importation it appears that this is predominantly with sugars (Coomber, 1997b). Further evidence presented by Coomber (1997b) also suggests that to cut the heroin they sell is not a normal practice of heroin sellers. This is further supported by the fact that few heroin samples are found to contain sugars under forensic analysis. It is hoped that the newly formed UK-wide Forensic Science Service, which has amalgamated all of the previously disparate services, may be able to provide the coordination and overall strategy for the monitoring of illegal drugs by forensic analysis in the UK. But at the time of writing no such plans are evident.

It can be recognised that there is a relative dearth of consistent and reliable information on trends regarding drug purity, drug composition, variations and prevalence of drug origins, trafficking and adulteration/dilution practices. Recommendations are made below which would help ameliorate this situation in the UK. It may of course be preferable to see systematic and comparable monitoring on a Europe-wide scale facilitated by a body such as the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) or some similar body. This would provide a broader dataset, able to track drug movements within Europe as well as revealing similarities and differences of distribution practices within and across boundaries. If centrally funded via Europe the problem of such monitoring (as is now the case) being subject to 'local' political and economic priorities would be largely resolved.

Recommendations for future recording of adulterant/diluent data

The following steps are suggested as a refinement to how existing data regarding adulteration/dilution and drug composition should be collected and reported:

- (1) Random samples of heroin and other street drugs from police seizures should be analysed regularly for purity and composition (proportional), including adulterants, diluents and substances resultant from the production process. Samples should include both street seizures and Customs seizures for comparison. This would allow the monitoring of a range of trends and potential hazards.
- (2) Similar to the practice adopted by the Drug Enforcement Administration's Domestic Monitor Program in the USA, a retail- (street-)level purchase programme should be set up to provide samples to compare with street seizures analysed.
- (3) The percentage of samples where adulterants/diluents are not found should be recorded.
- (4) The geographical location of where each sample was seized or bought should be recorded. This will, as in the DEA's Domestic Monitor Program, provide improved monitoring of drug use in key cities and surrounding locales. In the USA for example, certain cities consistently have heroin of very high purity and others heroin of medium and low purity.
- (5) The monitoring should be strategically managed and coordinated by a centralised body or authority with responsibility for collating and presenting the data. Such arrangements could be managed nationally, and would result in improved monitoring. However, a preferable move would be for central funding from the European Community to facilitate and coordinate analysis in a consistent and strategic way.

Concerns around how comprehensive analysis of heroin and other drugs might affect a prosecution to which the sample is related (normally individuals are charged with supplying or possessing a single drug;

the finding of other illicit substances could mean higher sentences) could be managed by samples for the strategic review being anonymised and the normal checks (e.g. simply to confirm the presence of the drug) can be carried out separately as at present.

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Coomber, R. (1999a) 'The 'Cutting' of Street Drugs in the USA in the 1990s', *Journal of Drug Issues*, Vol. 29, No. 1, pp.

Having established through a range of qualitative research and forensic analysis that the situation as regards the cutting of drugs in the UK was largely at odds with that which was commonly believed this paper sought to expand that research further afield to the shores of the US. This was undertaken because the research via the Internet and WWW (Coomber, 1997c) had suggested that cutting practices within the US were similar to those in the UK but initial analysis of DEA data (which was much more comprehensive than that found elsewhere) suggested otherwise. It appeared that heroin in the US was consistently cut by dealers once inside the borders of that country. Re-analysis of specially provided and previously unpublished components of the DEA data combined with the experience gained during research on the preceding publications however led to a significant re-assessment of that position. Importantly it was found that in some cities buying heroin with any cutting agents present was more difficult than buying it with them in, even when sold by 'street gangs'. Moreover, it was found that the appearance that heroin was being cut after arrival in the US (purity of street seizures was consistently lower than that of customs seizures) could be explained by the way the data was being aggregated and that customs seizures were from a narrower range of source countries (with higher purities) than those purchased on the streets. The situation in the US therefore, as regards cutting practices by those who distribute and sell heroin appears consistent in important respects to that found in the UK.

THE CUTTING OF HEROIN IN THE UNITED STATES IN THE 1990s

Author Biography

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The term “cutting agent” is used in this paper to refer to substances added to illicit drugs in the process of selling and distribution. Specific cutting agents differ but can be essentially separated into two main groups: adulterants and diluents. Adulterant is the label applied to psychoactive drugs (like caffeine or paracetamol) that have similar or complementary effects when mixed with the main substance, which helps hide the fact that the substance has been diluted. The term diluent (as in to dilute) refers to cutting agents that are not psychoactive, such as glucose and lactose. It should be noted that some substances found in street drugs are the result (by-product) of the particular manufacturing process used to make the drug. These substances might be more properly referred to as “impurities.” This paper is primarily concerned with cutting agents, those substances added to a drug by those involved in its production and distribution in order to increase the amount available to be sold.

Introduction and background

Currently in Toronto there is a report of crack tainted with cyanide...and Cheryl Littleton, nurse practitioner at the Hospital for Sick Children's adolescent unit, has heard of teens buying heroin and Ecstasy combinations (Dubey, 1996).

The above quotation exemplifies a common misconception about street drugs, that “you never know exactly what's in them.” This obvious truism, however, does not necessarily translate into the fear that street drugs are “cut” (adulterated or diluted) with something dangerous or that users are engaged in something analogous to “playing Russian roulette with drugs” (Dubey, 1996). In fact, there is evidence to suggest that much of what is commonly assumed to happen to drugs on their journey down through the chain of distribution is mistaken or exaggerated and, ultimately, of no use for better understanding the risks associated with the adulteration/dilution of street drugs by drug dealers (Coomber, 1997a,b,c,e).

The classical model of drug distribution and the practice of “cutting” have long influenced thinking about what drug dealers do to the drugs they sell. Preble and Casey (1969) found that in the U.S., the highly structured and multi-layered chain of distribution involving organized crime syndicates in the heroin market created an ongoing process of adulteration/dilution all the way down to the street. This process often involved one-to-one cuts of the samples at every link in the chain until the resulting purity was perhaps a tenth of its original imported strength. Even then, however, samples were tested for quality throughout the process, leaving little or no room for adulteration with obviously harmful substances. From the 1960s, the decade in which Preble and Casey gathered their data, until the late 1980s, the average purity of street heroin in the U.S. remained relatively low (around 3-5%), broadly supporting the kind of model outlined by Preble and Casey. Once established, the low purity level of heroin in the U.S. (as compared to Europe and earlier periods of the century in the U.S.) in all probability perpetuated the practice of cutting in order to avoid excessively pure heroin being sold and producing an unwitting overdose. In the 1990s, however, much about the trafficking and distribution of heroin changed. The predominance of Southeast Asian and South American heroin in recent years has shifted purity levels ever upwards in comparison with recent decades. The average purity of street heroin in the U.S. as a whole in 1995 was forty percent, with Boston, New York City, and Philadelphia each reporting averages of over sixty percent for 1994 and 1995; and, over the last six years, many cities have consistently recorded average purity levels of over fifty percent (Drug Enforcement Administration, 1994; 1995). Previously unpublished data collected by the Drug Enforcement Administration's Domestic Monitor Program show that the heroin sold on the streets of America is not necessarily cut with *any* substance. Moreover, these data indicate that in some of the cities monitored, it is *hardly*

ever adulterated/diluted and, of the samples that do contain cutting agents, the number of times they have been cut is fewer than is normally assumed.

It is not only the classical model of drug adulteration/dilution practices that is undermined by forensic and other evidence. The supposedly commonsensical model, which assumes that *dangerous* drug adulteration/dilution (with poisons and such substances) practices by “strung out” junkies is a common risk to drug users, is also undermined. A reappraisal of each of these scenarios regarding drug adulteration/dilution may present a new and important picture of both street heroin and those that sell it. This paper will review recent research carried out on drug adulteration practices, present previously unpublished material from the Drug Enforcement Administration's Domestic Monitor Program and Heroin Signature Program, and assess the conventional understanding of what drug dealers do to drugs, particularly the “cutting” of illicit drugs.

Some comparative background

The U.S. drug trade has its own historical and cultural practices that have contributed to an overall picture of how drugs are both sold and used. In the particular case of drug cutting practices, however, it may be useful to consider what is happening elsewhere in the world, especially what has been discovered about drug adulteration/dilution in the U.K.

The UK scene in the 1990s

Recent research in the U.K. has begun to form a picture of adulteration/dilution practices that differs considerably from conventional understanding. After reviewing the disparate forensic evidence, Coomber (1997a) suggested that less adulteration/dilution of street

drugs actually takes place in the U.K than is commonly perceived. Not only was the actual amount or percentage of adulterant/diluent generally found in heroin lower than expected, it was speculated that this was a likely consequence of less adulteration/dilution actually taking place at each point along the chain of distribution than previously thought. Regarding heroin, it was noted that when "street" seizures were compared with Customs seizures, there was often less difference in purity levels between the two than might be expected¹. This relative lack of disparity has also been noted in Lewis *et al* (1995) (also U.K.), Kaa (1994) in Denmark over a twelve-year period, and, more recently, by De la Fuente *et. al.* (1996) in Spain. Respectively, the average differences reported were 8-14% (Coomber, 1997⁷a), 15-25% (Lewis *et. al.*, 1995), and 9% (Kaa, 1994). Additionally, an analysis of 228 street heroin samples from police seizures in the U.K. (Coomber, 1998^{7e}) found that nearly half (44%) contained no adulterants.

In support of the proposition that adulteration/dilution is *not* a predictable outcome of various drugs² working their way through the chain of distribution, Coomber (1997b) reported on information gathered from 31 drug sellers at varying points in the chain of distribution. Of the seventeen who supplied/dealt in heroin, eleven (65%) said that they *never* adulterated/diluted at all, four adulterated/diluted only sometimes, and only one (dealing 4 to 5 ounces a month) said he *always* diluted the heroin (glucose, by around 10-20%). No direct relationship appeared to exist between the dealers' level of involvement (i.e. how much they sold, how long they had been selling for, or what proportion of their incomes depended on drug sales) and their adulteration/dilution practices. The dealers also submitted evidence to suggest that less adulteration occurs (i.e. the *number of times* each sample of drugs is adulterated/diluted) than is commonly thought to take place with *all* "street" drugs.

Regarding dangerous adulteration, Coomber^(1997b) relied primarily on responses from the

dealers about their perceptions of the practice. Almost all respondents (90%) believed that dangerous adulteration/dilution took place with a wide variety of substances. However, when asked if they themselves used dangerous substances as cutting agents, none admitted to doing so and only three claimed first-hand knowledge of such practices by others. ← X ?

Regarding particular kinds of cutting agents, forensic analyses of street heroin in the U.K. and elsewhere do not find the broad range of deadly substances (rat-poison, "draino," domestic scouring powder, ground light-bulb glass, etc.) commonly assumed to be present (Coomber, 1997a). In Coomber (1997b and e), dealer interviews provided some insight as to the reasons for this unexpected finding: 1) there are easier and less risky means to secure profit from drug sales, such as selling in small samples or slightly lighter weights, and (2) there are logical problems inherent in the practice of selling drugs that have been adulterated/diluted with dangerous cutting agents. The two foremost logical problems are elaborated here (for a broader discussion, see Coomber (1997a)). First, it is not good commercial practice to poison your customers, as you will soon run out of customers, and, as testified consistently by respondents (Coomber 1997b and c), dealers fear reprisal. Second, it is, in fact, often easier and even cheaper to use readily available substances that are relatively harmless, like sugars, caffeine, paracetamol, or herbal tablets, than it is to grind light-bulbs or bricks or to gain access to and use rat-poison. When asked *why* they (the dealers being interviewed) would not adulterate/dilute with dangerous substances, responses fell into two categories: the rational calculative (fear of reprisal) and the ethical or humanistic (concern not to harm the user). In direct contradiction to the conventional image of the evil drug dealer, 25 (81%) of the dealers interviewed in Coomber (1997b) responded that they wouldn't adulterate/dilute (either at all or with dangerous substances) because of concern for the user's health (the rest cited fear of

reprisal as stated above). In addition, three dealers felt that they had a reputation for quality merchandise (and took pride in that fact) that they would not want to jeopardise in such a way. For example, one respondent stated that he did not adulterate/dilute his drugs “because my products were known for quality...the above can hurt people.” Another respondent spoke of a concern for maintaining “the purity of my drugs and the respect of my customers.”

Methodology

In the U.S., there are two main sources of data regarding heroin purity and constituents, both Drug Enforcement Administration (DEA)-funded programs. The first, the Heroin Signature Program (HSP), primarily analyzes samples from seizures made prior to or at importation by the U.S. Coastguard or Customs at international airports. Each year, the HSP aims to perform “in-depth chemical analysis” on between 600 and 800 samples of heroin from seizures and a random sample of purchases made at the wholesale level (Drug Enforcement Administration, 1996b). The second source of data, the Domestic Monitor Program (DMP), is “a retail level heroin purchase program” that operates in twenty cities across the U.S.

Essentially, this program aims to provide information on the price of street heroin and its purity at the street level and to assess its availability (Drug Enforcement Administration, 1996a). The program’s strength lies in its focus on heroin samples bought directly from street dealers. As such, it is able to provide information about heroin as it is sold to consumers. In 1995, the DMP analysed 818 heroin samples from the twenty designated metropolitan areas, ranging from 29 purchased in New Orleans to 132 in New York City. The mean number of purchases per city was 41.

While the HSP and DMP provide a considerable amount of data that is later collated,

aggregated, and disseminated in public reports, much of the detail of these data is not made available to the public. With information made specially available by the Intelligence Division, Domestic Section, of the Drug Enforcement Administration, Washington D.C., the research described herein presents a secondary analysis of DMP data on purity, adulterants, and diluents, from 1990 to 1995, not previously available for public scrutiny. The data are not particularly sensitive (although they are often treated that way), but the difficulties involved in creating data sets that included the necessary detail and, in some cases, manually reformatting available data resulted in somewhat limited access to the full array of information collected by the DMP. The normally unpublished data that *were* requested, received, and reported on is as follows: a list by city of average heroin purity, range of heroin purity, and the adulterants and diluents found in the samples. Each of these data sets was broken down by the sample's "source composition" (whether it originated from Southeast or Southwest Asia, Mexico, South America), including whether or not heroin was even present. Another list, again by city and by source composition, provided information regarding the proportion of samples in which no adulterants or diluents were found. This information, regarding the amount of heroin sold without any adulterant or diluent present, is almost never reported, yet it has been shown to illustrate a great deal about drug cutting practices (Coomber, 1997d). Finally, information regarding the proportions of adulterant/diluent present for 20 individual DMP samples (1995) from New York City was also provided.

The data provided by the DMP have a number of limitations but also some distinct strengths, particularly when compared to data from other countries. It is important to understand that forensic analyses of street drugs are relatively expensive, and costs increase with the amount of detail required. Funding for analysis beyond simple identification of a

substance, either at the local or national level, is rarely given priority because the needs of the criminal justice system are generally satisfied by mere confirmation that the heroin seized is indeed heroin or the cocaine is cocaine. Concerns about purity and the nature of constituents present in street drugs are of little direct relevance to the police and the courts, the consequence of which is little co-ordinated, rational, systematic analyses of drug samples on an annual basis in many, if not all, countries around the world. Most countries, in fact, rely on reporting from information collected in haphazard fashion from single, short-term (usually quite limited) research projects. The U.S. is different in that the DEA, at least in regard to heroin, does collect data through the operation of its two programs mentioned above in an attempt to provide comparable, year-by-year information on the drug's purity. The samples that are seized or purchased by the DEA are comprehensively analysed, and reports are produced to indicate the various substances detected in the samples and the proportions in which those substances are present. By virtue of this process, illicit drugs such as heroin can often be traced back to their country or broad geographical area of origin through the particular so-called "signature" or profile that is produced by forensic analysis.

While the DEA undertakes a more systematic analysis of heroin entering the U.S. than do its counterparts in other countries, it tends to mirror their deficiency in the reporting of its findings. Information regarding average purity, source origin, and volume coming in are the main areas covered in DEA reports. Very little detail finds its way into public reports like the annual Drug Intelligence Report from the DEA on the *U.S. Drug Threat Assessment* or *Drugs, Crime, and the Justice System* from the Bureau of Justice Statistics (1992). The strength of the data presented here is that they provide more statistical information than is normally available on drug adulteration/dilution. In particular, the fact that the DMP is a street purchase program

means that the data reflect properties of heroin actually sold on the streets rather than that of dealers whose goods have been seized at the point of importation. Specific weaknesses of the data are related to the sampling techniques employed by the DMP. Data are gathered from only twenty U.S. cities, excluding many large areas (particularly more rural locations) that may differ substantially from those twenty. Additionally, while 800+ samples is a relatively large number, it means that, in any given year, some of these cities may contribute less than forty samples for analysis. As will be shown, these annual data suggest that distinct patterns do exist, but the aforementioned limitations are not insignificant. It is impossible to determine the extent to which the picture produced by an analysis of the drugs from the twenty cities included in the research is representative of the U.S. as a whole. This said, the data *are* strong enough to better inform our understanding of the many aspects of drug adulteration/dilution practices in the U.S. and to call into question current beliefs about those practices which are commonly assumed.

What are street drugs in the USA cut with?

The wealth of forensic evidence from the analysis of street drugs presents us with a range of substances that commonly appear as either adulterants or diluents. In fact, there tends to be significant consistency as to the substances found and how often they are found. More importantly, as we shall see later, much of this adulteration/dilution is likely to have occurred either prior to importation or relatively high up the chain of distribution not, as is commonly assumed, at the bottom of the chain where the “strung-out junkie” desperately puts in anything that will secure his or her next hit from the sale. Recognition of this inversion of reality affects both the rationale for “cutting” and the type of “cut” used, the primary consequence of which is

that the “quality” of the cut is better (expensive sugars such as mannitol and/or adulterants such as caffeine which help improve the uptake of heroin) (Huizer, 1987; Eskes & Brown, 1975) and safer.

In the U.K. and elsewhere in Europe, the predominant cutting agents found in heroin are paracetamol (acetaminophen), caffeine, and various sugars. Occasionally, but not normally, diazepam, methaqualone, or phenobarbital are also found (Kaa, 1994; Institute for the Study of Drug Dependence, 1994). By and large, these cutting agents are comparatively harmless, particularly in the quantities found (Coomber, 1997a). In the U.S., the predominant diluent found in the 818 heroin samples purchased in 1995 through the DMP was some form of sugar: mannitol (39% of all samples), lactose (32.5% of all samples), dextrose (4%), and starch (24.5%). The predominant adulterants were quinine (23% of all samples), procaine (14% of all samples), diphenhydramine (12%), caffeine (12%), and acetaminophen (10%). These figures, however, do not tell us how much of any one substance, on average, was found in the heroin tested. Caffeine, for example, might have been found often but in small quantities. Of the twenty DMP samples made available from 1995 New York City purchases, caffeine occurred five times and in the following proportions for each sample: 0.6%, 0.6%, 0.8%, 0.9%, and, the highest, 3.30%. Although Kaa (1994) reported finding samples with proportions of caffeine up to 92% in Denmark over a twelve-year period, cutting to this extent can be attributed to statistical outliers, not the norm.

Even when a sample is relatively heavily adulterated, it may not mean that heroin purity is low. One sample from New York had as much as a 44.4% concentration of Procaine, but heroin purity remained significantly above the national average at 51.4%.

Many of the samples listed as containing adulterants or diluents had more than one such

substance present. For example, of the fourteen Southeast Asian samples from Chicago, at least two contained lactose, caffeine, acetaminophen, and starch, with the possibility of others as well (Drug Enforcement Administration, 1995). One New York City sample had as many as three other substances detected - wheat starch, sodium bicarbonate, and acetaminophen, but the most all three combined constituted was around 1%. Many occurrences of substances are low in proportion and often merely “trace” amounts, and the percentage of all DMP samples with no adulterants or diluents present was 26.2% (Table 1).

In 1995 and 1996, hospital presentations, particularly of overdoses, evidenced heroin adulterated with scopolamine, an anticholinergic drug, in New York City, Newark, Philadelphia, and Baltimore (Center for Disease Control and Prevention, 1996). However, evidence from the DMP and other various analysis agencies indicates that this was not a widespread problem. Of the 818 DMP samples analyzed in 1995, none contained scopolamine, and only two 1996 samples tested positive. The problem seems to have been limited to the Northeastern region of the U.S. Because of the type of mix involved, its rarity and its relatively confined location, it is likely that scopolamine-adulterated heroin was a “product,” designed specifically by a particular retailer or group in an attempt to make its stock more attractive or to boost poor quality heroin in a competitive market. Reports of the heroin/scopolamine mix being sold under the street names of “Point on Point,” “Sting,” “Polo,” “Homicide,” and “Super Buick” (Centre for disease Control and Prevention, 1996) further suggest that it was sold as a definable product, marketed similarly to “speed-balls,” a heroin/cocaine mix.

[TABLE 1 TO GO IN HERE]

Not only were the 1990s a period in which the heroin sold in the U.S. was of increasingly higher average purity but, as Table 1 shows, one in which the proportion of samples with no adulterant or diluent also steadily increased. As we shall see later, we might expect this trend to continue.

The samples represented by the DEA's Domestic Monitor Program may or may not be representative of what heroin "looks like" as regards the occurrence of adulteration/dilution in the U.S. as a whole. This limited generalizability is a result not only of the cities representing only a small percentage of the populated areas in the U.S., but also of the variance between and *within* these cities. In New York City, for example, in the years 1979-80, the DMP distinguished between Harlem with an average purity of 3% and the Lower East Side where the average purity was nearly three times as much at 8.5% (Drug Enforcement Administration, 1997). In 1995 in San Francisco, the average purity of the Mexican heroin, the predominant heroin represented in DMP samples, was 32%, whereas the purity of Southeast Asian heroin was 85.3%.

Variance *between cities*, as evidenced by Table 2 below, appears to be a non-random phenomenon. Throughout the 1990s, those cities recording heroin samples with the lowest occurrence of cutting substances have consistently done so. Cities such as San Diego, Seattle, Denver, and Phoenix, for example, consistently recorded the absence of adulterants/diluents in over 70% of the samples bought for the DMP, and, since 1993, over 80%.

[TABLE 2 TO GO IN HERE]

Similar to the Table 1, which shows those cities where little adulterated/diluted heroin has been sold, those cities with the highest proportion of samples recording the *presence* of cutting agents also has great consistency.

[TABLE 3 TO GO IN HERE]

As we can see by Tables 2 and 3 there is great consistency, city by city, in terms of where adulteration/dilution does and does not tend to occur in analysed samples of street heroin.

What do US drug dealers do to the drugs that they sell?

From the data provided in Tables 2 and 3, we can see that there are a number of cities in the U.S. where the vast proportion of the heroin sold appears to be free of cutting agents and that this, according to DMP data, has been relatively constant over time. Likewise, we can see that in some cities, such as New York, Chicago, or Miami, the chances of buying heroin without either an adulterant or diluent of some kind is practically impossible. What does this tell us about the practices of drug dealers? To begin with, it tells us that heroin imported into the U.S. without cutting agents is not *necessarily* going to be adulterated/diluted at *any point* prior to being sold at “street” level and that, certainly, its being cut is not simply a matter of course. It is also unlikely that this is due to a greater degree of altruism amongst the transient drug dealing populations of these particular cities.

Where the drug originates impacts on what cutting agents are found in heroin

The primary factor common to those cities where little cutting is observed is the presence of Mexican heroin. Likewise, for those cities where it occurs in almost 100% of the samples analysed, the common factor is the relative absence of Mexican heroin. Each of the cities listed in Table 2 where purchased samples consistently show little or no adulteration/dilution is a city much like San Diego where, in 1995, 36 of the 37 samples purchased were of Mexican origin³. In those cities where Mexican heroin is not predominant, very few samples of Mexican heroin are represented. Thus, the consistent existence of “clean” street heroin in certain U.S. cities appears to be primarily due to the fact that the imported heroin is not cut *prior* to importation and the drug distribution/dealing system, in opposition to what is commonly believed, does not *normally* include this practice.

When we consider *how* Mexican heroin is distributed and sold in the U.S., this finding may be doubly surprising. In the DEA's Executive Summary to the National Narcotics Intelligence Committee report, *The Supply of Drugs to the United States* (1995: 4), it is stated that “Black tar and brown heroin were produced by traffickers in Mexico and sold in the Western United States by ethnic Mexican-American criminal networks. Organisations controlled from Mexico made distribution at the wholesale level; local U.S. gangs often managed street sales.” So, despite being highly organised down through the chain of distribution and finally being sold “on the street” by local U.S. gangs, little, if any adulteration/dilution took place.

As we have seen, around 25% of samples analysed by the DMP in 1995 were found to be free of adulterants/diluents. It seems reasonable to assume that if Mexican heroin became

more prevalent, then the amount of heroin on the street that is free of adulterants and diluents would increase. Moreover, if the trend towards higher purities from other sources also continues in the manner of the past three years, the *proportions* of adulterant/diluent found in heroin from these sources will also likely decline.

While it is becoming clear that dealers do not adulterate or dilute the drugs they sell as a matter of course and that, in some cities, they do so rarely, if at all, it is also clear that the majority of samples analysed do have cutting agents present and that some heroin sold on the streets is of an extremely low purity. Purity ranges of samples within and between cities in the U.S. can be, and often are, extreme. In New York City in 1994, for example, the average purity of heroin was 63.9%, but the purity ranged from 12.2% to 94.2%. For Southeast Asian heroin alone, purity ranged from 23.6% to 89%, and for South American heroin, from 37.1% to 94.2%.

We need, however, to be careful about assuming that those samples at the lower end of the purity scale simply reflect heavily adulterated/diluted samples because what is generally understood as heroin purity is misleading. Analysis reveals that a heroin sample apparently only 65% pure (or indeed less) may, in fact, have *no* adulterants/diluents present (Gough, 1991; H. M. Customs & Excise, 1995). Depending on country of origin and, thus, on the method of manufacture, the production of the heroin itself produces a more or less “pure” product. In some cases, various other opiate alkaloids, such as noscapine and papaverine and acetylcodeine, a by-product of heroin manufacture, may account for the bulk of the other 35%. In the reporting drug purities, this important fact almost invariably remains unstated, inadvertently giving the impression that the other 35% is, in fact, constituted of adulterants/diluents put there by those who sell the drug. The public reporting of drug purities certainly gives no indication that 50%

purity may also refer to drugs with no adulterants or diluents found. In fact, a senior forensic scientist related to me that this is a point of which he has to constantly remind even his own staff (King, 1996). In the U.K., a comprehensive analysis of 92 Turkish heroin seizures by Customs and Excise prior to importation recorded an average purity of 70.65% (H.M. Customs & Excise, 1995). Diamorphine (heroin) purity ranged from 12% to 89%. However, when we look at the sample recording 12% diamorphine purity, we find that it contained no adulterants or diluents and that 66.8% of sample was made up of the opium alkaloids noscapine (55.6%), papaverine (6.7%), 6-acetylcodeine (2.5%), and 6-acetylmorphine (2%), produced as by-product at the time of manufacture. Many of the low purity samples recorded in this report over the four-year period of the study showed that low purity is not necessarily an indicator of a heavily adulterated or diluted sample. It also demonstrated quite clearly that many of those samples which did record the presence of one or more cutting agents also often recorded purity levels close to the average or even above it. One such typical sample recorded from 1992 where the country of origin was designated as Pakistan had a purity of 49.1% (the Pakistan heroin average for that year was 47.58%) but also contained caffeine (4.4%) and phenobarbital (6.2%). This latter circumstance, the existence of heroin where its purity is close to or even above the mean but where adulterants/diluents are also present, is consistently found in heroin bought (DMP) in New York and other cities where high purity heroin is sold (specially provided unpublished information from the DMP, 1997).

While we can see that the absence of adulterants/diluents in areas effectively supplied by Mexican heroin alone demonstrates that cutting is *not* the norm for dealers in these areas, we should not assume that the consistent and comprehensive presence of them in other cities is

evidence that dealers in those areas do cut their drugs. Heroin that originates in other source areas, such as Southeast Asia, is commonly cut with adulterants/diluents before it reaches the borders of the U.S. and other nations.

The extent of adulteration/dilution of street drugs in the United States: differences between samples seized at point of entry and those bought/seized at street level

Comparing average purity levels of heroin at importation with those at “street” level potentially provides some insight into the extent of cutting both prior to and after heroin enters the U.S. For example, if retail purity is one-tenth that of heroin seized prior to importation, then evidence of significant adulteration/dilution is clear. If there is a less clear-cut divergence, then other factors may play a part. Because there is a time-lag (due to distribution/networking after importation) between those drugs seized at the borders and those purchased at street level, such figures are not directly comparable. In the U.K., for instance, we do see slightly lower average purity levels for “street” seizures (For the years 1991, 1992, and 1993, the average difference between Customs seizures and street seizures was only between 8-14%, with the average purity of street heroin being 45%, 46% and 39.25%, respectively (H.M. Customs & Excise, 1995a; NCIS, 1994)), but senior forensic scientists at the Forensic Science Service have stated that they believe a time-lagged histogram of the purity of Customs seizures and police (“street”) seizures would, in fact, closely match, indicating that little adulteration/dilution takes place once the drugs are in the U.K (Forensic Science Service, 1996). Many of the cutting agents found by analysis are, therefore, assumed to have been put there prior to importation or even during production. Kaa (1994: 178), referring to heroin analysed in a range of different countries in

Europe and Asia as well as Denmark, points to the similarity of the cutting agents found at similar points in time and suggests that “This indicates a world-wide distribution and...that many of these substances have been added either at the production level or at an early stage in the chain of distribution.”

For the U.S., an initial comparison of heroin seized prior to importation and street heroin appears to demonstrate that significant adulteration/dilution of heroin is undertaken after the drug has been imported. As illustrated in Table 4 below, in 1995⁴, the average purity of all heroin seized at, or close to, importation, as analysed by the HSP, was 63.2%. At the retail level, as analysed by the DMP, average purity was 39.7%.

[TABLE 4 TO GO IN HERE]

The HSP, however, is heavily supplied by seizures from U.S. airports. In 1992, 91% (454 out of 498) of the samples included in the HSP were from airports such as New York's JFK International, which accounted for 75% of the samples alone (Drug Enforcement Administration, 1993: 39). This means that the generally lower-purity Mexican heroin, which is included in a greater proportion of the retail level samples, is under-represented in the HSP figures. Moreover, most of the heroin that came through JFK International in 1992 would have been the comparatively pure Southeast Asian and Southwest Asian heroin. Street level average purities in 1992 for these two products in New York were 54.3% and 69.7%, compared to the 1995 HSP average of 63.2%. As such, the real average for importation would in all likelihood

be closer to the retail average than demonstrated by merely comparing overall HSP and DMP figures.

The emergence in 1995 of South American (Columbian) heroin as the predominant form of heroin in the U.S., eclipsing the previously dominant Southeast Asian heroin, is likely to only enhance this appearance of disparity between seizures at importation and samples bought on the street. As stated above, South American heroin, like Southeast Asian heroin, is generally imported into the U.S. via major airports such as JFK and Miami International. Because this form of heroin now predominates and its average purity is higher than heroin from competing sources (which will still be picked up by the retail-level buying which informs the DMP), the relative difference between HSP analysis and DMP analysis is likely to increase. This can, of course, happen without any increase in cutting activity taking place whatsoever, although initial impressions may be that it has. A comparison of the average purity of South American heroin as analysed by the HSP and the DMP's individual city samples shows that, on average, street heroin was between 13% and 25% lower in purity than that analysed by the HSP. Overall, the average was approximately 20% lower for retail level samples than for those seized at importation. If there is a time-lag to be taken into account, we might expect the 20% difference in the purity to be partially explained by the slightly lower-average purity of HSP seizures in the previous year finding their way through in 1995. As we can see from Table 5, in 1994, the overall average purity for the HSP was 60.4% and, for the DMP, 40% (Drug Enforcement Administration, 1995).

[TABLE 5 TO GO IN HERE]

This is only a 3% differential, and it tells us little. As mentioned earlier, because HSP seizures tend to report a predominance of the type of heroin that comes through international airports, the real average difference between imported heroin and street heroin purities is difficult to speculate upon. We can, however, see that in each of the categories, the DMP samples are consistently lower (on average) than the HSP samples. This is an historical constant, and, if no adulteration/dilution took place once heroin was imported into the U.S., we would not expect this to necessarily be so. It is, however, also clear that average purity indicators may be misleading if used to describe what appears to be a general picture of drug cutting. In New York City, for example, in 1995, the purity of South American heroin at importation was 81.4% on average and, on the street, a whopping 76%. The DMP figures, however, also recorded a range between 37.3% and 91.5%.

[TABLE 6 TO GO IN HERE]

Comparison of purity at different points in the distribution chain

If the cutting of drugs was a routine occurrence down through the chain of distribution, samples would, analogous to the description provided earlier by Preble and Casey (1969),

become increasingly less pure. The available data (Drug Enforcement Administration, 1994b), which relates heroin purity to the weight seized, suggests that cutting and lower purity relate more to weight shipped than to cutting practices down through the chain. While the data for the last half of 1993 and the first half of 1994 show a drop of around thirty percent for purchases at the kilogram, ounce, and gram levels, giving the impression of cutting (albeit relatively minor), they match, almost exactly, the average purity for those same weights which were seized. As most of these seizures were from the Heroin Signature Program, this suggests that purity was, once again and for the most part, determined prior to importation. An inference such as this is consistent with findings in both the U.K. (Coomber, 1997a) and Spain (Fuente *et al*, 1996) in the 1990s. Unfortunately, because of the limited nature of the data (relating to where the seizures were from) and the small amount of time covered, this information is only indicative, not conclusive.

It is by no means the suggestion of this researcher that no adulteration/dilution takes place once drugs have entered the U.S. Cutting is not, however, either systematic or necessarily located at any predictable level in the chain of distribution. In this sense, it is not the norm. When it does take place, it is, for the most part, likely to be in small amounts and with relatively innocuous substances. The varying reasons as to why less cutting of drugs takes place than might be expected are now outlined and explored.

Reasons why less cutting takes place than is often assumed

There are a number of reasons why much less adulteration/dilution of drugs such as heroin takes place than is commonly believed. As previously mentioned, the assumption that dealers cut the drugs they sell as a matter of course is undermined by a range of forensic

evidence which shows that the difference between seizures at importation and at street level is less than commonly believed and that purity tends not to differ with regard to amount seized/purchased (U.K.). Where it does (U.S.), import and retail level purity at comparable weights appears not to differ substantially.

As we have seen, in a number of cities around the U.S., it appears to be much more difficult to buy drugs that *have* been cut than to buy drugs that *have not*. Some of the rationale for this, combined with a fear for potential reprisal, has to do with a concern not to cause undue harm. Adherence to a certain amount of ethical or humanitarian behavior by drug dealers should not be a surprise. Most drug dealers are, in fact, only “part-time” in the sense that they also hold down other, legitimate jobs, and drug dealing is a way of supplementing their incomes (Reuter *et al*, 1990). Those that are more involved have a greater incentive to remain competitive in the market and retain their customers. In their study of dealing practices in the 1960s, Prèble and Casey (1969) noted that the occurrence of increased cutting took place at a time when the heroin supply was interrupted. In the 1990s, an increase in world-wide heroin production and importation to the U.S., coupled with the relative inability of various enforcement agencies to prevent its supply, virtually ensured that, rather than being in short supply, heroin was readily available, and dealers had to compete with quality as well as quantity. Hence, the increase in purity of street sales.

Regarding substances such as strychnine (rat-poison), often thought to be added to LSD as well as heroin, one respondent (Coomber, 1997b) made the point: “Seen the price of strychnine? Seriously - why should anyone want to?” This quote sums up a number of important points. First, many of the dangerous substances considered to be common additives, such as strychnine or cyanide, are often more expensive than the primary drug as well as more

difficult to obtain. Those that are not more expensive or difficult to obtain, such as ground light-bulbs or brick dust, require a level of effort incommensurate with the original logic propounded as to why such cutting takes place -- desperation. Sugar off the shelf is quicker and cheaper than grinding light-bulbs. The type of cutting agents which are found -- mannitol, caffeine, acetomorphine (thought to be an illicitly produced brown preparation (Forensic Science Service, 1996) – are, according to available evidence, most likely added as “quality cuts,” high up the chain of distribution and often, if not mostly, prior to importation.

Conclusion

The 1990s present us with a completely new scenario of the cutting of street drugs like heroin in the U.S. Purity levels of heroin sold on the street are now, on average, some ten times higher than those reported in the 1960s, 1970s, and some parts of the 1980s. In fact, we find that in some cities where Mexican heroin predominates, little or no cutting agents are found in the heroin sold. Moreover, the DEA's Drug Monitor Program found that in the mid-1990s, about a quarter of all heroin sold on the streets did not have any cutting agents present and that where they were present, it was often in small or trace amounts. Of course, significant adulteration/dilution is not an irregular occurrence by any means. These findings, bolstering previous research, indicate that the adulteration or dilution of heroin is neither a necessary nor a predictable outcome of the drug distribution process. They certainly indicate that the cutting of heroin (some of which happens prior to importation) does not routinely take place at each, or indeed any, particular level of supply. The consistently lower purity of street heroin as compared to that found at importation indicates that some cutting does take place once the heroin is inside the U.S. The available evidence, however, suggests that this is the practice of a

minority of individuals involved in the supply of drugs as opposed to normal practice.

Forensic evidence and other research also show that the oft-believed adulteration/dilution of drugs with dangerous substances is neither commonplace nor likely. When heroin is adulterated/diluted, it is with substances less problematic than the primary drug and not with a range of dangerous and/or malicious substances. In fact, there is emerging evidence to suggest that many drug dealers, either through self-interested fear of reprisal and/or a level of humanitarianism, are careful to preserve the quality and safety of the drugs they sell.

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Table 1 – Average % of street heroin where no adulterants or diluents were found (USA)

Year	Percentage free of cutting agents	Number of samples analyzed
1995	26.2%	818
1994	24.5%	736
1993	21.7%	688
1992	19.3%	533
1991	16.4%	621

Table 2 – The 5 main cities (1991–95) where the least amount of adulteration/dilution has occurred (% indicates *without* cuts)

Year	1st	2nd	3rd	4th	5th
1995	San Diego (90%)	Seattle (87.5%)	Phoenix (82.5%)	San Francisco (73.3%)	Denver (60.5%)
1994	San Diego (90%)	Seattle (88%)	San Francisco (82.4%)	Phoenix (80%)	Denver (62.8%)
1993	Denver (97.1%)	San Francisco (80%)	San Diego (80%)	Seattle (72.7%)	Phoenix (60.5%)
1992	Seattle (73.9%)	Phoenix (73.9%)	San Francisco (54.3%)	Denver (50%)	San Diego (45.5%)
1991	Denver (76.5%)	Seattle (55.6%)	San Francisco (54.3%)	San Diego (41%)	Los Angeles* (19.4%)

*It is suspected that Phoenix would have recorded fifth spot (or higher) in 1991 but this city was not included in the DMP and thus did not record any figures.

