THE ECONOMICS OF DRUG POLICIES

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> Attempts to stamp out the illegal drug trade have failed all over the world and have consumed more and more resources. There is no benefit in blinkered thinking. The starting point must be an acceptance that illegal drugs are established in the community and that the prohibition has not worked. Orthodox policy is quite unable to enforce the law. Priorities must be established for the use of the [limited] available resources. One thing is certain: the conventional method of giving the job to the police, on top of all their responsibilities, has failed all over the world and a new approach is needed.
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> *The Report of a Commission of Inquiry*
> (The Fitzgerald Report) (1989)

1. The Scope of This Paper

The purpose of the laws against certain drugs is to alter people's behaviour, to induce them to use the drugs only in certain circumstances or not at all. The laws against heroin—its importation, manufacture, possession, sale, and use are prohibited—embody our attempt as a society to stop the use of this drug. Heroin is an extreme case: other drugs are regulated, to a greater or lesser extent. Some, such as caffeine in the form of coffee or tea are not controlled at all; others, such as morphine, are available only to a limited number of officials.

Policy analysis of the problem of illegal drug use is complicated by the different dimensions in which the drugs are viewed. The more alluring the drug, the greater the difficulty. One of the most attractive of the illegal drugs—heroin—is particularly difficult to disentangle.

1.1 Four Aspects of Heroin

1.1.1 Heroin as a Commodity The view of heroin as a commodity reflects a certain set of values and beliefs: acting on this view tends to move particular interests to the centre of attention. The commodity view highlights the black markets on which the drug is bought and sold. Any market transactions involve supply, demand, price and quantity. There is more than one black market: there are many, corresponding to the flow of the drug from the opium fields, through the refining from opium to morphine to the heroin users on the street. The central issues emphasized by the commodity view are the high returns for the sellers, and the high cost to buyers, especially the consuming buyers who cannot therefore recoup their costs by on-selling the drug.

The high returns provide the sellers with an incentive to engage in the illicit transactions, and provide means to protect the trade by paying for protection by corrupting public officials. By the same token, high prices mean that buyers must lay their hands on large amounts of

money to pay for their purchases, which they evidently are able to do, despite the illegality and subsequent high costs, and which they are evidently willing to do because of the attractiveness of the drug for them.

The effects of the high returns to sellers and the high costs to final buyers are to impose a high indirect cost on society—above the direct cost to the taxpayers of the criminal justice system—costs which become the focus of the economic policy analyst. This paper will highlight the costs of the prohibition of heroin in Australia and argue for a relaxation of this law to allow a regulated market for heroin, at a much lower social cost.

1.1.2 Faustian Ambrosia The second view of heroin is at a much more elemental, affective level. The most important property in this view is its addictiveness, and its attractiveness, as epitomised in the 1970s saying: "It's so good, don't even try it once." The central values emphasized here are the unbridled pleasure believed to flow from its use and the loss of self-control—and perhaps ultimately of self—that continued use of the drug are believed to result in. The Faustian bargain is thus: "I shall give you pleasure such as you have never dreamt of, but you will become a slave to my addictive attractiveness." The emphasis in straight society is thus on the fear of enslavement and fear of oblivion, which ultimately is a fear of nothingness, of death.

This view, although mistaken, has a strong grip on the popular mind. As Marks (1990) describes, early attempts to outlaw opium smoking in both Australia and the U.S. were tinged with xenophobia, and, despite its commercial origins as a turn-of-the-century cough suppressant, heroin continues to possess some of opium's exotic allure and mystery, at any rate for those who do not have first-hand experience of compulsive heroin users. As Davies (1986) argues, perhaps heroin—and other illicit drugs from time to time—performs the role of a scapegoat in our industrialized society, which militates against rational debate about heroin policy. At any rate, this potent but incorrect view of heroin—as embodying aspects of the "food of the gods" and diabolical damnation—means that it is very difficult for the commodity view to prevail.

1.1.3 A Vector for Disease As remarked by many commentators (see Marks [1974; 1990] for a summary), when carefully administered, pure heroin of known dosage will result in no long-term physiological or psychological effects. And smoking or snorting heroin carry small dangers. But injecting the drug—which, by delivering the whole dose into the bloodstream in one batch, greatly increases the acute effects of the drug, particularly the euphoric "rush"—carries specific risks of overdose or infection, related to some users' lack of clean facilities, and to their failure or inability to use sterile paraphernalia and water. It is the likelihood of HIV infection spreading from the intravenous drug-using (IVDU) community to the population at large that has led to clean-needle exchange schemes, and which, I believe, has led many public health officials to revise and in some cases reverse their opposition to arguments for relaxing the prohibition of heroin.

1.1.4 An Analgesic The final view of heroin is also a medical one: as a superb analgesic, in some resects unique, its use has been advocated as a palliative for the terminally ill. Indeed, testimony before the Williams Royal Commission (1980, pp.C178–95) held that heroin was a unique analgesic, and should be legally available for prescription to two groups: terminally ill patients, as in Canada and the U.K., and those post-operative patients whose recovery might be adversely affected by the nausea sometimes accompanying the use of morphine.

1.2 The Approach and Scope of this Paper

Despite the complications for the policy maker that the fourfold aspect of heroin causes,[1] we shall focus on the first aspect, that of a commodity, the exchange of which, despite its total prohibition, can be analysed using the tools of micro-economics. Indeed, it can be argued that this is the correct approach precisely because of the mistaken Faustian ambrosia view and given the public-health issues of IV drug use.

In 1985 at the special Premier's conference on drugs—the so-called "drug summit"—the Australian Commonwealth, States, and Territories agreed to spend $120 million over the following three years on an anti-drugs programme, the National Campaign Against Drug Abuse or "drug offensive." Of this large amount, $24 million was allocated specifically to improved police and Customs surveillance and detection, and the balance for programs of treatment, education, and rehabilitation (Blewett 1986). Unfortunately for the taxpayer, lack of data on the pre-existing situation means that the effectiveness of the Campaign cannot be clearly measured, although some resources are being spent to remedy this lack—perhaps for future campaigns. If this amount of money can be spent on it at a time of financial stringencies, the drug problem must be serious. Heroin abuse is seen to be a significant part of the problem. It seems clear that any serious attempt to reduce the social costs of heroin use must focus on the demand side.

The recently completed report on *Drugs, Crime and Society* from the Parliamentary Joint Committee on the National Crime Authority, the so-called Cleeland Report (1989), presents the most recent information on, inter alia, "the scope and nature of the trade in illegal drugs in Australia", and "the social costs of the present policy of prohibition of the production, possession, use, supply, importation and exportation of illegal drugs". We shall critically review the Committee's findings with regard to heroin and some of the Committee's recommendations.

2. The Economics of Illegal Markets

2.1 Supply

2.1.1 Customs and Smuggling The importation of heroin is prohibited, yet the prohibition is ineffective. There is no evidence that the efforts of the Custom Service and the Police Services are stemming the flow of the illegal drug or reducing the extraordinary incentives for unscrupulous entrepreneurs to enter the illicit trade. The then head of the joint federal/NSW Joint Task Force on Drug Trafficking, Detective Chief Superintendent Jim Willis, stated that only four to seven per cent of imported illegal drugs were being interdicted (Davies 1986, p.133). More recently, the Australian Federal Police estimated that no more than 10% of heroin imports are being intercepted (AFP 1988).

To this author it seems unexceptional to argue that when the expected loss of heroin is highest—both because the risk of detection is highest and the quantities are largest: when the drug is being smuggled across national frontiers—its concentration or purity is highest: in

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1. Indeed, last century the opiates held a further, strategic aspect, when the Chinese attempted to halt the flow of opium from India in action which resulted in the Opium Wars.

order to reduce its volume and hence the risk of detection. Evidence in Marks (1989) suggests no change in the purity of the smuggled drug—between 75% and 90%—over the period 1981 to 1988, which suggests that the risk of detection by Customs has not fallen. It may have risen. Purity of 80% or 90% does not leave much scope for further significant reduction in volume, and the cost of further refining in the country of origin may be excessive.