Table 3 – Ranking order of cities where most adulteration/dilution occurs

Year	100% of samples containing cutting agents	90–100% of samples containing cutting agents	70–90%+ of samples containing cutting agents	30–70% of samples containing cutting agents
1995	Baltimore Chicago Dallas Detroit Miami Newark Washington D.C.	Atlanta New York San Juan	Boston Houston Philadelphia St Louis	Denver Los Angeles
1994	Chicago Detroit Miami Newark New Orleans Washington D.C.	Boston Dallas New York San Juan St Louis	Atlanta Los Angeles Philadelphia	Denver Houston
1993	Baltimore Chicago Dallas Miami St Louis	Atlanta Detroit Houston Newark New Orleans New York Philadelphia San Juan Washington D.C.	Boston	Los Angeles
1992	Atlanta Detroit Miami New Orleans Philadelphia San Juan St Louis Washington D.C.	Chicago Dallas Houston New York	Los Angeles Newark	Boston San Diego S. Francisco

Table 4 – Comparison of purity by source between heroin seized at importation and at the retail level – national (1995)

Average purity (1995) by source	HSP	DMP
Overall	63.1%	39.7%
South American	81.4%	56.4%
Southeast Asian	69.2%	44.6%
Southwest Asian	59%	35.3%
Mexican	43.1%	29.7%

Table 5 – Comparison of purity by source between heroin seized at importation and at the retail level – national (1994)

Average purity (1994) by source	HSP	DMP
Overall	60.4%	40%
South American	77.1%	59%
Southeast Asian	69.8%	39.7%
Southwest Asian	58.9%	35.9%
Mexican	36.1%	27%

Table 6 – Comparison of purity by source at importation and retail level in 1995 (New York City)

Average Purity (1995) in New York City	HSP	DMP
South American	81.4%	76%
Southeast Asian	69.2%	58%

Coomber, R. (1999c) 'Lay Perceptions and Beliefs About the Adulteration of Illicit Drugs in the 1990s: A Student Sample', *Addiction Research*, Vol. , No, pp.

This paper sought to explore the under-researched area of what the lay public believes about various aspects of drug adulteration practices. In Coomber (1997a,b,e) it had been speculated that the general public would be likely to believe that dangerous adulteration was a significant danger associated with drug use because most reporting on drug adulteration (by both 'authorities' on drugs and the media) suggested this to be the case. This research found that almost all of those surveyed believed that dangerous cutting took place. In fact, this research indicated that lay perspectives on what drugs are cut with, why they are cut and who cuts them runs counter to the emerging evidence. It is suggested that this has significant consequences for how drug dealers are perceived by the lay population and ultimately is likely to inflect upon how they are controlled.

Title: Lay Perceptions and Beliefs About The Adulteration of Illicit Drugs in the 1990s
– A Student Sample

Abstract

Much has been speculated but little is actually known about lay perceptions and beliefs about the adulteration of illicit drugs. This research, using a convenience sample of 248 university students in South East London, sought to explore just what it is that illicit drugs are thought to contain, the rationales for why they are thought to contain other substances and how people come to obtain their particular world view on the issue. It was found that the vast majority (over 90%) of respondents believed that street drugs were adulterated or diluted with dangerous substances such as rat-poison, domestic scouring powders such as Vim and Ajax, and/or other dangerous drugs (e.g. heroin in ecstasy). Significantly, this is in direct contradiction to current forensic and other evidence as were most of the other prominent beliefs that they reported. Other beliefs investigated related to why the respondents believed what they did, what rationale they attributed to the cutting of drugs and when and by whom they thought the 'cutting' of drugs took place.

Keywords

Adulterants; cutting-agents; lay beliefs; public opinion

"Thousands of lives are at risk as spiked Ecstasy tablets...with [substances such as] heroin, LSD and even crushed glass and rat poison. ...Organised crime gangs lured by the promise of vast profits are thought to be behind the trend" (*Time Out*, 1993)

"[Heroin] is always adulterated with other substances when bought at street level. The drug is progressively diluted (or 'cut') as it moves down the line from manufacture through various dealers to the end user" (Wills, 1997: 23)

INTRODUCTION

The quotations used to head this paper arguably sum up what is generally thought about what is done to illicit drugs by those who manufacture, traffic and 'deal' in them. It is certainly true that much of the drugs field literature when referring to drugs such as heroin uncritically assumes that dangerous adulteration/dilution is both a common occurrence and represents a significant risk aspect of drug use. Moreover, in Coomber (1997c) it was suggested that the cutting of illicit drugs with dangerous substances was a generally uncontested notion by those who inform the public on drug issues and as such

was likely to be a relatively uncontested perspective of the general public too. To date however this has been an unreported area of research with the minimal indicators that there has been relating to drug users (Cohen, 1989; Forsyth, 1995) or more latterly drug dealers (Coomber, 1997b,d). The research presented here sought to explore what kinds of images members of the lay public hold about what is done to street drugs (illicit drugs) and also why they believe what they do. One reason why this is important is that recent research strongly suggests that nearly all of what is normally taken as non-problematic about drug cutting practices in general (cutting down through the chain of distribution, cutting with dangerous substances) either does not happen or happens so rarely as to make it an unuseful way of understanding what happens to street drugs and how certain aspects of drug dealers' activities should be perceived (Coomber, 1999; 1997a,b,c,d,e,f). If, as suspected the general public believes that drug dealers commonly cut the drugs they sell with dangerous substances with little care for those to whom they sell then this clearly impacts on public attitudes to drugs, drug dealers, and in all probability further inflects on public opinion regarding the sentencing of those involved. This clearly raises issues regarding the content of drug education, both in the media and from various 'authorities' (such as the police, drug service workers, and politicians) as well as in the schools. It also raises a further issue relating to harm-reduction policy. Too much emphasis on the potential harm from dangerous cutting agents may play a role in the diverting of attention away from where the real dangers relating to drug use may lay – either in the drug itself, multi-drug use, inappropriate co-activity, or in the injecting of drugs.

Background

That drugs such as heroin and ecstasy are 'laced' or cut with dangerous substances by unscrupulous dealers is thought to be commonplace and is often reported as such by the various media, by the police and even by many drug field publications (Coomber, 1997a,c). The cutting of drugs takes place it is assumed because the dealer is seeking to maximise profits by replacing (diluting) proportions of the drug with anything that looks like it might do the job without being obvious at the time of being sold. Either complete indifference towards others (the 'evil' dealer) or the desperation of the addict-dealer (who uses anything to hand) it is suggested, explains why dangerous substances come to be used. It is further assumed that cutting takes place at each stage of the chain of distribution with drugs such as heroin and cocaine getting progressively weaker until it is finally sold on the 'street' in a highly adulterated form. The emerging evidence however suggests that such a scenario is in fact highly misleading.

As regards what kind of cutting agents are found, forensic analysis of street heroin in the UK and elsewhere does not find a range of deadly substances present (rat-poison, 'draino', domestic scouring powder, ground light-bulb glass etc) despite the common assumption that it would (Coomber, 1997a,f). In Coomber (1997b and e) the dealers interviewed provided some insight as to why this might be the case. Firstly, there are easier and less risky means to secure a profit from drug sales. Just selling in small samples (e.g. 56 half-grammes from an ounce) and slightly light weights (perhaps increasing 56 to 58 half-grammes) realises significant profit. There are also a range of logical problems which when thought through would suggest that dangerous adulteration/dilution is unlikely, I shall elaborate initially on the two main ones (for a

broader discussion see Coomber (1997a)). First, it is not good commercial practice to poison your customers – you will soon run out of customers and, as testified consistently by respondents in Coomber (1997b and c) they (the dealers) would fear the reprisals. Second, it is in fact often easier and even cheaper to use readily available substances which are relatively harmless – sugars, caffeine, paracetamol, herbal tablets than it is to grind a light-bulb or a brick down or get access to and use rat-poison! Anyhow, substances such as Vim, Ajax, light-bulbs glass, and brick-dust are not soluble in water and would 'be easily sussed' by customers.

The most common adulterants found in heroin in the UK are paracetamol and caffeine. Both of these substances can in fact (when 'smoked') enhance the amount of heroin uptake to the user than if the sample were pure heroin alone (Huizer, 1987). The addition of substances such as paracetamol and caffeine are therefore partly strategic and cannot be seen as adulteration purely for the benefit of dilution. Substances such as paracetamol and caffeine moreover often do not appear in very large amounts again re-enforcing the sense of their strategic inclusion (Coomber, 1997a, 1999). Sugars, when they are detected tend to be relatively expensive ones such as mannitol, lactose or glucose, again, suggesting care in the cutting process as opposed to the reckless or senseless use of anything to hand.

In relation to the number of times that cutting takes place and what proportion of a drug sold on the streets is likely to be made up of a cutting agent the picture is, as the previous section suggests, also at odds with portrayals in the media, by the police and the general literature. In Coomber (1997a), after a review of the disparate forensic evidence less

adulteration/dilution was suggested to occur in two distinct senses. First, that the actual amount or percentage of adulterant/diluent generally found in heroin was lower than expected. Second, that this was a likely consequence of less adulteration/dilution actually taking place down through the chain of distribution than previously thought. In relation to heroin it was noted that when 'street' seizures were compared with Customs seizures that there is often less difference in purity levels between the two than might be expected¹. This relative lack of disparity had also been noted in Lewis *et al* (1985) (also UK) and Kaa (1994) in Denmark over a twelve year period, and recently, by De la Fuente *et al* (1996) in Spain. Respectively, it was noted that average differences were found of around 8–14% (Coomber, 1997a); 15–25% (Lewis *et al*, 1985) and 9% (Kaa, 1994). In Coomber (1997b) information gleaned from 31 drug sellers at varying points in the chain of distribution supported the proposition that adulteration/dilution is *not* a predictable outcome of various drugs² working their way through the chain of distribution. Of those who supplied/dealt in heroin, 65% (11) said that they *never* adulterated/diluted it at all. Only 1 heroin dealer (dealing 4 to 5 ounces a month) said he *always* diluted the heroin (glucose, by around 10–20%). Four others adulterated/diluted only 'sometimes'. No direct relationship appeared to exist between the level of involvement – i.e. how much they sold, how long they had been selling for or what proportion of their incomes depended on drug sales. Data from 80 drug dealers, from 14 different countries, responding to research mediated through a questionnaire on the Internet³, and partially replicating the research of Coomber (1997b), strongly indicated that those findings may be applied, albeit with proper caution, internationally (Coomber, 1997e). A specially arranged analysis of 228 'street' heroin samples from police seizures in the UK in Coomber (1997f), found that nearly half (44%) contained no adulterants at

all. Likewise, secondary analysis of US forensic data (Coomber, 1999) revealed that in a number of US cities, where Mexican heroin predominates (even where distribution was 'gang-controlled'), the majority of heroin sold is free of cutting agents. A review of Customs seizures of heroin between 1990–93 showed that where a heroin sample originated from was a greater predictor of whether cutting agents would be present, what kind of cutting agents would be present and what proportion of the sample would be made up of cutting agents (Coomber, 1997f). Heroin adulterated at source or very high up the chain of distribution therefore tends not to be cut further down the chain of distribution. Most cutting takes place prior to importation and with substances which are designed to enhance or complement the drug in question.

METHODS AND SAMPLE CHARACTERISTICS

254 subjects were asked to participate in this survey. All of those asked agreed to fill in the questionnaire. 6 respondents however, stopped filling in the questionnaire after just a few questions perhaps deciding that they did not wish to participate. 248 subjects therefore satisfactorily completed the questionnaire. This gives an overall response rate of 98%. The subjects were all students of the University of Greenwich, South East London.

Representativeness

When dealing in convenience samples some issues and some samples are clearly more problematic than others when seeking an indicator of more general behaviours or beliefs.

This survey sought to find *indicative* information about the beliefs of non-professional (drug-field or related, e.g. the police) members of the public about drug adulteration and

its surrounding practices. It was speculated in Coomber (1997a,c) that as the most authoritative sources of information about adulteration were fairly consistent in their reporting it was likely that the general public would also have similar views. As such it is arguable that in this case the subjects in this paper are more reasonably understood as members of the non-professional 'lay' population than they are as students. The very high similarity of response in a number of key areas regardless of gender, age or participation in drug use suggests that there is no obvious reason to assume that as students they hold drastically different beliefs on this particular issue than a more general sample. At the very least, in a very under-researched area, the findings provide a strong indicator of the types of general beliefs likely to be prevalent about these issues in the lay population whilst at the same time providing useful additional data regarding specific aspects of adulteration/dilution and the distribution of illicit drugs.

Procedure

The particular way in which the sample was approached, recruited and managed was considered very important to the relative validity of this research. Although a convenience sample, the response rate was almost 100% due to the way respondents were recruited. This means that the sample was not self-selecting and ensured a good cross-section of the student body involved. Steps were also undertaken to ensure that no prior discussion of the subject had been carried out between groups or friends – that the responses were thus individual and 'spontaneous' – as well as protecting respondents, as far as possible from the pressure to 'conform' when answering. Requesting students to fill in the questionnaire in isolation, immediately before the start of a class was also the

primary reason for the almost 100% response rate. For although the students appeared completely happy with contributing to the research when asked, if the questionnaires had been merely distributed amongst the student body for later collection, or even at the end of a class, the response rate would have been drastically reduced. Previous experience in both these methods has shown that students left to their own devices to return the questionnaire would have tended not to bother and attempting to carry out the same exercise at the end of a class, whilst more successful than the former method is still prone to significant numbers rushing off to do more 'pressing' activities. In either of these cases the questions left about the non-responses and how they affected the data would have been highly detrimental to the resulting data. As it is the lack of non-respondents importantly avoids this difficulty.

Each subject was given a questionnaire to fill in. All classes were approached within a short period of time with little opportunity for the students to have been aware of the research prior to request for their co-operation. Students were asked not to discuss the research until after the questionnaire had been gathered. As the questionnaire had a number of sensitive questions relating to personal drug use a number of basic procedures were employed to help facilitate more reliable responses. First, the subjects were reassured that all responses would be anonymous. Second, as the questionnaires were given out during classes, students were asked not to sit near anyone while they were filling them in and third, they were also asked not to talk to each other while they were filling them in. In this way students were provided with a context which was non-threatening in the sense that unwanted exposure of their drug using behaviour to others was not at risk. Such precautions also meant that the respondents were not under any

pressure to conform to or exaggerate to the perceived norms of drug use of others which may have occurred if students were not isolated.

The questionnaire

Students were asked a range of questions relating to the cutting of illicit drugs that are common in media and other reporting of drug related risks. In particular, the respondents were provided with a list of four street drugs that are amenable to adulteration/dilution because of their powdered or pill form, heroin, cocaine, ecstasy and amphetamine. These drugs were chosen because a) there is forensic information available that relates the kind of cutting agents found in them, and b) they are either fairly widely used, as in the case of ecstasy and amphetamine, or widely publicised in the media as having a range of attendant risks relating to being 'dirty' (cut) which is the case for all four (Coomber, 1997a). For each the street drugs listed respondents were provided with a fairly extensive choice of substances commonly found or reported to be found in those particular drugs. Ecstasy for example is often claimed to be cut with heroin, and heroin with rat-poison, likewise paracetamol is not commonly cited as being used in ecstasy. They were then asked to report which of those substances they had heard of as being used to cut street drugs they believed were actually used. Respondents also had the opportunity to add substances heard of but not listed. This enabled those that believed that they had heard of paracetamol to be used in ecstasy to add it to the list if they wanted to. Choices given in each of the questions used were informed by common perspectives of the point in question as represented by the drugs field literature or media representation. An opportunity to state an alternative position was offered where relevant.

Sample characteristics

Sex

66% (n163) of the sample were female and 34% (n83) male.

Drug Use

Overall, 143 (58%) of the sample reported that they had used illicit drugs. In terms of gender 56% of the female sample reported having used illicit drugs whereas a slightly higher proportion (61%) of the male sample responded in this way.

Age

The students were categorised into four main age groups. 58% (n143) of the sample were between the ages of 18–21, 23% (n58) were aged 22–30 years old, 8% (n20) were 30–35 years old and a further 11% (n27) were 36 years and over.

THE FINDINGS

General awareness of the existence of adulteration/dilution in illicit drugs

At the most basic level, of the 248 students who took part in the survey nearly 91.5%

(n227) said they were aware that street drugs were thought to contain other substances.

Of these, 97% stated that they had some idea of what some of those substances were.

Lack of awareness

Of the 21 (8.5%) who stated that they were unaware of drug adulteration/dilution the main defining characteristics of this group related to both their age and their own drug use. Thus, of the 21 respondents who were unaware of adulteration/dilution 71% (n15) of them reported that they had never used any illicit drug. This compares to 40% (n90) of the 'aware' sample. Thus, a significantly larger percentage of those who had used drugs were aware of adulteration than those who had not (Chi Square = 7.65, df = 1, p = 0.006). More specifically, when age is taken into consideration we find that only 3% (n4) of 143 respondents in the 18–21 age group were not aware of it whereas 19% of the 22–30 age group, 15% of the 30–35 age group, and 11% of the Over 35 age group were unaware that street drugs were thought to contain 'other' substances.

When drug use is also taken into consideration with age we find that 100% of those in the 18–21 and the 30–35 age groups who lacked awareness of the adulteration/dilution of street drugs also had no self-reported history of drug use. For the 22–30 and over 35 age groups the figures are 50% and 66% respectively. Thus, it was very unusual for those in the 18–21 year old bracket to not be aware that illicit drugs are thought to be cut with other substances. When it did occur it was significant that those individuals were not themselves drug users (Chi Square = 5.86, df = 1, p = 0.016). There were no significant differences in the other three age groups.

Lack of awareness of adulteration, or indeed any of the responses was not reflected in the gender of the respondents. This was tested using a series of Chi Squares and there were no significant differences found.

From many of the comments made on the forms it is likely that the distinctions which can be made regarding age and drug use relate to the fact that subjects such as how 'dirty' drugs are, along with other drug related issues, are more likely to be discussed by drug users than non-drug users and that this group predominates in the younger age groups. This would partially explain the fact that far fewer (29%) of those who reported some drug use were unaware of this issue.

Perceptions of *dangerous* adulteration/dilution

Of those 227 that were aware that street drugs were thought to contain other substances a conclusive 93% believed that they consisted of one or more of a range of what would be perceived as *dangerous* substances. More specifically, 68% stated that they believed that substances such as 'rat-poison', strychnine, domestic scouring powders such as Vim or Ajax or ground light-bulb glass were used as well as other slightly less fearsome sounding substances such as talcum powder, brick dust, chalk and/or other street drugs. 18% whilst not believing in the more fearsome sounding substances such as rat-poison or ground light-bulb glass did believe that substances such as talcum powder, brick-dust or chalk were used. A further 8%, whilst not believing in the first set of substances listed (e.g. rat-poison, ground glass) did believe that street drugs such as ecstasy were adulterated with other so-called 'hard' drugs such as heroin and cocaine and were also

likely to believe they contained substances such as chalk, talcum powder and brick dust.

Substances heard of and believed to be used as cutting agents

Some substances, unsurprisingly, had been heard of, and believed to be used more than others. The cutting agent most commonly believed to be used in street drugs was talcum powder. Over half of the aware sample (52%, n118), believed talcum powder to be used as a cutting agent in cocaine, 51% (n115) in heroin, and 44% (n103) to be used in amphetamine.

The substance least heard of and believed to be used was mannitol. Although mannitol is commonly found in cocaine only 14 people (6%) claimed to have had heard of the substance being used as a cutting agent and one of those did not believe that it was actually used.

Table 1. shows those substances most commonly believed to be used as cutting agents by the respondents.

Table 1. Substances most commonly considered to be used as cutting agents

Drug	% Who Believed Talcum Powder	% Who Believed Chalk	% Who Believed Paracetamol
Heroin	52%	41%	41%
Cocaine	51%	41%	40%
Ecstasy	N/A	39%	N/A
Amphetamine	44%	41%	41%

Note: N/A means that respondents were not asked to comment on this substance in relation to the drug in question.

Whilst the list in Table 1 refers to the three substances most commonly heard of and believed to be cutting agents, belief in some of the more heinous substances was far from insignificant.

Table 2. Ranked percentage of responses regarding the more dangerous substances believed to be used as cutting agents

Drug	`Rat Poison'*	Vim/ Ajax	Brick Dust	Ground Glass
Heroin	30%	26%	19%	8%
Cocaine	22%	24%	N/A	N/A
Ecstasy	31%	N/A	N/A	9%
Amphetamine	22%	27%	N/A	N/A

Note: N/A means that respondents were not asked to comment on this substance in relation to the drug in question.

* Responses for rat-poison and strychnine were combined as usually respondents had heard/believed one or the other rather than both. Where respondents did tick both the response was counted as one.

A relatively high percentage (56%) of the 227 'aware' respondents had heard of either strychnine or rat-poison as present in heroin and as we can see in Table 2, 30% overall believing it to be actually used. Similarly, that rat-poison or strychnine is used as a cutting agent in ecstasy was believed by 31% of the sample.

There are some beliefs relating to the use of other street drugs as cutting agents, often specifically held by users of particular drugs, that were also evident in the findings from this research. Cocaine users for example often believe that amphetamine is a common adulterant in cocaine (Cohen, 1989; Coomber, 1997a,b), and ecstasy users that heroin and cocaine are used in ecstasy (Forsyth, 1995; Coomber, 1997a). Whilst other research may have found that these are not uncommon beliefs of drug users, importantly, Table 3 shows that such beliefs are not less prevalent amongst those who have not used the drug.

These results were found to be not significant using a series of Chi Squares (heroin in ecstasy: Chi Square = 0.68, df = 1, ns; cocaine in ecstasy: Chi Square = 0.18, df = 1, ns; amphetamine in cocaine: Chi Square = 1.87, df = 1, ns).

Table 3. Beliefs in the use of other illicit drugs as cutting agents

Drug Combinations	% Who had Heard of (Overall)	% Who believed (Overall)	% Who had used drug and believed
Heroin in Ecstasy	30% (n68)	26% (n59)	29% (n13)
Cocaine in Ecstasy	38% (n86)	33% (n75)	42% (n19)
Amphetamine in Cocaine	44% (n103)	37% (n85)	49% (n20)

Note: N/A means that respondents were not asked to comment on this substance in relation to the drug in question.

If a respondent had heard of a substance being used as a cutting agent then the likelihood was that they would also believe it to be used. All of the substances listed were believed to be actually used as a cutting agent by over 70% of those that had heard of them. In fact for most of the substances the extent of belief was above 80% with 4 being above 90%. Mannitol, whilst being the least heard of substance overall with only 14 people having heard of its use, 13 of them (93%) believed that it was used.

Other issues raised

Other significant issues however were raised by the method with which the respondents tended to relate what it was they believed about what it is that street drugs contain. For example, only 19 (8%) stated that they believed all of the substances listed to be contained in street drugs. Most responses were thus more considered than this. Many, for example, were happy to state that they believed that, for example, talcum powder and/or rat poison was an adulterant/diluent in one or other particular drug but were

unwilling to comment on those drugs where they had not heard of it. The respondents thus did not always assume that just because they had heard of and believed strychnine to be present in ecstasy that it would therefore also be likely to be present in say heroin or amphetamine.

Why they believe what they believe

The respondents were queried as to why they believed what they did about which substances were present as cutting agents in street drugs. Of the 217 responses to this question 43% (n95) stated that it was simply 'common knowledge'. That is, it is considered to be a type of knowledge which needs little reflection and on which the basic and essential aspects of the issue are deemed to be well understood. It could be argued therefore that for these respondents this is not an issue which is deemed to be contentious in any serious sense but one which is relatively straight forward. Many others stated in conjunction with it being 'common knowledge' or in exclusion to it that their beliefs had been informed by 'sources such as the media' (47%, n102) or that they had had drug education which had informed them on the issue (24%, n53).

The status of 'first hand knowledge'

22% of the respondents (n50) also stated that they believed what they did because they had 'first hand knowledge' of what cutting agents were used. The problematic status of 'first hand knowledge' of respondent beliefs, has been raised elsewhere in relation to the beliefs of drug dealers (Coomber, 1997b,d). Such problems were further exposed in this

study. It is clear that some individuals who consider themselves to have access to, or experience of drug dealing practices also consider their beliefs to have a particular and enhanced credibility due to this 'inside knowledge'. On further investigation in Coomber (1997b,d) it was found that the respondents in those two pieces of research who legitimated their beliefs of dangerous adulteration by claiming to have first hand knowledge of it were invariably referring to something rather less than actually witnessing dangerous cutting practices or having done it themselves. For the most part, 'first-hand' knowledge of dangerous adulteration usually meant one of two things: First, either that the respondents considered the activity to be so well known that it was taken as a self-evident truth. Specific proof was unnecessary. They 'knew' that it took place. Second, that the 'evidence' that was considered first-hand knowledge was in fact little more than unsubstantiated rumour (or suspicion) about a particular dealer, or that they had been told of such an event by another third party.

In this survey what was construed as 'first hand knowledge' by the respondent supposedly legitimating why they should believe what they did believe about cutting agents was equally problematic. Typical statements where first-hand information was indicated were: 'friend became ill from 'cut' speed'; 'some one (sic) taking them said'; 'Bought speed cut with something else'; 'friend of mine tried ecstasy'; 'know drug addicts'.

These statements are self-evidently not of a calibre which could in any way be considered proof yet the respondents clearly felt that what they had was of some greater weight than if they had not had access to such 'knowledge'.

Clearly, understanding the limited utility of so-called first-hand knowledge is especially important when considering a whole range of beliefs around illicit drugs. Research which uncritically accepts the apparently 'informed' statements of drug users and drug dealers just because they are part of the scene may produce a picture of activity or context which is unsubstantiated by further more informed research. Being 'close' to the activity in question, as drug dealers are or as drug users are, as we have seen, lends a certain credibility to the knowledge they have and choose to share but it may not provide the researcher with more reliable information.

Who or whom is the 'cutter' of street drugs?

The majority of respondents to this question (n225) were very clear about when and why street drugs were cut with other substances. 57% believed, in strong accordance with the quote used at the beginning of this paper, that drugs are 'hit-on', 'stepped-on' or 'cut' at each stage they pass through in the chain of distribution. 34% stated that they believed it to be the 'street dealers' who tend to cut the drugs whilst a smaller proportion still (4%, n9) stated that such activity was likely to be the act of 'desperate addicts/dealers'.

Perceived rationales as to why street drugs are adulterated/diluted

Of the 210 responses to this question most, (74%), stated that cutting takes place as a means to increase the profit from drug sales. The desperation of addicts was believed to provide the rationale for the adding of adulterants/diluents for 20% (n44) whilst only 5%

(n12) deemed it to relate to the act of depraved or evil dealers.

When asked why they believed that cutting with *dangerous substances* takes place 63% still stated that they believed this was primarily due to the pursuit of profit. The desperation of the addict/dealer was seen as the rationale for 28% and, although representing an increase, a distinct minority 10% (n20) saw dangerous adulteration as the act of someone who is essentially 'evil'.

Discussion

As speculated in Coomber (1997a,c) the primary set of beliefs around the adulteration/dilution of illicit drugs held by the respondents in this survey were generally consistent with those images presented by the media, politicians, the police and other 'authorities' on or around the subject. Nearly everyone contacted was aware of the cutting of drugs with other substances. Of these, 93% believed that dangerous substances were used as adulterants/diluents, 68% in the use of substances such as rat-poison, Vim/Ajax or ground glass. A significant majority (57%) believed that drugs are cut throughout the chain of distribution and that this is done to increase profitability. Most of the others saw 'street' dealers as responsible (34%) or 'desperate addicts/dealers' (4%). Thus 'street' dealers, low-level dealers directly supplying users, who constitute the great majority of those prosecuted for 'intent to supply' illicit drugs are considered to be responsible by all of those who responded for acts of dangerous adulteration. Current evidence relating to drug adulteration strongly calls each of these primary beliefs into question. *Dangerous* adulteration is largely mythical. When adulteration/dilution (with

substances such as caffeine, paracetamol, glucose or lactose) does take place, predominately it does so high-up the chain of distribution, and even then it may not, and indeed often does not, take place at all. The image of what drug dealers *do* to the drugs they sell and the beliefs of the lay population in this regard therefore stand almost inverse to current reality. If it is the aim of those in the drug prevention/education field to inform the public on the particular dangers presented by drug use then this should extend to information on cutting-agents. It may be true that 'you never know what it is that you are buying' but it is essentially untrue that the dangers that drug users are exposing themselves to and should be cognisant of are those posed by cutting-agents. Initially, attempts should be made to educate the educators. Police spokespersons, the media, politicians, school drug education co-ordinators need to be made aware of the substances that *are* found and equally so of the substances which are not. If propagation and perpetuation of this particular aspect of drug mis-information can be quelled at this level then general population beliefs may also slowly change and become more congruent with what we actually know about drug adulteration/dilution not with what we think we know about it.

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Notes

1. Whilst it is true that forensic scientists might not expect the difference to be great, the general rationale for how street drugs become adulterated is heavily tied up in the mythology of the dope-fiend which suggests that most adulteration/dilution is carried out by the 'street' dealer themselves (see Coomber 1997a,c for elaboration). Moreover, the reporting of these relatively narrow differences as being important as an indicator of drug distribution practices is not something that has been of concern to forensic scientists and their reporting of it.
2. The point to be made here is that whilst drugs such as amphetamine are heavily diluted it appears that this is normally the result of a very large initial 'cut' down to a low purity. That seizures rarely find gradations of

purity (e.g. 60% pure, 40% pure, 20% pure) suggests this is true. If amphetamine was diluted down through the hierarchy of distribution (as in the classical model) then it is likely that such gradations would be found.

3. See Coomber (1997d,e) for further information on this research and the methodology which enabled it to take place.

Coomber, R. (1999d) 'Assessing the Real Dangers of Illicit Drugs: Risk Analysis as the Way Forward', Editorial in *Addiction Research*,

Vol. , No, pp.

In this editorial the point is once again made that the dangers illicit drugs are perceived to present to us are often exaggerated, distorted or even just untrue. A call is made for an improvement in the way that the risks associated with illicit drugs are measured and assessed and that consistent methodology should be applied to both licit and illicit drugs, as this presently is not the case. A number of suggestions are made as to how such improvements might be applied, such as differentiating between moderate and excessive use, occasional and addictive use, and the corresponding risks. A call to locate an understanding of drug risks within a broader societal framework of risk in society is also made. This would allow us to understand drugs and the risks they present in perspective.

EDITORIAL ASSESSING THE REAL DANGERS OF ILLICIT DRUGS – RISK ANALYSIS AS THE WAY FORWARD?

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How risky is heroin? How risky is ecstasy, cocaine or cannabis? Well it depends on who you talk to, what position they are coming from and what agenda they want to pursue. There is, therefore, a great deal of variance in the understanding and propagation of the dangers attached to illicit drug use. Too little of this variance however is based on reliable and appropriate risk appraisal and too much is based on historical attribution and emotive reasoning. As an assessment of prospective danger and the basis of ongoing and future policy, risk analysis and information pertaining to drug risks has got to be less subject to personal and emotional bias and more reliant on reasoned, comparative and reliable appraisal of the risks than at present. Although drugs control policy has always, in spirit at least, been strongly related to notions of dangerousness or risk it has not always (and it remains true today) been based on very sound analysis. In fact “proper” risk analysis has only really developed in the last thirty years or so and is, in many ways, still in its infancy (Renn, 1998). Despite this development however, risk assessment in relation to illicit drugs remains woefully deficient.

Risk analysis itself is essentially about trying to predict the probability of “an undesirable state of reality (adverse effects) [which] may occur as a result of natural events or human activities” (Renn, 1998: 51). This is fine as long as all phenomena are subject to the same rules. Where illicit drugs are concerned I would argue it is the *potential* risks resulting from exces-

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sive use that tend to be heavily overplayed at the expense of a broader context and the understanding that most use is moderate recreational and/or occasional. The outcome is that many illicit drugs are attributed with a level of riskiness which is not generally congruent with that which is found in reality. Obversely, for licit drugs the potential risks, although often clearly labelled, are in practice, played down. There is an assumption that for the most part, use of these drugs is moderate and as advised and that the stated risks and potential side-effects are thus minimised. Thus illicit drugs are assessed through their potential for harm to each individual user, licit drugs for their likely harm to each individual user – two decidedly different methods. Added to this bad drugs/good drugs dichotomy which is in itself contradictory and unuseful as a way of estimating comparative drug risks is the fact that illicit drugs are also more commonly subject to the attribution of powers that they simply do not possess (Musto, 1987; Bean, 1993; Woodiwiss, 1998).

At the very least there is a need to develop sensitive measures of risk attached to street drugs which are comparable to those used to gauge the relative riskiness of legally produced pharmaceuticals. Risk would be measured initially in terms of mortality (based on the average dose of seized or bought samples), and then as with licit drugs, in terms of other side-effects. The advantage of this would be that a league table of relative risk would help inform public and policy debate about the problems presented. Understanding illicit drug risks in a way comparable to licit drugs would be a start but illicit drug use is deemed to be more than a problem of potential poisoning, it is also understood as a broader social problem.

As such the riskiness of illicit drug use also needs to be gauged against other risks which present themselves to us in life. Understanding a risk (a problem) in social terms only actually makes sense if this is done. In relation to ecstasy the recently deceased Nicholas Saunders (1993: 48), using OPCS Monitor statistics, attempted (as did the new Scientist, 25.1.97) to take us indicatively along this route, "If we assume that ecstasy is taken on 25 million occasions a year (half a million a week), and that there are 5 Ecstasy related deaths per year, then this compares favourably with 10 deaths related to fishing, which is done on 45 million occasions a year, and 12 deaths resulting from horse riding which is done on 40 million occasions". Moreover, we don't overly worry about fun-fair rides and yet the likely risk of dying from any one fun-fair ride has also been estimated to be greater than the risk of taking an ecstasy tablet (Saunders, 1993: 166). It

can of course be objected that like is not being compared with like. Different weather conditions may make fishing more treacherous at times but that it is essentially a safe activity (our sensibility tells us as much). But death from ecstasy use is also context bound. van Aerts (1997) in reviewing the toxicity literature around ecstasy notes that severe reactions to ecstasy were rare when it was used in a more relaxed way in the US in the 1980s. Marks has suggested that the risks attached to ecstasy use are further reduced when reliable supplies and sensible health care advice is also available (Daily Express, 1996). Risk is thus inextricably context bound. A broader context based assessment of drug related risk would not be an attempt (as some would have it) to deny the riskiness of drug use but to adjudge the risks in real not abstract terms.

For those that have read the above as somewhat simplistic and perhaps naive let me briefly outline my rationale for the proposed direction of risk analysis stated above and below. I am only too aware of the many problems surrounding research on risk and in particular the epistemological strains that exist in the field (for a review see Rosa, 1998; Adams, 1995; Beck, 1993). That what is considered to be a risk issue often has more to do with morality, politics, and fear is well stated (Douglas, 1996;1986, Beck, 1993; Adams, 1996; Green, 1997). And while I recognise that many of the dangers which are commonly attributed to illicit drugs are unreasonably exaggerated, distorted or even untrue I do not believe that the most pragmatic stance to take on redressing this irrational basis of risk assessment and thus policy rationale is by continuing to debate these issues in the abstract.

At the very least, what we need to do as a first stop is decrease the levels of variance in the interpretation of how risky a behaviour, activity or event is. It is possible to make progress in terms of how we make risk assessments and it is necessary that this is done in relation to concerns around illicit drugs.

I now want to make some tentative suggestions for the type of criteria which would inform a drug related risk analysis of any particular substance. At the very least they may serve as a platform for debate over an appropriate framework.

1. The first requirement would be that wherever possible consistent comparative criteria are used. This will involve assessing the risk of all drug use, both legal and illegal and help provide a social yard stick

with which to adjudge a drug's relative dangerousness against other drugs. This may help to demonstrate the inappropriateness of the good/bad dichotomy that is often applied to legal and illegal drugs.

2. Difference by degree of activity. Simply this would be an assessment of the relative riskiness attached to single, occasional, recreational and dependent use. Thus a risk assessment of cocaine would show that few problems present those who use it occasionally or moderately (WHO/UNCRI, 1995).
3. Placed in a context of known or assumed general patterns of use. Without knowing the relative use patterns, whether most use is moderate or excessive, it is difficult to judge what the "problem" is. Thus if most cocaine use is moderate the problem which presents is different to that if the belief is that most cocaine use is excessive.
4. To dis-aggregate real and constructed risks. It is likely that many heroin overdoses are not simply reducible to this definition (Darke, 1997) and yet deaths from "heroin overdose", as currently recorded, greatly inflate mortality risk statistics relating to heroin. This would need, as is appropriate, improved recording of drug related mortality. Such improvements are, in any case much needed.
5. To include actual data where possible on poly-drug risks. Just as the risk of severe reactions are increased when ecstasy is taken in combination with certain co-activities, the risk attached to drugs such as heroin are increased when taken in combination with alcohol and other drugs. Sensitive tables would attempt to dis-aggregate heroin use and thus "heroin" overdose from poly-drug use and drug combination overdose.
6. Closely related to 5 above, to build up information on relative risk factors associated with particular behaviours and contexts for particular drugs. Ecstasy use, as stated is less likely to produce severe reactions in certain contexts than in others; likewise injecting heroin is more risky in certain respects than when "chased" or "snorted".
7. To use complementary qualitative research as well as the traditional quantitative risk methodology. A great deal of useful and important material regarding risk related attitudes and behaviours has been borne from ethnographic and other qualitative research in recent years. It is often the case that qualitative methods give rise to information that is largely inaccessible by normative quantitative methodologies and/or often provides new variables for consideration in such approaches.

I recognise that many of the figures used to assess relative risk would be reliant upon guestimates of use. This is not a reason to not do it. Much of the existing literature which refers to risk is forced to use guestimates of one kind or another. The key is to set parameters within which reasoned estimates of risk could be gauged. For example even if the risk of mortality from ecstasy use was ten times short of the real mark it would still represent a smaller risk than many generally accepted activities in which we partake (New Scientist, 1997; Saunders, 1994: 48). Such parameters would need to be informed by a range of survey material giving insight to patterns of use and prevalence. I also understand that the location of particular drugs on a "league table" of risk would be subject to socio-political manoeuvre and that a "real" place of risk in the league table would not in reality exist. I do believe however that a reasonably rigorous methodology would ensure against the worst abuses of subjectivity and that a range of substances, cannabis for one, would be placed at a point in the league where its relative risk could be assessed less emotively (and with less variance) than at present.

Because risk analysis is a growth area increasingly applied to most aspects of life my intention here has been to suggest a pragmatic way forward for risk assessment regarding illicit drugs which goes beyond the overly simplistic and one dimensional approaches currently relied upon.

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Coomber, R. (1993) 'Drugs in Sport: Rhetoric or Pragmatism?' in *International Journal of Drug Policy*, Vol. 4, No. 4, pp. 169–178.

This article looks to begin with at the prevalence of drug use in sport, then at the aims of sporting drug controls and finally, at the way that performance enhancing drugs have been presented. It was suggested that the use of performance enhancing drugs (PED's) was more common than is often acknowledged by sporting authorities; that representations of PED's effects, in terms of enhancing performance and in terms of health risks have been unreasonably overstated, and that there was no evidence to suggest that 'getting tough' is a successful strategy to employ if the aim is to prevent the use of PED's. In many respects this paper was relatively introductory but it did make two arguments which had not at that time been applied to drug control in the sporting context. It was argued that the overly punitive prohibitionist stance of sporting policy makers had pushed PED use underground and as a result effectively prevented medically supervised use and research to be carried out. A consequence of this, it was argued, would be to increase not decrease the potential harm to the user. It was further argued that the adoption of harm reduction approaches to PED use would be a more pragmatic an approach given that such approaches had produced some real gains in the non-sporting world and that the current punitive approach is showing little signs of success.

DRUGS IN SPORT: RHETORIC OR PRAGMATISM

Ross Coomber looks at the latest battleground in the 'War on Drugs', the sporting arena, and contends that an effective policy on drugs in sport should be based on pragmatism because the means to detect and prevent their use do not exist.