2.1.2 Police Enforcement A more realistic goal is to attempt to tighten domestic law enforcement and to increase the effective operating costs (including risk) of the domestic distribution networks. This will become more important when domestic production of "designer drugs" means that customs seizures are even less effective at preventing the opiates from reaching the final consumers. One such drug, 3-methyl fentanyl, is already sold as a cheap substitute for heroin in the U.S. (Stimson 1986). Moore (1977) has the most comprehensive study of the structure of illicit heroin-distribution systems and of the structure of narcotics-enforcement efforts. He argues (p.52) that the most likely structure for the distribution system is one of monopolistic competition, which, as well as maximising profit while minimising the risk of detection, could most efficiently (a) restrict the total supply of heroin to maintain prices, (b) regularly and reliably supply an amount of heroin fairly close to the realised demand, (c) manipulate upstream supply conditions in the system with a minimum of explicit planning and negotiation, and (d) adjust to errors in supply with a minimum of communication and activity. Such a structure requires product differentiation and barriers to entry. The illegality of the trafficking, possession, and use of the commodity provide these requirements: users on the street, for fear of arrest and of being "ripped off" by the dealers given their lack of knowledge of the quality of the heroin, will tend to do less "comparative shopping" than buyers in a legitimate market; and the distribution network can buy barriers to competitors' entry from corrupt law-enforcement officials, and use its own violent methods to deter competitors (Schelling 1967). Marks (1989) reports a unique survey which corroborates Moore's assertions about the structure of illicit ditribution networks for Australia.

Gross profits of such distribution networks include (a) the firm's opportunity cost, (b) a risk premium, and (c) a monopoly return. We might expect that increased enforcement of the prohibition would raise the price of street heroin by increasing the risks and the operating costs, as well as by reducing the supply of heroin, but, *so long as the demand is price-inelastic,* a higher price will increase the social cost of heroin use, as discussed below. Moreover, given the probable structure of the distribution system, effective enforcement might lead to increased competition as networks became less able to protect their market segments, with consequent lower street prices and increased sales (see Elliott 1982, p.41). Only if the demand for heroin were price-elastic would a policy of increased enforcement be effective, but at a cost which the community has so far baulked at.

What is the cost of police efforts at enforcement? The Cleeland Report (1989, p.89) reported that in 1988 there were 200 Australian Customs Service officers, 350 Australian Federal Police officers, 170 New South Wales Police officers, and 72 Victoria Police officers engaged exclusively on drug detection work. Moreover, the National Crime Authority was established in 1984, and the recommendations of the Williams Commission (1980) have been acted upon. Davies (1986, pp.41–48) reported that in 1978 the 46 members of the NSW Drug Squad made 39 arrests. The Cleeland Report (1989, p.x) remarks that "the law-enforcement agencies have been more successful than they have been given credit for in making seizures of drugs".

But if the structure of the distribution network has responded to the increased law-enforcement efforts of the past decade, this has not had the desired effect of staunching the flow of heroin to the streets, as the Australian Federal Police observed in their submission to the Cleeland committee. Moreover, when we analyse the potential returns to dealers at two different levels of the network—Wholesale and Ounce Dealers—the return on capital has risen by at least 20%. Table 1 presents the maximum value added at the three dealer levels of Importers, Wholesalers, and Ounce Dealers, in New York 1970–74, Melbourne 1981, and Sydney 1988.

	Melbourne 1981	Sydney 1988	New York City 1970–74
Importers	1400%	1550%	660%
Wholesalers	63%	72%	90%
Ounce Dealers	103%	120%	133%

TABLE 1. Maximum Value Added as a Percentage of Purchase Costs

Source: Marks (1989)

The detailed calculations are based on maximum, gross figures; that is, no accounting has been made for possible leakage by, for instance, own consumption or gifts, and the only costs included are those of the purchase of the drug. None of the activities need take more than four weeks to complete. Although these results come from surveys conducted using quite different techniques, in different cities, over a period of eighteen years, there is a strong similarity in the pattern and magnitudes of the returns in the three surveys.

The most striking number is the potential return of 1550% to importers in 1988 Sydney. Of course, the costs of transporting and smuggling the drug will reduce this return somewhat, but the attraction of the return to any unscrupulous entrepreneur is obvious. Necessary for the extraordinary returns made by illicit importers is the large gap between the low prices in the producing country and the high prices in the consuming country. Dobinson and Poletti (1988, p.93) estimate that the price in Hong Kong for 80%–90%-pure heroin is between $12,000 and $15,000 per kilo, and Stimson (1987) reports that heroin in Pakistan is available for export at about £3,000–£4,000 a kilo. If the Cleeland Committee's figure of annual imports of 350 kg of 80%-pure is taken (Cleeland 1989, p.45), then the annual import bill for heroin is no more than $5,250,000. Even if the higher estimate of Dobinson's (1989, p.1151) of 440 kg is used, the import bill would still only total $6.6 million.[2]

Given the lack of reliability of data about the illicit industry, perhaps all we can say is that despite the increased effort of law enforcement against illicit drug distribution there is no evidence of the dealer's life between the poppy fields and the street having become any less

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2. The *Sydney Morning Herald* in its editorial of May 9, 1989, misquoted this author in the statement that by supplying Australian heroin users from the Tasmanian opium farms Australia could save "perhaps $1 billion a year".

attractive. Of course, the emergence of HIV infection among the population of intravenous drug users (IVDUs) means that the financial returns do not tell the whole story. It seems clear that any serious attempt to reduce the social costs of heroin use must focus on the demand side.

2.2 The Size of Heroin Use in Australia

Despite the increasing interest in this issue in Australia in recent years, and the expenditure of many millions of dollars of taxpayers' money on parliamentary inquiries and royal commissions, there are no reliable estimates of either the numbers of heroin users or the social cost of their use. There have been virtually no empirical studies of the issue. A document prepared for the "drug summit" by the National Information Service on Drug Abuse (1985) concludes that "there has been little change in overall levels of the legal use of narcotics in the last ten years." Moreover, "the use of methadone increased considerably overall soon after methadone syrup was made available for the treatment of addicts in 1974,"—other forms of methadone had been available earlier—"but the level of use has been affected by changes in State policies." The document states that there was no reliable evidence to allow an estimate of the number of heroin users, and that no firm estimates could be made of the quantities of illegal drugs used, including heroin. Indeed, there are not adequate data, even at State level, on the numbers of people using drug treatment services, as an indicator of overall drug use. In the absence of such data, the size of the problem can only be deduced from health and crime statistics.

A recent NACAIDS study concluded that 5% of adult Australians had injected [illicit] drugs at some time in their lives and that 2% had injected over the twelve-month period of 1986/87 (NACAIDS 1988). For an adult population of 12 million, this corresponds to 600,000 who have ever injected, and 240,000 who have recently injected—figures ten times larger than those quoted below, perhaps corresponding to a large population of occasional drug users as found in the U.S. by Zinberg (1979) and in Australia by Cleeland (1989) and Marks (1989).

These occasional users are in general people who can control their use of the drug, perhaps going on an occasional binge, but no more becoming an "addict" than the social drinker becomes an alcoholic. The public image of the heroin user—recently reinforced by the lurid anti-AIDS advertisements—is of the derelict junkie shooting up in the gutter. The occasional users, since they have not in general come to the attention of the police or the medical services, do not conform to the picture of the "typical" heroin user, and indeed have, until recently, been overlooked by the professional commentators. But since they control their heroin use, they impose no direct cost on the taxpayers, unlike the "full-time addicts" or narcovores. In this case, what reason is there to be alarmed at their numbers or drug use per se? Concern, if any, might be justified if their casual use and needle-sharing posed a public-health risk.