The message from sports' governing bodies for some time now has suggested that sport is largely drugfree and that appropriate detection methods are available and being employed to ensure it stays that way in the name of fair play and health protection. If at times the problem appears to be getting out of hand, all that is needed is an injection of more of the same, i.e. spend increasingly greater sums of money to enhance detection and therefore reduce demand by making the activity too precarious to warrant continued involvement. On the surface, evidence appears to support this supposition, and as a consequence validates the existing policy stance which severely punishes those who attempt to gain advantage through the use of performance-enhancing drugs. The policy of prohibition, combined

with the policy of testing for drugs and the consequent castigation and public shame if caught, seems to act as sufficient deterrent and thus as successful policy. There are, however, a number of reasons why current policy regarding performance-enhancing drugs is both inadequate and misinformed. This will be examined with particular reference to harm reduction as an alternative basis for policy on drugs in sport.

HOW MANY?

Sporting authorities such as the International Olympic Committee (IOC), the International Amateur Athletics Federation (IAAF) and the British Amateur Athletics Board (BAAB) point to small numbers of competitors found to have banned substances in their urine at major sporting events such as the Olympic Games, the World Championships and at national competitions. In the 1988 Seoul Olympic Games, for example, only 10 competitors, including Ben Johnson, were disqualified for the use of performance-enhancing drugs. Out of roughly 13 000 athletes who competed in Seoul this represents 0.08% and suggests that the idea of widespread drug use has little foundation. This picture, however, contrasts significantly with that portrayed by athletes* themselves and a number of officials who

* Although many of the examples given refer directly to athletes, the term 'athlete' should be taken to mean those participants involved in competitive sporting activities which may conceivably benefit from enhanced performance.

respect to prevalence that 'many, many more athletes than those actually testing positive have taken advantage of banned substances and practices' (Dubin, 1990, p. 349). A similar enquiry carried out by the Australian Senate also heard evidence which suggested that '70 per cent of the athletes in Australia's international pool took, or had taken, ergogenic [performance enhancing] aids and that 25 per cent of the 29 athletes in Australia's 1988 Olympic track and field squad had taken, or were taking, ergogenic aids in their preparation for Seoul' and accepted that drug taking in Australian sport was 'widespread' (Black, 1989, p.62).

It seems then the 'War on Drugs' is also being lost in the sporting arena. If we accept that far more athletes use performance-enhancing drugs than is officially accepted and recorded, what we need to explore is how is it possible to have such a wide disjuncture between the pronouncements of sporting authorities and those closer to the ground. There appears to be two primary reasons for such a difference. First, current procedures are inadequate as a means of detecting the great majority of the use of performance-enhancing drugs. Second, it has been argued that sporting authorities have not been and are unlikely to be entirely candid about the extent of drug use in sport because of the perceived damage a more realistic appraisal may have on the multi-million pound industry (Dubin 1990; Voy 1991; Simson and Jennings, 1992). If the use of performance-enhancing drugs is common rather than anomalous, policy designed to deal with it should reflect this situation, not ignore, deny or underplay it. If the use of performance-enhancing drugs was uncommon then the existing policy of prohibition and punishment could be considered effective; as it is, it can only be considered ineffective and inappropriate.

WILL ATHLETES STOP USING PERFORMANCE-ENHANCING DRUGS?

As in the non-sporting world, demand for prohibited drugs is likely to continue – albeit for different reasons; the problem, however, has its similarities. Those using drugs are unlikely to respond to or trust sporting authority indictments of various substances as either unethical or unhealthy or to listen to their pleas for abstention – the 'Don't be a Dope' campaign by the British Athletic Federation being the latest equivalent to the much criticised 'Just Say No' campaign waged against heroin use in Britain in the 1980s. Athletes are and will continue to take drugs. It would be wrong to try to suggest

deterministic factors which make athletes use drugs because the pressures and motivations are undoubtedly manifold. However, some evidence is revealing and perhaps indicative of why athletes use performance-enhancing drugs. One survey of over 100 top American athletes in the late 1970s revealed that nearly 55% of them reported that they would be willing to take a drug which would kill them within a year if it could assure them of an Olympic gold medal (cited in Donohoe and Johnson, 1986); a follow-up to this study in 1984, using similar methodology, found that, of 198 world class athletes, 52% said they would take a 'wonder drug' that would probably kill them after 5 years if it guaranteed success (Goldman, 1984). Recent studies of anabolic steroid users in gymnasiums have also indicated that the motivation to use steroids came from the perceived benefits obtained from their use and that knowledge of the purported risks did little if anything to deter them from use (Tricker et al., 1989); in fact users are often unconvinced of the credibility of the research, citing cigarettes and alcohol as carrying greater risk (Korkia and Stimson, 1993). This study also reported that 87% of the 94 interviewees who responded to the question said that they would continue to use steroids if they became illegal. Clearly, dissuasion from regular use to abstinence is difficult to achieve on the basis of proselytising about either health or the ethics of fairness. The expected benefits from performance-enhancing drugs at present appear to heavily outweigh the fear of the potential risk. For some, the accolade of a gold medal may provide the motivation to use them; for others, it may well be the benefits that accrue with sporting success. As Weis has said:

'The more sport becomes professionalised, the more winning as opposed to the means by which it is achieved, is emphasised as the goal of sports aspirations and, finally, the more significant the economic or other consequences of victory are, the greater is the probability that the rules of sport will be violated in favor of other interests ... Wherever victory and success are the highest goals, the end will legitimize illegitimate means.'

Weis, 1976 quoted in Johansson 1987, p. 95

Whatever the reasons, and they are varied (desire to win or succeed at any cost; desire not to be at a disadvantage to those already taking the drugs; the pressure to gain or keep sponsorship either to continue participating or to provide a comfortable income; the fame,

wealth and glory which accompanies success; the desire to 'fill out' [for cosmetic or competitive purposes]; the 'encouragement' from other athletes, coaches or even family; a lack of confidence in scientific 'risk' evidence) drug use is deemed to be legitimate for many in practice if not as an ideal. What we have to accept is that there is nothing intrinsic to modern competitive sport which encourages athletes to care for the 'taking-part' over the winning. Sport at the top level is effectively a career not a microcosm or model of how we should behave morally and socially. For these reasons and more it is difficult to see the use of performance-enhancing drugs declining voluntarily.

CAN ATHLETES BE PREVENTED FROM USING PERFORMANCE- ENHANCING DRUGS: MORE OF THE SAME?

If athletes are unlikely to stop of their own volition, can we reasonably expect sporting authorities to succeed in preventing drug use? A historically informed answer would suggest not. Detection techniques and facilities have improved significantly in recent years, especially at the major sporting events, but levels of detection have not risen consistently or significantly. We find, for example, that, in the 1976 Montreal Olympic Games, 2.9% of the 275 tests were positive for anabolic steroids; in Moscow in 1980 there were no positive returns from 1500 tests; in Los Angeles (1984) 1.1% of the 1510 were positive; in Seoul (1988) 2% of the 1500 tested were positive (Yesalis, 1993). Athletes, of course, are fully aware that testing will take place at the Olympics and other major sporting events, and have ample opportunity to clear their system of tell-tale traces of drug use and/or 'hide' possible traces with so-called masking agents. This average of 2% or thereabouts for positive testing of anabolic steroids in the Olympics has even been superior in certain major sporting events in the USA, such as the 1987 US Olympic Festival in Greensboro where only 1.0% of 628 tested were positive, and the 1988 and the 1989 Olympic Committee-sponsored events where 0.2% recorded positive from 5000 tests in both cases (Yesalis, 1993). When the US Olympic Committee carried out tests at a number of events unannounced, i.e. where the athletes did not expect testing to take place, the picture looked completely different. Rather than 2% or less testing positive for

anabolic steroids, the figure was in fact closer to 50% (Simson and Jennings, 1992). Athletes clearly have the ability, on the whole, to avoid the detection of their use of drugs such as anabolic steroids from current technology. Moreover, the idea that detection methods are effectively reigning in and reducing demand by keeping ahead of the users' ability to avoid detection is in reality somewhat problematic (Donohoe and Johnson, 1986; Ferstle, 1993). Rather than technology keeping drug use at bay, it has and is in fact tending to help users stay ahead of the means to detect the use of performance-enhancing drugs. Even those involved in the detection of their use have revealed the concern of the sporting authorities by pointing out that one of the main problems for the future is the use of artificially manufactured substances such as somatotrophin and erythropoietin. Somatotrophin is a synthetic growth hormone reputedly more effective than anabolic steroids, with fewer unwanted (side) effects,* and mimicking a naturally occurring substance in humans, for the sake of determining foul play, is to date beyond the capabilities of the testers. Likewise erythropoietin, again a naturally occurring substance in humans, permits red blood cells to carry more oxygen and thus reproduce the effects expected from the previous practice of blood-doping, and increase endurance. Although these substances are detectable, erythropoietin and growth hormone occur differentially in individuals, some having high and some low levels, and there is at present no way of knowing what an individual's 'natural' level should be. Added to the way that 'progress' is permitting athletes to avoid detection should be added the long list of techniques that have been and are being used by athletes to successfully provide false samples (the use of catheters and other means to supply clean urine; 'masking agents' such as diuretics which hide or flush out residues of the banned drug; and/or the use of 'other' ergogenic compounds which are not on the banned list) and, of late, the questioning, in court, by Butch Reynolds, Katrin Krabbe, Jason Livingston and others of the reliability of the testing procedures themselves. The infallibility of the tests has also been questioned (Ferstle, 1993) and, in relation to non-IOC accredited laboratories, found seriously wanting (Uzych, 1991). If detection procedures are lacking (and even random, out of competition testing will not resolve the problem of the use of naturally occurring substances), and they clearly appear to

* The efficacy of human growth hormone as a performance-enhancing drug is highly questionable as are its claims to be less harmful than anabolic steroids. It is, however, taken by athletes on this broadly assumed basis.

be, the way forward is not to push for more artillery, as in the wider 'War on Drugs', because the evidence suggests that new ways to avoid detection will be employed.

As if the technical problems of detecting the use of performance-enhancing drugs in athletes was not sufficient to undermine attempts to reduce demand, the logistics of producing a uniform, consistent (across sports governing bodies, within nations and throughout the world) and therefore effective anti-doping policy have, to date, proved difficult to achieve, and possible future developments, where governing bodies are increasingly controlled by the athletes taking part, may make the process ever more unlikely (Houlihan, 1991), if indeed at all possible.

Prevention through attempting to cut back demand has, to date, largely failed. Prevention of supply is likely to be similarly unsuccessful as it has been historically for illicit drugs such as cocaine, heroin and marijuana in the world outside of sport, where enforcement resources are much more plentiful. Athletes have commonly testified to the ease of access to and the availability of performance-enhancing drugs (Davies, 1984; Goldman, 1984; Sanderson, 1986) and the likelihood of this availability being stemmed while demand remains high is slim indeed.

SPORT IN THE TWENTIETH CENTURY – A COMMERCIAL UNDERTAKING: EFFECTS ON POLICY

The greatest level of anti-doping detective work takes place in athletics. To a large extent this is because athletics and its primary showpiece – the Olympics – have over the years been attributed with a set of ideals which are as much a part and parcel of the sporting activities as the competing itself. In fact notions such as 'taking part' being the *raison d'être* of participation in sport, rather than the winning, have always rested uneasily with the glories and motivations supplied by Gold, Silver or Bronze received on an Olympic podium. Contemporary sport is also qualitatively different to the era in which more idealised notions of sport were reconstructed in the late nineteenth century, and this tends to undermine that already fragile tension: the fact that amateur sport as we know it is all but dead. When Baron Pierre de Coubertin – the founder of the modern Olympics – stated that 'The important thing in life is not the triumph but the struggle. The essential thing is not to have conquered but to have fought well', he could have barely imagined the context in which sport-

ing events take place today. Top 'amateur' athletes receive what are effectively large payments for participating and continuing to compete (appearance money, sponsorships, scholarships, prizes, employment which is often little more than a well-paid sinecure) just about any time they perform and even the sacred cow of 'olympicdom' now permits professional (multi-millionaire) basketball and tennis players to compete legitimately for its own prizes, as long as they receive no direct payment for being Olympians. The 1993 World Championships, for example, presented each of its gold medal winners with a £20 000 Mercedes Benz (Bierley, 1993) and the payment of appearance money to ensure the top names are in attendance to help maintain the status and credibility of the event was resisted this time, but is unlikely to hold out much longer. Major events need to continue to succeed or they will decline.

Second string events such as the World Cup, which followed in the wake of the 1992 Olympics, suffered from such a failure of credibility as many of the world's top athletes chose not to take part in it – the effect was to destabilise the event even further. Athletics is a now multi-billion pound commercial undertaking. If athletic events decline, the bottom begins to fall out of the now lucrative industry. This has led to suggestions that it is not in the interests of bodies, such as the IOC, the IAAF or in fact any body attempting to maintain a high profile for its sporting activity, either to disclose the true level of doping infringements (reports of positive tests going unreported) or to put in place prevention policies which would make the use of performance-enhancing drugs very much more difficult. The damage – or at least the perceived damage – that may be done to an event such as the Olympics, if the public feel themselves not to be watching great athletes but artificially induced achievements, is seen to be far reaching and potentially fatal, in a commercial sense.

The IOC and other sporting authorities have, on the one hand, to be seen to be doing something about drugs, but, on the other, exercise damage limitation for the 'good' of the sport as a whole. If too many Ben Johnsons are consistently found, in the name of keeping sport clean, this too may detract from public confidence, for sport would be self-evidently dirty. The sincerity of policy designed to mitigate against drug use in sport has therefore been questioned by a number of commentators and enquiries (Gold, 1989; Dubin, 1990; Simson and Jennings, 1992). Although I have suggested so far that the technology and the application are not available to detect the use of drugs successfully

to act as an effective deterrent, Simson and Jennings (1992) cynically but forcefully argue that, even where it has caught competitors out, at times these positives have been selectively covered up; this is because some of the names involved are so prominent that it would not have been in the long-term interests of athletics to expose them. Voy (1991), moreover, frustrated in his attempts to help clean up athletics in the USA, also suggests that sporting authorities are complicit in the cover up and not in the eradication of drug use. Although it is true that the US Olympic Committee set up unannounced tests before the Los Angeles games which they described as an 'educational, non-punitive, drug-testing programme', Simson and Jennings suggest that the real reason for its existence was to ensure that US Olympians did not embarrass the host nation during the games themselves. The chances of the USA hosting the games for the second time in a space of 12 years would surely not have borne fruit if American athletes were seen to be less drug free than other nations. Simson and Jennings argue that the 'education programme' was 'a transparent joke; ... It was a godsend to the dopers. They flocked to use the lab, to discover more precisely how fast their bodies cleared of tell-tale steroid traces ... No Americans were caught at the LA Games. Fourteen foreign competitors were' (Simson and Jennings, 1992, p.190). Robert Voy, the former Chief Medical Officer and Director of Sports Medicine and Science for the US Olympic Committee between 1984 and 1989, has said that 'Allowing national governing bodies... such as the United States Olympic Committee to govern the testing process to ensure fair play in sport is terribly ineffective. In a sense, it is like having the fox guard the hen house' (Voy, 1991, p.101). The commitment to providing 'drug-free' sporting events therefore is not necessarily the same as a commitment to preventing athletes from taking drugs.

It may be argued then that current policy is sometimes more symbolic in nature than it is a sincere and concerted effort to ensure that drug use in sport is effectively curtailed.

REASONS AND JUSTIFICATION FOR THE PROHIBITION OF PERFORMANCE-ENHANCING DRUGS

The main justifications for the banning of performance-enhancing drugs are that they do provide an unfair advantage to athletes over those who do not take

them, and their use is likely to cause harm to the athlete involved. These two essentially ethical justifications (Fraleigh, 1985), one based on the moral responsibility of governing bodies to protect athletes from unreasonable injurious practices and the other on the assumption that drugs introduce unfair advantage, are despite initial appearances far from being self-evidently straightforward or unproblematic.

Regarding unfair practice, there are policy inconsistencies, for example, surrounding what counts as banned substances and practices regarding the enhancement of performance. Erythropoietin, used to reproduce the effects of altitude training, is banned whereas the practice of training at altitude is, quite reasonably, permitted. The use of anabolic steroids to get stronger and to enhance training is banned (if performance is enhanced through anabolic steroid use it is only in conjunction with hard, specialised training and diet) whereas an otherwise debilitated athlete is permitted to use (under medical supervision) corticosteroid pain killers to enable him or her to compete almost immediately to satisfactory levels – Peter Elliot in the Seoul Olympics won Silver after undergoing a series of cortisone injections – when they would not otherwise be able to. At the time of writing a new 'food supplement' (used incidentally by world champions Linford Christie, Sally Gunnell and Colin Jackson) has been much vaunted as able to produce up to a 5–7% enhancement of performance (Brown, 1993) – the sort of improvement attributed to some drugs. One, however, is permissible, the other not.

For the purposes of this article and the policy prescription which will be outlined, it is not, however, entirely relevant whether the so-called performance-enhancing drugs actually do improve a competitor's performance significantly. The important factor relevant to policy analysis and prescription is that many (most?) athletes believe that they do. This belief is unlikely to be countered by the now long espoused denials by medical authorities that performance-enhancing drugs do not work – mainly because they tend to be used by athletes in ways which are unlikely, for ethical reasons, to be duplicated (and therefore verified) in humans for the purpose of research, e.g. polypharmacy and 'stacking', or the use of a number of different anabolic steroids and substances at the same time in doses that are in excess of what would normally be considered safe. Also, in relation to drugs such as anabolic steroids, athletes can see that changes have occurred (increase in bulk), giving, rightly or wrongly,

the impression that this will aid performance.* As regards the stimulants (and over a longer period, the anabolic steroids), a feeling of well-being may be experienced, leading to the belief, if not the actuality, that performance has been or is being enhanced. If athletes believe performance-enhancing drugs work, then policy makers have to be pragmatic and accept that traditional health education† approaches which encourage abstinence through attempts to scare off the user through stories of what exaggerated horrors might happen to them ('heroin screws you up' style) if they 'mis-use' or 'abuse' drugs are apparently as unsuccessful in the world of sport as they have been in the non-sporting environment (compare Segal, 1976; De Haes, 1987; Goldberg et al., 1991) and may in fact have the deleterious effect of arousing interest where it previously did not exist (Advisory Council on the Misuse of Drugs 1984; Cashmore, 1990; Yesalis, 1990).

On the second issue (the use of performance-enhancing drugs is likely to cause physical or psychological harm), the extent of that harm needs to be questioned. Implicit, at least in their denunciation of anabolic steroids in particular, is the notion that severe long-term effects, if not fatal illness, is the probable outcome of non-medically supervised use. This is once again a mirror of how illicit drugs in the non-sporting world are often represented and once again a less than useful piece of alarmist exaggeration. Many of the unwanted effects from anabolic steroids, such as testicular atrophy, high blood pressure, acne, abnormal liver functioning and aggressiveness have been shown to be largely short-term reversible effects, with a return to normal functioning following either abstention from steroid use or, in the case of abnormal liver functioning, after a few weeks even if use is continued (Windsor and Dumitru, 1988). As regards long-term and more severe problems, the jury is still out. However, if drugs such as anabolic steroids are used extensively, and have been for some time, the level of serious problems often ascribed to such use, especially given the practice of stacking over many years, should lead us to expect a large number of serious casualties becoming increasing-

ly visible. This is not the case. Just as in the non-sporting environment, the level of actual casualties (death and serious long-term health problems) which can be directly attributed to the substance in question‡ (be it heroin, cocaine or steroids) is far below that widely presumed or suggested. On occasion a highly publicised 'public interest story' may allow an individual to ascribe current health problems to past use of performance-enhancing drugs, but these occur rarely and it is far from clear how many of these individuals would have contracted their particular problem even if they were not taking drugs. At the very least, a review of the literature suggests (as regards anabolic steroids) that the real level of risk is in fact far less than is commonly assumed, rhetorically and publicly stated: 'Although anabolic steroids have been used in the United States for about 30 years, no study has demonstrated an increased risk for cardiovascular or peripheral vascular disease in athletes who have used steroids' (Windsor and Dumitru, 1992, p. 48). Even when the 'much discussed and little observed phenomenon' (Windsor and Dumitru, 1988, p.42, my emphasis) of liver tumours is discussed, the relationship is strong with a particular group of oral anabolic agents isolated around the C17 α -alkylated derivatives of testosterone (Windsor and Dumitru, 1988; Friedl, 1993) and can for the most part be avoided. In fact Friedl (1993, p.135) is forced to concede that 'From the evidence of studies of androgen administration, it is not readily apparent that we can attribute significant adverse health effects to androgens as a general class'. When we consider how many steroid users there are (up to 500 000 adolescent users in the USA alone (Buckley et al., 1993) and millions world wide), the way that steroids have been used (stacking and in conjunction with other compounds), the length of time they have been used (around 30 years) and the many research projects set up just to show how dangerous steroids are, I would suggest that there is a shortfall of evidence for the purported and consequently extrapolated risks. The corticosteroids mentioned earlier as a legitimate performance-enhancing drug present contradiction also in policy regarding health concerns of

* Of course in some sports such as body building, or for those looking for purely cosmetic improvements, the objective of using a variety of substances would include the bulking effect, perhaps in preference to any gains in strength.

† Ironically, as Cashmore (1990) points out, belief in the efficacy of drugs is heightened by the millions of pounds spent on attempts to prevent the use of performance-enhancing drugs at the expense of the sporting authorities. If the drugs don't work, why prevent their use? In this sense the traditional education campaign is effectively running counter to itself.

‡ In fact, most of the deaths commonly attributed to the use of performance-enhancing drugs have been stimulant, not steroid, related and even in these cases the numbers remain low with famous examples such as Len Bias in the USA and Tommy Simpson in the UK being brought up time and time again to maintain impact.

athletes. The corticosteroids themselves have risks attached which include (after prolonged administration) some of those consistent with the use of anabolic steroids, e.g. acne, and in women problems relating to menstruation and excess hair growth. Other risks include problems with adrenal insufficiency mimicking that produced by Addison's disease if the athlete is not withdrawn slowly (Donohoe and Johnson, 1986) and possibly changes to mood. However, and perhaps more seriously, by enabling an athlete to compete on an existing injury, long-term problems which would have been avoided through abstinence from competition may be produced.

What we find then is that the argument to ban these drugs on the basis of health risks is seriously undermined by making corticosteroids available to athletes despite the well-known hazards attached to them. Moreover, if the use of substances, such as cortisone, which permits athletes to perform when they would not otherwise have been able to – perhaps causing more damage in the process – is considered legitimate, then the concepts of 'performance enhancing' and health protection that are being employed are clearly very narrow ones. These are concepts that I would argue are contradictory to the ethical justification for the banning of performance-enhancing drugs in the first place.

Although the risks attached to these drugs seem to be somewhat exaggerated they do nevertheless raise questions of policy efficacy.

EFFECTS OF PROHIBITION: MORE HARM THAN GOOD?

Given that prohibition appears not to be effective in reality in the prevention of the use of drugs in sport and that at times it reveals itself to be inconsistently applied, we need to consider whether a policy of prohibition ironically produces unintentional effects which work against the stated desire to protect the health of the athlete.

At present athletes who use performance-enhancing drugs have no recourse to reliable help or advice. Their activities are forced underground leaving them more vulnerable to the vagaries of drug use. The problem is worse where prohibition in sport is combined with criminalisation by law. In the USA, where use of anabolic steroids is arguably more prevalent than elsewhere and more widespread across a broader range of

ages than elsewhere, the problems and consequences of the criminalisation of steroids may already be being felt. Whereas previously they were being provided largely by other athletes and the quality of the product was consistent, with criminalisation there appears to be a shift in the distribution network towards the sellers of street drugs (Yesalis, 1993). With production becoming more difficult and expensive, laboratories are forced further underground, with the possible effect of a less reliable (safe) product. The potential for adulteration is further increased when the distribution network increasingly includes sellers of other illicit drugs, whereby the standard practice to optimise profit is to adulterate their goods. This is a common problem for users of street drugs but for the users of anabolic steroids it is new. Because athletes are unsure of the quality of the drugs they are buying, or because normal supply routes are less reliable than they used to be, there seems to be growing evidence that other compounds are being used as performance-enhancing drugs (Yesalis, 1990). If the use of drugs in sport appears to get worse in Britain – who likes to take a lead in these affairs – the recent call for prohibition may well be repeated and eventually successful, leading us even further from a policy of resolution.

It is my contention that, in recognition of the continuing use of and experimentation with performance-enhancing drugs by athletes, and the large numbers involved, prohibition should be lifted.* This would enable athletes to seek the kind of assistance for their drug use that they receive for other aspects of their training regime – such as nutrition. At the very least, policy should entail: the provision of harm-minimisation literature available at all athletics meetings (and where appropriate); how to use various drugs safely; which compounds absolutely should not be mixed; that injectable androgens appear safer than oral ones; and how to reduce risk associated especially with injections given the broader context of HIV/AIDS. Such literature should not recommend doses or practices so that the literature will be disregarded. It should recognise stacking and polypharmacy, and relate to athletes how to reduce harm associated with this. One foreseeable advantage of harm-reduction programmes of this kind may be that they will also facilitate access to athletes willing, under an anonymous and non-punitive setting, to be involved in meaningful research of the effects of this type of behaviour, improving our knowledge of the consequences of drug use – on both health and

* Of course, in the USA this would also mean decriminalisation

performance – and perhaps making it more credible in the eyes of what constitutes a comparatively research hungry group of drug users.

CONCLUSION

Policy on drugs in sport needs to be pragmatically approached on the basis that athletes do and will continue to use performance-enhancing drugs and that the effective means to prevent use are unavailable and unlikely to be so. Given this, appeals to more idealistic notions of sport and fair play tend to ignore the context in which sport is played out and to prevent appropriate policy from being enacted to do just what most governing bodies profess as an objective: to protect the health of the athlete.

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In this paper an argument was made for sporting policy makers to become aware that the issue of drugs in sport did not operate in a societal vacuum. This is difficult because, it was suggested, one reason why sporting authorities were unable to engage in broader debate on drug use and learn from the non-sporting world is because those that make policy in sport are not drug experts they are sports administrators. As such they are unlikely to see or understand the parallels between the experience of the sporting world and the non-sporting world. It was argued that sports administrators need to become more historically and socially informed, understand the impact of harm reduction policies and, in the face of a failing policy, take the responsibility to *lead* public opinion not defer to what they believe it to be regarding the responsibility of drug control policy.

The effect of drug use in sport on people's perception of sport: the policy consequences

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Abstract

Policy on drugs in sport should be informed policy — historically and socially — as well as able to convey the support of the public. Drug policy in the sporting world, however, is often devised and carried out as though it operates in a vacuum to the non-sporting world. Its policy makers do not appear informed of, or sensitive to, the experiences and problems of drug prohibition policy in the non-sporting world and this prevents them from devising pragmatic and appropriate responses to their problems. Prohibition alone has not worked in the non-sporting world and is not working in the world of sport. If informed and pragmatic changes of policy mean confronting and persuading public opinion, then policy makers have this responsibility too.

This is, I think, an interesting area of inquiry for a number of important reasons. Not least because *how* the audience is believed to relate to watching, reading and hearing about sporting achievements that they then learn involved the use of so-called performance enhancing drugs helps to form current and future policy on drugs and those that use them. Of course, to some extent this is always the case with policy making. A policy of any kind rarely exists where there is not a 'problem' (real or imagined) to be managed or solved.¹ However, policy often has to serve more than one function. Policy is not just about doing something about the problem at hand, for as a recent large-scale survey on the views of the general public on drug use pointed out: 'Policy regarding

drug usage is unlikely to prove successful if it fails to satisfy the requirements of the public to whom the policy makers are chiefly responsible' (Leitner *et al.*, 1993, p.3).

We might accept then that policy will struggle to succeed if it fails to satisfy public opinion, but does that mean it should be led by it? I think not. The report goes on to state that simply knowing what is the public's opinion is not enough to construct policy from. You also have to be guided by 'the level and accuracy of the public's knowledge regarding the issues surrounding drug usage' (p.3). This is important, they say, for if 'the public's perception of drug usage is inaccurate, then policies addressing the real nature of any problem may seem oblique or potentially harmful

in the eyes of the public' (Leitner *et al.*, 1993, p.3).

In other words, a situation may arise where an inaccurate understanding of the problem leads to calls to resolve the problem in ways that *informed* policy makers know would not work. An example could be that of increasing teenage pregnancies and abortions. Policy in England has evolved to suggest that the pragmatic way of dealing with this problem is, in fact, to provide sex education and to give non-judgemental advice about how to avoid pregnancy and sexually transmitted diseases. It is not a policy response that sits happily with many who argue that it encourages promiscuity. Fundamentally, it is policy based on the experience that teenage girls *do* and *will* have sex. It is a pragmatic response but not one that carries all with it.

For many kinds of policy, whether its formation is based on 'on the hoof' decision making, after urban riots for example, or distinct and long-term planning, those involved in making policy are often working from a pragmatic 'what can actually be done' position and/or a historically and informed position (cf Hill, 1993). In many such circumstances, public opinion has to be managed and informed as public opinion is often reactionary and misinformed about the complexity of the problem at hand (Goode and Ben-Yehuda, 1994).

In the case of drug use in sport, those who make policy about its control and the way it should be managed do not, in general, work within the same parameters as those policy makers outside sport have to. Drug policy in sport is seen as an issue that concerns sport and thus sporting authorities, and it has essentially isolated itself from considerations of how drug policy in sport relates to the world outside of it.

Drug policy in sport, by and large, works from the *principle* that the use of banned substances is essentially wrong; that the credibility of sporting achievement is being fundamentally undermined in the public eye and that this threatens the status, well-being and ultimately the existence of contemporary commercial sport, which in general continues to grow (with the odd splutter) and prosper as a marketable commodity. Dealing with the problem of drug use in sport is therefore, in part, an exercise in public relations. Of course, policy on drugs in sport is

also based partly on what is perceived to be ethically correct in the sporting sense (i.e. notions of 'fair-play', and 'level playing-fields') and an image of sport as having a kind of purity that the non-sporting world can look up to and refer to. (Although, we must also remember that it is the same authorities who espouse such traditional views on sport who are continuously creating the very conditions –commercial and other pressures –likely to undermine these very essences they profess to hold dear.)

If, as I argue, policy on drugs in sport is at least in part determined by this attempt at a public relations exercise, to reassure the public that (1) drug use is not as prevalent as the media and others may suggest (for discussion see Coomber, 1993); and (2) that they (the sporting authorities) have the problem, whatever its size, under reasonable control, then the issue is not so much about what the public think as it is about what those in sporting authority think the public think. But upon *what*, we may ask, do these authorities base their thinking?

Information on what the public really think about drug use in sport is practically non-existent. Even the large-scale public opinion survey on drug use that I previously referred to did not ask a single question about the use of drugs in sport, or even about the cosmetic use of steroids and other supposed 'enhancers'. How the public really thinks about the issue, however, varies, I am sure. Let's face it, it even varies *within* different types of sport. Sports such as professional cycling, where the use of drugs was for a long time a relatively accepted activity, continue to show their comparative unease with the legislation by imposing less punitive penalties on their offenders than other authorities.

The fact that the sporting world itself is not unanimous in its views on punishment and is struggling to 'harmonise'² thinking and policy (except perhaps for a general position on prohibition) is merely indicative that public perception may not be as one dimensional as they think.

Anyway, alternative views do get aired. The 'quality' broadsheet sports writers regularly raise the question of whether drug use can be stopped and, if not, maybe it should be permitted. Others question the policy consistency of banning one supposed advantage when so many others methods of obtaining

advantage are either legal, within the 'spirit' of the sport or receive such little comparative punishment despite giving potentially much greater advantages. 'Taking-out' a key opposition player early in an FA Cup final, for example, may result in little more than a booking and a free-kick but it significantly reduces the chances of the other side of winning. Also, the ingestion of 'supplements' such as creatine are legal while other substances attributed with performance enhancing effects are prohibited. Athletes such as Daley Thompson, in response to some of the more simplistic analyses of some of his sporting co-commentators, often take time to remind us that the pressures inherent in the modern sporting environment to take drugs should not be ignored and the athlete alone should not be scapegoated.

The messages, then, though commonly one-dimensional, that doping is shameful and undermining the very essence of sport (and thus society?) are not always so simple or one-sided.

This assumption by most sporting authorities that the public perceives drug use as something that must invoke or retain a policy of outright prohibition and severe penalty is far-reaching. It is true that athletes may be using un-safe ways of administering their drugs, using unsafe drugs in unsafe ways, and may even be unintentional transmission routes into the non-sporting world of sexually transmitted diseases such as HIV, but it is also true that a less punitive approach to drug policy may reduce the harm associated with all of these problems.

It is fundamentally important to recognise that the sporting world does not exist in a vacuum from the non-sporting world. Nowhere is this more true than in the arena of drugs. By this I do not mean the attempts by sporting authorities to persuade governments to make possession of drugs like steroids illegal. That is just an attempt to extend their own policy and elicit help in enforcement for their own cause. The problems that the introduction of such a policy is likely to create, however, does take it closer to those in the non-sporting world. Rather, I mean the Public Health issues involved are similar, and that sport impacts on the non-sporting world.

There are many lessons to be learned about drugs, drug users and methods of control from the non-sporting world but those who make policy about

drugs in sport are not drug policy experts, they are sport administrators. Those that are drug experts are often in fact literally just that; they are chemists and are often equally unaware of *broader* policy issues. This is patently obvious in the continued approach to sporting drug policy. It is bereft of ideas (because it is bereft of broader drug policy knowledge and experience), and it is putting people in danger by being so. Being ignorant about finer aspects of drug policy possibilities in the non-sporting world means that sport administrators are reliant upon making policy that is one-dimensionally based on prohibition and the conventional (as its trajectory continues to be) attempt towards prevention through harsh penalties and public humiliation. If this does not work then more of the same is deemed necessary. This is a mistake that has been made time and again in the non-sporting world. Here, drug war zealots see current failures as the result of too few resources being given over to the war. The reality is (as is increasingly acknowledged by senior police officers in both Britain and abroad, including the ex-head of Interpol's drug enforcement section, and as demonstrated by numerous studies) that the ever-increasing resources put in to fighting the war on drugs has not prevented the growth of drug use, has not prevented the growth of addiction, has not stopped the cost of drugs dropping, and has not prevented these drugs from being increasingly available. In their *own terms*, the policy of *outright* prohibition has failed and it is destined to continued failure in the sports world too. The fact that the recent (1995) Athletics World Championships failed to record a single positive drugs test, is less a testament to its success than its failure to detect drug use in major sporting events.

In Britain, drugs policy in the non-sporting world has tended to be a mix of pragmatism and control. Outright prohibition has proved to be un-policeable. In some parts of Britain, the high level of cautioning by the police as opposed to charging for possession of cannabis, or even heroin and cocaine in some overwhelmed localities, has led to the suggestion that drug use has been effectively decriminalised in some areas (South, 1996). With much recreational illicit drug use becoming closer to normal behaviour and much addicted use being by people who resemble (apart from their drug use) normal,

rather than deviant, members of society (Parker *et al.*, 1995) responses from the Department of Education and Science and the Police have had to change. In the face of high numbers of school-age users, schools have now been instructed not to suspend or expel those found with drugs but to deal with them more sensitively (Massey, 1995). These are but two of the pragmatic responses of enforcement and education where the tide has swept over them. Current policy was not containing the problem; so policy, still well-meaning, had to adopt pragmatic responses and adapt. I have argued elsewhere (Coomber, 1994) that the war on drugs in the sporting world is bigger than officially admitted and is for a variety of reasons not likely to be contained. If drug use in sport is unlikely to be contained then it is the responsibility of sport to adopt appropriate policies.

Let me give an example. With the advent of HIV/AIDS in the non-sporting world, drug policy in Britain concerned itself with reducing the spread of HIV to the general population. This meant accessing one of the high-risk groups likely to spread the virus – injecting drug users – who had contracted high levels of infection due to needle-sharing practices. Access to this group, and introducing them to practices likely to reduce the spread of the virus, both within their population and the non-drug using population with whom they may have sex, took priority over compelling these people to stop using drugs. Without access to non-judgemental help and real benefits (such as clean needles, and in some circumstances even access to drugs of choice), these users, who were not interested in stopping using drugs, would not have been accessed. A major policy decision was made that HIV represented a bigger threat to Public Health than drug use. It was a pragmatic response that had adapted to accommodate the broader context and reality of the situation, rather than to what people thought ought to be (MacGregor, 1996).

Harm-reduction practices such as these were at first damned and damned again. Public opinion was stirred by the media and harm-reduction services were slated. In certain areas however, such as Merseyside, where efforts were made to inform local communities and the media, public opinion became more amenable to the radical practices and in turn many accepted that the policy was a practical way of

dealing with a serious problem (Parry, 1994). Harm reduction services such as needle-exchanges now rouse little in the way of public angst.

Those with policy making authority have a responsibility to make policy that is informed, pragmatic, and possible. As in Merseyside, policy making is sometimes about trying to educate public perception and make it understand the policies that have been chosen. This reminds us that the customer is not always right and that policy can seek to inform public perceptions as well as manage them – if the will is there. I do not believe that the current policy makers in the sporting world display either the confidence necessary to do this nor, unfortunately, that they have the historically informed background to enter into debate about, or confront, their current policies.

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NOTES

1. Although there are examples in the history of drug

control where certain substances have been brought under control in individual countries where no problem existed or was even thought to exist due to the fact that they were signatories to International conventions or agreements which had included them in their list of substances to be controlled (see Mott and Bean, 1996).

2. Even prohibition has been more or less forced on various sporting bodies and their sports in turn to adopt as non-compliers would forego access to various sporting events such as the Olympics.

Coomber, R. (1999b) 'Controlling Drugs in Sport: Contradictions and Complexity', in Nigel South (ed.) *Drugs: Cultures, Controls and Everyday Life* London, Sage.

This book chapter following on from the previous to papers sought to look at the contradictory nature of drug control policy in sport and assess it. In particular, it was pointed out that the current concern about PED's is in fact a relatively recent one and that its development could not be divorced from the development of concerns about 'drugs' per se in the mid-1960's. Moreover, the well publicised health risks attached to performance enhancing drugs (PED's), anabolic steroids in particular, that had provided so much momentum and justification for the implementation of drug controls in sport, had little basis in the medical literature. Many of the dangers had been unreasonably exaggerated. It was further argued that the level of punishment handed out to 'drug-cheats' was comparatively excessive and could not be justified through reference to the amount or type of advantage said to accrue from PED use. Other forms of advantage seeking could produce greater levels of advantage and/or levels of harm and yet they may receive almost no punishment in comparative terms. Ironically, especially as regards anabolic steroids, scientific evidence of the advantage giving properties is to date unproven yet governing bodies are willing to punish severely those that use them. In addition, it is pointed out that there is a whole range of substances, techniques, technologies and resources open to certain competitors and not to others. The 'level playing field' of sporting lore is, in reality a myth, and yet drug control policy is partially based on its very existence. At the time of writing it even remains unclear exactly what is a PED or indeed what actually constitutes a drug. creatine supplementation is permissible yet the use of testosterone is not. Both are substances naturally produced in the body and they allegedly provide similar benefits. One is considered legitimate the other is not. One is considered a drug the other is not. Drug controls in the sporting world it is argued are replete with contradiction, based upon unreasonable assessments of drug risks and the

performance enhancing potential of PED's. It is further suggested that moral outrage relating to PED's is greater depending on who is believed to be using the drug and that certain nations are more likely to be scapegoated than others. As an overall appraisal, it is suggested that drug control policy, in its current highly punitive and often-contradictory form, is neither rationally sustainable nor practicable.