The amount of heroin seized by federal agencies has fluctuated, but in 1983 was five times the figure for 1978. Criminal charges associated with "narcotics" peaked in 1978, as did charges associated with heroin specifically. What can we make of these figures? None is an ideal proxy for illicit drug usage: deaths may well be related to cumulative usage in previous years; the amount of drug seized is a function of the size of each shipment, the number of shipments, and the level and effectiveness of law-enforcement activity; and numbers of criminal charges also reflect the numbers of users, the amount of trafficking, and the level and effectiveness of law-enforcement activities. There has been a steady increase in four indicators: NSW heroin users (Sandland's method), morphine-type dependency deaths in NSW, opiate-

related convictions in NSW, and Australian opiate-related deaths. All tripled over the period 1980–1985 (Marks 1990). The series which has risen most smoothly since 1978 is that for opiate-related deaths. On the basis of this series, and given the confounding influences on the other series, we shall work with a figure of 20,000 regular users of heroin in 1983.

Research carried out for the Cleeland Committee reveals that the total number of heroin addicts is up to 12,000 Australia-wide, with no more than 3,360 addicts actively using at any one time (Cleeland 1989, p.ix). This is an order of magnitude less than earlier estimates (Marks 1990), but the Committee argues that these figures are consistent with the limited avenues that heroin users have to finance their drug use. We would argue that the large number of occasional users, who use small amounts of the drug and can therefore afford, in general, to pay a higher price for their less frequently made purchases, might well be used by the user/dealers to finance their habits, so that the limited avenues for other income may not be the barrier to larger numbers that the Committee asserts. If the Committee's recommendations for better data collection are acted upon, this uncertainty may be resolved.

2.3 Managing Demand

"Demand" policies can fall into three categories: (1) deterrents, (2) cures, and (3) continuing programmes. Deterrent policies attempt to dissuade the individual from becoming, or continuing to be, a user, either by the threat of the consequences of the illegality of the possession and use of heroin, or by threat of the ill-health, suffering, and eventual death that are said to befall the addict. Cures attempt to treat the user so that he no longer wants or needs the drug, but becomes a socially valuable number of society, and is free from any illicit drug use. Continuing, or maintenance, programmes attempt to enable the user to lead a reasonably normal life, while undergoing continuing treatment or care, with no certain goal of eventual "cure," that is, eventual freedom from some drug use or treatment. This is equivalent to insulin maintenance for the diabetic.

Rather than attacking the "means" of the heroin problem—the supply side of the illicit market—demand policies address the "ends," the individual demands for the drug which in aggregate result in the social costs of illicit drug use and addiction. If the demand for heroin were zero, there would be no heroin problem.

2.3.1 Deterrents As Moore (1977) points out, in enforcing narcotics laws there is a dilemma common to all negative-incentive systems. To the extent that people notice and respond to the incentives, a desirable result occurs: people are deterred from using heroin. But, for the people who do *not* respond and who begin using heroin in spite of the incentive system, punishment entails a deadweight loss: the policy is to deter, not to punish; unless punishment will result in future deterrence, there is little to be gained by further action. If only a modest disincentive is sufficient to discourage users, then much can be done to dampen the adverse consequences of the incentive system on current users.