CONTROLLING DRUGS IN SPORT: CONTRADICTIONS AND COMPLEXITY

Ross Coomber

'Talking past' one another is an activity employed by many who take differing stances on a whole variety of social issues. The issue of drug control in sport is no different. Advocates of prohibition (of those drugs deemed to be *performance enhancing*) often relate marginally to those who would advocate less extreme control or even the complete removal of controls, and vice versa. This is also true in the non-sporting world where debate around drug control is more advanced and contended more fiercely. The aim of this chapter is not to convince the reader of one side or other of the argument but to present the *complexity* of the issue and show how simple accounts arguing for or against the prohibition of drugs in sport, which may serve as good rhetoric, have little real policy value other than as symbolic positioning.

Simple prohibition and severe punishment of those caught, currently the primary approach to the use of performance enhancing drugs (PEDs) in the sporting world, as in the non-sporting world, has not been effective even in its own terms. Moreover, it has even been argued that an unintended effect of existing policy may be that it works against some of the principles upon which it is based and seeks to maintain, such as the health of the competitor (Coomber, 1993). Thus, stressing the real life complexity of the problem as it is currently defined as well as the complexity of resolving such concerns will hopefully contribute to a broader debate on the control of drugs in sport. We need to recognise, however, that the acknowledgement of complexity in an issue makes people uncomfortable (so they often do not do it) for it also means they have to acknowledge that the current approaches to dealing with the matter are of limited utility. Rhetoric is clean; reality and everyday life are messy.

UNDERSTANDING THE BASIS UPON WHICH DRUGS IN SPORT ARE CONTROLLED

This is not the place to undertake a full history of how drugs in sport came to be controlled but it is necessary to provide some background to, and contextualisation of, its emergence. The controls, or relative absence of them, which exist over drugs (all drugs) at any one time are contingent upon the particular socio-historical context which is being considered. Tea and coffee have both been illegal drugs and vilified, as is alcohol today in Saudi Arabia and a number of other Muslim countries. Cannabis and other psychedelics (both natural and synthesised) as well as certain stimulant drugs have been and continue to be not only legal in some parts of the world but also an important aspect of the culture in which they are used (Evans Schultes and Hofmann, 1992; Rudgley, 1993; Goodman et al., 1995). Heroin is a controlled drug (not an illegal one) prescribed as a painkiller by doctors in the UK whereas in the US, where heroin is illegal, the prescribing of heroin has, in the past, led to the imprisonment of medics. The control, and more specifically the banning, of drugs in sport is a very recent phenomenon. It is only in the last thirty years or so that any concerted effort to control the use of so-called performance enhancing drugs has been made. Prior to 1963, and for hundreds if not thousands of years, the seeking of advantage through potions, plants or drugs was part and parcel of the general seeking of sporting advantages in whatever way possible (Prokop, 1970; Yesalis, 1993) which in large part constitutes the very nature of competitive activity. In fact, concerns around doping in sport used to centre not on performance enhancement, but, in relation to horse and greyhound races for example, on *diminished* performance: a doped animal would be prevented from performing well, making a race more predictable for gambling purposes (Donohoe and Johnson, 1986). A number of events, however, conspired to alter how drug use for performance enhancement was perceived and thus understood in the second half of this century, from being one of many forms of advantage seeking to the most heinous of forms.

Initial calls for control did not focus on notions of unfair advantage, although debate about this did go on, but upon potential health problems, particularly from drugs such as amphetamine. Early concerns were highlighted by the death of the Danish cyclist Knud Jensen during the 1960 Rome Olympics, and the International Federation of Sports Medicine lobbied for controls on PEDs (Donohoe and Johnson, 1986). Other high-profile sporting deaths have since galvanised opposition to PEDs (despite a relative paucity of absolute numbers) and controls have been widened and punishments increased. A simple reading of sporting drug controls, which have slowly gathered steam from the early 1960s, would have us believe that the impetus came solely from within sport. Whilst it is true that technology and medicine now provide the opportunity

to speculate on the dangers of drug use for performance enhancement, the gaze on drugs in sport in the 1960s cannot be separated from concerns about drugs and drug users in the non-sporting world.

The 1950s and 1960s were periods of high-velocity change for Western societies in general. Many conventions, traditions and norms were being challenged by emergent youth cultures. Recreational and addictive drug use was widely associated (although this was often wildly overstated) with many of these fashions and cultures. In general, drug use, whether it was by jazz musicians, mods and rockers or hippies, became associated with a relatively deviant way of life, and with people who were less committed to the conventions of society. It, and they, were thus perceived to represent a threat to society in general. In the non-sporting world much has been written about the unsound and morally based rationales which provided the impetus and grounding for drug controls there (cf. Saper, 1974; Musto, 1987; Coomber, 1997a). Much of this (ir)rationality inevitably found its way into the formation of early sporting controls as well. It would be naive to believe that those governing sport sought to 'clean up' sport (amphetamines for example, were being used in and outside of sport), merely to protect the competitor. The protection of the image of sport was also paramount. Concerns around drug use in sport were thus, in part, transformed by the concerns around drugs in society in general and not solely by issues of fair play and safety, and the history of drug controls in sport cannot be divorced from this fact.

The emergence of doping regulations is therefore a recent phenomenon and not unrelated to non-sporting drug use outside the sporting community. A shift in attitudes took place towards the use of particular substances: from being considered one of a vast range of potential, and not necessarily inappropriate, attempts to enhance performance, to being considered an improper means.

THE PROS OF CONTROLLING DRUGS IN SPORT

The policy rationales for controlling drugs in sport are firmly put in terms of offsetting harm, whether physical or moral. In other words the pros of controlling drugs are considered to outweigh the harm which is believed would result by not controlling them. Fraleigh (1985) for example, in reviewing the ethical debate, concludes that if there were no restrictions then the amount of aggregate harm befalling athletes and 'society' as a result of drug use would be greater than at present, which justifies the restriction of the choice to use drugs. As discussed elsewhere (Coomber, 1993), the primary justifications for the banning of certain drugs in sport are to help ensure that competition takes place on a 'level playing field', i.e. that no competitor or competitors have unfair advantage over others and that the health of those competing in sport is

protected. Moreover, many of the ideals upon which Baron Pierre de Coubertin revived the Olympic Games, with which most modern sport officials (particularly those at the forefront of doping control), declare their affinity, also underlie the particular version of fair play which is adopted. Taken at face value, there is little wrong with these rationales. It is relatively uncontroversial that a sporting body should seek to protect its members from harm, at least when it comes from ingested or administered substances.¹ It is also reasonable to ask competitors to compete within the rules that are laid down for respective sports in the name of fairness. Preserving 'fair play' in sport however also elevates sport to something more, to an example and model of what ought to be: nations and individuals competing at ever greater levels but with a spirit which embodies that 'what is important is the taking part – not the winning'. The ideal of modern sport is a hearty mix of magnanimity and competition, or an example of and manifestation in abstract form of a kind of benevolent (and friendly) capitalism. Preventing these ideals from being undermined, in the best traditions of paternalistic policy, thus protects both competitor (individual) and society from itself. That sport feels threatened by drugs is evident from the extent of efforts to eradicate their use and the pronouncements of some of its leading spokespersons, e.g. 'It is a sad fact of life that doping has become a deadly threat to sport but thankfully our sport has recognised the problem of doping and is sparing no expense or effort to bring it under control' (Ljungqvist, 1993: 3). It is not the intention of this chapter to question the ideals of fair play: that sport should protect its competitors or that it should wish to encourage something more than 'winning' as the essence of sporting endeavour. Indeed, this author believes that such ideals are laudable. The assumed pros of contemporary approaches to drug control in sport however are undermined in a number of significant ways mainly because the precepts upon which they are based are either more complex than assumed or are confronted by other contradictory, if not hypocritical practices which themselves are not prohibited. The rest of this chapter will concern itself with the two essential areas that present real and ongoing problems for the achievement of drug-free sport. To begin with it will consider the actual 'hands-on' problems of successfully carrying out a sporting war on drugs and preventing the use of performance enhancing drugs, and secondly, it will discuss a number of ethical and rational problems presented by the current trajectory of drugs control policies.

WINNING THE WAR ON DRUGS IN SPORT

The main weapon that sporting authorities employ to prevent the use of PEDs is that of urine testing to detect the use of banned substances.

Testing however produces varying results. It may be reasonably argued that the fact that no competitors in the 1995 World Athletics Championships in Helsinki tested positive for doping is more of a testament to the *failure* of drug testing than to its success. I do not intend to rehearse this argument at great length in this chapter (see Coomber, 1993 for further discussion); suffice it to say that there are few officials with responsibility for doping controls, athletes, coaches or journalists attending the Championships who will believe that a significant number of those athletes competing in Helsinki were not PED users. Testing as a means to detect drug use is seriously problematic for various reasons. Firstly, there are a number of substances and practices which are difficult to test for or cannot be tested for (Ferstle, 1993; Duncan, 1995). This is particularly true when the substances, such as human growth hormone (HGH) or erythropoietin (EPO) are also naturally produced by the human body. Although drug testing laboratories can *detect* such substances they cannot prove that they were unnaturally administered as opposed to naturally produced (Duncan, 1995). This creates serious and currently irresolvable problems for testing. Athletes who may once have used androgenic anabolic steroids (AAS), or stimulants such as amphetamine, may now be using HGH or EPO, and in the case of insulin growth factor 1, its use by athletes may be even 'more prolific than the use [prescription] by specialist clinicians' for appropriate medical conditions (Parry, 1996: 48). Testing at the World Championships would not have produced positive results for these competitors. Even if tests become available for these substances it is likely that new substances problematic for testing will emerge as they have historically done to date. In the 1996 Atlanta Olympics a new 'stimulant' was detected in a number of Russian athletes but as the substance was unknown to the International Olympic Committee (IOC) at this time (despite its use by the Russians for some years) no action was taken against the athletes (Woodhouse, 1996). Athletes employ various techniques to outsmart the testing system, including switching from drugs which can be tested for to those for which testing is not yet available or to drugs which are yet to be banned, and to the use of various masking agents. There is no evidence to suggest that athletes will not stay one step ahead of new technologies and new testing strategies.

The practical problems of actually preventing the use of PEDs through testing are further compounded by the fact that even when a positive test is recorded a simple outcome is far from certain. Litigation arising from problems relating to positive and false-positive tests continues to plague national and international sporting authorities and perhaps even threaten their bankruptcy. Numerous cases involving positive tests have been contested in recent years in the courts. Testing by non-IOC-accredited laboratories has been shown to be fallible (Uzych, 1991), and problems with the administration of samples have even led to IOC-accredited laboratories being subject to question, and in extreme cases, the athlete

being exonerated.² The testing procedure itself is thus, on occasion (but increasingly so), being called into question and challenged in court. Each time a decision goes against a sporting authority a blow is struck against the effort to prevent drug use and, importantly, scarce funds are used up.

Even when a positive finding is successfully translated into a ban on the individual competing in further sporting activity, that ban, imposed through the sporting authorities rules and regulations, may be overturned by national courts on the basis of broader employment laws which take precedence in the country of which the competitor is a citizen. This poses particular problems for leading international sporting authorities such as the IOC, the International Amateur Athletic Federation (IAAF) and the Federation of International Football Associations (FIFA), among others, who may find that their decisions are effectively overturned by domestic legislation.

Something called 'harmonisation' is the goal of bodies like the IOC. Harmonisation would entail the consistent application and implementation of rules, regulations and punishments relating to PEDs not only across sports but also across nations and continents. Unfortunately, even if such harmonisation were possible at the level of stated policy, the chances of expensive and reliable testing regimes being carried out around the globe is, in the near future, simply fantasy. The very many developing countries which participate in major sporting events have important demands on scarce resources that will take precedence over developing the kind of extensive (and expensive) testing regimes in place in countries such as the UK. Harmonisation will in practice mirror (to some extent) the efficacy of the various international drug conventions of the non-sporting world. Many of those countries who have ratified the international drug conventions are also foremost in producing illicit drugs, such as heroin, cocaine and cannabis, and have neither the resources nor often the will to combat production and trafficking in practice. Perhaps half the sporting world will, for the foreseeable future, also have insufficient means or political will to try to ensure drug-free competition.

As in the non-sporting world, the evidence to date suggests that the war on drugs cannot be won, and that simple prohibition of drugs, pursued primarily through enforcement measures, does not, and is not able to, prevent their use. The response to this of course may be simply to spend more and more time and resources on improving the systems already in place, arguing that not enough has yet been done. This has certainly been the position of drug war advocates in the non-sporting world. To date, however, there is no evidence to suggest that simple enforcement and harsh punishment strategies – even when relatively well funded – have been successful in preventing the general escalation of drug use over the last twenty years in the US where such policies have been pursued with great vigour (Bullington, 1998).

What hope is there for preventing the use of PEDs in the sporting arena? It would seem very little, and this is a practical problem that has to be faced up to and not rejected out of principled idealism. Trotting out aphorisms which would suggest that this is 'giving in to' or 'going soft on' drugs is missing the point that at present the means to prevent their use are not at hand and are unlikely to be so. Moreover, much of that principled and indignant idealism arguably manifests itself in the way it does (outright prohibition and strong-armed enforcement at all costs) because of a lack of understanding of drug issues more broadly and the belief that the specific issue of drug use in sport is a *simple* matter, in the sense that drug use is cheating and must be prevented. If the very harsh penalties which attach themselves to the crime are any indication, it is certainly conceived of as a form of cheating far worse than most others. But is it *really* that simple?

ISSUES OF EFFICACY

The general mood in the 1990s regarding the efficacy of PEDs, particularly anabolic steroids, is that they do indeed work (WHO, 1993). To suggest otherwise lays one open to derision. This represents a stark change to the mood of the 1960s and 1970s when most sporting, medical and other scientific authorities tended to deny PEDs' performance-enhancing abilities (Donohoe and Johnson, 1986; Van Helder et al., 1991; Lycholat, 1993; WHO, 1993). Science, however, was saying one thing but the body-builders and athletes taking the drugs were saying another. In the eyes of the people they were trying to influence, those who were taking PEDs, the scientific community lost credibility. Those using them argued that they were experiencing and seeing improvements in musculature and/or performance and that research was failing to prove this because research ethics prevented studies from using the very large doses of PEDs that were being taken outside of experiments (in the 'real world') and/or in the ways that they were taken – e.g. the use of a number of different drugs at the same time. Although continued research has not been able to prove that PEDs, especially anabolic steroids, do actually enhance performance (see Stone and Wright, 1993)³ the need (conscious or unconscious) to recapture public and sporting credibility has meant that few sports scientists, medics or sporting authorities now question that PEDs do work. However, even leading authorities such as the IOC, the IAAF and the UK Sports Council are hesitant and selective in their pronouncements on performance enhancement:

There is little evidence to support the belief that Anabolic Steroids alone can increase muscle strength; development is very much dependent upon an appropriate diet and exercise programme. However, studies have shown that muscles tend to look bigger, but this is probably due to water retention. It is

more likely that the androgenic effect of steroids – increased aggression and competitiveness – which makes people train harder and enables them to recover more quickly, increases strength. (Sports Council, 1990: 3)

The last sentence is the one that pays lip service to those who claim that the benefits of AASs are meaningful. Unfortunately, distinguishing such effects from those produced by *expectation* of drug effects is difficult to achieve and whilst athletes claim AAS use helps heal injuries quicker there is also evidence to suggest that using steroids may lead to recurring injuries which may be said to negatively affect training and performance (Freeman and Rooker, 1995; Hang et al., 1995). Charlie Francis, the coach of Ben Johnson, has stated that he believes that steroids represented at least 1 per cent of performance, a figure so low that working out whether the improvement was due to a placebo effect (through expectation or raised confidence) or from the use of AASs is impossible. Moreover, we have to accept that huge improvements in performance across all sports and athletic disciplines are not in fact uncommon and that drug use is not suspected in many cases – but, how do you tell the difference between the two? A greater correlation between exceptional performance and suspicion of drug use, arguably, often has far more to do with politics and geography than proof. When the Ethiopian (Ethiopia being a world leader in distance running), Haile Gebrsilassie ‘demolished’ the 10,000 metres world record by a massive nine seconds in 1995 one television commentator was moved to exclaim ‘if I hadn’t seen it with my own eyes I wouldn’t have believed it’ and yet no media (and thus confident peer) suspicion was evident in the aftermath of the race. Similarly, when the British athlete Jonathan Edwards (a man known to hold strong Christian beliefs) improved his triple jump performances to lengths far beyond those previously known in this event (but suspected probable by his own previous performances) his character was unquestioned. Both of these performances were in the region of amazing improvement but neither athlete came under suspicion even though most world records often deemed to be the result of drug use entail no more than minor incremental improvements. Conversely, when Michelle Smith, a swimmer from Dublin, won three gold medals in the Atlanta Olympic Games in 1997, despite being ranked world number one the previous year in one of the events and having showed steady improvement in her times in general, she suffered the extreme media pressure of suggestions that she had used steroids. There was no evidence that Smith had done so other than her not being considered pre-event favourite. But she was from a country which had never previously won a swimming gold medal. Likewise, when China started to produce world records in distance running and swimming in the early 1990s, emphasis on the extent of improvement raised suspicions of the use of steroids (a reaction partly reflecting suspicion of a communist nation), as opposed to the training schedules and lifestyle which led one top Western athlete

who had witnessed the difference from Western regimes to declare it not so surprising (Wightman, 1993).

There is a distinct lack of consistent application when it comes to the commonsense (or even 'specialist') notions of the kind of level of improvement that is expected from the use of drugs. The improvement is often expected to be phenomenal, and in that way 'detectable' – as we have seen however, this applies only to those vulnerable to such suspicion, for other 'phenomenal' feats are simply accepted as evidence of great athleticism. There are also inconsistencies in expectations about the speed at which drug use can produce improvements. Whilst there is little, if any, evidence, to show that tremendous improvements can be made through the simple use of PEDs there is ample evidence to show that level of confidence and the right or wrong frame of mind can produce great improvements in performance or hinder it despite an athlete's relative physical conditioning (Feltz and Landers, 1983; May and Asken, 1987; Turner and Raglin, 1996).

WHY 'PICK' ON DRUG USE?

Even if we accept for the moment that it could be demonstrated that the use of PEDs is effective in enhancing performance we would still have to ask why this has been elevated to a position of such concern that competitors are publicly humiliated and castigated and then given comparatively severe punishments? The issue here is to understand why the evil of drug use as a means of gaining advantage is a greater problem than other means used to gain advantage. It is not due to clear and consistent evidence that drug use provides either fail-safe or, necessarily, even any advantage. In fact when a myriad of offences is considered in a whole variety of sports it appears that many other illegitimate techniques may offer greater potential advantage than the use of drugs, but are punished far less severely. In motor racing in 1994 the Benetton team was given relatively light penalties for cheating (in ways which gave them clear, measurable and predictable improvements in performance) on two separate occasions in one season (Henry, 1994), and yet its driver Michael Schumacher went on (and was permitted) to win the World Championship in that same year. In the 1998 Football World Cup finals numerous players were booked for 'diving', attempting to convince the referee that a foul had been committed, sometimes looking for a penalty, at other times positional advantage. Shirt pulling and other 'professional fouls' were commonplace. This is part and parcel of football matches all around the world. In ice hockey as in football and rugby, violence (and the 'taking out' of key players with over the top tackles (football) or 'stamping' (rugby) – potentially career threatening actions) is commonly punished (rewarded?) with little more than a caution or time in the 'sin-

bin' whereas in other sports it would result in lengthy bans. Each sport has its techniques and methods of cheating which arguably offer as much in the way of advantage as drug use, none represent positive role models of behaviour, each in its own way brings its sport into disrepute – yet the punishment is minor. There are also of course techniques which, whilst not illegal, stretch the spirit of the game unreasonably: tennis players who habitually argue during games, often at key moments, thereby unsettling their opponents; managers who seek to 'psych-out' the competition by using the press to make carefully calculated statements; or even the calculated failure to actually bowl towards the batsperson in cricket.⁴ Significant advantage can be achieved through foul and unfair means but relatively little is made of this. Sometimes these advantages may threaten the health and well-being of others, sometimes they just offer significant potential advantage. What they mostly attract though is relatively minor censure and forms of punishment far less severe than those applied in cases of the use of drugs, which, in terms of performance enhancement, may merely enhance the ability to train longer and harder.

Not only do other forms of cheating provide equal or perhaps more significant levels of advantage, but the very arena of *normal* sporting activity also provides numerous examples of legal methods of advantage seeking which nonetheless leave some competitors at a very great disadvantage. The very notion of a level playing field, and the notion of policy as an attempt to ensure it, is one of the greatest myths of the modern sporting environment. Some nations seek advantage by systematically providing their competitors with better environments and arrangements for training and practice competitions. These may range from centres of excellence providing top-rate coaches, accommodation and state-of-the-art training regimes to simply providing adequate sponsorship for full-time and appropriate training. Some nations can afford to do this; others cannot. Some individuals, such as Steffi Graf, Boris Becker, Ayrton Senna, Jose-Maria Olazabel and Alberto Tomba, were born into families with resources that provided them with the relative advantages that money can offer from the earliest of ages to enable them to reach the very heights of their respective sports. In boxing and weight-lifting, some attempts are made to provide weight-based categories but in the high jump, unless you are tall, then forget it. Why? Records are broken year in, year out, but some of those records are broken under conditions that were not provided to the competitors whose records have been broken. Faster tracks (some tracks are fast for sprinters, some for distance runners), faster pools, more efficient javelins, better poles in the pole vault, better running shoes, better skis . . . the list is endless. Some of these advantages, which may confer riches and status, or simply opportunities to continue competing, may provide no real superiority over the effort they have been said to have superseded, yet one competitor may suffer whilst the other may reap the dividends offered by technology.

This is an unfair advantage external to the ability of the competitor yet is sanctioned and encouraged by the sporting powers that be. We must also ask: if drugs offer no simple route to performance enhancement, then why is it deemed legitimate and unproblematic for competitors to improve their levels of confidence, ability to endure pain and discomfort for longer periods, or increase aggression in training and competition, through recourse to hypnosis, meditation or techniques of sport psychology which are ways of adjusting and improving the natural (and sometimes) fragile state of mind of a competitor? Is it fair that some squash players have access to experts able to provide techniques for improving ball-to-eye coordination, and that some competitors have access to other ergogenic (performance enhancing) aids, when others do not?

If other forms of illegal and legal advantage seeking which undermine the hallowed level playing field are attempted and practised regularly, and secure significant advantages yet go relatively unpunished, why are drug users scapegoated? Again, we probably need to look more closely at what goes on in the non-sporting world.

GOOD DRUGS, BAD DRUGS

As in the non-sporting world, much of the prohibition of drugs is predicated on the idea that there are good drugs which are not banned (and which are of medical utility) and bad drugs, which are. The specific drugs of primary concern in sporting and non-sporting worlds are different but the basic underlying rationale is often the same. The bad drugs are considered bad because they are a threat to health and in addition, in the sporting world, because they supposedly provide an unreasonable and unequal route to artificially enhanced performance. In the non-sporting world this performance enhancement may also have its parallels in the sense that having a 'good time' through recourse to non-socially sanctioned artificial as opposed to natural ('I don't need drugs to enjoy myself') or socially sanctioned means (such as alcohol) is frowned upon.

The 'good' drugs are not generally considered to be bad because they are taken under medical supervision and are not therefore considered to present comparable health risks. Moreover, as prescribed medication they are not considered to provide artificially induced improvement to performance. As in the non-sporting world, though, this distinction between good and bad is not very useful, nor is the way in which such a distinction is made. To begin with, many of the prescribed drugs may also present dangers or risks comparable to, or in excess of, many of those that are banned. They may produce cardiac disorders, convulsions, a range of other side-effects and even death if not used appropriately

(Donohoe and Johnson, 1986). Addiction may also result from use of certain groups of drugs if these are not used carefully; some require a carefully managed withdrawal to avoid serious health consequences (Favre, 1996). Withdrawal from corticosteroids may even lead to the development of adrenal deficiency and the condition known as Addison's disease (Donohoe and Johnson, 1986). Although these drugs may be prescribed and their use condoned by sporting authorities, those using them may choose to compete or take part in sporting activity only because they are *enabled* to do so by use of a drug. In the short or long term this may lead to serious injury. Without the drug, competing would not have been possible, although taking part arguably would have. Prescribed drugs therefore may not only facilitate participation in competition but also enable a level of performance to be achieved that would have been unlikely without the drug. Granted, the sporting competitor may not be able to perform to their normal level but without the drug they might not have performed at all. So the good drugs can, and sometimes do, cause harm, and arguably also enhance performance. For the sporting authorities the issue is firmly that there is a qualitative distinction between 'enabling' and 'performance enhancing' drugs, but is there? Take two hypothetical athletes, with similar capabilities under normal conditions, but with similar injuries. One runs without the use of painkilling drugs and is comparatively inhibited, the other, using painkillers, is able to perform close to their norm, uninhibited by the discomfort of the injury and the constant psychological messages to 'protect it' (the injury) which may result in minutely (or greatly) changed gait or stance. Therefore, one athlete's performance is potentially enhanced beyond that of the other, and as such an *advantage*, occasioned by the use of drugs is the possible result, as is further harm to the injury.

Significantly, many of the drugs banned do not, despite common representation, present too great a danger to health. Many of the widely reported dangers of androgenic anabolic steroids for example are reversible shortly after use has stopped and others are exaggerated (cf. Windsor and Dumitru, 1988; Van Helder et al., 1991; Stone and Wright, 1993; Yesalis, 1993). Likewise in the non-sporting world the dangers of drugs such as cocaine, amphetamine and heroin are often unreasonably exaggerated (Kaplan, 1983; Alexander and Wong, 1990; Miller 1991; Bean, 1993; Ditton and Hammersley, 1994; Greider, 1995; WHO/UNICRI, 1995; Coomber, 1997b). Almost regardless of substance, a large list of fearsome-sounding side-effects and potential harms can be reported regarding its use, particularly its use to excess. Caffeine for example can cause 'insomnia, muscle tremor, abnormally elevated heart rate and breathing . . . vomiting and diarrhoea . . . to delirium. Death from overdose is possible' (ISDD, 1993: 43). Even water, taken in excess over a short period of time, can cause intoxication, headaches and a condition called hyponatremia, a swelling of the brain which may result in death. Yet we give relatively little concern to these dangers, and rightly so

because the risk is small, and often managed. Merely to list the health risks of androgenic anabolic steroids and other PEDs without reference to context and without regard to an understanding of *relative* risk is thus problematic. It is not my intention here to disregard the risks of taking AASs in large doses, as the taking of many substances in excess is risky. We need to be aware though that many of the reported dangers are exaggerated or quite simply unproven (see Van Helder et al., 1991; Stone and Wright, 1993; Windsor and Dumitru, 1988; Friedl, 1993). It is not unusual for such a situation to occur when a drug has been demonised for other reasons (being illegal as in the case of amphetamines and cocaine, and undermining fair play, and thus sport, in the case of AASs). The reporting of drug dangers in general may be massively overstated. Alexander and Wong (1990) have shown how the reporting of health risks for cocaine, even in respected medical journals, is often imprecise and misleading with a tendency to overstate *potential* risk at the expense of the probable or common risks involved. Most cocaine use is in fact moderate, and presents few health risks, whilst reporting of health risks tends to emphasise those that result from excessive use. The general impression gained of the riskiness of cocaine is therefore an exaggerated and distorted one. The press on AASs has at times been similarly sensational. Scares over 'Roid-Rage', a supposed steroid-induced aggression, as well as other scares linking steroids to various problems from cancers to heart disease, have been and continue to be emphasised by sporting authorities and the media as a major part of their campaign to prevent drug use in sport. As with fears of drugs in the non-sporting world (see Chapters 1, 2, 3 and 4 in this volume), the scares around PEDs suggest a danger out of proportion to reality. Studies demonstrating links with aggression are often weak in research design (Stone and Wright, 1993), may show no direct link between aggression and steroids, fail to take into consideration the expectations of the users that steroids increase aggressive tendencies, and report that those involved in weight-lifting and body-building who are not taking steroids have higher levels of recorded aggression anyway. This is not a new issue to those of us who research on drug effects more broadly. Many drugs in the non-sporting world have long been associated with violent behaviour, but once you control for expectation of drug effects, previous violent disposition of the individual concerned, the context in which the violence occurs, and the choices available to the individual to avoid violence, the picture is much more blurred (MacAndrew and Edgerton, 1969; Falk, 1994; Potter, 1989; Fagan, 1990). For some drugs, such as heroin, the association with violence is in fact *lower* than for the non-drug-using population (cf. Tonry and Wilson, 1990). We have to remember that steroids are commonly used to help treat numerous medical conditions and that, contrary to popular beliefs, steroid users are not dropping down dead all over the place despite many decades of high-level use. As in the non-sporting world, the distinction between what is a good drug

and what is a bad drug is largely a construction based upon muddy thinking and moral positioning around what is considered 'medication' and what is considered 'abuse'.

In terms of protecting athletes' health (a stated rationale for the banning of the bad drugs), it is far from clear that outright prohibition of PEDs prevents more harm than would a policy where drugs were not banned but appropriate and well-managed information and guidance on drug use operated.

SHOULD 'INTENT' TO CHEAT BE PUNISHED?

The question of whether PEDs work or not is an important one for a number of reasons. For example, if PEDs do not work, should athletes actually be punished? If they do work but do not provide as much advantage as other forms of cheating, should the athletes be punished at the levels currently set? Should the intent to cheat, even if it provides little advantage, be punished? In football, an identified attempt to deceive the referee into giving a free kick or penalty is punished, but relatively lightly. If intent alone is to be punished, at what level should the punishment be set? If we cannot prove that PEDs improve performance should we even be banning them? Should policy which aims to control behaviour and punish transgressors, as in the case of PED controls in sport, precede the proof that what is being punished has actually taken place? This latter point is not a purely hypothetical issue. Some sports regulations accept that competitors may not have intended to cheat and either punish lightly or not at all when intent cannot be proved; others state that a positive finding is sufficient to impose the standard ban even while recognising that 'intent' is often difficult to prove. Discretion in the application of the rules is widespread in various areas of sporting decision-making involving 'intent' and attempts to 'cheat', e.g. a defender (accidentally) handling a ball in the penalty area in football.

WHAT IS WRONG WITH DRUGS THAT AID TRAINING AND HEALING?

One of the supposed problems with some PEDs like the AASs is that they are deemed to aid a faster healing of injuries for the athlete or competitor using them; some studies appear to support this (Stone and Wright, 1993: 15). This may or may not be true. As with other issues relating to the efficacy of AASs, separating out the effects of expectation from what would have been a 'normal' recovery is simply not possible

without the implementation of rigorous controlled trials.⁵ Even then, as with trials to detect performance enhancement, expectation of effects is almost impossible to prevent. If, however, drugs such as AASs are able to prevent sports injuries and/or enable faster healing, it is not clear why this should be deemed a problem. Surely, it points towards the *controlled* use of such drugs for the benefit of health and sport alike? Millar (1996) (on the strength of one medically controlled programme) has suggested that side-effects from steroids can be minimised, whilst benefits to performance enhancement may still be gleaned.⁶

WHAT IS A PED? FOOD, MEDICINES AND UNFAIR ADVANTAGE

If the primary advantage gained by the use of drugs such as anabolic steroids is its enhancement of training – and even then only when it is part of a hard rigorous training programme and specialised dietary regimes, as opposed to some artificial ‘quick fix’ akin to turning on the turbo on a racing car – how is it to be distinguished from other training aids? What, objectively, constitutes a drug and what constitutes a food or food supplement is far from straightforward (Goodman et al., 1995) and may in fact by IOC doping criteria represent a real ethical problem (Williams, 1994). A professional athlete may legally take the food supplement creatine (which is naturally produced by the body, as is testosterone) as a training aid in order to increase strength and endurance.⁷ Carbohydrate loading, the technique whereby an athlete would load up (and thus store reserves) of carbohydrates by eating large portions of pasta and other foods high in carbohydrate in the days before an endurance event, is now a commonly accepted use of the food and dietary approach to competition. Added to this simple dietary process may be the completely legal use of refined carbohydrate pills or drinks, even during activity, which likewise may help optimise the amount of energy going to the muscles. Without carbohydrate loading, the simple act of internally storing appropriate high-grade fuel for the muscles, an athlete can expect to endure less well than if they had not prepared in this way (Bjorkman et al., 1984; Coggan and Coyle, 1989; McConell et al., 1996). The use of vitamin supplements is permitted and yet these supplements may cause harm if too high a dosage is taken, although their proper use may also aid speed of recovery from vigorous training and injury or perhaps maintain or even enhance performance (Bird et al., 1995; Clarkson and Haymes, 1995; Dekkers et al., 1996). The distinction between a food and a drug is not a scientific one (see South, and Ruggiero, Chapters 1 and 8 in this volume). Modern sports competitors legally use many highly refined dietary aids where the purpose is to enhance the ability to train harder, last longer, recover quicker and

compete more effectively. These may come in the form of tablets and be unavailable, and unlikely to be used, as normal foodstuffs. Perhaps what should be of primary concern is the *safe* use of performance enhancing aids, whatever their arbitrary scientific classification, rather than continuing to force prohibited and potentially harmful use underground.

TOWARDS THE FUTURE

For the near future, the likely trajectory of drug control policy in sport is in the direction of 'more of the same'. Concerns continue to focus on 'getting it right' (testing, uniformity of practice, the traversing of awkward legal fences) and pursuing PED users with acrimony. If anything, controls will become ever wider and inclusive. A number of sports now punish competitors for recreational drug use under the guise of 'help', even in cases where the police would not have taken action. Many national sporting bodies are lobbying for PEDs to be brought under stricter control or included in existing national drug laws where they are not already covered. However, the direction of drug use and drug control in sport are likely to mirror the concerns and problems of the non-sporting world. The ever-increasing rewards of success in modern sport, and the rising numbers able to reap such rewards, are factors likely to ensure that drug use continues to grow. Getting control right will simply mean drug-using competitors staying one step ahead of the testers. They always have; they probably always will.

NOTES

1. It is not a completely uncontentious concern that a sporting authority should seek to control behaviour and even participation in the interest of the competitor. Individual and concrete cases often belie the simplicity of abstract formulations and ideals such as these. There are numerous examples, at all levels of many sports where non-participation in an event may be to the obvious health benefit of the competitor involved yet no action is taken to prevent that individual taking part. In the 1996 Atlanta Olympic Games, Kelly Holmes was allowed (although she had been advised against it) to run on a hairline fracture above her ankle despite this fact being widely reported and the long-term potential damage being significant. Many athletes over-train, and many endurance competitors maintain diets which leave them undernourished. The potential harms for each and any of these examples can be serious and long term yet the idea of formal controls on them seems unreasonable.
2. In the case of Dianne Modahl, a top British athlete initially found guilty of a positive test for testosterone, it was found, after further investigation, that

the procedures taken by the IOC-accredited laboratory in Lisbon allowed the sample to deteriorate (producing unusually high levels of testosterone). The athlete was finally cleared by both the British Athletics Federation and the International Amateur Athletics Federation of any doping infringement (Bierley, 1996).

3. Proof is sometimes a difficult thing to achieve. In particular, in relation to research on anabolic steroids, it has proved difficult to distinguish between actual effects and those resulting from the research subjects' expectations relating to the use of anabolic steroids. Even for those subjects on double-blind studies the particular side-effects which those on steroids experience mean that the subjects who are receiving the active substance (as opposed to the placebo) are soon aware that this is the case. When this occurs, 'improvements' directly attributable to the anabolic steroids are almost impossible to discern. Improvements are generally small in any case and in some studies the placebo group has even out-performed the group taking the steroids.
4. During a recent international cricket Test match Zimbabwe prevented England from winning the match by effectively not bowling within reach of the England batsmen (*Guardian*, 23 December 1996) regularly enough to prevent too rapid scoring. If they had, they would have been easily beaten. In the end the game ran out of time and was formally drawn. In some senses they literally didn't compete, but they stayed within the rules.
5. Recovery rates for all sorts of health-related problems, from addiction to other chronic illnesses, have often been demonstrated to improve comparatively more quickly for patients who experience either positive encouragement from their practitioner and/or are given treatment (even placebo or 'passive' treatment) than for those who are given little attention or no treatment. Thus we might anticipate that for athletes who expect AASs to heal them more quickly and/or to enable enhanced training, this would commonly result.
6. Improvement is a difficult thing to measure but however it comes about this is what the competitor is after. Appropriately controlled prescribing regimes working hand in hand with medical specialists may provide a safer alternative than *laissez-faire*, non-intervention prohibition.
7. As with anabolic steroids, creatine has been credited with 'providing immediate and significant improvements to athletes involved in explosive sports' (Greenhaff, 1993) through both anecdotal and 'scientific' study. Such claims, however, have recently become less convincing and the level of significance has been reduced to within what might be potentially achieved through expectation. In some instances double-blind trials report no improvement (Murjika et al., 1996).

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This book chapter serves as an introduction to understanding how drugs and drug users are represented in the media. What kind of images of drugs and drug users are portrayed in the media; media drugs education campaigns; the language of drug reporting; media effects; moral panics, and why the media presents the images it does, are all discussed.

Drugs and the media

by Ross Coomber

Introduction

This chapter will briefly review and explore the relationship between the media and drugs. It is not intended to be exhaustive nor does it seek to provide more than an introduction to many of the issues raised.

The relationship is not a simple one. Messages about drugs are often mixed and contradictory and people do not receive messages from the media passively, simply accepting the views of journalists and politicians without reference to their own experience and beliefs. This situation is further complicated when we consider the *role* of the media. Is it there to inform, to reflect the views of the population, or to stimulate serious debate? It has also been argued that the media is manipulated into playing up and exaggerating drug issues to move the focus away from other sensitive topics, such as unemployment and poverty (Goode and Ben-Yehuda 1994; Kohn 1987; Edelman 1988). These issues will be considered below.

What type of images of drugs and drug users does the media portray?

“Horror as drug addicts’ fingers fall off” (*Scottish Sunday Mail*, 12.7.92); “Heroin Kills TV Syd’s Son” (*The Sun*, 30.1.95); “Fight Drugs: Addiction leads to misery and death” (*Lewisham Star*, 3.7.86).

Each of these headlines are examples of how the national tabloid and local press commonly build up stories related to drugs and/or drug users. The headlines are powerful and succinct, sticking to the commonly perceived dangers of drugs and what happens if you get mixed up with them. Drug stories are considered by the media to be newsworthy, at least in the sense that they are judged to be of such

popular interest that they will attract audiences or readers. But it is not just newspapers and magazines which have a consistent interest. Drug-related themes are also the stuff of many films, documentaries, chat shows, commercials (Government health education campaigns), and television soap operas. Overwhelmingly they tend to present a variation on the images evoked by the headlines above.

It is true however that depending on the medium involved (television, magazines, broadsheet newspapers, tabloids), the approach will tend to vary even if the general message does not. So, for example, a recent report on an ex-steroid user who committed suicide by running head first into a wall while resident in a psychiatric ward was headlined on the front page of the national tabloid *Today* as “Steroids Drove Him Mad ... then Mr Muscles killed himself”. In the local newspaper, the front page kept up the drug connection with the headline, “Emotional plea by mother of bodybuilder driven mad by steroid abuse” (*South London Press* 10.3.95). By contrast, *The Guardian* devoted only a small column to the story headed “Man Died After Butting Wall” but then uncritically reported that the individual had used steroids and that this had been cited as sufficient cause. In fact it is by no means certain that the ‘quality’ broadsheet newspapers are necessarily more reliable, for as Bean (1993: 61) has pointed out in relation to reporting around crack cocaine, “The *Observer* had consistently been the source of some of the most dramatic forms of presentation and indeed misinformation, even overtaking some of the tabloids ... crack was described as ‘a highly refined and smokable variant of cocaine, said to be so potent that a single dose can lead to addiction’ ... ‘this drug crack is a killer. And Britain could be its next target’”.

Most drug-related stories, like those above, do not try to present the story within a broader context or question its facts but are happy to blame the drug as sole cause. No consideration for example was given in these stories to the bodybuilder’s previous psychiatric disposition or, in the case of crack, whether the reports were consistent with what we know about addiction and the effects of cocaine in general. Assumptions therefore are made about drug effects and their harmful potential which are neither substantiated nor questioned. It is as though there is an underlying assumption that we already know as much as we need to know about drugs and their effects and about drug users and the things they are capable of. This is often taken to its logical conclusion by the common use of ‘drug user biographies’ – “At nine he was in the playground, at 12 he was sniffing glue, at 22 my son Georgie was dead from an overdose” (*Daily Mirror* 17.10.94) – the unquestioned quoting/interviewing of an ex-drug user or someone close to them – “Once they take it they’re hooked for life. People who sell these drugs are murderers and they are evil” (*Guardian* 22.1.94 quoting the distressed mother of a dead heroin addict) – or a highlighted reference to what is often unsubstantiated ‘fact’ – “Highly addictive and easily obtainable, crack is the fastest growing problem on the drug scene. You may think you can handle it but after one high you are hooked, as 22-year-old student Michele discovered” (*Mizz*, May 1994).

Drug stories can be so useful to certain reporting that even when the drug connection is tenuous to the main story it is not unusual for the drug aspect to be given undue and often misleading prominence. For example, the story which ran under the heading “Drugs Kill Def Leppard Rock Idol Steve” (*Today* 1991), actually reported that the musician died from alcohol poisoning not a drug overdose. Similarly, the headline “Teenager Kim Armitage died after a cocktail of drink and drugs...” (*Daily Express* 1995) arguably suggested use of illicit drugs whereas the drugs in question were in fact “aspirin with her mother’s painkillers”. Similarly Messner *et al* (1993) illustrate how a story about wife battering in two major daily newspapers framed it as a drugs story while largely ignoring the violence aspect.

Some stories carry with them widely held assumptions about ‘street drugs’ that journalists feel able to cite with impunity despite almost no evidence: “Ecstasy has turned to agony for thousands of E users as dealers spike tablets and capsules with heroin, LSD, *rat poison and crushed glass* (my emphasis)” (*Time Out* 27.10.93). Although firmly believed even by many drug agency workers and users themselves, the existence of rat poison or crushed glass as adulterants in street drugs is almost unheard of.

Statistics provide another potentially misleading source about the drug scene, when “Official statistics are swallowed whole [and] where official/expert (or not so expert) statements are uncritically treated as reality” (Shapiro 1981).

Media education campaigns

There are often many factual inaccuracies and distortions in media reporting of drugs. For example, in portraying heroin use, popular media in particular will revert to stereotypical images of the heroin user as being invariably spotty, skinny, ill and deceitful, living a life of unremitting crime and degradation leading to the mortuary slab. This view of heroin use was adopted wholesale by the Government’s 1985/6 and 1987 drug education campaigns which used conventional ‘scare’ tactics in an attempt to prevent young people trying drugs. These campaigns were a deliberate attempt to utilise the media as a tool for preventing drug use, by communicating the potential horrors of heroin addiction. While not being ‘wrong’ (in the sense that the images can and do represent the *consequences* of heroin addiction in many instances) they are unhelpful as a way of understanding much about drug use and addiction. One obvious consequence of these media campaigns was that media reporting of drugs in the more sensationalist forms already discussed was given added credibility. Interestingly, there was anecdotal evidence that some young people found the emaciated image of the boy in the poster campaign which accompanied the TV adverts, rather attractive and used the poster to decorate their bedrooms. The actual research conducted to evaluate the impact of the campaigns indicated that those who were anti-heroin in the first place had their feelings confirmed by the campaign, but there was a nothing to indicate that any sort of

scare campaign would actually stop somebody experimenting with the drug.

One unintended effect of scare campaigns which give such massive prominence and visibility to drugs such as heroin is that they may actually *increase* experimentation with these drugs. In its 1984 report on *Prevention* (pp35-36), the Government's own advisory body, the Advisory Council on the Misuse of Drugs (ACMD) warned, "Whilst we accept the need, in appropriate circumstances, for education to include factual information about drugs and their effects, we are concerned about measures which deliberately present information in a way which is intended to shock or scare. We believe that educational programmes based on such measures on their own are likely to be ineffective or, at the very worst, positively harmful". Research elsewhere has supported this fear (De Haes 1987; Schaps *et al* 1981). Thus, to some young people, branding the use of mysterious and dangerous substances as anti-social and deviant may (especially if they have seen peers using these drugs with few of the effects sensationalised by the media) provide a focus and new outlet through which their frustrations may be vented and their 'resistance' demonstrated, while for others it may merely spark their curiosity.

The language of drug reporting

When it comes to presenting the drug issue to the public there is a common vocabulary with recurrent metaphors which inform the statements and reports not only of the press, but also national and local politicians, medical experts, and many others. Two of the most consistent metaphors are the drug 'epidemic' – the disease running unchecked across the land contaminating all it touches – and the 'war' against drugs where gung-ho language such as 'fight', 'battle', 'onslaught on the drugs epidemic' (all from one story, *Evening Standard* 22.4.94) is used to reassure the public that the sternest possible law and order response is in place to deal with the problem.

The notion of an 'epidemic' is useful because it evokes an image of contamination which cannot be controlled except by the harshest measures – segregation, incarceration, kill or cure. An epidemic is a public health issue, affecting us all. It is not a problem of individuals, but of communities and society. The metaphor completely removes from the picture the active individual, the circumstances under which initial drug experimentation takes place and the context in which continued use is likely to occur – it de-personalises the problem. Epidemics can also be forecasted to achieve all sorts of worrying proportions, and, as we shall see later in relation to crack, be exaggerated out of all proportion to the actual problem.

By using and repeating particular metaphors it has been argued that 'reality' is framed and organised in particular ways, "For example, framing the issue of drug abuse ... by using the 'drug war' metaphor implies a strong application of law enforcement and even military intervention to the problem" (McLeod *et al* 1992) as

has happened in the USA (Trebach 1987). On the other hand, a differing emphasis on addiction as a health problem rather than a social one, may frame the issue differently and consequently lead to a helping response instead of a criminal justice one. There was evidence of both these approaches in the UK during the mid-1980s. Concern over the rise in the number of young heroin addicts (seen as victims who needed help) ran parallel to the more traditional reporting about drug traffickers (seen as 'evil merchants of doom' who needed locking up). Thus the media helped create the climate where substantially new resources were made available for treatment and rehabilitation at the same time as restating the public demand for a 'war against drugs' directed at traffickers.

What is the impact of media reporting on attitudes to drugs and drug users?

The oldest debates about the press have centred around its ability to influence people's thinking and attitudes. This debate remains relevant to the drug issue. If most media portrayals of drugs tend to reproduce existing drug mythologies, fail to contextualise drug issues more broadly and sensationalise much of the experience of drug use in society, then we need to consider how important this is to how drug users are generally understood and dealt with.

However, trying to actually determine the impact of the press on attitudes to particular issues is far from easy. Certainly, the aptly named 'hypodermic syringe model' – which has it that audiences are directly and predictably influenced by the media, information being pumped into the body of the population and absorbed – is inappropriate in this case. On the other hand many surveys about drugs show that most people's main source of information about drugs is the popular media (Coggans 1991).

Most media output is intended to be informative or entertaining. Research which has attempted to find out how much the media can inform and educate, and therefore alter or even reinforce existing beliefs, has shown that media effects are complex. Different status, class, gender and cultural groups receive information differently and do different things with it (Morley 1980; Tichenor *et al* 1970; Cantril 1940). Despite this complexity, there are a number of areas where media influence appears able to have impacts which are relevant to our discussion.

Firstly and most obviously, the general public is unusually dependent on the media for information about any new phenomenon (Katz & Lazarsfeld 1955; Glover 1984). A recent example of this, the emergence of HIV/AIDS in the early 1980s, led to all sorts of negative images and press sensationalism ('gay plague') providing false messages and information that proved difficult to dislodge, even from some health care workers years after more reliable information was known. This also indicates that initial and fearful images may in some cases be relatively

resistant to future alternative messages.

Secondly, it's hardly surprising that existing views and attitudes are easily reinforced, particularly because of the cumulative exposure to similar images in newspapers, television, books and films going back decades. What is significant is that alternative messages, although they occasionally surface, are comfortably countered by the weight of messages which reinforce existing perceptions. This is particularly true when combined with a topic or subject upon which individuals are almost entirely reliant on the media for their information. Finally, the language and metaphors used by the media may help frame the way a problem is seen and help set the agenda for how it should be dealt with.

Moral panics

One further recurrent theme around drugs and the media is that of the 'moral panic' or the media-led drug scare. In this scenario, the media are able to create a scare through the reporting of drug-related concerns disproportionate to the actual seriousness of the problem. Scares may originate from an increase in Customs and Excise drug seizures or the arrival of a 'new' drug.

The theory of the moral panic was originally developed by Stan Cohen (1972) in relation to the fears around violence between 'Mods' and 'Rockers' in the 1960s. Cohen sought to explain how a relatively small and isolated social problem (a clash of the two groups in a seaside town over a Bank Holiday weekend) was exaggerated in the media to something more. The stories were spiced up with the dark imagery of leather jackets and motorbike gangs suggesting that the seriousness of the incident was actually related to the type of individual involved and the fear that such behaviour and 'fashions' among the young would become a broad threat to society as a whole.

The consequences of a moral panic are that it creates an 'amplification spiral' with the police, courts, government and the general public becoming less tolerant of the behaviour depicted. Similar styles, fashions and images often get sucked into the vortex and an isolated incident becomes more broadly defined. This results in the creation of new social controls (laws, restrictions) constructed as a response to the problem as conceived. Explicit in most theories of moral panic is the idea that the focus of the panic (the group involved) serves to identify 'folk-devils' (e.g. junkies) who are then scapegoated as examples of what is wrong with society and provides a target onto which general fears and anxieties may be pinned.

The crack cocaine scare of the late 1980s occurred during an ongoing anti-drugs campaign (predominately heroin) and resulted in what Bean (1993: 59) describes as a drug scare without parallel in all those that have "beset the British drug scene over the last 25 years". This was despite the fact that little evidence of any

significant increase in use was available in Britain. The scare elicited overstatement from all quarters – neither the quality press, television news nor tabloids were immune. Bean (1993) similarly suggests that the crack scare in Britain was *media-led*, based on speculative assumptions about instant addiction, a ready and existing demand, and the notion that problems which emerge in the USA have a strong likelihood of surfacing here. The epidemic never happened and the National Task Force set up to outmanoeuvre and deal with the expected problem was disbanded two and half years later through relative inactivity. It was however indicative of what the media could do with a drug issue. US drug enforcement agents forecasted a crack explosion in Britain and hyped the drug as having previously unseen powers. The media chose not to question the reliability of these predictions but to accept them unconditionally. The situation in Britain in 1995 is that crack does have a significant presence in areas of traditional drug use, such as deprived inner-city areas, and does cause many problems. However, the dire predictions about the end of British society as we know it have thankfully not been proved correct.

The impact of panics on public attitudes is borne out by research. Reeves and Campbell (1994) relate how in the USA in the mid-1980s the media-led crack scare helped produce a jump in public opinion on drugs as the nation's most important problem from two per cent to 13 per cent over the five month period of mass coverage. Beckett (1994) has described how public fears and anxieties over crime and drugs are often transformed by panics led and constructed by the media, and others have described similar media-inspired drug scares elsewhere, especially in America (Goode & Ben-Yehuda, 1994; Trebach, 1987; Reinerman & Levine, 1989).

Why does the media present such images?

So far we have looked at the type of drug-related image presented in the media and considered how useful they are as a means of understanding drug use. We then considered the effects of these representations and found that although 'effects' as such are difficult to measure there are circumstances where they are more likely to occur, such as when new information becomes available. We also have to recognise that in general, the media (or at least the *news* media) is aware that it can influence attitudes and behaviour and accordingly tries to reflect that responsibility in the manner of its information provision. We then have to ask *why* does the news media report drugs in the way that it does? At the very least there appear to be three interrelated factors which may partly explain how and why such reporting has come to pass: the construction of 'the dope fiend', the importance of the 'human-interest' story, and the view that the media acts as a 'mirror' to society.

The dope fiend

For much of the 19th century there was little concern over the very common use of opium and it was taken widely as a form of self-medication for a wide range of ailments. From the 1830s a number of factors came together which fundamentally

altered public perceptions of opium and the type of person who used it. Fears were soon raised around the displacement of alcohol by opium amongst the working classes and its use for 'stimulation' rather than for medication. Such use was considered as a societal threat despite little or no evidence to support this belief (Berridge and Edwards 1987).

These fears later coincided with and were bolstered by the claims of the emerging medical and pharmaceutical professions that opium was too dangerous a drug to be available for self-medication and that there should be controls (medical and pharmaceutical, of course) over its use. This came about because of genuine concerns over the rise in the number of infant poisonings, but opium and other drugs also became the battleground over which doctors and pharmacists fought for control of the prescription of drugs.

There was also a much more unpleasant concern – that of a perceived threat to society from outside. From the 1860s, interest grew in the numerically small but highly concentrated and visible Chinese immigrant population in London. And as far as the media of the time was concerned, wherever there was a Chinaman, there was an opium den. Literature was riddled with the drug and its effects, from Dicken's *Mystery of Edwin Drood* (1870) to Oscar Wilde's *Picture of Dorian Gray* (1891) and Conan Doyle's Sherlock Holmes stories. Opium smoking was depicted in these books "in a manner soon accepted as reality ... 'fantastic postures on ragged mattresses. The twisted limbs, the gaping mouths, the staring lustreless eyes' ... Not all writers were so obviously hostile; yet from the 1870s an increasing tone of racial and cultural hostility was discernable" (Berridge and Edwards 1987:197). Opium was blamed for the failure of missionaries to convert the Chinese to Christianity, and the use of opium for pleasure became linked to depravity and weakness. The ever-present Victorian fear of 'racial contamination' was only heightened by the newly-perceived fear of opium.

Similar issues had also emerged in America in the 1870s, where there was a much larger Chinese population. Kohn (1992: 2) notes that "Variations on this scene set the tone of the British drug panic of the 1920s, firing on the potent juxtaposition of young white women, 'men of colour' (the term was current), sex and drugs. If the ultimate menace of drugs had to be summarised in a single proposition, it would be that they facilitated the seduction of young white women by men of other races". Between 1910 and 1930 Parssinen (1983: 115) reports "In newspapers, fiction and films, the public was deluged with a mass of fact and opinion about drugs. The perception of danger expressed in ...the previous four decades, gave way to near hysteria". In America other racist images of blacks, Mexicans and Chinese were being spread by zealots such as Hamilton Wright who propagated stories about black cocaine users who once intoxicated, raped white women and could only be halted by a hail of bullets (Musto 1987). In England, headlines demonstrated similar fears: "White Girls 'Hypnotised' by Yellow Men", "The Lure of the Yellow

Man – English Girls’ Moral Suicide – Fatal Fascination” (Kohn 1992: 3). With the First World War furnishing reporters with the opportunity to combine drug scare stories with those of alien conspiracies and spies (Kohn 1992) the construction of the drug fiend and the powers of ‘dope’ were as firmly entrenched as the troops in France.

By the 1930s in America, it was the turn of other drugs to be ‘demonised’. Harry Anslinger, head of the newly-formed Narcotics Bureau, saw drug use as deplorable and degenerate but, more importantly, needed a ‘good drug scare’ to keep funds coming in from the US Congress (Himmelstein 1983). Anslinger’s descriptions of the effects of cannabis seem astounding to us now, but as Gossop (1993) observes they also satisfied a need: “The smallest dose he told his eager audience, was likely to cause fits of raving madness, sexual debauchery, violence and crime”.

‘Scientific’ evidence such as this presented by a highly placed US official, did much to exacerbate how drugs (even comparatively benign ones like cannabis) came to be viewed by the media. The descriptions of addicts at times read like science fiction, but these descriptions came from law courts (Wisotsky 1991), public officials and doctors, not scriptwriters. In the decades that followed, the connection between drugs and ‘others’ (foreigners) or ‘outsiders’ (deviants) was continuously reinforced (Bean 1974) and often acted as a catalyst for action against drug users.

The dope fiend had been born, and once such reporting was underway (and it would have been deemed proper and responsible to inform the public of such evils), the familiar media stereotypes became set in stone. They then became increasingly the common currency of drug reporting, reliant on the framework employed in the reporting of human interest stories and the problems attendant in that reporting.

Human interest stories

Curran *et al* (1980: 306) have argued that human interest stories, are a type which show that life is “strongly governed by luck, fate, and chance [and] shares common universal experiences: birth, love, death, accident, illness, and, crucially, the experience of consuming”. They seek to reach the maximum audiences through appealing to the lowest common denominator; they “cross the barriers of sex, class, and age, appealing almost equally to all types of reader” (p301). This, they argue, is true of the so-called quality papers as well as the tabloids. A similar approach can be seen in even highly regarded news programmes, such as the News at Ten, which recently introduced an ‘And finally.....’ section into its broadcasting. This explicitly attempts to end a normal broadcast of doom and gloom (unemployment, civil wars, famines etc) with a happy, lighthearted human interest story. Typical human interest stories are looking to ‘hook’ the audience, with a certain amount of ‘professional licence’ applied to the material and its presentation. Curran *et al* argues that commercial pressure since the early 1920s has led to a particular style of news reporting that needs to attract attention and appeal. Drugs stories are only one of

many topics (along with sex, crime, scandal and dead donkeys) which are considered to do both. Drugs issues fit neatly into the human interest story formula, even (as we have seen) turning stories which may have little saleable 'interest' into drug stories in an effort to spice them up and increase audiences.

Whose media is it anyway?

The six-million dollar question has to be 'who controls the media' – whose views does it reflect? Sometimes the answer is easy. In the Soviet Union the media was state-run and most of its presentations paid homage to the ideas and propaganda of the Communist Party (Lane 1990). But in democratic societies like Britain and America the debate continues over whether media output is independent, supportive of 'capitalist' ideas, influenced and manipulated by government or by media tycoons. The debate is too lengthy and contorted to rehearse here but one aspect, the idea of the media as mirror, is important.

In relation to a subject like drugs, this would suggest that for the most part the media provides us with images and perspectives which are in line with reasoned public and authoritative thinking, and is therefore responsibly acting in the public interest. And indeed, much of what the media is itself fed, in the form of press releases, public comment, and Government campaigns, contain images which are not inconsistent with what the media then passes on to us. In this sense the media may be said to be providing legitimate and responsible images, and rather than trying to agitate and challenge what is a general consensus on drugs, merely reflects what people already believe. If this is true (and it undoubtedly is in part) then – when combined with the reporting style of the human interest story and the dope fiend stereotype – we can begin to understand why so many drug stories take the form they do and why they continue to do so.

Conclusions

Obviously there are many dangers and problems associated with drug use but the media consistently represents them in ways which distort and fail to adequately contextualise them. This in turn often results in misleading and uninformative images and text.

Why should this matter? Shouldn't people have the worst possible image of drugs? Putting aside the ethical issue of misleading the public, one of the main problems with scare tactics is the impact they have on drug users and the way they may be treated by family, police, the courts and employers. It may for example, prevent them and their families seeking help because of the stigma attached to drug use.

If the role of the media is in any sense to live up to the ideal where "access to relevant information affecting the public good is widely available, where discussion is free ... [and where] the media facilitates this process by providing an

arena of public debate” (Curran 1991), then in regard to drugs, there is plenty of room for improvement.

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CHAPTER NINE • DRUGS AND THE MEDIA

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This chapter introduces the reader to a range of common drug myths. The myths are outlined and research and reason applied to them to demonstrate their lack of substance. The 'hard' drugs 'soft' drugs dichotomy is looked at along with the escalation or gateway theory, which suggest that using so-called soft drugs will lead to hard drug use. Drug dealer mythology is rife and in this instance the pusher at the school gate or leaning from the ice-cream van is considered. Lastly, three myths of addiction: instant and/or inevitable addiction is considered along with the pain of withdrawal.

Drug Myths

by Ross Coomber

Introduction

A myth is a popular belief which has limited use as a way of understanding the subject on which it is focused. While there are often elements of truth in all myths, in the main it could be said that they are based on stereotypical and simplistic images which have their roots in ignorance, and attribute particular characteristics to things and people which are neither supported nor substantiated by much more than hearsay. Furthermore, there are more often than not consequences (some good, some bad) for those they focus on.

Drug myths fit this description quite well. If drug users are classified as degenerate rather than in need of help they will be treated in ways appropriate to degenerates. They may be subject to harsh criminal laws instead of liberal ones; they may be feared and castigated by their friends, neighbours and community instead of accepted or supported; they may be scapegoated because of what they do and who they are. In short, by 'demonising' the drugs, invariably the same happens to those people who use them.

There are many myths about drugs. Some like 'once an addict always an addict' have been covered elsewhere in this *Reader*. Below, we outline a few of the harder myths about the misuse of drugs.

Hard versus soft drugs

The terms 'hard' and 'soft' suggest the inherent dangers of using a particular drug. A 'hard' drug is associated with a variety of potential dangers ranging from helpless addiction to mindless violence. Heroin and cocaine are considered to be hard drugs.

Drugs such as cannabis, ecstasy, and amphetamines are generally considered to be

‘soft’ drugs because the effects are considered to be comparatively less intoxicating, less likely to lead to addiction and less likely to be dangerous for the user in general. Sounds simple enough, doesn’t it? And that’s the problem – not only is it too simple a way of categorising drugs, but in the light of some basic information about the drug scene as a whole, it does not stand up to much scrutiny.

Extrapolating the ‘hard/soft’ argument, legal drugs such as alcohol and tobacco and drugs such as paracetamol which are available in any corner shop, must be softer than the ‘softest’ illicit drug, otherwise they wouldn’t be so widely available. Yet the dangers of misusing these drugs are well documented. Paracetamol is an effective painkiller, but in 1991 over 200 people died from paracetamol overdose. The prescribing of over-the-counter tranquillisers often results in unwanted side effects and may lead to some form of dependence in over a third of prescribing cases (Gabe and Williams 1986). Research has suggested that significant numbers of hospital prescriptions result in a “*major toxic reaction*” to the medicine prescribed (Gossop 1993: 49).

Tobacco alone is believed to be responsible for 110,000 premature deaths in Britain annually (HEA 1991), as well as significantly contributing to thousands of cases of heart disease, thrombosis and cancer. Alcohol is considered to cause between five and 25,000 premature deaths a year and like tobacco is associated with serious health problems for many thousands more. Using the rationale of hard/soft drugs outlined at the beginning, these drugs would have to be designated as ‘hard’ yet the hard/soft distinction is never applied to them in the general debate about drugs.

Risk of death is one of the benchmarks by which we label a drug as dangerous, but the number of deaths attributed to *illicit* drugs is far less than commonly thought. Even allowing for the fact that there are far fewer users of heroin than alcohol or tobacco, a smaller proportion of heroin users are likely to die from their drug of choice than smokers and drinkers. Granted, there is a far greater risk of overdosing on heroin than alcohol and dependence is likely to take hold far more quickly than alcohol or tobacco. However, in terms of toxicity, heroin, unlike alcohol or tobacco, does not damage major organs of the body such as the heart, liver or brain and tolerance to huge doses can be built up where even decades of use result in no discernable physical damage from the drug itself. (A regular and reliable supply of heroin may be taken with relatively little impact on the user. It is when supply is interrupted that problems are likely to be encountered.) The main dangers (dependence or overdose apart) relate to *how* the drug is taken. Thus the use of dirty or contaminated needles present dangers as great as the drug itself.

The historical and cultural context in which drug use takes place also influences the hard/soft distinction. There was a time in the 1960s and ‘70s in America, for example, when cocaine was viewed as a relatively benign drug which caused few problems. The advent of crack radically changed this perspective.

By contrast cannabis in the 1950s was associated with numerous harmful attributes, including powerful addictive properties, violence-inducing tendencies and the likelihood of producing both moral and physical degeneration. Today, these views have very little credibility. Undoubtedly cannabis would have been considered a 'hard' drug in the 1950s whereas in the 1990s it is generally seen as a 'soft' one.

Another problem with the oppositional separation into 'hard' and 'soft', is that it may conjure up an image of soft drugs as harmless. All drugs have some level of danger attached to their use. Ecstasy use has been associated with a number of deaths in recent years (Newcombe 1994) mainly related to heatstroke when combined with long periods of intense dancing. Amphetamine use can lead to a range of problems (tiredness, delusions, paranoia, psychosis, addiction) depending on the regularity and severity of use. Amphetamine is considered a soft drug yet its effects are similar to those of cocaine. Cannabis smoke appears to be more damaging than cigarette smoke in relation to respiratory complaints and diseases, while an inexperienced LSD user may suffer distressing psychological effects from the 'trip'. Solvents, barely considered in the ambit of 'soft drugs', in reality kill substantially more young people in the 12-19 age group than all the other substances put together (Taylor *et al* 1994; HOSB 1993).

Finally, the categorisation of drugs into soft and hard is often a reflection of what is also a politically expedient approach to understanding drugs. Historically, groups lobbying for the legalisation or the decriminalisation of cannabis have sought to distinguish the drug from 'harder' ones by claiming cannabis to be a drug with few attendant problems compared to the severity of harm caused by drugs like heroin. Similarly, the anti-drug lobby constructs an image of illicit drugs whereby soft drugs are shown to be no better than hard drugs because they seduce the user to seek the stronger, more intense experiences promised by their more dangerous relatives.

Using soft drugs leads to hard drugs

Another reason why certain illicit drugs are sometimes referred to as soft and hard relates to the long-held belief that experimentation with or regular use of certain drugs (particularly cannabis) will lead – as sure as night follows day – to the use of 'harder' drugs. The theory goes that the user is exposed to drugging, is seduced by its pleasures and moves on to bigger and better things. It is in this way that drugs such as cannabis and amphetamines are seen as being 'gateway' or 'stepping-stone' drugs. However, the relationship and transition between different drugs is not quite as simple as this.

While studies consistently show that nearly all heroin addicts have used cannabis it is also clear that only a small minority of cannabis users will 'progress' to hard drug use. If this were not true, then there would be many more heroin users given

the millions who have ever tried cannabis (perhaps eight million people in Britain alone). A recent Government survey found that although 96 per cent of people who had used opiates in the past year had also taken cannabis, only seven per cent of cannabis users had taken opiates (Leitner *et al* 1993: 203). There is as much of a causal link between cannabis use and heroin use as there is between a young person drinking shandy and a tramp drinking meths – they may be at opposite ends of a spectrum but that doesn't mean there is a clear progression from one to the other.

Although it is true that cannabis use is the most common first *illegal* drug to be used, most cannabis users have already 'experimented' with tobacco and alcohol, both of which have significant psychoactive and physiological effects. In fact many heavy cannabis users never try drugs such as heroin, and often exhibit the same negative prejudices and accept some of the stereotypes about heroin users as other members of the non drug-using population.

Gossop (1993: 103) makes the ironic point that maybe the number of cannabis users who experiment with other drugs is swollen by the simple fact that in order to get hold of cannabis, users have to mix with dealers who may supply other drugs and are tempted to experiment with them much more than if the current controls on cannabis did not make this association necessary.

That said, there clearly are cannabis users who do move on to heroin. There are also social drinkers who go on to become alcoholics. The point however is that there is nothing inevitable about this 'progression'. There is nothing inherent in cannabis or a glass of wine which propels people up (or down) an inevitable slope.

The pusher at the school gate

"Playground pushers are selling amphetamines disguised as jelly beans to schoolkids" (*The People* 17.10.93).

One of the most common and hardy drug myths is that of the evil pusher at the school gates or some other opportunist place (the ice cream van is another favourite) enticing vulnerable young children into drug use in order to increase their sales. There is little, if indeed any, evidence to support such a view. In reality, there are a number of amalgamated myths which help construct this particular picture. One such long-standing myth is the idea that the dealer will provide free samples in order to 'hook' the child, and that once hooked the child will bring a new and regular income. There are a couple of problems with this scenario:

1. Most schoolchildren do not have a regular and sufficient income to actually become dependent on drugs which can be a lengthy and expensive process.
2. Pushing drugs onto schoolchildren would also present an unreasonable risk to

the seller. Parents and teachers would soon learn of such a character and act accordingly.

Although there is little research on drug dealing in schools, it is likely that where drugs are available in school, it will be one of the students who has access to them and is either dealing to make a bit of cash or selling their own excess to friends.

There has always been a fear of the unscrupulous and degenerate character preying on the weakest for their own gain. The fact that the archetypal 'pusher' is not found or caught rarely disproves to believers that he did not exist in the first place. Unfortunately for the mythmakers, initial and early drug use has little to do with pushers as they are conventionally portrayed. Initial provision of an illicit drug is nearly always from within the peer group (friends and acquaintances) or the family (an older brother or sister). It is unlikely that unknown 'pushers' would have much success enticing people into drug use as they are not equipped with the 'security' of the peer/kin group, which gives the drug credibility and desirability, and provide a setting in which it can be taken and learned about, thereby providing a context in which second, third and continuing use can occur.

This persistent mythology sets up parents and children to resist temptation from evil strangers, but this can divert attention from the settings where experimentation is most likely to occur. Friends, friends of friends, relatives and neighbours are not drug fiends, but they are more likely to be the source of drug experimentation than a menacing figure in shadow and shades.

Instant or inevitable addiction

The notion that certain drugs have the power to make individuals immediately crave them and compel them towards more use and inevitable addiction is yet another drug fallacy. Recently we have heard much about the powers of crack cocaine to produce instant addiction. This is not the first time a drug has been given such a press. Heroin is another drug to which such powers are often attributed: an American book was titled *It's So Good Don't Even Try it Once*.

In reality, the process of becoming dependent on heroin, for example, is quite lengthy and relies on a number of factors related to personal circumstances. Most people who try it for the first time are physically sick and won't bother again. Others will try it a few times and then decide heroin isn't for them. If you carry on taking the drug, tolerance builds up so that you need higher and more frequent doses to get the same effect. If you got to the point where you were using the drug on a daily basis and then suddenly stopped using it, you would experience the classic heroin withdrawal symptoms. This would mean your body has become physically dependent on heroin and you feel ill if you stop using. To feel 'normal' you would need to take more heroin. Even then for somebody to reach the point

where they are so hooked on heroin both physically and psychologically that it completely dominates their life can take several months (Kaplan 1983).

The effects of smoking crack cocaine are very different to smoking or injecting heroin, but many of the lessons are the same. Dependence on any drug does not occur solely because of the drug's effects. Although crack cocaine provides a quick and intense euphoria and dependence *may* occur more quickly than to cocaine powder, to become addicted to crack (a psychological addiction in this case) an individual has to be 'dedicated' to the daily ritual of obtaining money for drugs, arranging to buy them, use them, come down from the effects and start all over again. 'Crack' is one of the more recent drugs to be labelled 'instantly addictive', but there is enough research evidence to show that many people do not enjoy the crack experience and fail to repeat it, while others can 'take it or leave it', primarily because to acquire a 'crack habit' means finding hundreds of pounds every week (Ditton and Hammersley 1994; Miller 1991; Newcombe 1989). The association with instant addiction and this particular drug may say more about the type of user *most visible* in the American experience. Research into freebase cocaine users and some crack users suggests that many are in fact more heavily involved in heavy and multiple drug use than other users. Thus the scare over the powers of crack may have been exacerbated by the *visibility* of existing heavy drug users using a new drug (crack) to excess and apparently demonstrating its ability to hook quickly and easily those people already heavily involved in a drug-using lifestyle.

The pain of withdrawal

A common myth about heroin dependence is that the pain of withdrawal is unbearable and even life-threatening. This is probably a major reason why many heroin users are scared of giving up the drug and it also helps reinforce the notion that heroin is a drug which enslaves users for ever, or at least until they die. Abrupt withdrawal from some drugs such as alcohol, barbiturates and tranquillisers can be highly dangerous, but for many users the effects of withdrawing from heroin are similar to a very bad dose of flu – not very pleasant, but hardly life-threatening.

Of course physically withdrawing from the drug so that it is no longer in the body, is only the beginning of the process of coming off drugs. As one musician said many years ago about heroin, "they can get it out of your body, but they can't get it out of your mind". Although this is an exaggeration, it is true that rehabilitation is a long process involving major changes of attitude, motivation, lifestyle and so on, so that drugs are no longer the central feature of a person's life.

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This book chapter covers more than one area. It is initially an introduction to the types of treatment or help available, and outlines the kinds of services available in the UK. A brief analysis is then undertaken that seeks to address what service can actually do for drug users and this section describes the differences between say 'street' agencies, detoxification and Narcotics Anonymous whilst at the same time providing some indication of their efficacy. The chapter ends by considering which treatment is best and finally whether treatment can actually make a difference at all.

What help is available for drug users and does it work?

by Ross Coomber

Introduction

There are a broad range of services and treatments available for those dependent on drugs. This chapter will outline the main types of services available, the treatment options that can be found within them and provide an insight into how successful these treatments are for the individual drug user and also, on a more general level, for society. This chapter will mainly deal with heroin dependency because in the UK heroin is the main illicit drug on which people become dependent and that treatment services are best equipped to deal with.

Types of treatment

Street agencies

These are locally-based agencies offering a range of services which might include a telephone helpline, drop-in centre, home visits and outreach (where drug workers go into the community to 'reach' drug users). As well as information and advice (on the whole range of drugs), street agencies often provide individual and group counselling and other support services for those with drug problems and for those who are becoming, or who have become, abstinent from drugs. Many street agencies work closely with GPs either to provide primary health care and/or to provide prescriptions for withdrawal, detoxification and occasionally stabilisation through maintenance prescribing (see Treatment options below). Harm reduction services such as the provision of free condoms and safer sex advice/information, as well as needle/syringe exchanges and information and advice on safer injecting practices are also within their remit.

Drug Dependency Units (DDUs)

Whereas the street agencies are nearly all in the voluntary (non-statutory) sector, DDUs are all part of National Health Service provision, and as such are often found in hospitals, as opposed to 'in the community'. They have a variety of services mirroring many of those provided by the street agency, and they also provide various 'clinical' treatments such as detoxification through medium and short-term prescribing. Most will provide longer-term prescribing (mainly opiates) for stabilising those for whom it is deemed appropriate. Maintenance prescribing is not normally offered and some do not offer a prescription service at all. As might be expected in a clinical setting, psychiatric and psychological treatment is also available. Inpatient as well as outpatient detoxification may be available.

Community drug teams

The 'community arm' of statutory provision. Services provided are similar to those offered by the street agencies although a drop-in service may not be available. They may have closer links with the DDU and as such access to clinical treatments (including psychiatric and psychological) through referral and liaison.

Residential services

These services provide accommodation, food and support in order to help the user become drug-free. Often they are located in areas well away from the temptations of inner city life. Most of these services require the client to be drug-free when entering the programme and be prepared to become a committed part of a hierarchical community structure within which they learn to deal with a drug-free lifestyle through various individual and group support mechanisms. The different residential services are often based upon particular philosophies relating to drug addiction and what an individual must do to overcome it. Some of them, for example, are based on religious groups.

Self-help groups

Groups such as Narcotics Anonymous (NA) and Families Anonymous are two high profile self-help groups based on the ideas of Alcoholics Anonymous, which essentially sees addiction as a lifelong disease from which there is never a complete 'cure', therefore the only way is total abstinence from any drugs or alcohol.

Narcotics Anonymous involves attendance at meetings, getting and providing mutual support from/to other members and adhering to the '12 Steps' towards a drug-free life. The encouragement to engage with a 'power greater than ourselves' is explicit in the 12 steps to be practised. Formal religious adherence is not the necessary focus of these groups but may nonetheless figure strongly. Families Anonymous seeks to help 'dysfunctional' families recognise the problems which may be inherent in their functioning and which contribute to the addict family

member continuing with their addiction, and to provide a 12 Step programme for recovery.

There are other types of family and self-help groups offering advice, support and counselling many of which operate from drug services.

General practitioners

Some GPs have a lot of experience of treating drug users whilst others tend to refer them on to drug services. GPs can potentially offer a range of services relating to health problems associated with drug use, and also prescribe certain drugs for withdrawal, detoxification, stabilisation or maintenance. It is however evident from a number of surveys that most GPs consider the management of drug users and their problems as something that they would prefer to avoid (Glanz 1994).

Notification of drug addicts to the Home Office

A common concern for drug users, and one which may keep many from seeking help, is the belief that treatment agencies will report them to the police, social services and other agencies. In fact, since 1968, doctors have only been required to notify the Home Office of those considered to be addicted to particular drugs such as heroin and cocaine, but not to drugs such as amphetamines, barbiturates or benzodiazepines. As such, drug users, as opposed to addicts, seeking help for drug-related problems are not notified. The 'Addicts Index' is primarily used to keep track of addiction and drug-using trends as well as keeping tabs on doctors prescribing habits. The index is almost entirely confidential and information is passed almost exclusively between treating doctors only. Since the mid-1970s the police have had no access to the index except for exceptional cases which are deemed to be in the interest of the addict themselves or public policy (Mott 1994).

What can services do for drug users?

It is commonly believed that once somebody becomes dependent on heroin, all they have to look forward to is a life of crime and degradation followed by an early death. Certainly this is the fate of some heroin users, but many others either conquer their dependency, either with help from treatment services, or indeed by themselves. This can happen when life events such as acquiring work or getting into a steady relationship mean that drugs are no longer the most important thing in that person's life. There is a concept known as 'maturing out' which indicates that many long-term chronic drug users who survive into their 30s just leave their addiction behind without any formal treatment at all. So, how effective is treatment in 'curing' drug dependency?

"There are many treatments for 'addiction', but relatively few have been shown in controlled trials to have any specific therapeutic effect. Indeed some have never

been subjected to controlled evaluation.” (Brewer 1993)

Brewer is making the point that there has been relatively little evaluation of treatment, and where this has been carried out, there have often been inconclusive verdicts on the benefits. We shall consider these points again later. In the next section we will briefly review what various treatment options do offer the drug addict.

Treatment options

Detoxification

Clinical detoxification is a particular method of treatment which has been likened to a ‘revolving door’ (Fazey 1989; Newman 1987) where patients undergo detoxification, relapse (into drug use), undergo detoxification, relapse again and so on. This is because addiction is not simply a physical attachment to a drug. Simple detoxification helps the addict to overcome physical withdrawal symptoms and reach a point of drug-free existence but little more. Detoxification alone does little to ‘treat’ the other aspects of the ‘addictive state’ which (Orford 1990) has shown includes complex psychological and social, as well as biochemical traits. Just as the process of becoming dependent on drugs is complex and individual, so is the route out of dependency. The revolving door analogy depicts treatment which clearly helps for a while, and clients acknowledge that help by often returning, but it also demonstrates that in many instances it only provides a start. As Gossop (1987: 161) notes, “There are ... different phases of treatment. One obvious distinction is between getting off and staying off [and] ... it is now clear that detoxification alone is ineffective as a means of helping addicts remain drug-free”.

Detoxification programmes have an initial treatment objective of getting the addict to a drug-free state, with the hope that they will be able to stay drug-free, but just getting clients to complete treatment has its difficulties. On this basis, inpatient detoxifications as compared to outpatient detoxifications can be quite successful with some programmes managing to successfully withdraw up to 81 per cent (using gradually reducing amounts of oral methadone over a 10 to 28 day period depending on individual circumstances) from opiates (Gossop *et al* 1986).

With longer-term outpatient detoxification (over six months or more) where the primary objective is to achieve complete abstinence by the end of the treatment programme, success rates may differ but are generally less successful. For example Gossop *et al* found that only 17 per cent of outpatient detoxifications in their evaluation successfully completed the programme compared to 81 per cent of inpatients. For both types of programme, relapse to drugtaking often occurs within the first four weeks after treatment has been completed.