The possibility of a long prison term has proved to be little or no deterrent at all. Indeed, as Wardlaw (1981) argues, a substantial percentage of Australian drug offenders have been convicted for criminal offences prior to their first drug offence. It is reported that 80% of inmates in NSW prisons have committed drug-related crimes, and that half of the inmates are drug addicts; further, that drug use is implicated in half of the break-enter-and-steal crimes committed in NSW and in 63% of Victorian house burglaries, and that 46% of the armed robberies in NSW are committed by drug addicts (Marks 1990). Moreover, attempts to

convince non-users of the deleterious effects of addiction have failed, and may even have contributed to the allure of heroin: the irony of this is that unadulterated heroin properly administered causes few if any side effects. On the other hand, public appearances by apparently "cured" addicts, with their tales of redemption from the sin of heroin use, may fascinate non-users and suggest that giving up heroin is easy. The 1985 "drug summit" in Canberra apparently put its faith in proper education, with $20 million a year for three years committed for education and rehabilitation programmes by the Federal Government. Blunt honesty will be needed in education campaigns, especially those directed at addicts.

For an effective policy of deterrence, better understanding of the causes of heroin use is essential. In a comprehensive discussion of possible psychological, sociological, and pharmacological/physiological causes of heroin use, Lennings (1981) is unable to isolate any particular cause: he concludes that a "structure theory" (in which heroin use is a response to the psychological aspects of the drug routine) is "most useful." We should emphasise that the subjective experience of any drug user is a function of the set (expectation) and setting (environment) of the user, as well as of the pharmacology of the drug itself (Kaplan 1983, p. 12), to the extent that clinical tests may not reveal the appeal of the drug on the street.

We are caught on the horns of Moore's dilemma: society has prohibited heroin and established strong direct deterrents (the criminal-justice system) to enforce this, which have resulted in strong indirect deterrents (the high prices, the sickness, the possible death). But deterred sufficiently they have not. Is the answer to turn the screw tighter, or is it to look for radical alternatives?

2.3.2 Treatments to "Cure" Addiction It is not entirely clear what the goals of "cure" treatment should be, although for the addict to stop using heroin, to stop committing crimes, and instead to find a job, to stabilise his personal life, and to become a useful and productive citizen are commonly stated goals (DeLong 1972, p. 178). To judge to what extent alternative "cures" have been successful is difficult, not least because of the lack of data; what data there are have tended to concentrate on whether the patient has stopped using heroin, with any lapse back into heroin use spelling failure. But such focusing on one indicator of success overlooks the fact that after treatment an addict may hold a job, support a family, refrain from other criminal activity, and yet still occasionally use heroin; or his crime rate might fall; or his physical health might improve although otherwise his behaviour remains unchanged; or he might swap his heroin habit for alcoholism.

We shall classify alternative "cures" into four categories:

1. *Detoxification*—the addict is helped through withdrawal from the drug in hospital or in a clinic, and then released. (Earlier this century, withdrawal was thought to be caused by an accumulation of poisons in the body, according to Dole 1980).
2. *Civil commitment*—this has been extensively used in the U.S.A.: the addict is given a choice by the court: gaol or commitment in an institution to help him overcome his addiction. The Drug and Alcohol Court Assessment Programme (DACAP) in Sydney is probably the closest Australian equivalent: before passing sentence on drug offenders, three petty-sessions courts can send the offenders for six week's treatment (including detoxification) to the Bourke Street out-patient clinic, and receive a probation officer's report for sentence (Bush and Scagliotti 1983). In its present form the DACAP began in

1980.

3. *Therapeutic communities*—such as Odyssey House and We Help Ourselves in NSW, which operate on the basic assumption that drug use is caused by a "character disorder" (Luger 1983, p.30) or an "addictive personality." They treat drug users with encounter group therapy in a drug-free "therapeutic milieu." The communities have high rates of initial rejection and attrition, and treatment can take up to several years of confinement.
4. *Outpatient abstinence*—programmes which bolster continued abstinence by counselling and group therapy while the addict is living at home.