The relapse rate widely perceived to accompany detoxification has led to reported staff frustration, staff 'burn-out' and at times disillusionment with the treatment of users by staff (Newman 1987: 116). Relapse to drugtaking however is not necessarily a relapse to addiction or even continued regular use, even though it often is the result. Gossop *et al* (1987) reported that 45 per cent of 77 opiate addicts, after undergoing an inpatient 21-day reducing methadone detoxification programme, were living in the community and drug-free six months later. Detoxification was followed up by appropriately tailored individual and group-based support and aftercare sessions. Although relapse had occurred for some of these, it had not proved to be decisive. Bradley (1989: 76) has argued that the belief that relapse is both common and decisive is perhaps over-estimated by staff at treatment agencies – although depending on the package offered it is probably more true for some treatment agencies than for others.

The importance of good quality support and aftercare services, tailored to the individual needs of the recovering addict, as evidenced by the Gossop study cited above, would appear to be of great significance to the effectiveness of such treatment.

Residential therapeutic communities

For the most part the 'effectiveness' results for residential therapeutic communities have tended to be mixed (Raistrick and Davidson 1985). In general, a review of the effectiveness of therapeutic communities tends to show that the longer a client remains in residence at such programmes the greater the benefits, particularly for those who stay longer than six months (NIDA 1982; Bleiberg *et al* 1994). One significant problem associated with residential therapeutic communities relates to high drop-out rates (Newman 1987). For those who are able to successfully adjust to the regimes, the benefits appear to be real. Unfortunately, for many, the treatment offered is not deemed to be appropriate or helpful. In fact, Thorley (1981: 149), commenting on a group of former residents where "almost 15 per cent were sure that their stay had done them more harm than good", acknowledged that the experience, whilst very positive for some, may, due to the nature of the programmes and the needs of individuals, in fact be problematic for others.

In recent years however, and in response to changing circumstances like HIV/AIDS and some of the criticisms levelled at them, therapeutic communities have tried to adapt their programmes to make them more amenable to a wider population (Toon and Lynch 1994).

Narcotics Anonymous

Narcotics Anonymous is a self-help organisation which is an offshoot of Alcoholics Anonymous. In the USA, these organisations are well ingrained in both the public mind and media representation, as well as those close to its treatment provision, as

being particularly successful (Vaillant 1983). The perception however may be misleading, "I and the director ... tried to prove our efficacy... [and found] compelling evidence that the results of our treatment were no better than the natural history of the disease" (Vaillant 1983, cited in Peele 1990). That is, patients undergoing treatment when compared to a group that did not, fared no better. This perhaps surprising outcome has also been found in other studies (Brandsma *et al* 1980; Ditman *et al* 1967). Christo (1994) has suggested that NA appears to be effective over long periods (after five or six years in bringing anxiety and self-esteem to normal levels) but does not compare this group with those from other treatments, nor does he consider the possibility that NA treatment may actually lengthen the amount of time for anxiety and self-esteem to return to normal due to its particular philosophies and practice.

Again, as with most other types of treatment NA often has high drop-out rates. For some addicts it is undoubtedly a saviour, providing them with support, structure and a focus. For others, like many treatments available, it is too restrictive and unhelpful.

Minnesota model

One form of treatment which is based on the traditions of NA is the Minnesota Model (Curson 1991). A short-term residential therapeutic programme (although outpatient facilities are often available) which has made great claims of success for itself (eg, up to 66 per cent rates of 'cure') and one which received a fair amount of public attention in the mid-1980s. Some of these claims come from self-evaluations and are part of a marketing strategy to secure income (Wells 1994). A review of the studies evaluating the effectiveness of these programmes were however found to be both few in number and often methodologically flawed (Cook 1988). Many however accept that this form of treatment, as with other therapeutic communities, does 'work' for those who accept, and are able to work within, the programme's powerful ideology, which takes much of its lead from the 12 steps of NA, although the 'spiritual' component need not embrace formal religion.

The programme has also a strong tailoring towards individual needs and includes use of "a multidisciplinary team that includes doctors, nurses, social workers, counsellors, psychologists etc" (ibid: 193). Attendance at NA meetings is integrated into the programme itself and is continued after residential treatment has ended.

Methadone maintenance

The use of methadone maintenance programmes, where opiate (usually heroin) addicts are provided with prescriptions of (usually oral) methadone continues to be the subject of much heated debate, despite the fact that it is probably the most evaluated of all treatment programmes (Farrell *et al* 1994). Treatment which is

explicitly based around maintenance does not have 'cure' rates in the sense we have been discussing them so far. Advocates of methadone maintenance programmes argue that the value of these programmes lies not in the narrow conception of cure defined as abstinence, but in the broader harm they prevent, both to the individual and society. A recent review of the impact of methadone maintenance concludes, "the randomised studies ... show consistent positive results over vastly different cultural contexts (United States, Hong Kong, Sweden, Thailand) and over two decades of research" (Farrell *et al* 1994: 998).

As we might expect the effectiveness of such programmes varies under different conditions and with different approaches. In other words, there are good programmes and not so good ones. A consistent finding is that programmes which do not restrict treatment to low doses, which provide adequate support services such as good quality counselling, where staff-client relationships are good, and where the objective of treatment is maintenance (and importantly, is perceived as such) as opposed to abstinence, have proved most effective.

Methadone maintenance programmes have been found to be effective in reducing drug-related crime; reducing the rates of HIV infection among treatment populations; reducing risky sharing practices, stabilising lifestyles, and reducing the use of street drugs. The benefits of maintenance programmes thus extends beyond the individual client into the community. This dual benefit has recently been acknowledged by the Advisory Council on the Misuse of Drugs and it has recommended that the benefits of the research and its indications of best practice be incorporated into existing programmes. Two recent studies from the US both report that treatment (particularly methadone maintenance programmes) are up to seven times more cost effective than enforcement as a means to controlling the drugs problem (ISDD 1994).

Methadone maintenance programmes, however, are not currently widespread in Britain and whether a clinic offers such treatment is determined by the clinical head of the unit. Such programmes where they exist will tend to use a methadone linctus which is taken orally, rather than the provision of injectable methadone. The provision (or non-provision) of methadone on a maintenance basis is an example where conflict between what health care professionals may believe to be appropriate or valid treatment may conflict significantly with what some drug users would prefer to have, for example to be prescribed the drug of their choice (heroin in preference to methadone) and/or to be prescribed for maintenance purposes as opposed to detoxification.

Counselling and other psychotherapeutic techniques

Basic information and advice apart, counselling and other psychotherapeutic techniques are an important constituent part of many drug treatments. The

techniques vary across and even within treatment programmes. They may range from fairly non-confrontational, and non-directional approaches where the counsellor/therapist seeks to help the client to understand and cope with their problems (many of which may be non-drug related) to more directional and/or confrontational techniques. Both individual and group (clients' family and/or other clients) counselling/therapy is often used.

Because counselling and other psychotherapeutic techniques are often integrated into treatment, evaluation of their efficacy is difficult and few evaluations have been carried out. Some particular therapies, for example those designed to prevent relapse, drawing on a cognitive-behavioural approach, appear to show promise for opiate users but as with other techniques there has been little evaluation and its employment has been relatively limited. As Johns (1994: 1556) has stated "The best of psychological interventions will not have much impact if they cannot be delivered to the patient. There is a need for therapists to be trained in these techniques and for treatment services to have ready access to clinical psychologists and counsellors".

What is the best treatment?

As we have seen, what statistics there are regarding treatment are difficult to interpret for a wide range of reasons. Different types of drug users often find some treatments preferable to others. Some treatment agencies may deal with more difficult or more chronic addicts than others. Some treatments may 'select' their clients to a greater extent than others, artificially boosting success statistics. One treatment programme of a similar type, on paper, may differ significantly in important respects in practice. Too few evaluations of most treatments have taken place to provide reliable information similar to that found for methadone maintenance programmes and comparisons have proved difficult not only between treatments but even between programmes of the same type.

In the USA, the National Institute on Drug Abuse concluded that "Comparisons of post-treatment outcomes of clients within each major treatment modality showed no evidence of differential programme effectiveness" (NIDA 1982). The Advisory Council on the Misuse of Drugs (ACMD) said similarly in 1982 that, "It is not possible therefore on the basis of research undertaken so far to demonstrate conclusively that any one approach is more effective than another" (ACMD 1982: 22). Moreover, as there is no such thing as the typical addict or addiction there is no standard treatment which will work in every or even in most cases. In this light Gossop (1987: 161) has strongly argued that treatment provision needs to take account of individual differences and provide treatment which takes into account the relevant problems. Although most programmes may profess to do this, in practice he suggests the individually tailored programme gives way to the 'typical offer' of a "relatively standard package of procedures and all individuals are

required to go through the system”.

Rather than arguing that any one treatment programme is best at curing drug addicts we can probably say that the best programme is the one which works for the individual and is able to provide the appropriate treatment, support and response at that moment in time when it is needed.

Does treatment make a difference and what is successful treatment?

Raistrick and Davidson (1985) asked the important question ‘does treatment work?’ The question was deemed to be worth asking because although we can see that various treatment programmes have a certain amount of success, we also have to recognise that treatment often does not appear to succeed to any greater degree than no treatment. This is, as we said above, is because much drug use, problematic or not, actually ends after an indeterminate period of time.

Information on how many are estimated to leave their addiction behind without recourse to treatment is scarce. In a review of research into non-treatment recovery, Waldorf and Biernacki (1979) found common recovery rates in the populations studied in excess of 50 per cent, some results showed less, some more. There was one famous study of returning Vietnam war veterans which showed that while most of them were using heroin in the war zone, most gave it up when they got home (Robins 1993).

Approximately 20 per cent of enlisted men are considered to have been addicted (predominantly to heroin or opium) whilst serving in Vietnam. One year after their return to the USA a follow-up study showed that 95 per cent of those addicted whilst in Vietnam were no longer addicted. After three years the percentage was 88 per cent and of the 12 per cent who had become re-addicted at some point in the three years, that re-addiction had normally been relatively short-lived (Robins 1993). Treatment cannot explain this incredibly high recovery rate. Only a small percentage received any treatment and of those who did enter treatment on return, their relapse rates, approximately two-thirds, compared poorly to those who did not access treatment.

Raistrick and Davidson (1985) raise the important point that the relationship itself between the treatment provider and the client can have important consequences for treatment effectiveness, citing the case of an experiment involving two groups of ‘rapid smokers’ as illustrative. One group was given a therapist who carried out the given therapeutic technique coldly and mechanically, giving no support or praise for successes between sessions. This group achieved a success rate (abstinence) of six per cent at follow-up, three months after treatment. This is contrasted to a 73 per cent success rate for the group who had received treatment from a friendly,

warm, enthusiastic therapist who provided encouragement for success between sessions. Other studies have found that positive incentives, as opposed to negative ones, tend to incur comparative success in methadone programmes (Strang 1988).

Relationships within treatment generally are far more arbitrary and mixed and as such difficult to assess. What research there is, and it is also true of most treatment settings outside of drug use, suggests that the formation of a positive and encouraging relationship in the right treatment setting can achieve significant impact. This is another indication that treatment can make a difference, but that the technique or programme itself may not always be as important as is often believed.

Oppenheimer *et al* (1990) followed up 116 users new to treatment two and a half years later from three different treatment settings: a drug treatment centre; a therapeutic community, and a crisis intervention centre. The results were impressive, "At follow-up 73 per cent of those currently living in the community were opiate-free. Thirty-seven per cent of the sample were free from all drugs including cannabis at the follow-up" (p.1259). McLellan *et al* (1982) after examining the outcomes of six treatment programmes (different types) and comparing those who had long-term (LT) exposure against those who only had five to 14 days concluded that, "the results from these analyses showed significantly better post-treatment status in virtually all areas for the LT patients" (p.1428). Importantly however, McLellan *et al* were concerned to make the point that although they considered treatment to make a significant and important difference they did not relate their findings to the narrow outcome of 'cure'. Effective outcomes from the methadone maintenance programmes outlined earlier also testify to the fact that treatment does make a significant difference, both to individual and society, even if it does not provide a cure. This raises the important issue of what should be seen as successful treatment.

The question of 'success' is important because not only may drug users have preconceptions about what they need and expect from a service, as may service deliverers what should be provided, but also because funding for services may increasingly come to rely on statistics which demonstrate the effectiveness of any one service. If an expensive drug treatment facility is to be judged in terms of 'cure' alone then many services will be under threat and as we have seen, some programmes do not even have abstinence as their primary aim. So what should be seen as successful treatment? Perhaps a different question could ask 'can drug addicts be successfully helped?'

Harm reduction treatments, such as the provision of new injecting equipment for drug injectors, the teaching of safer injecting behaviour, safer sex advice and provision of free condoms, or the provision of pharmaceutically pure drugs such as methadone amongst others, seeks to reduce the associated harm of drug use. It is not incompatible with curative treatment goals but is not reliant on it. It can be used

with drug users not willing to consider stopping drug use with the aim of preventing or reducing harm to individuals and society.

If we accept that different drug users may wish for, or need, different kinds of help at different stages of their addiction or using careers we can acknowledge the potential of harm reduction as appropriate treatment (Todhunter *et al* 1992). Harm reduction as treatment may also enable earlier intervention into a drug-using career because the user is able to make use of treatment earlier. A number of studies (Sheehan *et al* 1986; Hartnoll and Power 1989) have indicated that help-seekers access treatment when they feel they are 'out of control'. Much harm reduction treatment can intervene, with significant effectiveness prior to this moment.

Harm reduction may also mean that treatment starts to reach people that it would never have done otherwise, those who do not access treatment for cure. 'Treatment' in this sense can be seen to be effective, and to make a difference without actually trying to cure.

During the 1980s some drug-using populations had very high levels of HIV infection, acquired predominately through the sharing of infected injecting equipment. Drug users thus represented a significant risk to the general population if they continued to practise unsafe sexual practices with each other and non-drug using partners. The need to reduce risky drugtaking practices (sharing equipment) and risky sexual activity makes the goals of harm reduction as opposed to simple cure for treatment necessary not just for users but for the whole of society.

Conclusion

A review of what happens to drug addicts is far more optimistic than the conventional 'once an addict, always an addict' would have us believe. Large numbers of drug addicts manage to leave their addiction behind either through recourse to the various treatments available or without treatment at all.

What treatment is able to do for any one individual is affected by a range of factors. These include drug user characteristics, the type of programme on offer and the relationship between patients and those providing treatment.

CHAPTER EIGHT • WHAT HELP IS AVAILABLE FOR DRUG USERS AND DOES IT WORK?

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Coomber, R. (1992b) 'Agency Change and Orientation: Accessing the Non-White Drug User', in Adebowale, V. Cochrane, R. Ranger, C. and Coomber, R. *Substance Misuse and ethnic Minorities: An Agenda for Change*, CAN Press, Northampton.

This short chapter derived from a conference presentation deals with the problems of accessing the non-white drug user who may want to access drug treatment. It argues that the issue is unlikely to be resolved by simply appointing 'black' workers (a common argument) for a number of important reasons. Drug services have limited resources. In multi-ethnic settings they are unable to have a drug worker that is representative of each ethnic grouping. Which group is to get the 'black' worker? What of those groups who don't get 'their' worker? Moreover, whilst it may be appropriate to have non-white workers working in drug projects (in the way that it is in any field) having them serve 'their' community may just 'ghettoise' the worker and non-white clients may come to be seen as his/her client. It is argued that the bigger question of attracting white and non-white users to services has to be addressed. Only a fifth of those addicted to drugs are believed to use drug services and research has shown that drug services are simply not visible to many that might use them.

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Agency Change and Orientation: Accessing the Non-White Drug User

I would like to try to cover a number of points in this paper relating to the issue of why so few non-white drug users are being accessed by drug services. I will also hopefully raise a few issues that will probably be best dealt with by debate during the day.

This paper has been written with the belief that "there is a problem out there" as regards the non-white population in respect to drug use and that services are at present relatively inaccessible to them. Thus one of my assumptions is: firstly, that there is a non-white drug using population and, secondly, that services are unattractive to them (Coomber, 1989 Awiah et al, 1992).

The three issues that I want to address then are: firstly, why non-white drug users do not attend drug services; secondly, to assess the specific strategy of using more "black" drug workers as the primary answer to this problem and finally I will address the problem of what can be done to improve this situation.

Why non-white and other ethnic minority groups do not attend services.

Research into drug service provision and client take-up (and then as a consequence client characteristics) has in my mind tended to do two things in particular. Firstly, it on the one hand tells us that those who attend services are in fact representative of the drug using population in general, and secondly, that certain structural aspects of the service at least partially affects attendance behaviours.

So for example, in the past, the fact that the majority of clinic attenders were white and male (relatively consistent with the figures for notified addicts) the assumption was made that the white male population used drugs way in excess of white women. Other research told us that treatment philosophy and practice also had an effect on who, within this group would attend.

Other "indicators" also supported the notion that white, male drug use was the norm. This research tends to draw on information provided through the criminal justice system: the police, the probation service and the courts.

The point I am making is that in general the research didn't take into consideration that depending on where its data came from it could be painting a skewed picture of the real drug-using population. For example were female drug users less likely to attend clinics than men; and are men relatively more likely to come into contact with the criminal justice system than women.

I suggest this distortion of who is the drug user can be seen more clearly when a comparison between services is made or when services are actively involved in targeting client groups. (MacGregor et al 1991; Dorn and South, 1985). Specifically, in relation to women a number of factors were important. It seems that when the structure of an agency actively addresses itself to various needs, not just of the female drug user but of women in general, such as pertinent opening times, women only periods and the provision of creche facilities the attendance of women seeking help can rise significantly (Dorn and South, 1985). Moreover a number of censuses of various project types, from DDUs to Drop-In Centres, shows that some service types are more attractive to women than others. In the most attractive agencies the ratio of women to men was almost 1:1, at DDUs the ration was 2:1 (MacGregor et al 1991). We can see then that how drug users are defined can determine how services develop (hence the service orientation which was relatively insensitive to some women's needs) and that some barriers can be broken down by making the service more relevant/sensitive.

But barriers to help-seeking intrinsic to the agency are not the only barriers we need address ourselves to.

Layers of visibility.

We need to recognise that within cultures there may also be more or less barriers to help-seeking. There are indications from research in Bradford in relation to drugs and in Preston relating to alcohol that some members of the "Asian" population would not want to attend drug services within their

community - in some cases especially if it was to an Asian worker - in fear of it becoming known within their own community (Awiah et al, 1992; Malseed et al, 1990). Within this, the Preston research along with some research in Haringey in London (on women of Afro-Caribbean descent) has indicated that women are especially likely to hide their visibility of having a drink or drugs problem because of the extra stigma they would endure from within their own community.

In each community, white or non-white, there are more disincentives to women than men as regards seeking help over and above the provision of agency facilities. Specifically, the belief that social service intervention into child-care may result is one clear reason, but more generally the extra stigma attached to women drug users in general can be argued to be an important factor.

So a claim for the need addressing client needs can clearly be made in relation to accessing non-white and other ethnic minority drug users and we might therefore want to conclude that absence (or at least the comparative appearance of absence) does not necessarily indicate abstinence.

The Black Drug Worker.

One structural response which has commonly been put forward is that of the "black" drug worker. At the level of equal opportunities I believe that the need for more non-white drug workers is very real. However, as a strategy for accessing the non-white drug using population, I am more cynical.

Why is that? Well, first of all it smacks of the "quick-fix" type of response which may be of more benefit to the service providers than to the prospective clients. For example, any agency which gets a "black worker" may then feel that it is doing its bit as regards the black drug user and as a consequence feel safe against allegations of racist practice or at least from not addressing the problem. Also, as I am aware of in some cases it may mean that if a black client does come through the door that client is quickly ushered in the direction of the black worker. Very much the "that's your area isn't it" approach. In this sense we have to be beware of a ghettoising of the black worker and of its possible effect on preventing positive agency change.

Secondly, what is a "black" drugs worker anyway? I come from Greenwich in South London which is a highly multi-cultural area. With around 10% of the population being "Asian" 5% Afro-Caribbean and the Vietnamese and Chinese communities growing fast what kind of "black worker" would we appoint to make services attractive to the non-white population of Greenwich?

Also, even if a service could employ say an Afro-Caribbean and an Asian worker (however unlikely given resource constraints) would these be the most effective "mix" of black workers at all times? "Need" will vary over time and within different communities, do you sack say the Asian worker and bring in a Chinese one when the situation demands?

(Outreach may work in part but the same problems remain and perhaps this may be merely be the response of increased activity and at the expense of other more positive agency change).

The "Black" Experience.

We also have to consider the so-called "black experience" of health care. This notion is essentially the basis on which the black worker argument is based and underlies much of the discussion around this issue. Simply put the argument suggests that the general experience of the non-white communities to health care is a bad one, i.e. basically one of racism. In the field of drugs - where stigma is an added disincentive - non-white drug users are even more likely to and do avoid services. The answer is to provide black workers or black projects who will be neither racist or judgemental and be able to relate to the special needs of such clients.

Just as I find it problematic to talk of the black worker as necessarily useful I think to talk of a "black experience" is equally problematic. It certainly doesn't seem to me adequate as a complete explanation of why non-white drug users do not tend to present themselves to agencies. I don't want to suggest that some relatively general expectations or experiences of health care services do not exist merely that it is unlikely that expectations or experience will be uniform. As such it is unlikely that uniform effects will be the result.

As I have stated elsewhere, (Coomber, 1991) experience differs. It differs from community to community from culture to culture and within each community and within each culture. Nicki Thorogood for example has shown that many Afro-Caribbean women do not experience the National Health Service as discriminating against black people, or women or the poor (Thorogood, 1989) despite substantial research which suggests otherwise (Townsend and Davidson, 1983; Whitehead

1987).

The experience or expectation of racism then I believe cannot usefully be put forward as the reason why non-white users do not present themselves to agencies. But I feel the weight often given to this underlying argument may promote a particular agency response which may be inadequate.

Help-Seeking: The Evidence.

Research which has specifically looked at why drug users in general do or do not seek help and those which have tried to investigate why members of the non-white population are unattracted to services do point to certain recurring issues (DIP, 1989; Awiah et al, 1991; Malseed et al, 1990): These issues are the ones which must be addressed in order to increase access of any group.

The first and probably most important one relates to visibility pure and simple. Not the visibility of the drug user but of the agency. Simply put, many drug users are still just plain unaware of the existence of drug agencies. Moreover it is quite clear that if an agency is not visible to its target group or groups then any number of workers from whatever ethnic group will be wasted resources.

The second issue which is commonly seen to be important relates to the expectations users have of drug services in general. These may vary from having a distrust of formal services relating to issues of notification or confidentiality, however unjustified, or the association of drugs services with the proverbial "junkie" and therefore not themselves. In other words the service is not what they associate with their needs and to attend it may be conceived either as a threat to themselves or to their self-image. Again, certain specific areas of fear and anxiety are not going to be dispelled purely because the agency also has a black worker.

Conclusion.

The problems that I have highlighted so far on one level seem fairly intractable, especially if we continue to focus on a notion of "special" needs or additional needs to be tagged on to a myriad of differences. As with many general health services "ethnic needs" have tended to rely on "additionality" the tacking on of provision to services as remedial action (Johnson, 1991). In the drugs field the structure of the service has tended to follow the assumed "make-up" of the drug user. In fact services should be general enough and flexible enough to cater for the community not assuming one set of needs then relying on additionality. Services should reflect the community which they serve.

To sum up then I have argued that there is a need for firstly, straightforward agency promotion: this should be both general and specific. Secondly, agency promotion of confidence: prospective clients should be given detailed information on what the service does and does not offer e.g. confidentiality. This promotion of confidence in the agency should also provide information relevant to the community at hand. Thirdly, agency change/integration of non-white concerns: rather than having what in practice if not in intent turns out to be a token gesture of a black worker who find themselves with their own areas of responsibility which again in practice if not in intent means they are ghettoised in the agency.

The aim of this paper has been to broaden the scope of the debate around this issue, which itself has general ramifications.

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Question to Ross Coomber

Question - The emphasis perhaps on promoting agencies, or how agencies are seen doesn't always tackle the problem of what the agency provides. I feel that it's not the marketing of the agency that's important so much as the quality, and by quality I mean the ability to offer a comprehensive and culturally appropriate service across the board. The ability to provide that is the core of the problem.

Appendix A.

Macgregor, S., Ettore, B., Coomber, R., Crosier, A., (1992b) 'Paradigms and Practice in Drug Services in England', *International Journal of Drug Policy*, Vol. 3, No. 1, pp.16–27.

For the following publication, due to its size, the first few pages only have been included in this submission. The publication in full can be made available on request.

Macgregor, S., Ettore, B., Coomber, R., Crosier, A., and Lodge, H. (1990) *Drugs Services in England and the Impact of the Central funding Initiative*, ISDD Research Monograph Series, ISDD, London.

PARADIGMS & PRACTICE IN DRUGS SERVICES IN ENGLAND

The rapid expansion of English drug treatment services that followed the Central Funding Initiative in the early eighties led to a profound shift in the ideology of drug work. Susanne McGregor, Betsy Ettorre, Ross Coomber and Adam Crozier consider the reasons why

This article draws on the results of a study conducted over a three-year period which focused on the services developed through the central funding initiative (CFI) in England. This central funding initiative provided 188 grants at a cost of £17.5 million to help to establish and expand drugs services in England between 1983 and 1990. One hundred new services principally developed through CFI funds are presently in existence. The main research methods employed were the construction of a database on all specific drugs services in England; documentary research; surveys of all 188 agencies receiving funds through the central funding initiative; a series of census surveys focusing on clients seen at the service-delivery CFI agencies; case-studies, visits and interviews at a sample of fifteen projects. (Further detail on methods is available in MacGregor et al., 1991.)

This article describes and comments upon models of practice in these agencies under impact of changes in the size and nature of the drugs problem and of increasing concern about AIDS.

THE CURRENT SHAPE OF SERVICES

In England in recent years, the expansion of services for 'problem drug takers' has produced a pluralistic system. Services generally stress adaptability, flexibility and increasing accessibility to a wider range of clients. The concern to draw more drug users into services has involved adopting a more tolerant attitude towards drug-taking, placing less reliance on the previously dominant 'confrontational' approach. Harm-minimisation is also stressed and specific advice and treatment offered, influenced by awareness of the HIV risk to the general public, but also by the additional risks to health being taken by drug users themselves (Rhodes et al., 1991).

As a result of increased funding and the adoption of new approaches, by the end of the 1980s decade, the landscape of drugs services in England fell into five main layers:

1. Self-help, voluntary (unpaid) agencies and groups.
2. GPs and some private practitioners.
3. Community services, both statutory and non-statutory.
4. Hospital services, out-patient and in-patient.
5. Residential rehabilitation, non-statutory and private.

The major divisions within the services continue to be those between statutory and non-statutory services and between those led by doctors, predominantly psychiatrists, and those led by social or community workers.

Services have expanded and changed their shape

with the addition of extra resources from Central Government, although the increase in services has only just kept pace with the increase in the size of the problem.

The characteristic form that the new services have taken is:

- walk-in centres of projects providing counselling and advice
- community/district drug problem teams; community support programmes and follow-up services.

The new services also tend to have a higher clients:staff ratio than was previously the case. The critical development, however, has been the provision of a layer of community services.

In addition, the more traditional forms of provision have also expanded. These are:

- residential rehabilitation homes
- DDUs and hospital services; community treatment clinics.

In this context, social and community workers in both specialist and generic services have had to become better prepared to deal with drug misusers and have had to change their orientation to their work. These adaptations have taken place in the multidisciplinary teams and settings where the bulk of drugs and AIDS-related work is now being carried out.

Recently, HIV outreach health education has also been expanding fast. This work focuses on hard-to-reach populations – a term which includes drug users, drug injectors, women prostitutes and rent boys, the homeless and socially dislocated young people.

Outreach is defined as 'any community orientated activity aiming to contact individuals or groups not regularly in contact with existing services' (Rhodes et al., 1991: 12-14). This work shares the common theme that waiting for individuals to seek help will contact too few too late (op cit: 8) and that information alone may not be enough to change behaviour.

Today in English drugs services, in general the notion of addiction as a 'compulsion' has been replaced by the idea that drug use reflects problems in living and an alternative, albeit misguided, way of coping with stress. Counselling, individual therapy, family therapy and group work are all seen as having a part to play. Importantly too, contained within this broad approach is the idea that clients need to take some responsibility for their problems and for

their solution rather than relax into the passive role of the victim.

Importantly, there is now greater emphasis on the involvement of community psychiatric nurses and social workers, and less on the role of medical practitioners: at the same time, however, the issue is being raised that the swing has moved too far and that prescribing facilities are inadequate. Especially as a result of the appearance of AIDS and the rising demand for care, some argue that there is a continuing need for more hospital-based provision and an expansion of prescribing facilities, especially since GPs continue to be reluctant to deal in any large number with the on-going process of treatment and care of drug misusers.

In the drugs field, since at least the 1960s the voluntary sector has played an important part in provision, partly because it was felt that the special status of drug misusers engaged in an illicit activity made them suspicious of the public services, and that the non-statutory sector could offer 'the necessary anonymity'.

THE CENTRAL FUNDING INITIATIVE

The central funding initiative (CFI) was part of an increase in resources to extend and improve drugs services in England which characterised the 1980s. It involved an injection of £17.5 million in grants, normally covering a three-year period. These were followed by central government allocations to Regional Health Authorities (RHAs) based on the number of 15-34 year olds in their populations. RHAs were given direction over the dispersal of these ear-marked funds, subject to general guidelines. The overall funding process thus combined a 'kick start' with a steady flow of funds thereafter to maintain the system.

The objectives of the CFI set out in 1983 were:

1. To provide for regional and local assessments of the nature and spread of drug misuse problems.
2. To improve levels of awareness of the problems of drug misuse and increase the ability of professionals and others working in this area to help people with drug-related problems.
3. To improve links between health service provision and other community-based services.
4. To improve the effectiveness of services and to provide value for money.

It was hoped that the CFI would be a way of rem

TABLE 1: SHAPE OF SERVICES FUNDED THROUGH CFI GRANTS

(The proportion of total funds allocated to different types of service)

Type of service	Total funds (£s)	% total
Community services (statutory and non-stat.)	9,868,426	56.2
DDU/hospital services	2,560,07	14.6
Support for existing non-statutory services (self-help, CVS etc.)	1,752,427	10.0
Training, research	1,719,509	9.8
Residential rehabs	1,657,584	8.4
Total	17,558,020	100.0

TABLE 2 : SHAPE OF SERVICES FUNDED

Nature of activity	Number of grants
Community centre	42
Additional support for existing voluntary organisations	36
Community workers	32
Development in general medicine or psychiatry	22
Developments at DDUs	19
Training and education	11
Residential rehabilitation	9
Information-gathering/research	7
Self-help groups	4
Community detox/after-care	1

edying 'old problems' such as lack of service coordination, inadequate treatment and rehabilitation resources and absence of training for staff, while also rising to 'new challenges' such as providing a more comprehensive response, generating public awareness at the local level and promoting better joint planning. It should also be able to respond to changes in the shape of the needs associated with drug misuse. As it turned out, this was to be particularly important. When the CFI was initiated, there were no references to AIDS, at that time not recognised as the important need it turned out to be. In the event, services had to respond rapidly to new demands, especially those resulting from the growing problem of HIV disease.

Initially, the sum made available to agencies was £2 million during 1983-4, announced officially in December 1982. In January 1983, the total fund was increased to £6million over three years. In June 1984, in response to the 'overwhelming' number of applications for funds, a further £1million became available. Following the publication of the ACMD report on Prevention in July 1984, yet another allocation (£3million) was made and announced in February 1985.

The total CFI sum finally allocated was £17,558,020 (£14,479,561 revenue: £3,078,459 capital).

WHO WERE THE CLIENTS?

As part of our research on drugs services in England, we conducted three censuses of clients being seen at the agencies funded through the central funding initiative, and received reports from at least 70 agencies on the three census days.

The census data provided a relatively stable picture of the gender distribution of clients. The ratio of men to women these drugs services was 1.6:1 (62%:38%f). There were some important differences in the proportions of men and women seen by different types of agency. Women were more likely to present to walk-in day centres (1.3m:1f) and less likely to be seen at DDUs (2m:1f). They were even less well represented among residents of residential rehabilitation houses (4m:1f). As expected, women were more commonly found at the agencies specifically dealing with problems with dependence on prescribed tranquillisers.

In a survey of 149 agencies receiving funds from the central funding initiative, we found that ten main problems or needs were thought by those who worked in these services to dominate among those coming forward to help. In order of frequency of mention, and in their words, they were:

- social deprivation resulting from drug use, that is, unemployment, housing, family problems etc.
- physical and psychological dependency on heroin (opiates) and yet wanting a drug-free life

In libertarian ideas, drug use is seen as a private matter; there should be minimal interference by government in private affairs; individuals should be free to make choices and to take the consequences for those choices. In the medical approach, drug use is seen as a medical problem arising from a misguided but understandable search for relief from painful or oppressive circumstances. The criminal definition of drug use sees it as a problem of shiftless (uncontrolled, unregulated, feckless) living, closely associated with crime and violence.

Until recently in Britain, the dominant approach was one that could be termed social psychological, a 'soft' version of the criminal paradigm. Here drug use is seen as motivated largely by the search for pleasure, involving risk taking. It results from involvement in certain social networks and cultures – or from a lack of involvement in others (e.g. family, schools, work) with consequent effects on socialisation, personality and character formation.

Of late there has been a resurgence of the previously suppressed libertarian and medical approaches. One explanation for this has to do with the appearance of AIDS and the need to revise policy in the light of the threat to the general public. In general health policy discussion, there has been a change in ideological currents (greater stress on utilitarian notions in health care, cost-benefit analysis and consumerism) which feed into debates on drugs policy. Concern about the possible appearance of an 'underclass' and continuing worries about the inner city have also played a part. The spread of drug taking has exposed regional variations, and in general a more varied situation has emerged in which one model of service provision no longer holds sway. In a period of costs constraints, there are pressures to show results; and the expansion of services has brought new people into the policy-making arena who express different views. There is now much greater variety of drugs and drug users and this has led to a need for a greater variety of service types.

The social psychological paradigm stresses the potential for reform and correction through rehabilitation, counselling or education. Elements of other paradigms also intrude, however, so that the mix in practice is an eclectic one, and in different services, in different professions and in different locales, stronger or weaker versions of each paradigm can be

seen at work.

Ashton and Seymour have proposed the adoption of a new medical paradigm, a new public health. This stresses 'the building of healthy public policies which are enabling, and which create supportive environments and strengthen community action' (Ashton and Seymour, 1988:91).

Central to their discussion is the question of 'the extent to which individuals have the right to take risks which might endanger their own or other people's health and the extent to which society accepts an obligation to provide for risk takers and create a harm reducing context for their behaviour' (ibid.).

The different paradigms imply different approaches to treatment and care. The libertarian approach to treatment is that treatment should maintain or increase the individual's privacy and independence and net social costs should be reduced for society, through increased productivity. In the medical approach to treatment, the concern is for reduced morbidity and mortality, and relief of individual suffering; for society, there is a benefit to public health, effects on the young, and reductions in the transmission of illness to the general population. In the criminal approach, the emphasis is on the reduction of illegal conduct and reduction in the costs of crime, prosecution and incarceration (Gerstein and Harwood, 1990: 56-7).

WHAT APPROACHES WERE ADOPTED IN THE CFI AGENCIES?

In a survey of staff which we carried out in Spring 1989, one respondent commented:

'the adoption of a multi-disciplinary approach requires a wide range of professional/support staff to enable a dynamic and positive approach to service delivery.'

The vast majority of staff surveyed at this time said that their agency had a distinct philosophy, and this applied equally in the statutory and non-statutory agencies. Fifty-two per cent described this distinctive philosophy as revolving around the idea of providing a 'comprehensive' non-moralistic, non-judgemental, community orientated service'. Only 32 per cent described the aim as being 'to work towards a drug free existence for clients'. Seventy-seven per cent of staff said they were satisfied with their agency's philosophy.

Many of these models of practice were based on ideas developed in community alcohol teams (CATs). This approach envisaged a coordinated, multidisciplinary response to problem drug-taking, which allowed for local collaboration with various disciplines and services. It recognised that there was no typical addict, no single treatment and rehabilitation strategy, and no single discipline or service that could claim overall expertise in helping drug misusers. The main issue for this model was the tension between, on the one hand, allowing local variation, plurality, diversity and the involvement of a network of services, workers and professions, and, on the other, maintaining consistency and coordination in service delivery.

As agencies got under way, they began to concentrate on certain of their initial objectives and to relegate others to a secondary status. They also developed new approaches in the light of changing circumstances. One agency, for example, developed links with the local prison and began to develop a scheme to introduce a 'post-release package' for drug misusers leaving prison.

The variety of problems dealt with by agencies, both differences over time and differences between different agencies, and the constantly shifting nature of their work, is indicated in their responses to questions in a survey we conducted in September 1987 on changes going on in their practice. For example, some projects referred to more AIDS work, more problems relating to heroin and tranquillisers, and more need for family support; others referred to a shift to a 'client-centred approach', to more court or prison work, to more youth detoxification, or to an increase in psychiatric referrals. Others described having more pregnant women users, 'more women with kids' being seen, or seeing more psychological problems.

Similarly different descriptions were given by different agencies of the pattern of substance use: 12 projects reported seeing more opiates and amphetamines, while 5 reported seeing less; 36 said there was no change in injecting practices, while 21 said there were more injecting. What this information emphasises is the importance of recognising local variability and the constantly shifting nature of the problem, which all makes clear the need for a flexible and responsive reaction at the grass-roots by adaptable workers.

An indication of the variety of work that goes on

in drug agencies is found in this description of the activities of one agency: counselling to drug users and their families; a consultancy service to other projects and agencies; a needle and syringe exchange scheme every afternoon; group work in prisons for people with a history of drug misuse; facilitating self-help groups for tranquilliser users; outreach work in outlying, particularly underprivileged areas; appointments' system for client counselling each weekday and one evening; education/prevention service for parents using drugs; referral service to residential rehabilitation and other treatment services; and a training service.

Another project paid a lot of attention to outreach work, operating from a neighbourhood base which consisted of two rooms on a housing estate provided by the local housing department. The workers made contact with young drug users at an early stage of their drug use and also provided support to 'isolated women' who used the base as a drop-in facility. This agency also provided an 'easy access walk in facility' where there was training available in woodwork, crafts, music and drama. There was a pool room, women's room, a creche, a music room, a coffee bar, and a weight-training room. The service offered included counselling and after-care for ex-residents of rehabilitation houses, many of whom had relapsed.

It is interesting to note that in spite of the variety of activities involved, direct service provision dominated staff's pattern of work. Staff spent 53 per cent of their time providing a direct service to clients; the remaining time was divided on average between staff administration (15%); financial administration (7%); staff training (7%); and a variety of other work such as development, agency visits and case conferences. Sixty per cent of staff said they saw direct service provision as their main responsibility; 35 per cent cited administrative work as their primary task.

Because of the need to adapt to the potential threat of the spread of HIV through unsafe injecting practices, services had to consider how far to change either orientation towards advising on safe practice rather than principally encouraging a change of direction among their clients. The dilemma they faced was that too great a concentration on the injecting clients could crowd out or alienate those with different needs and different styles of life.

The services' ability to adapt to a changed situa-

tion is shown by the fact that as early as 1987, 103 projects reported that they were providing advice and information on AIDS, while 96 were offering specific counselling on safer practices. A majority of projects had implemented changes with regard to advice and information on AIDS, counselling on safer practices and counselling on taking the HIV test. In addition, further developments were in progress with regard to counselling for those found to be HIV positive and to extend involvement with needle and syringe-exchange schemes.

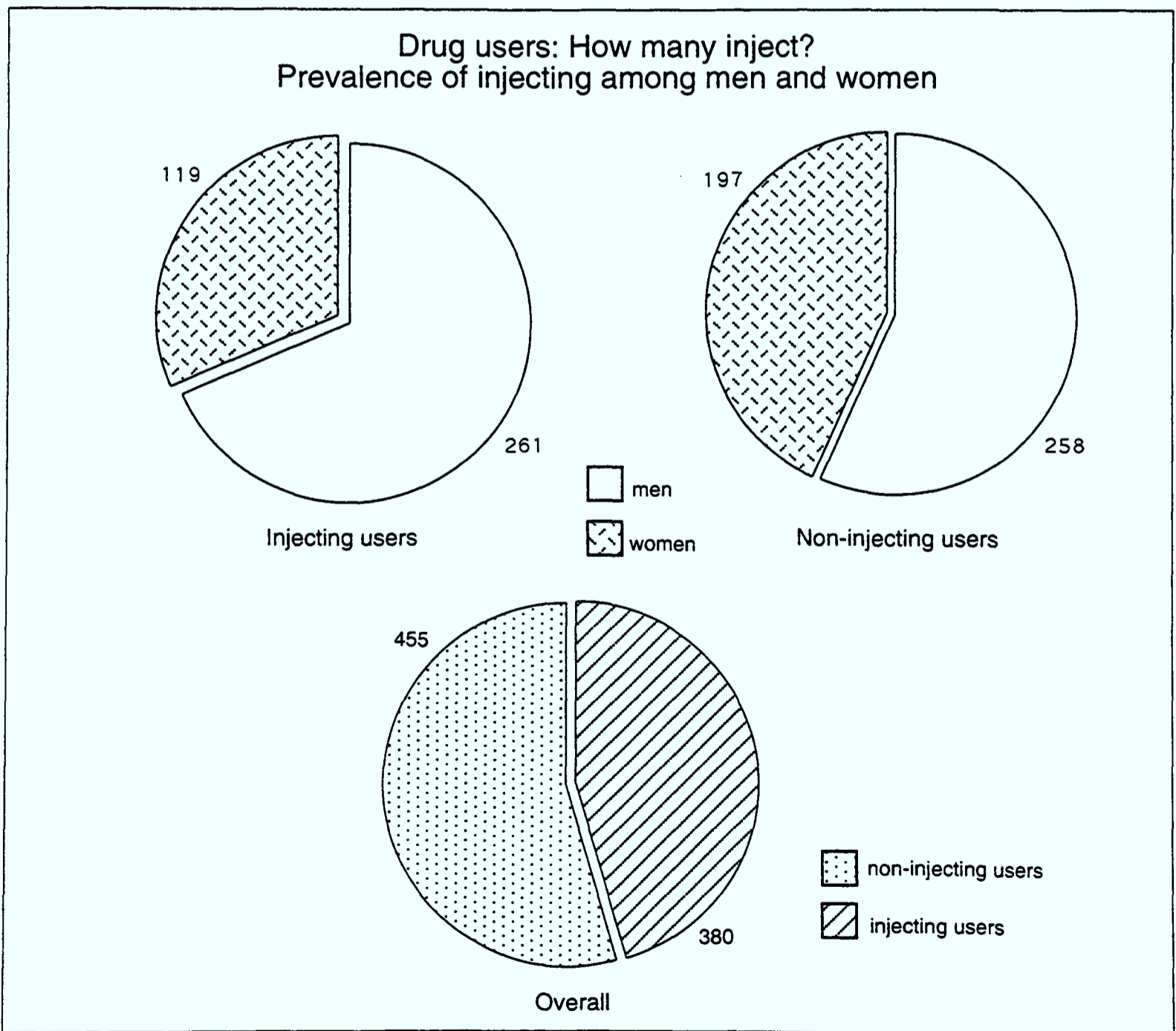
Our appraisal of projects' reports also showed that they were concerned about the impact of AIDS. They emphasised the need to improve the range of service offered, especially in terms of advice on safer sex, pre- and post-test counselling and bereavement counselling, to meet the needs of AIDS sufferers and their families and friends.

STAFFING IN THE NEW DRUGS SERVICES

What is most striking from the information on staffing is that the bulk of the work being carried out in these CFI drugs services was not being conducted mainly by doctors and nurses. Social work and counselling formed the basis of their approach.

Interestingly, the majority of staff reported that they had life experiences which they saw as important in their current work. One-third reported that their personal experience of drug, alcohol or tranquilliser abuse and mental illness, disability or bereavement was important, either in their own or their friends' and families' lives.

It appeared, however, from an analysis of projects' reports that very few considered the use of volunteers to be a viable means of running a project. Together with this went a belief that within the field of services for drug users, staff need to be well trained



and projects generally aimed at increased professionalism in their dealings with clients and in the management of projects. This indicates another division evident among drug services in England at present: that between the truly voluntary, self-help agencies (176 local groups were identified in our 1989 survey of drugs services in England) and the 364 professional services, found both in the statutory and non-statutory sectors.

While there are many overlaps between the statutory and non-statutory sectors in budgeting, organisational structure and even location, some differences remain, especially in the more nebulous but important area of 'style'. The statutory services are more likely to be characterised by medical leadership and their staff to retain a 'professional' orientation. On the whole, the non-statutory drugs services adopt a distinctive culture and style and are more likely to be led by social or community workers.

A subdivision can be made between those professions and occupations which adopt a *medical* approach (involving treatment of the individual), possibly accepting some leadership from medical personnel, and those which adopt a *social psychological* approach (involving negotiating the person's relationships in formal and informal society). Our staffing survey carried out in Spring 1989 found that in a sample of 105 staff (77% response rate) all those performing medically orientated roles were in the statutory sector ($n=21$) while 34 of the 52 staff classified as in socially orientated roles were in the non-statutory sector (65%). Of course, in practice, there may be less difference in the way an individual patient or client is dealt with by an agency than seems to be implied by this distinction, since there is a large degree of overlap in approach between psychiatry (especially social psychiatry and those practitioners interested in addiction), general medical practice and much social work and counselling.

Among those employed in the statutory sector, 38 per cent occupied *medical* roles. Of those in the non-statutory sector, 69 per cent were in *social* roles, with 31 per cent in *administrative/support* roles. However, this categorisation may distort the variety of occupations and professions found in these agencies. Staff employed ranged from psychiatrists found in these agencies. Staff employed range from psychiatrists to users and clinical psychologists, and to social workers, probation officers and health educa-

tors and researchers.

One critical area has to do with the nature of links with the police. Probation officers in particular often played an important role in setting up these new agencies, sitting on their management committees or on advisory committees and referring clients to the agency. The situation with the police is delicate, especially where the policy of an agency has changed from one emphasising abstinence to one tolerating drug misuse in the interests of harm-minimisation HIV strategy. Particularly where needle and syringe exchanges have been instituted, it has been necessary to address this question. Similarly, where a hard-core of injecting users formed a high proportion of the clientèle of an agency, a policy not to allow the police on to the premises gave such users a degree of security there, which they would not find elsewhere, but it placed a heavier burden of responsibility on the workers to 'police' the activities of their agency themselves. A similar problem arose where attempts were made to expand agencies to encourage more contact with local ethnic minority communities (the younger members of which may be suspicious of and hostile to the police force). Too great a sign of involvement with the police would for these agencies negate all attempts to establish closer contacts with young people there.

The majority of staff have regular supervision, although it appears that staff in non-statutory agencies have greater provision for supervision than in the statutory sector. Seventy-one per cent had had some specific training in the drugs field, again more commonly in the non-statutory (87%) than in the statutory agencies (58%) – often to do with counselling and/or AIDS. Eighty-four per cent said they would benefit from more training – 24 per cent mentioned psychotherapy training, counselling or group work training while 16 per cent mentioned management or finance training.

Staff were asked how, if at all, their current job differed in practice from what they had expected: 30 per cent noted that their professional work was more demanding than they had expected. For example, one commented:

'the job is much more demanding than expected in terms of both client work and running of the hostel where attention to detail is I feel absolutely imperative.'

Twenty-one per cent said the work was much as they had expected it to be while 11 per cent report-

ed that they were disappointed not to have had more opportunity to do other types of work such as outreach, counselling or other face-to-face work.

Burn-out of staff was reported to be a relatively common problem. Other problems reported were to do with confusion over management arrangements and accountability, recruitment practices, and having insufficient staff. Some said that the lack of long-term funding meant it was difficult to retain staff since they could not be offered a secure contract.

One-third of staff described resource problems, mainly connected with funding or staffing: for example, one wrote:

'there are not enough human resources to fulfil our potential as an agency. We could do with two or three extra staff and still be overworked. There is also a lack of general funds to initiate or operate new developments.'

Thirty-one per cent described organisational problems, such as GPs' reluctance to help, or relations between the statutory and non-statutory sectors, and 22 per cent referred to attitudes, such as prejudice against ex-prisoners.

The sorts of problems described by respondents included: uncertainties regarding funding; the difficulty of maintaining optimism in view of the self-destructiveness of clients; staff turnover; never having enough time to get the work done; lack of residential places to refer clients to; working weekends; and having too many meetings to go to.

Relations with GPs are important for meeting both the general health and the specific drug needs of clients. In some cases this presented difficulties: one specialist agency in the north of England commented:

'initially our work focused on providing an immediate response to GP referrals. Because of the overwhelming demand on our clinical service, referral policies have changed and a waiting list is now in operation. As a result difficulties have developed with GPs who want an immediate referral.'

What had happened here was that GPs had become resistant to treating drug users themselves and they had tended to off-load cases onto the specialist service, especially their more 'difficult' cases. This overloading reduced the amount of time available to operate a more psychosocial approach, which many of the staff would have preferred, and

concentrated attention on the more immediate prescribing task, with which only medical staff could deal. Whilst theoretically other agencies could have dealt with counselling and primary health care needs, only the specialist medical services could manage the prescribing task, especially where the GPs, as here, proved reluctant to become involved, preferring to refer on such cases. Thus, while most would agree that a more holistic approach to patient care is desirable and likely to be more effective in the long run, pressure of time limits the extent to which this can be done. Care of the drug users tends then to fall back into the old problem of fragmentation.

Over time, this pressure also encouraged some services to move towards a more confrontational approach to patients, focusing on methadone detoxification. In some cases, therefore, such a shift of policy seemed to be largely a response born of frustration and insufficient resources to deal patiently with a build-up of long-term patients. 'Overwhelming workload' as much as anything seemed to account for a move from maintenance to withdrawal approaches in some specialist clinics. Some practitioners believed this to be the better approach in any case. Abstention from drugs through short- or long-term treatment processes, that is a six-week detoxification and eventual abstinence, while simultaneously encouraging as much family support and participation as possible, was seen by them as the principal service to be provided by the clinic. This was also seen as a desirable alternative to inpatient or residential rehabilitation care. In some areas, home detoxification had been developed as part of this treatment package.

Those patients who did not have family support or who lived in circumstances which discouraged attempts to change were less likely to benefit from this approach. Other practitioners had reservations about the direction of this package primarily in the light of the HIV risk associated with uncontrolled illicit injecting drug use. They felt that a confrontational approach, while encouraging some to make radical changes in their lives, simply washed its hands of those who were not able or willing to make such changes. This might have been defensible when it could be argued that only the drug taker suffered, and that it was their decision and they should take the consequences. However, where immediate others are involved, such as children or partners, or

where the general public is concerned, as with the HIV risk, this strategy was, they believed, less acceptable.

Some agencies were beginning to notice a need for continuing support for clients for a long time after they had become drug free. It is in this area that self-help groups, like Narcotics Anonymous, have an important role to play, since there are simply not enough nurses and social workers around to give people individual professional attention. The need was voiced for 'full support and aftercare services'. Some of the self-help agencies also play an important part in meeting the previously unmet needs of the families of drug misusers. 'The family sees the drug user from a different perspective than either the services or society as a whole,' they said. Agencies supporting self-help groups are of increasing importance, partly with the recognition of the long-term nature of the support that is required in weaning the drug users away from drug dependence, and also because the greater the stress on community provision rather than residential care, the more costs are off-loaded onto the family and friends of clients and patients. Given the shared view, set out above, it seems fair to say that least some professional support should be available to self-help groups who are functioning on a voluntary basis.

One interesting aspect of work in these agencies, which generally stressed the importance of a multidisciplinary approach, was the blurring of the roles of social workers and CPNS. In fact, what one saw was not so much a multidisciplinary approach as a shared view of needs and appropriate care among these workers. (This was also found in a study of 'multidisciplinary work' at City Roads, see Jamieson et al., 1984: 98-111.) Over time, some began to see themselves not as social workers or CPNs but as 'drugs workers' with a distinct identity of their own. This process may tend to handicap the extent to which drugs agencies can be drawn wholly into the mainstream: the special status of the drug taker, as a marginal and distinct member of society, can rub off on those who work with them.

Some community drug teams and community drugs agencies aimed not only to offer individual counselling and advice but, importantly, to have a high level of visibility in the local community as well. To a greater or lesser extent they would be available to participate in local action or decision-making as issues arose. Their activities were not

solely limited to helping drug takers; they would be available for parents, neighbours and other local residents who wanted help and advice. For these agencies, sensitivity to the local community and culture was seen as an essential part of their practice. Ease of access was important, and volunteers were encouraged to participate. Outreach teams were a part of the way in which the work of these agencies was organised.

But these workers too were in danger of being engulfed. Their approach was more outward looking than that of those based in the clinics: the idea was that rather than waiting for the clients to come to them, they would go out and get them. But just as the clinics had been overwhelmed by referral on to them from other professionals, these agencies were in danger of being engulfed by the almost limitless number of problems that a 'community' approach could theoretically encompass. With the onset of the risk of HIV infection, over time such workers began to concentrate their attention on health education, arguably a rational response and preferable to the more thankless task of trying to increase motivation and reform drug users in a hostile environment. Part of this response in some cases involved the development of needle and syringe exchange schemes and associated counselling.

So some services, founded on a community form of social work practice, began to move towards a practice which can be seen to accord with a public health approach to drug misuse. In this, it was necessary for skills and knowledge based on community medicine to be incorporated into the pre-existing knowledge drawn mainly from social sciences such as psychology and sociology. It is interesting to note that where these developments have occurred, community physicians have sometimes been involved. The move has been towards using contact with clients, formed around, for example, a needle and syringe exchange scheme or services for prostitutes, to educate them about the dangers of sharing and also to inform them about safer sexual practices and other matters of basic health care. A non-judgemental, user-friendly approach has been adopted. They have also served as sources of information, especially about AIDS and HIV, for other agencies and professionals, thus generally helping in the dissemination of information and aiding coordination and a more effective response to the HIV risk at the local level. Education and prevention are the key words here.

The clientèle of these agencies has extended from drug users to their families, partners and neighbours and to the general public, including other professionals: as one worker put it 'our aim is to minimise the harm drug users do themselves, their families and society through their drug use'.

Such an emphasis on health education and primary health care calls for more attention to the specific knowledge of biological sciences that nurses have, and to their knowledge of hygiene and physiology. CPNs are also theoretically well placed to liaise between GPs, consultant specialists and drugs agencies with regard to overall patient care.

THE IMPACT OF THESE APPROACHES

Evaluation in this field is complex: there are no easy measures of success, since the goals of the agencies vary and may be very vaguely stated. For staff themselves it was common for a measure of success in terms purely of abstinence to be rejected:

'although helping the problem drug user toward abstinence is an aim of the scheme, it is often a long term one and one not frequently shared by the client. It is our job to work with whatever problem is presented, giving consideration to drug use as the possible root of the drug problem, but not demanding the reduction of drug use as a condition of providing help.'

Other staff held similar views, for example,

'the most important task has been developing individual relationships with clients which allow us to help them to change. Maintaining contact over time, regardless of what is happening with their prescribing, enables the worker to be available to make use of periods when they become well motivated for change';

'if we can just maintain a good relationship with clients, we feel that we are meeting a need and we can move forward with them if and when appropriate'.

Keeping in contact thus become a major aim and for many agencies success was measured in terms of whether or not this happened.

In this sense, it was generally seen as an indicator of success that a lot of people used the service. And that, if the numbers using the service were increasing, this was an argument for expansion: for example,

'we were initially set up as a pilot project to assess

whether there was a need for such a service in the area. It seems obvious now with the number of people who have contacted us over the past year for help and advice that the service is needed.'

Assessment of the success of drug services is further complicated by the fact that many if not most have had to shift their goals towards containing the incidence of HIV disease rather than concentrating on other problems related to drug use. Recent figures on the incidence of HIV disease have challenged a rather complacent attitude that developed when the more apocalyptic projections of the likely spread of AIDS turned out to be exaggerated. Recent figures from the Centre for Research on Drugs and Health Behaviour, for example, point to 13 per cent prevalence of HIV positivity among injecting drug users in North West Thames. Even if the figures remain relatively low, there are still increasing numbers of clients who are ill and becoming very ill. These are people who are much likely to have supportive networks of friends to help them. The need for hospice and other care will have to be thought through carefully.

CONCLUSION

A review of social care for drug users shows that the best interventions work only partially for some of the people some of the time – as is also the case in other areas of health and social care. The absence of one simple cure does not imply that no treatment or care should be offered. What should be expected from services should depend on who is being treated and how severe is their condition, and success should be viewed as a matter of more or less, not all or none (Gerstein and Harwood, 1990: 130-1).

Included in the factors influencing outcome are depth of drug dependence, extent of criminal activity, physical health, employment, family support and other support, and client motivation.

The drug problem is complex; different forms of treatment and care are needed. The variety of needs to which services should respond include psychosocial and health problems and other general problems which precede drug use, and exist apart from drug use. Our review of services in the drug field in England has shown that these issues are ones with which practitioners are deeply concerned: they recognise the importance of the need to try to improve practice and to make the best use of limited

resources within a shared paradigm of the nature of the problem itself.

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the idea of being questioned, and basic procedures like obtaining an address or telephone number and a contact proved difficult.

Secondly, having made contact with a number of such groups, it quickly became clear that the kind of information being supplied was not relevant to this survey. After all, regardless of the dynamics of individual groups, one NA self-help group is in some ways much the same as the next, in that they offer the same service—self-help—and there are no funds and no paid staff. Apart from their administrative headquarters, the groups do not have their own premises as the meetings take place in the homes of members or in church halls. In addition, because of the nature of such groups, the contact point is likely to change as new groups are established and older members leave. As a result, it was felt to be more useful to exclude such self-help groups from the main body of this information-gathering exercise, while stressing their importance to the overall shape of services. (Readers interested in self-help groups may find the work of David Robinson and his colleagues useful [Robinson and Robinson, 1979].)

Remarks that apply to self-help groups for drug users apply equally to those for the families and friends of users, with the additional point that they are not specifically services for drug misusers, although many will befriend users and refer them to other specialist services.

In the case of advice and counselling agencies, it is often a part of the 'philosophy' of such agencies not to isolate any particular aspect of a person's life as problematic, but to help the whole person. As a result, many generic counselling services and youth counselling services, which no doubt see and help large numbers of drug users, have not been included because they are not *principally* drugs services.

Recognising that such distinctions over which services to include and exclude are to some degree arbitrary, it should perhaps be said that there is probably no satisfactory means of saying where the boundaries should be drawn, that one person's definition of what constitutes a service for drug misusers would be unacceptable to the next, and that the kinds of problems encountered in this research are reflected in the ways in which policy makers and planners engaged in the development of services, in the regions, the districts and in voluntary organisations, consider their work.

Whatever the difficulty may be over the definition of a service, the confusion is equally as marked in categorising services by type. The categories, 'drug dependency unit', 'residential facility', 'community drug team' and 'advice and counselling agency' have all been used in this research, and perhaps it will appear to some that such terms are unambiguous. It is not however at all clear that there are any unifying criteria enabling us to say precisely what is understood by any of the categories used. For example, in the case of drug dependency units, whilst one can say that *in general* they are services located in hospitals and employing medical specialists in drug dependency, the nature of their practice varies. Even within London, where most of the drug dependency units are located, the service offered varies from one to the next according to a whole range of factors, including the service's specific history,

the historical role of the DDU within the hospital where it is based, finance, the ideas of the individuals who work in the DDU and the role of the DDU in the region's strategy.

The case of the community drug team (CDT) is even more complex; the difficulty of classification is compounded by the fact that in the mid-1980s, there was some attempt to be seen to be doing the 'right thing'. Following the recommendations of the Advisory Council on the Misuse of Drugs (ACMD) in its Report on *Treatment and Rehabilitation* (1982), which urged regional health authorities to establish a network of CDTs throughout each region, there appears to have been a burgeoning of new services, most notably of CDTs.

On closer examination however, services that in some regions are called community drug teams, are in fact, more often than not, virtually indistinguishable from what in other parts of the country are called advice and counselling agencies. The staffing complements are similar, the types of staff working in the services are similarly qualified and from similar professional backgrounds, the costs of the services are similar as are the types of services offered. So why the difference in name? The conclusion must be that CDTs were the model for the statutory sector in the mid-1980s. Those policy makers and service planners in the regions who were alert to the expectations of bodies like the DHSS (as it then was) and the ACMD for service development, no doubt were keen to ensure that their region was not left behind; in many instances they simply attached the suffix 'CDT' to what would previously have been called advice and counselling agencies. This development also indicates the way in which ideas of practice originally developed in the non-statutory (predominantly social work) sector began to permeate the (primarily medical) statutory sector, largely through a process of absorption of social work ideas by social psychiatrists and addiction specialists, especially those influential on the ACMD.

However, there is one important theoretical distinction which could be made between a CDT and an advice and counselling service. Replying to the question, 'Is there a difference between an advice and counselling agency and a community drug team?', one consultant psychiatrist with responsibility for regional planning of services said:

"Well, it depends doesn't it? I think a CDT should be a service with medical input which is able to prescribe. That's what I mean by a CDT. I don't know what everybody else means by it! Some people see a CDT as an advice and counselling service that may negotiate a three-way contract: a prescription between a client, the drugs team and a GP."

To this must be added the ACMD's 1982 proposals for district drug problem teams (DDPT). At a time when specialist multidisciplinary drugs services were not yet in operation, the ACMD envisaged DDPTs mainly as a specialist advisory resource for other professionals dealing with drug misuse and not as a specialist service for drug misusers themselves,

"The DDPTs would act as specialist, advisory, supportive and educational teams consisting of specialist (often primary) health and social services personnel, as well as other non-specialist personnel in hospitals and hostel

settings.” [ACMD, 1982, p.135]

Instead, the ACMD saw the regional drug problem team as the service which would provide direct medical services to drug misusers.

Furthermore, one of the pioneers of this type of multi-disciplinary, community-based service, John Strang, in his definition of a CDT, defined it in these terms:

“These were district-based services whose ... staff aimed to increase the quality and quantity of service available at district level ... It was hoped that such staff would act as catalysts to the slow absorption of services for problem drug takers into the broader provision of care.” [Strang, 1989, p.157]

As with all labels then, the term ‘CDT’ is open to a number of interpretations, and simply because services have the letters CDT or DDPT in their name does not indicate that such agencies share characteristics to the extent that it is possible to say, ‘If an agency has one of these it must be included as a CDT’. For the truth is that whilst one agency will have, for example, a multidisciplinary team, it may not have a prescribing facility and *vice versa*. As a result therefore, there is bound to be some overlap of the categories CDT and advice and counselling agency used in this research.

One area where it might have been thought that the issue of boundaries would be more straightforward has to do with the distinction between sectors. Three categories of sector were used: statutory, non-statutory and private. As with the question over deciding which services should be included in the overall survey, some cases *are* straightforward. Hospital-based services, drug dependency units and community drug teams attached to hospitals are clearly statutory sector services. There are, however, a number of community drug teams which are in the non-statutory sector, in spite of the fact that they provide an identical type of service to their statutory sector counterparts, and that they are funded either exclusively or mainly by a statutory body, in the form of a district or regional health authority or a local authority. The problem of categorisation is even more acute with advice and counselling services, some of which are in the statutory sector, others of which are in the non-statutory sector.

Moreover, the problem is compounded by the fact that sometimes the workers in these smaller services do not know whether their service falls under the heading ‘statutory’ or ‘non-statutory’. The explanation for this may well be that since those in small drug teams or counselling agencies are likely to be busy practitioners primarily concerned with providing a good service, they take less interest in the business of the funding and administrative aspects of their service. Additionally, it is possible that the whole process of funding and re-funding an agency is something which confuses the staff members, especially in those agencies without someone to oversee the administration and financial aspects of the service.

Apart from the problem that workers in agencies may be unaware of their funding sources and do not know under which sector head their agency falls, it is also the case that the boundaries between sectors are becoming less clear.

Voluntary sector services may be funded by local authorities or district health authorities. They may be staffed by people employed directly by local authorities (in the case of social workers) or by the Home Office (in the case of probation officers). Even the notion that the distinguishing feature between the two is the fact that non-statutory services are in some way autonomous and independent of the state, above all in their management, is less than clear, with management committees in the voluntary sector frequently composed exclusively of statutory sector staff.

The distinction between non-statutory and private is equally unclear. All agencies outside the statutory sector are by definition ‘non-statutory’. However, it was thought to be useful to examine the extent to which agencies in the field are concerned with profit. For this reason, a distinction was made and, when completing the questionnaire, agencies were asked to list under which of the following sector heads their service fell:

- i) statutory sector;
- ii) non-statutory/voluntary/non-commercial sector;
- iii) private/commercial sector.

Methods of investigation

The first part of the research was divided into four broad segments:

① Creating a database

A review of existing material, in particular sources which gave details of the names and addresses of services. In order to obtain details of agencies in both the non-statutory and statutory sectors, it was decided to use the directories of both the Standing Conference on Drug Abuse (the SCODA National Directory) and the most up-to-date equivalent in the statutory sector, the DHSS’s *Drug Misuse Prevalence and Service Provision* (The Blue Book). This was produced in 1984, so it is not surprising that it often proved inaccurate and outdated. Other sources, including the list of services mentioned in the appendix of the ACMD’s report *Treatment and Rehabilitation*, were also used as a starting point. A database was set up using dBase III+ and names, addresses and telephone numbers were entered.

② Questionnaire survey

A questionnaire was devised and, following a pilot study on a sample of various service types, the final version of the questionnaire was sent to all known agencies. This questionnaire was designed to be easy to read, to understand and to complete. It was deliberately kept brief—two sides of A4 paper—in order not to discourage agency staff who might have been put off by more lengthy research demands.

A covering letter was sent with the questionnaire explaining the aims of the research and that the information given would be treated in confidence. A stamped addressed envelope was also sent to encourage a good response. Agencies were asked to supply the names, addresses and telephone numbers of three other services for drug users in their area. The intention here was to ensure that at least

the best known and most widely used agencies were not overlooked. The original questionnaire, together with a new covering letter, urging a reply, was sent out eight weeks later to those services which had not responded. Those agencies which proved impossible to contact by post were contacted by telephone and the same questions as on the written questionnaire were asked verbally.

It should be pointed out that the only means of obtaining information on this scale was through the use of the questionnaire and where necessary by telephone. The accuracy of the information given therefore depended entirely upon the individual agency supplying it. Where possible, we have sought to verify information, particularly regarding the questions of which services exist and on funding.

③ Analysis of the questionnaires

The responses from the questionnaires were entered onto the computerised database, which was then sorted, in order to produce maps of the services. Information on the nation's 15–34 year-old population and on the number of notifications of drug users to the Home Office was taken as a means of contextualising the location of services.

④ Consultation and checking of facts

A draft of the report was prepared and shown to interested parties for comments. These included the Department of Health and practitioners in the field as well as SCODA. In particular, it was felt that because the analysis focused on services in the 14 regional health authorities, the regional medical officers (RMOs) should be consulted. As a result each of the 14 RMOs was sent a copy of the section of the report which related to their region.

The aims of this consultation were:

- (i) to find out whether the picture presented from the findings of this research was, in their opinion, an accurate reflection of how they viewed their region's services for drug misusers;
- (ii) it was hoped that any omissions of services made in the course of the survey would be picked up at this stage, so enabling a more thorough analysis of all services which should have been included.

Finally, having consulted with the various interested groups, revisions were made, the new information incorporated, and the final version drafted.

Research on the CFI

The overall aim of this aspect of the research was to assess the impact of the CFI on the development of treatment and rehabilitation services for drug misusers in England. Here we list the main techniques used to collect and analyse information. More detailed accounts of the methods employed are available in the text of the eight reports submitted to the Department of Health during the course of this research.

This part of the research was conducted between September 1986 and September 1989 and involved a range of approaches to the investigation of this policy area:

① **Analysis of documentary sources.** Part of this work involved an appraisal of the annual, interim and progress reports submitted by projects to the Department of Health. Another part involved a detailed analysis of files kept at the Department of Health on applications for funding through the CFI. And another reviewed a range of current literature and government reports (eg, SSI, DAS reports) on drugs services.

② **The establishment of a database on all CFI projects.** This included *inter alia*: location; key dates; type of service provided; aims; financial information; and staffing. This is similar to the database described above which was compiled on all 'dedicated drugs services' in England.

③ **A questionnaire survey of CFI projects:** hereafter referred to as the **September 1987 survey**. All 188 grant-holders were sent a questionnaire in September 1987. A response rate of 79% was finally achieved. A comparison of respondents with non-respondents indicated that the sample achieved (n=149) was representative of the range of types of CFI projects overall.

④ **Three censuses were carried out on 5 October 1987, 11 May 1988 and 6 December 1988:** hereafter referred to as the **census surveys**. Their purpose was to gain an insight into the characteristics of the people with drug-related problems using the projects to which CFI money had contributed; also to assess, in the light of AIDS, how prevalent injecting was amongst users; and finally to see if the data could be used to indicate present trends in drug use.

The overall response rate in each of the three censuses was 82%, 86% and 80% and fairly reflected the shape of services produced by the CFI as a whole. The number of agencies which were open on the day and returned completed census forms in each of the three censuses were 70, 82 and 76. Thus on each occasion we had data deriving from at least 70 separate agencies throughout England on the same day.

⑤ **A questionnaire sent to a sample of staff in CFI projects in Winter–Spring 1989:** hereafter referred to as the **Spring 1989 survey**. A questionnaire was first sent on 1 December 1988 to 137 staff in 15 agencies. The agencies were selected on a quota basis as representative of the different types of projects, in all regions, funded through the CFI. All staff in these selected agencies were surveyed. Three reminders followed, resulting in a 77% response rate. Analysis of the respondents showed that they were representative of all staff categories and projects.

⑥ **A detailed study was made of each of the fifteen agencies described above through the case-study method.** All documentation on these services was read in detail and a series of visits was made to them and interviews conducted with key staff in these agencies. These have contributed to our analysis of models of practice and the process of service development.

⑦ **A rolling survey of the process of negotiating future funding.** This involved *inter alia* a questionnaire sent to all agencies shortly before the date on which their CFI funding was due to end: hereafter referred to as the **end-funding survey**. This was supplemented by telephone enquiries to these agencies resulting in a 100% response rate in all relevant agencies.

Appendix B.

Coomber, R. (1998c) 'Post-Preparation Residue: A Contribution to Beliefs in the Dangerous Adulteration of Street Drugs' Unpublished research.

Post-preparation residue – a contribution to beliefs in dangerous adulteration?

Abstract

Despite there being little evidence to suggest that the 'cutting' of illicit street drugs such as heroin with *dangerous* substances takes place (Coomber, 1997a,b,d,e; 1999b) the belief that it does so is widespread (Coomber, 1999a; 1997a,b,c). This research sought to explore if there was any concrete aspect of the drug using experience, as opposed to unsubstantiable fear and rumour, which appeared to lend credence to such beliefs. In particular the research was concerned to explore issues around residues produced during preparation for injecting or the inhalation of volatised drugs and to record how these were perceived by the users. 21 experienced intravenous drug users, each with thousands of preparation events behind them, were interviewed regarding their experiences of and perceptions about post-preparation residue. Although Residue was interpreted differentially with users intuitively assessing the 'quality' of drugs post-preparation, on the whole, for this particular sample, post-preparation residue was not deemed to be problematic and simple associations of residue with *dangerous* cutting agents were generally not made. Preparation techniques and outcomes in relation to residue are also discussed.

Introduction

In Coomber (1997c) a number of reasons as to why drug users believed in dangerous adulteration were hypothesised. First, it is widely reported in the various media that this is the case. Second, it was suggested that because purchasers of illegal substances can never know the quality of what

they are buying the suspicion that they are being 'ripped-off' is constant, particularly when not using a regular supplier. Third, if an unusual reaction is experienced or witnessed attribution of this event to 'bad gear' is not uncommon. Beyond rumour, fear of the unknown, awareness of vulnerability and media and other 'informed' representations however there was little evidence of any concrete basis upon which such beliefs could be based. It is clear that rumours of, or experience of drug users becoming ill after drug use has led to some of the beliefs which permeate about dangerous adulteration. It is also clear however that such events have equally, if not more plausible explanations relating to poly-drug use, build-up overdose, inappropriate co-activity or allergic reaction. The research presented here sought to explore whether there was anything about the handling and using of injectable and smokable drugs, primarily heroin, which might provide some drug users with 'evidence' that such adulteration takes place. In particular it sought to explore drug user's experiences relating to the existence of post-preparation residue and how they generally perceived it. In this sense drug users were asked to describe the residue or residues that they would find after preparing their drugs for injecting or inhaling and to relate what they perceived it to be. Enquiry was also made about the methods of preparation, tools and substances they used to aid preparation and why.

Methods and sample characteristics

21 experienced drug users were contacted through a London walk-in centre and through 'snowballing' from known contacts. The sample consisted of 18 men and 3 women. The mean age of the sample was 39 with a range between 20 and 51 years. The semi-structured interviews were carried out in February 1998.

The mean length of time of reported drug use was 22 years, with a range between 2 years and 33

years. The mean length of time of drug use with the least and longest interviewees excluded was 23 years, with a range between 5 years and 32 years.

The number of times that any one individual had prepared their drugs was important to the study.

The aim was to interview users who were 'experienced', that is who had prepared enough heroin or other drugs to be able, with reasonable reliability to comment on what residues were found and/or where able locate 'dirty' drugs. Obviously, literal accuracy relating to how many times an individual had prepared drugs for injection or smoking was impossible to ascertain. Interviewees were thus asked how many times a day, at the height of their use, would they have prepared drugs for personal use and how long this frequency of use lasted. Extent of use and experience of preparation varied but in each case was, for the purposes of this research, extensive. Interviewee's reports of how often they prepared their drugs for injection at the height of their drug use ranged from up to 12 times a day for a period of 8 months with lesser frequency at other times, plus years of occasional use to comparatively more moderate use at '4 times a day for a week off and on'. Typical others reported: '3 times a day for 2 years'; 10 times a day for 2 years plus years of use at a lesser frequency; 'up to 8 times a day for 2 years then on and off'; 6 times a day for 14 years, and 5-6 times a day for 3 years plus years of use at lesser frequency. For most of the interviewees this represented only the peak of their drug use and it is safe to say that for most of them lesser levels of use and preparation took place over numerous other periods of time. All of the interviewees reported having prepared drugs for injection and/or smoking more than 2,000 times with many exceeding this figure many times. Because the mean length of drug use was 22 years a number of the interviewees were able to reflect on post-preparation residue over many years. In relation to drugs such as heroin therefore, they will have been exposed to, prepared and used heroin from different source countries and containing different cutting agents as both these aspects have varied over time (Coomber, 1997d; Huizer, 1987). As regards preparation for inhaling/chasing heroin only one of the interviewees had never done this. Eighteen had prepared

heroin for smoking and 2 had prepared cocaine for smoking but not heroin.

While most of the users interviewed were or had been poly drug users and had injected and smoked numerous street drugs they were nearly all predominately heroin users. Most of what they reported related primarily to heroin. Given that much concern relating to dangerous adulteration, both past and present has involved, either directly or parenthetically, the problematic nature of street heroin then a concentration on this drug is as relevant, if not more so, than any other.

Findings

Preparation

The interviewees nearly all prepared their drugs for injection and inhalation in the same way. The rationales for why they did it this way however sometimes differed.

Intravenous use

The basic or standard model of preparation involved the `cooking-up' (the heating) of heroin mixed with vitamin-c powder and water on a spoon. Vitamin-c was generally preferred to lemon juice, with two interviewees suggesting that it produced a `cleaner' solution. Once cooled the solution was drawn into a syringe through a filter.

Nearly all of the interviewees used cigarette filters to filtrate out `impurities'. Only one interviewee said that she hadn't used a filter for heroin although she had for Tuinal. This user had

been told by 'others' that it was important to filter the chalk from Tuinal but had not been told to do the same for street heroin.

Residue

Reports of, or interpretations of residue varied. 18 reported that heroin sometimes leaves a residue which was differentially described as 'gritty bits', 'dark grunge', 'dirty brown spots' (on filter) and 'brownny crud'. Generally though the experience was that the filter would discolour (to the colour of the solution being drawn through it) rather than become spotted or leave any obvious gritty bits. This was thought to happen 'mostly' by nearly all (20) of the interviewees, only one could 'not remember'.

How the 'brownny crud' residue was interpreted however is particularly interesting. For 20 of the interviewees the residue was considered to be relatively unproblematic. Some of them would simply add more water and vitamin-c and re-heat the mixture until it had all dissolved (which it invariably did) some would leave it until the next time and see if it dissolved on that occasion. Two simply reported that they would sometimes simply 'clean it up with my finger and eat it'.

Six interviewees thought the residue to be heroin, the occasional gritty bits merely being the result of differential production processes or, as in the case of two interviewees, even bits of 'raw opium' left from unsophisticated illicit production processes. A further 6 thought it to be benign cutting agents such as glucose, mannitol, or vitamin-c, whilst the others either declared that they did not know what it was (n4), or that 'it could be anything' (n2) but did not suggest it to be of a potentially dangerous quality. One interviewee's experience, beyond the discoloration of the filter was that there was no residue of any significance. It is likely that this individual's experience of the discolouration of the filter did not differ from the others but that his interpretation of this as

constituting `residue' did. Only two interviewees stated that they thought that the drugs might, on occasion, contain dangerous cutting agents. Neither of them however suggested that there was anything about the *residue* that had led them to conclude this.

Inhalation

In this instance the standard model of preparation involved the heating of heroin powder on a piece of silver foil. The heroin is carefully heated by moving a lighter flame back and forth under the silver foil. Keeping the flame in one place would result in too rapid a temperature rise which would burn both foil and drug (Huizer, 1987). Once the heroin reaches a controlled temperature the drug volatilises, producing a vapour that the user then inhales.

Residue

Reports of or interpretations of residue once again varied. 4 reported that they had not noticed a residue or that `there was black burnt foil but no real residue'. Clearly then for some the blackened (oxidised) foil would be indicative of a thin layer of residue and for others merely the expected outcome of burning something (anything?) with this method. 6 others referred to residues resembling `a black mess', `a thick residue on the foil', and a `light-brown caramel substance'.

Once again the interviewees did not consider the residue to be indicative of dangerous cutting agents although it was deemed to be indicative of the quality of the drug: `the better the gear the less will be left'; `Some agents run good – the cleaner the run, the higher the purity of the gear',

and another, 'good heroin will run clear, different cut will run black differently' or if it is particularly poor quality 'if bad, it just burns up, just doesn't run'. Thus, consistent with the experiments of Huizer (1987), some of the interviewees were aware that the purity of the drug and what it had been cut with would significantly affect the volatisation of the heroin, how much was retained and how much residue would be left – although their understanding of these outcomes may differ from what actually happens¹.

As with the heroin prepared for injecting the interviewees generally believed the residue to be either non-volatised heroin or relatively benign cutting-agents such as glucose.

Conclusions

This research sought to explore whether the existence of post-preparation residue was a common experience of heroin injecting and/or chasing and if it was what influence this had on the commonly held belief that heroin is adulterated with dangerous substances. The findings suggest that residue is indeed common but that a general interpretation of it is that it is not to be regarded suspiciously. The residue was often perceived to be either heroin that had not fully diluted or volatised or a relatively benign cutting agent. Thus, despite the common existence of post-preparation residue this research suggests that users do not generally perceive it as providing 'evidence' of dangerous adulteration. Evidence of dangerous adulteration for users therefore, appears to come from

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Notes:

1. Although it is true that different cutting agents will affect the preparation process and the effective outcome of it differentially - how much heroin is retained - the ways in which this happens is likely to be at odds with the users perception of what is actually happening. Huizer (1987) found that a number of substances such as caffeine and paracetamol in fact increase the amount of heroin retained by the user when 'smoking' or chasing the drug. As this is a little known forensic fact it is likely that users would expect any 'dilution' of the heroin to result in a decreased volume of heroin being available.

Appendix C.

Coomber, R. (1998d) Preface, in Coomber, R., *The Control of Drugs and Drug Users: Reason or Reaction?* Amsterdam, Harwood Academic Publishers.

Preface

'Drugs are not bad because they are illegal, they are illegal because they are bad'
(Statement to Senate committee investigating drug legalisation by
John Lawn, former Director of the US Drug Enforcement Administration)

How, and even *if* currently illicit drugs and drug users should be controlled are questions which in recent years have been raised increasingly as an issue in the media and by other interested parties. These include many of those who have to actually enforce current controls, such as the police, and at the international level, bodies such as Interpol. In some arenas however, especially at the party political level, the issue has more often been about whether the debate itself is actually needed or is even considered to be appropriate. Individual politicians may feel the need to debate drug policy but this is widely perceived to be a political liability across the major political parties, potentially leaving the party vulnerable to the dreaded accusation of being 'soft on drugs'. Outright condemnation of drugs and their use remains the public Party political consensus – drugs are bad and dangerous and therefore little debate is needed except to agree newer and tougher measures. This is largely due to the broad acceptance of the rationale for existing drug controls, the direction of the approaches taken, and of their historical formation as a reasoned response to an accurately portrayed problem. There are however fundamental difficulties with each of these assumptions. There is a further problem such that for the most part these assumptions are also reliant upon a highly questionable scientifically progressive world view of rational and benevolent public policy.

Public policy regarding the Public Health is legitimised through recourse to scientific evidence demonstrating the need to control or manage a problem as it becomes evident. Unfortunately, in relation to drugs the assumed problem has never been a simple one, neither conceptually, nor indeed, pharmaceutically. A simple, chronistic reading of drugs control history can point to periods where drugs were increasingly becoming associated with overdoses and deaths (opium), with a growth in addiction (morphine, heroin, cocaine), with violent and criminal activity (opium, cocaine, heroin, even marijuana) and correspondingly point to the apparently rational controls which were then introduced in

response to these public health concerns. It is deceptively easy, and of course both convenient and comforting, to read history in such a way. Once policy has been consolidated in history as essentially rational that attributed rationality can then feed into the current situation – if previous policy has a sound grounding then the same rationales and concerns must also apply today and consequently justify and legitimate current policy. Numerous historical re-evaluations of how particular drugs came to be perceived as problems are however, able to point to the complex interplay of political, circumstantial, racial, sectional interest, economic, social and cultural influences which gave rise to particular policy at particular times (Bean, 1974; 1993; Berridge, 1984; Berridge and Edwards, 1987; Bruun *et al.*, 1975; Harding, 1988; Kohn, 1992; Mathee, 1995; Musto, 1987; Reinerman, 1979; Saper, 1974; Smart, 1984).

Unlike the assumption expressed in the quote which heads this introduction, the attribution of ‘badness’ to a drug and the policy for its control does not simply relate to some objective potential for harm inherent in the drug as many drugs which are considered ‘bad’ present less danger to the user than many that are legally sanctioned (Gossop, 1996). The attribution of badness cannot be divorced from the range of colluding, and often interacting, sentiments (be they moral, racial, or a localised fear of the unknown) which, for whatever reason, pervades the understanding of particular drug use. In fact, much of the literature discloses that fears and related perspectives on a whole variety of ‘bad’ drugs has as much, if not more, to do with *who* is using the drug than it has to do with the drug itself. We have no reason to believe that, in the current situation, policy is any less problematic. That existing drug control policies may have developed from a drug-centric foundation of exaggeration and falsity, interrelated with notions of ‘otherness’ (xenophobia/racism) and misplaced (and essentially contradictory) moralities as well as international and national politics, amongst other biases, suggests that until these influences have been acknowledged and neutralised, rational debate on drug and drug use controls will remain difficult. This book, looking at the development of controls in Britain and the United States and how those controls have since fared, aims to contribute to the growing literature which aspires to provide a grounding from which such debate may be pursued.

In part one of this volume a number of the authors tease out and explore some of these influences which can be seen to have impacted on drug control policy. In chapters one, two and three we are invited to acknowledge the particular histories of drug control in Britain and the United States. In particular, the emphasis is on the impact of many of those forces mentioned earlier: morality, xenophobia, racism, sectional interest as well as international politics. Geoff Harding in particular (chapter one), treats us to an historical perspective on how both drug (opium and its derivatives) and drug user were attributed specific qualities which then had repercussions in the controls introduced. Without the development of particular discourses which (influenced by forces other than ‘science’) defined drug and drug user in the ways they did it is difficult to accept that the development and trajectory of drug control would not have differed signifi-

cantly. Likewise, Michael Woodiwiss revisiting US influences usefully reminds us of how pliable and powerful even the most apparently innocuous policy can be. Combined with zealous prohibitionist activity the development and implementation of the 1914 Harrison Act reflects all that is problematic about the history of US drug controls. Infused with distortion, xenophobia, racism and moral crusading one is left to reflect that current controls in the US have a creaky foundation based less on rationality than on reaction.

Whilst most control issues appear to be relatively transparent as regards enforcement, the laws are there, the policy is clear, at least in theory. When it comes to issues of treatment and rehabilitation, notions of power and control are subtly diffused within broader conditions relating to medicine, pharmacology and how conditions such as addiction have been defined. Decisions on *how* to treat heroin addicts have often had as much to do with considerations external to the condition of addiction, such as controlling leakage of supplies onto the black-market and pseudo-medical positions, than whether abstinence or maintenance is appropriate as treatment. Decisions which appear to be essentially medical and thus free of moral/political positioning thus often, under further scrutiny, show themselves to be less obviously clear-cut. Complimenting Harding (chapter one) Rachel Lart (chapter four), utilises a Foucauldian framework to illuminate our understanding of the power relationship between medicine, and thus medics, to the drug user up to the early 1980s. Once again, *who* the addict/drug user was is elaborated as significant in how the problem was understood. In the late 1950s and 1960s in particular she argues that a shift in treatment practices based upon the type of addict rather than on the conception of addiction itself was instrumental in deciding and inculcating new and future treatment policy. The treatment of drug addicts, particularly that involving the prescription of opiates or other substitutes, and in what ways, continue to be issues of importance for many, particularly those being treated, and those doing the treating. That there are specific power relationships involved in the treatment of drug users not based purely on medicine and the 'facts' however, continues to elude some.

It is not unreasonable to allude to the distortion and exaggeration of drug effects/dangers which have impacted on drug policy, especially in its early formative stages and that are often present even in the contemporary media and images presented by politicians as these problems are well documented (Bean, 1993; Goode and Yehuda, 1994; Murji, 1995; Parssinen, 1983; Reeves and Campbell, 1994; Reinerman 1989). However, this position needs to be careful not to slip into a too simplistic and out-moded 'social control' framework, particularly when relying on notions of 'moral-panics' which are often fairly uncritically employed. In respect to understanding how media and other representations impact on policy this is of course of critical importance. In chapter five, Karim Murji, whilst not shying away from the idea that much media representation on drugs is unuseful, asks us to re-assess the notions of moral-panic and unreasonable representation which have been commonly applied. Simply 'de-bunking' media representations he argues often leads to the de-bunkers committing some of the same sins of those

being accused of the unreasonable representation of drugs and drug users. A more contemporary understanding of media reaction and counter-reaction needs to acknowledge that the “more complicated, contradictory and messily fragmented patterns of real life are an inconvenience which both approaches prefer not to deal with”. The ‘one dimensional’ picture presented in media reaction that Cohen (1972) drew attention to is replaced by an alternative, but equally one dimensional view in counter-reaction.

It must be conceded however, that even if controls over drugs *were* more directly related to some objectively reliable assessment of their dangers, it doesn’t necessarily follow that the controls which have been implemented are either the most appropriate or effective even within the stated aims of those policies. In fact it is this very point, whether existing drug control policy works and therefore continues to be appropriate, that provokes most calls for debate rather than a concern for how the policy came into being in the first place. In the second part of this book the contributors look at current controls over drugs and drug users (both in the realms of enforcement and treatment) and seek to assess their efficacy and continuing relevance. Nigel South (chapter six) provides us with a lucid account of the problems faced by current enforcement policy in Britain. In an attempt to curtail an increasing supply, drug controls (enforcement) have become increasingly punitive and ‘draconian’. The impact of this policy during the 1980s and ’90s, South argues, has been “Almost without exception ... overwhelmingly negative, with rising numbers of drug users, offenders in prison, drug related crimes, [and] demand on enforcement resources”. He also notes something about drug control policy which is taking on increasing significance; how policy is being implemented in practice may not conform to the principled and formal position of extant policy. Sometimes change in practice actually precedes policy. Thus, in Britain and some other European countries the handling of cases of simple *possession* of ‘soft’ drugs through cautioning as opposed to prosecution has *de-facto* decriminalised much use. In some hard pressed localities this has even been extended to drugs such as heroin where the police forces involved see little benefit to pursuing prosecution. In circumstances such as these debate and re-considered policy has been preceded by action which is seen as appropriate to the conditions at hand. Thus a situation is now occurring whereby drugs such as cannabis are prohibited but that prohibition is not being enforced as it once was.

While Nigel South can point to the anomalies of enforcement strategies, and to the failures of supply and demand reduction in Britain and Europe, Bruce Bullington (chapter seven) casts a longer shadow over current US policy. The War on Drugs in the US he concludes has not been a mere rhetorical device to galvanise public support or been carried out superficially but has been fought “with a vengeance”. Extensively reviewing the impact of enforcement and other measures in the War on Drugs he reflects on how “One of the most puzzling features of this war is how it has been possible to go to such extremes to assure a victory against drug use and users, and yet to have come away with no clear cut beneficial outcome”. Reviewing the costs of prohibition in the States, Bullington

questions the practicality and the reasoning of those who argue that the answer to future drugs policy is more of the same, based on the same reasoning.

Susanne MacGregor (chapter eight) showing some continuity from Rachel Lart's earlier chapter, analyses policy manoeuvres in treatment and rehabilitation from the 1970s to the present day. In trying to assess moves in treatment away from prescribing towards abstinence and then towards harm reduction (and thus back to aspects of prescribing) she argues that the British system should be seen as characterised not by a coherent or even consistent strategy but by appropriate and pragmatic responses to a constantly changing problem. Such pragmatism, which differs from the more forthrightly penal approach of the US, is perhaps most visible in the response to the dangers of HIV. "Thresholds were lowered and there was greater emphasis on educating about injecting practices and about sexual behaviour. At times it appeared that the main activity of drugs agencies was to hand out syringes, needles and condoms. Rather than such activities being discussed as matters of principle, as is the tendency in the United States, on the whole the British approach was flexible, tolerant, pragmatic and adaptable". Current policy it would seem is at times a mish-mash of reasoned response (albeit within a pre-defined and often questionable set of assumptions about the user and the problem in hand) to particular circumstances whilst at other times it is defined and legitimated by unreasonable adherence to principles of 'what ought to be', such as a zero tolerance to drug use. Debate needs to tease out and establish that which is based on reason, what is effective and indeed, what is possible. Thomas Szasz (chapter nine), in more polemic form, continues a theme he has developed over many years. Drug prohibition is hypocritical, in contravention of our basic 'rights' as individuals, and based on the scapegoating of drugs for other ills. The War on Drugs he contends is unwinnable, has contributed more to America's ills than have drugs themselves, and is based upon a falsification of 'danger' in society – by obscuring the fact that 'life is dangerous' and suggesting that drugs can and should be reasonably separated from a conception of risks in everyday life.

In this sense it is unfortunate that where 'debate' *has* taken place it has often been disappointingly shallow, tending to concentrate on dichotomous argumentation. Thus, simple prohibition is counter-posed with simple legalisation, and vice-versa. Part of the problem encountered by those who wish to engage in debate concerning reform of drug control policy is that of transcending this simplistic policy framework. Policy is a multifaceted continuum. A continuum because between outright prohibition accompanied by outright repression to enforce it and outright laissez-faire legalisation there are a multitude of variations possible. Multifaceted because within this continuum a variegated mix of policies is possible. In reality of course this is exactly what we have and how policy manifests itself. Drug policy in the US is not a pure mix of extreme prohibition and enforcement but it does have, in general, greater levels of prohibition and enforcement than the UK. The UK by contrast has a heady mix of (slightly lesser) prohibition, (lesser) enforcement and many more consistently applied

approaches to the reduction of harm associated with drugs. For some prohibitionists in the US harm reduction strategies are tantamount to condoning drug use, whereas in the UK this policy distinction has been made more comfortably. The debate has to move beyond simple oppositions. In this light, part three of the volume seeks to explore some of the issues that may be part of future policy debate which are not reliant either on simple prohibition or outright legalisation. It does explore however the potentiality of a relatively more liberal approach in a number of areas. One area which is subject to much discussion in the supply reduction literature is that of crop substitution, the 'encouragement' and/or sponsorship of substituting the production of drug producing crops with crops such as coffee, bananas or other such alternatives. Historically these programmes have had limited success for a range of reasons but continue to be advocated as a means to reduce supply, particularly by the US. David Mansfield and Colin Sage (chapter ten) reassess the potential role of alternative development in poor drug producing countries. Outlining the difficulties and shortcomings of current approaches to crop substitution they argue that until the complexity of the role that drug crops play in these drug source areas is acknowledged and until key issues such as poverty targeting, participation and environmental sustainability are addressed then they will be limited in their success. They argue that more appropriate policy in the design of 'alternative development' programmes would have an emphasis on 'appropriate development initiatives' which would be 'given precedence over those of drug crop reduction'.

One of the problems of conflating drugs into 'good' and 'bad', is that it suggests that the pharmacological effects of the drugs are easily understood in terms of 'health' and their general or potential utility as a therapeutic agent. That heroin is widely used for therapeutic reasons in the UK, and sometimes even as a prescribed drug of addiction, but is prohibited in the US however, shows that this simple distinction is useless for even one of the 'hardest' drugs. In the US cocaine and morphine are available to be used therapeutically (although cocaine use has been limited in recent years) whilst cannabis, the 'softest' of drugs (?), is not. In the chapter which follows, *Missed opportunities? Beneficial uses of illicit drugs*, Lester Grinspoon and James Bakalar develop this theme further with respect to other currently illicit drugs. Considering in turn cocaine, various psychedelics (including LSD, MDMA, Ibogaine, psilocybin) as well as cannabis, they outline the various therapeutic potentials that these substances may provide. Such potentials they argue are wide ranging and significant. By outlawing drugs in such a way that doesn't acknowledge the multifaceted nature of their pharmacology and stresses the demonised aspects, they suggest that real benefits are being lost which could reduce suffering and improve well-being.

Closer to home, it is a common suggestion that more liberal controls would result in increased uncontrolled drug use. This position is predominately located in the assumption that drug use, especially those drugs such as heroin and cocaine (powder and crack) among others, is largely uncontrolled drug use. Wayne Harding (chapter twelve) sets about presenting the evidence which

counters this simple 'pharmacomythology'. Drawing on a body of research he has long been involved with, considering informal social controls of drug use, and controlled and moderated drug use itself, he questions the validity of a notion suggesting that illicit drug use would necessarily become more compulsive and excessive if current restrictions were lessened. Harding rightly contends that any liberalising of drug controls would not be in isolation from other harm reduction activities. Existing informal controls such as those applied around alcohol would increase but these would need to be bolstered by, for example, increased and improved secondary prevention education, the provision of needle exchange programmes, and appropriate information about recreational and controlled drug use which would encourage and embellish the types of social controls which can be effective in reducing compulsive and excessive drug use.

Earlier in this introduction I alluded to the fact that what happens 'on the ground' is not necessarily the same as that which is laid down in policy dictums. In a number of countries across Europe a more liberal policing approach to possession is increasingly occurring, especially in regard to drugs such as cannabis which makes up the vast majority of enforcement activity. In Britain this slackening in the policing of drug use has even (as it has in similar ways in other countries) coincided with a call by the Home Secretary for harsher, not more lenient penalties for such offences. Richard Hartnoll (chapter thirteen) in his overview of *International Trends in Drug Policy* pinpoints tensions such as these as of emerging importance when he says "that significant tensions are building up over the emphasis and direction of policy. The pressures for change are largely generated from the bottom up, whilst the tendency from the top down is to resist change and re-affirm the status quo". Such tensions however are evident not just between the local and national levels but also between the national and international levels. Providing an overview of policy differences, local, national and international tensions, Hartnoll maps out some of the broad trends that can be discerned in recent years and the trajectory of policies such as harm reduction within these contexts. With reference to the above and in keeping with the overall theme of this volume and its underlying concern, Hartnoll concludes by posing "whether reason, based on scientific evidence, day by day reality, and a willingness to think clearly and imaginatively about a complex issue can play even a slightly larger role than it has on a topic dominated by unthinking reaction based on moralistic rhetoric".

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Appendix D.

Coomber, R. (1998f) 'Drug Adulteration', *Drug News*, Spring, pp. 19–23

Coomber, R. (1998e) 'The Myth of Dangerous Adulteration', *Mainliners*, pp.6–7

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QUESTIONS AND ANSWERS: DRUG ADULTERATION

Ross Coomber

What is drug adulteration?

When heroin, cocaine, amphetamine or any other street drug has been adulterated this means it has had another substance added to it. This is less formally known as 'cutting' the drug, and colloquially, among users and dealers, as 'stepping' on it. Street drugs are 'cut' with a range of substances and adulterants are only one formal category although the word is often used as an umbrella term for anything added to the primary drug. Adulterants proper are in fact other psychoactive substances, such as paracetamol or other drugs. The second major group are the diluents, or more literally, the dilutants. Diluents are substances added to drugs which have no psychoactive properties of their own, such as lactose. Together these substances are often called 'cutting-agents'. The term adulterant will be used here to cover both adulterants and diluents unless otherwise stated.

Why adulterate drugs?

Some of the substances that are added to street heroin which is to be smoked have been found to increase the amount of heroin available to the user significantly in excess of that made available by heroin alone. In other words, some adulterants enhance, rather than diminish, the quality of the product being sold. On other occasions particular drug mixes are sold as just that, a specified mixture. A heroin and cocaine mix for example, known as a 'speed-ball', is bought for the particular co-active effects of that combination and would be sold as such. Some street drugs such as amphetamine have comparatively high levels of adulteration/dilution whereby the rationale for the cut was that of dilution. Heavily adulterated or diluted products, however, unless (as in the case of amphetamine) the accepted purity norm is low, may prove difficult to sell as word of mouth informs prospective buyers of poor quality drugs from particular suppliers.

What substances are found as adulterants and diluents?

In recent years the primary adulterants found in heroin in the UK are paracetamol and caffeine. Occasionally, but not normally, phenobarbital, diazepam and methaqualone is found. In cocaine caffeine is again the main adulterant with glucose and mannitol (another sugar) being the main diluents. Amphetamine also is found to have caffeine as a main adulterant along with ephedrine and paracetamol whilst the main diluent in this case is lactose. Ecstasy is normally found to be diluted with lactose. Sometimes drugs which are not ecstasy are sold as ecstasy. These pills sometimes have mixes which attempt to mimic the effects of ecstasy e.g. amphetamine and LSD or ketamine. Heroin is not found in ecstasy.

What about the stories of rat-poison, brick dust, Vim and Ajax, talcum powder, ground light-bulb glass etc?

Unsubstantiated and logically problematic. Forensic analysis does not find this kind of cutting agent. The United States Drug Enforcement Administration for example, which undertakes very comprehensive analysis of street drugs bought in cities throughout the US, does not find such substances (with the rare exception of talc which is also used in commercial painkillers and

which are probably its origin when found in street drugs). The justification for this type of story rests on the basic idea that you never know what exactly is in a street drug, that drug dealers are evil degenerates who care little about the people they sell to and that at moments of desperation will use anything that comes to hand to dilute their drugs. Grinding bricks or light-bulbs is certainly not effort free and is likely to leave tell-tale residue as would Vim or Ajax. Sugar off of the shelf would be less problematic and it is not even expensive. Poisons such as strychnine are also not that easy to come by (certainly not in a moment of desperation) and are relatively expensive. Recent research suggests that rather than drug dealers caring little about the risks attached to the drugs they sell they are in fact often wary of both causing unnecessary harm through adulteration from both an altruistic perspective and because they fear the potential 'come back' from dissatisfied customers. Lastly, the current evidence suggests that most of the cutting that does take place is done high up the chain of distribution, not by desperate addicts, or evil 'street' dealers, at the bottom and is strategic with 'quality' cuts as opposed to hap-hazard with dangerous substances. As an addendum to this question strychnine *has* been found in particular variants of street heroin, but at very low concentrations. Like caffeine and paracetamol, strychnine can increase the amount of heroin retained when it is heated for smoking. It appears that the occurrence of strychnine in heroin when it occurs is strategic and there as an enhancer. At the low levels found it is not a health hazard.

What about the sudden deaths of drug users and unusual side-effects?

It is not uncommon for both drug users and those involved in the treatment or enforcement of drug use to blame dangerous adulterants for negative effects resulting in ill-health or even death following drug use. However, neither those using the drugs nor those in 'authority' commenting on the problem are commenting from an *informed* forensic position. LSD users for example have long assumed that the stomach cramps they occasionally experience are due to adulteration with strychnine but strychnine is not found in LSD. Likewise, ecstasy users often believe they have taken ecstasy adulterated with heroin, and cocaine users that cocaine is commonly adulterated with amphetamine. Heroin is not found in ecstasy and amphetamine is only very rarely found in cocaine. In one study of cocaine users for example, none of the samples users provided where they believed amphetamine to be present were found to contain it. 'Authorities' such as the police often attribute overdose deaths of heroin to either adulterants or very pure heroin but one recent Scottish survey of such deaths revealed that they were in fact likely to have resulted from an addict's lowered tolerance on release from prison. The police who carried out this research however, were increasingly aware that less informed officers who communicate with the media help perpetuate assumptions about heroin in this respect which are unhelpful.

Who adulterates street drugs?

The evidence suggests that most adulteration and dilution takes place high up the chain of distribution and often either at source or en-route to the final destination country but prior to importation. A percentage of those who sell drugs to users, lower down the chain, once they have been imported do 'cut' their drugs but mostly where this occurs it is in fact dilution with one sugar or another (e.g. mannitol or glucose) which takes place. Recent research into adulteration practices in South East London found that 65% of those interviewed who sold heroin and 73% of those who sold amphetamine 'never' adulterated the drugs they sold, and that in fact only one of the 17 who sold heroin 'always' did so. Extent and length of involvement in drug selling did not make adulteration more or less likely in this or a consequent study.

Why do drug dealers not adulterate the drugs they sell?

There are three main reasons why drug dealers do not, in general, adulterate the drugs they sell. The first reason is that they do not have to. The primary rationale put forward for adulteration is one of diluting for profit. In fact profit on drug sales is easily and safely achieved by simply 'bagging' or 'wrapping' the drugs they have into smaller and thus proportionately more expensive sales. 'Skimming' off small amounts of a sale and providing an underweight or 'short-count' sale is also a common strategy. An ounce of cocaine for example, in this way may be stretched to 29 separate grammes sales instead of the normal 28. The added advantage to both of these strategies is that the 'quality' of the drug is not reduced through dilution. The second main reason relates to a combination of altruism and self-interest. Asked why they do not adulterate either at all or with dangerous substances dealers either responded that they feared the potential 'come-back' or reprisal from dissatisfied customers or that they didn't want to hurt anyone. The third main reason relates to the fact that most dealers assume that their drugs have in fact already been adulterated (higher up the chain) and therefore no further depreciation of quality would be possible or desirable. This last factor however, also tended to betray that rather than most dealers being 'experts' in drug cutting many actually are very wary of it having no idea what to safely use and therefore relying more commonly on the profit available from the mark up from small sales.

How common is drug adulteration?

Not as common as often thought. In the UK, analysis of 228 'street' heroin samples in 1995/96 found that nearly 50% contained no adulterants at all. These samples, which had passed down through the chain of distribution therefore further demonstrate that the adulteration of drugs such as heroin is neither routine, nor in fact predictable. Likewise, in the US, in some cities where the selling of Mexican heroin predominates nearly all of the samples bought by the Drug Enforcement Administration's Drug Monitor Program are free of adulterants and diluents despite passing through a number of links in the chain of distribution and being sold mainly by 'Mexican gangs'. Many samples which do have one or the other added will also only have very small amounts, sometimes trace amounts, present. However, it is important to acknowledge that some drugs are more likely to be subject to adulteration than others but that this also tends to happen high up the chain of distribution and not as is often believed routinely 'cut' at each stage down through the chain of distribution.

When drugs are adulterated, how much are they adulterated?

The amounts differ. Some heroin samples reveal very small amounts of cutting agent/s whilst amphetamine in the UK is commonly only around 5% pure. Some figures are however, misleading. Heroin purity of only 50% does not necessarily mean that it is 50% 'impure'. The other 50% may be made up of other opium alkaloids resulting from the production process and in fact contain no adulterants or diluents. Mexican heroin in the US with no adulterant or diluent present is likely to be of significantly lower purity than that from Southeast Asia or South America despite the fact that heroin from these sources is much more likely to contain adulterants/diluents.

If there is little real evidence for dangerous drug adulteration why does it persist as a belief?

One reason is that evidence to counter it is only just emerging, another is that the belief has been used by prohibitionists, legalisers and those propounding harm reduction policies as partial justification for their particular approaches. Prohibitionists use the supposed existence of dangerous adulterants as proof that drug dealers are the lowest of the low and that drugs are 'bad' and thus require tough measures whilst legalisers and advocates of harm reduction have seized upon it as evidence of why 'pure' (and thus safe) drugs should be either legal or prescribed.

Do we need street drug analysing services?

In the UK although, as we have seen, the adulterants and diluents of drugs such as heroin and cocaine are less problematic than often thought it remains true that as a drug user you never can know what you are purchasing. In Amsterdam a single, walk-in, street drug analysis service has now expanded, in the space of two years, to more than twenty such services around Holland. Under the auspices of the Dutch *Drug Information and Monitoring System* which co-ordinates drug testing in Holland, drug users can walk into these services and obtain information about the drugs they have bought and intend to use. Primarily, this service has been used for the identification of ecstasy and drugs bought as ecstasy. Each tablet analysed by the service is also measured (depth, width) and described (colour, logo, speckled, non-speckled etc) with each observable characteristic recorded on a database against which others like it can in future, from the same batch/manufacturing process, be checked. Users are informed as to whether the tablet is of unusually high potency, if it is MDA as opposed to MDMA or if it is a different substance altogether, such as amphetamine. A slightly less comprehensive service is also provided (by the street analysis service) at raves and other large dance events where users can check their tablets against the data-base and with simple chemical tests, for certain other adulterants. Testing for heroin purity and common adulterants takes a little longer because powdered drugs cannot be measured and described in the way that tablets can. Responses to powdered drugs take about a week. If a tablet has not been encountered before, analysis will take two days to a week. The user can at least be informed that this is an 'unknown' tablet and delay use until analysis confirms its make-up. Street drug analysis services have been set-up as a harm-reduction approach to inform drug use and lessen its potential harm. Users can, with enhanced information, make decisions as to whether to use the drug or not. In some cases the drug tested will not be the drug thought to have been purchased, or will be of a higher purity than desired. If under these circumstances users decide not to use then the service also demonstrates its potential for the prevention (short-term) of drug use.

A strong argument could be put forward for the establishment of similar services here in the UK based on the same principals, but this would require an increased level of tolerance towards drugs such as ecstasy and those who use it than is presently evident.

What can drug services do?

The media plays a strong part in perpetuating the inaccuracies around drug adulteration but they often attribute their information to various sources of 'authority'. Thus the police, as with the Leah Betts tragedy, were quick to initially blame her collapse and consequent coma on

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Dangerous Drug Adulteration: Myth and Reality

It is commonly believed by the general public, accepted by drug users and health field professionals, and reported by the media that street drugs such as heroin are 'cut' (adulterated) with dangerous substances such as brick dust, rat-poison, ground light-bulb dust, chalk and domestic scouring powders such as Vim and Ajax amongst others (Coomber, 1997a,b; 1998a). The notion that dangerous cutting agents add considerably to the existing risks of illicit drug use is therefore widespread and is often compared to users partaking in a kind of pharmacological Russian Roulette. There is however a leap of faith involved in conflating the truism that 'you never know what you are buying' with the suggestion that this means what you are buying has been purposely cut with dangerous substances. Recent research rather than supporting the belief that one of the main risks involved in the use of street drugs relates to dangerous cutting agents suggests that the risks attached to the substances actually used are in reality negligible. Importantly, it also suggests that far less actual cutting takes place than is generally thought to be the case (Coomber, 1997e; 1998b). Also, as regards heroin, what cutting does take place, rather than it resulting from the hap-hazard desperation of a 'strung-out junkie' or from the routine dilution of the drug as it makes its way down through the chain of distribution, it is predominately carried out *prior* to importation and with substances which often enhance, not diminish the drug effect.

What is in street drugs

Forensic analysis of street drugs does not find the substances listed above. In heroin the most

commonly occurring cutting agents in the late 1990s are caffeine and paracetamol. Comprehensive analysis of heroin samples by the US Drug Enforcement Administration (DEA) since 1990 reveals numerous sugars, prescription drugs (primarily paracetamol), opium alkaloids and occasionally salts but none of the 'dangerous' cutting agents commonly asserted or feared (Coomber, 1998b). In Europe the situation is not identical as sugars are less likely to be found in heroin but it is similar in the sense that dangerous cutting agents are not found (Coomber, 1997a,e). Arguably, due to long-standing images of sudden death and overdose, heroin is the drug that is most commonly associated with poisonous cutting. In recent years however this has transposed itself across the whole spectrum of drugs. Yet, as for heroin, there is no forensic evidence to suggest the use of dangerous cutting agents such as those listed above are finding their way into other street drugs.

Not only are the dangerous substances of common folklore not found in street drugs but also far less actual cutting takes place than is believed to be the case. Comparison of drug purity levels for heroin seized prior to importation with those seized on the 'street' and at other points in the chain of distribution do not tend to differ as markedly as would be expected. Moreover, one recent survey of heroin 'street' seizures from around the UK found that nearly 50% of the 228 samples tested did not contain any adulterants at all indicating that the cutting of street drugs was far from a predictable outcome of passing through the chain of distribution (Coomber, 1997e). Similarly, analysis of US (Mexican) heroin has found that in some major US cities, even where the selling is 'gang controlled' buying heroin *with* cutting agents maybe difficult to do (Coomber, 1998b).

There are a number of reasons why less cutting takes place than is normally assumed (Coomber, 1997a,b,d). First, dealers usually resort to 'safer' methods of realising profit from drug sales such as

selling smaller amounts for proportionately more. A second related method is that of 'skimming' small amounts of the drug from a sale to secure more sales. Thus, in this way a dealer may make 30 single gramme 'wraps' from an ounce instead of the standard 28. These methods result in profit but do not deteriorate the sample (which they usually assume has already been cut) and do not enhance the riskiness (beyond that entailed in the drug itself) of the drug. Risk in drug selling is perceived as a 'two-way street' and dealers often fear the reprisal that would follow if they were perceived to be selling bad drugs. Combined with the reasonable concern that they do not want to harm others, (because dealers, are generally not chemists or are otherwise knowledgeable about what is a 'good' or 'bad' cutting substances) and that it is not unusual for them to have a concern to protect a reputation for selling 'quality gear' the result is that the cutting of street drugs by dealers or desperate addicts is neither systematic nor predictable.

Why, given the (lack of) evidence, is dangerous adulteration believed in.

We have to ask why, given that there is almost no forensic evidence to suggest that dangerous cutting agents are put into street drugs, that belief in it is so strong. Even drug dealers believe that (*other dealers*) do it (Coomber, 1997b,d). The question is worth asking because in fact there in seems to be little *concrete* evidence for even users to refer to to support the notion. User's assessments of the residue left after preparing their drugs (in the case of injecting and/or inhalation) appears not to provide evidence of unusual (non-soluble) cutting agents or to suggest to them cutting with dangerous substances has taken place (Coomber, 1998). If influences are not found in the residue, then where? Users often believe they can tell when a drug they have taken contains something other

than the primary drug. In one research sample, 37 of 319 previously taken ecstasy samples were believed by those users to have contained heroin (Forsyth, 1995). Heroin has never been found in ecstasy. In another sample cocaine users provided the researcher samples of cocaine they believed to be adulterated with amphetamine, something they and many others believed to be a common cutting agent of cocaine. No amphetamine was found in these samples and forensic analysis almost never finds amphetamine in cocaine (Cohen, 1989; Coomber, 1997a). LSD users often believe the stomachache that sometimes accompanies use of this drug to be derived from strychnine in the original solution. One user related to me that this was 'well known'. Again however, strychnine is not found in LSD (Coomber, 1997a). Another common suspicion relating to dangerous adulteration that users often adopt relates to adverse reactions, ill health or overdose to the drug in question. In other words when a user has an adverse reaction to a drug it is not uncommon for blame to be attributed to dangerous cutting agents (Coomber, 1998; 1997a). This line of thought is particularly evident amongst peers when the individual concerned is an experienced user. It is also the first line of thought for authorities such as the police when responding to a tragedy such as that of Leah Betts. Analysis of Leah Betts's ecstasy however, as is always the case in these circumstances, to my knowledge, did not reveal anything but pure ecstasy. As regards overdose and other adverse reactions with drugs such as heroin where samples are analysed they do not usually find anything unusual. Although purity can sometimes be very high this is also not usually found and blood tests of those who end up in hospital do not find poisons other than the drug in question (Coomber, 1997a). More reasoned explanations of why adverse reactions occur relate to build-up overdose, where the individual over a period of time, without realising, consumes more than normal. This also partly explains why such events happen to only one user in a group where all had been using the same sample. A usual co-factor in adverse reaction circumstances is the existence of poly-drug use, most

commonly alcohol. In fact one recent research paper has suggested that most events recorded as heroin overdoses are in fact nothing of the sort (Darke and Zador, 1996). A third contributing factor to adverse reactions is that of inappropriate co-activity. Examples of this in the case of ecstasy would be over-exertion without periodic re-hydration or 'chilling-out', or, ironically, over re-hydration - drinking too much water.

If users cannot in reality tell whether a drug is cut with particular substances or not and do not find suspicious residue in their drugs post-preparation but *do* assume dangerous cutting practices are to blame for ill-health or overdose, we need to ask why.

Knowing exactly how a belief system such as this arises in the absence of concrete evidence to a level whereby it is almost unquestioned and believed even by those who are supposed to do it is obviously difficult. I have argued elsewhere (Coomber, 1997c) that there are three primary issues which need considering. First, the development of images around the 'dope-fiend' at the end of the last century and its contemporary versions up to the present day. Second, the way that certain common drug myths re-enforce each other, each proving the truth of the other. Third, the illicit and clandestine nature of drug distribution and its supply.

Drugs such as heroin and cocaine have long been associated with the ability to transform users into something more morally degenerate. Over fifty years ago, Lindesmith critically pointed out that the 'dope-fiend' as then characterised was associated with the capability to carry out the most heinous of crimes. '[he] becomes a moral degenerate, liar, thief, etc., because of the direct influence of the drug' (Lindesmith 1941, p202.). The heroin campaigns of the 1980s presented similar images of moral

degeneracy brought about by addiction where even stealing your mother's wedding ring to buy heroin was depicted as likely (Rhodes ref). Media images of 'pushers' at the school gates and street corners where the young are supposedly being targeted further depicts an image of drug dealers who are willing to 'hook' the most vulnerable members of our society to ensure a steady custom. The assumed transformative powers of drugs such as heroin and cocaine are important to understanding how dangerous adulteration could be deemed to occur. Knowingly putting dangerous substances such as strychnine, ground light-bulb glass or domestic scouring powders into drugs that you are to sell is clearly either an act of pre-meditated violence or one of diminished responsibility. Both fit into the broad spectrum of beliefs about how this practice supposedly occurs but neither makes any real sense. Even the 'strung out' junkie who cares not (diminished responsibility/morally degenerate) what they put into the drugs they sell in order to dilute it will find that it is easier to grab sugar off the shelf or access glucose or lactose (both cheap) than it is to access strychnine, or spend time grinding a brick or light-bulb down, or crushing chalk.

A number of drug myths, when considered in isolation, do not hold up to scrutiny. There is little or no substantial evidence for the pusher at the street corner/school gate preying on children giving away free samples. Such pushers are not found (though stories of them are common) and anyway drugs like heroin do not addict quickly enough to make this a viable economic activity (Kaplan, 1985). Ironically however, when combined with the assumption of dangerous adulteration they gain some credence. Thus, the evil drug dealer, likely to prey on the young on street-corners and outside the school gates becomes a credible concern because of the widely accepted existence of dangerous drug adulteration. Dangerous drug adulteration occurs of course because the transformative powers of drugs such as heroin degenerate the moral faculties of drug dealers (dope-fiends; junkies) and thus

make it possible or even, in times of desperation, likely. Only crazy or evil individuals would cut the drugs they sell with dangerous substances and to such individuals pushing their drugs on the vulnerable would harbour little concern. If however we are able to assert that dangerous drug adulteration does not occur and that rather than demonstrating no regard for their customers they often display a concern *not* to contribute harm to them (Coomber 1997b,d) then a more considered view of who and what the drug dealer is must be the outcome. In fact without the underlying assumptions relating to dangerous adulteration those other drug myths are left with little or no foundation what so ever.

To these concerns must be added the context in which drug selling takes place. Mistrust of retailers by consumers is common even in the realm of licit buying and selling. The second-hand car we buy may have been 'patched-up', previously written-off or even stolen. The 'pure' orange juice or the 100% beef product we buy may in fact be something quite different. The Concern about being 'cheated' or 'ripped-off' is part of every-day life so we should not be surprised when such fears and anxieties are magnified in the context of an illicit and clandestine market place. To some extent consumers of drugs may even invest in the danger of the illicit market place. Drug use after all is generally a fairly mundane activity. Convincing yourself that there is a possible danger (beyond that of the drug) in every hit arguably makes it all a little bit more interesting.

Common assumptions over dangerous drug adulteration are, by and large, mistaken in all-important aspects of the issue. Dangerous cutting agents do not represent a large or particularly significant risk to drug users. Drugs are not cut routinely or haphazardly down through the chain of distribution. Indeed, as regards heroin (for 'smoking') the substances that are found, such as caffeine or

paracetamol, rather than being deleterious to the quality of the drug in fact often increase the amount of heroin available. By emphasising the risks assumed to be attached to dangerous cutting agents the media and authoritative others on the one hand divert attention from the real risks, those attached to the drugs themselves and the inappropriate co-activities which may accompany their use, and on the other hand re-produce unhelpful stereotypes about drugs, addiction and those who sell drugs.

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Appendix E.

Letters confirming acceptance of Coomber (1999a,c)