Cures have not proved very successful, even when measured only by the single criterion of heroin abstinence. Robins (1979) found that the likelihood of cessation of opiate use amongst Vietnam veterans was the same for those who had entered treatment as for those who had not. Nonetheless, the medical model is very influential. Marks (1974, p.77) reviews data on U.S. programmes, which can be summarised as follows:

1. Detoxification programmes—with an abstinence rate (for one month or more) of below 5% among the 10–20% of addicts who "graduate"—have virtually no long-term successes. (There is a minor benefit in that addicts lose some drug tolerance after detoxification, and so need less heroin; by the same token the street user is more at risk of overdosing.) To use Milner's words (1976, p.551) detoxification is only a "palliative procedure," with a cost only one-tenth that of hospital residential treatment.
2. With a graduation rate of between 10 and 100%, civil-commitment programmes seem to be slightly more successful: up to 30% of graduates are abstinent for one or more months. But the cost of between six months' and five years' institutionalisation and aftercare is very great. Moreover, there is evidence of a marked rise in the use of other drugs among the "successes." The DACAP programme boasts that gaol sentences among its graduates are only a quarter as likely as for non-DACAP criminals, whereas therapeutic-community treatment is seven-eighths as likely (Bush and Scagliotti 1983, Table 5), but its goals are extremely unclear, with no long-term follow-up.
3. In the U.S.A., only between 10 and 50% of those who want to join therapeutic communities are considered "acceptable" and fewer than 15% "graduate" (participation in some programmes is considered semi-permanent), although abstinence is very high (90%) among these few "successes." But the cure does not come cheap: from eighteen months to two or even five years at $6,300 per year in 1983 (Luger 1983, p.30), although this cost is less than a quarter of a year's gaol ($31,000 in 1985) and less than a seventh of a year in hospital, as Luger points out. But it is clear that for most addicts, therapeutic communities are not the answer.
4. Outpatient-abstinence programmes have low success rates, and high drop-out rates. This marked lack of success may explain the lack of further data on costs, length of treatment, and abstinence rates.

In conclusion, we can state that no effective "cure" for heroin addiction has been found—not rapid or gradual withdrawal, not long terms of imprisonment, not civil commitment, not therapeutic communities. Nor should this surprise us: despite the recent advances in neuro-pharmacology and the discovery of endorphins—naturally produced analgesics in the body (Akil 1977)—medical science is a long way from unravelling the enigma of heroin addiction. It is said by staff who work with addicts that they must *want* to solve their day-to-day problems

without the use of heroin; heroin addicts in Australia either die or grow up (Williams 1980, p.C21). This "maturing out" is examined by Waldorf and Biernacki (1981), and is also seen in a longitudinal study of U.K. addicts from 1968, when the Clinic system began, to 1976 (Stimson and Oppenheimer 1982, p.244). As Kaplan (1983, pp.36–7) argues, the rarity of addicts over forty is not because all die younger; rather, many have stopped using heroin, at least regularly and frequently. After summarising previous "natural history" studies of heroin users through time in both the U.S.A. with illicit heroin and the U.K. with legal heroin, Wodak (1985) concludes that a steady 2–3% of users become abstinent and 1–2% die or become institutionalised each year. A recent study of "desistance" (Biernacki 1986) leads to some unsettling conclusions for those heavily invested in the criminal-justice and medical models of addict management, which we explore below.

2.3.3 Continuing Programmes By continuing programmes we mean programmes in which the user is continuously treated with a drug, usually an opiate, whether natural or synthetic (heroin, methadone, morphine, dipipanone, etc.). Roughly, there are three forms of continuing programme (Marks 1974), depending on the degree of medical supervision. First, maintenance programmes in which the drug and dosage are determined by medically qualified personnel and in which the doses are administered under close medical supervision. We shall consider two versions of this form: *methadone maintenance,* examples of which have been operating in Australia since the late 1960s, and which are to be found in the U.S.A. and Britain, as well; and *heroin maintenance,* an example of which was the treatment of registered addicts in the British Clinics immediately after their establishment in 1968. [The proportion of addicts receiving prescribed heroin fell from 54% in 1970 to 21% in 1978, (Stimson and Oppenheimer 1982, p.100).]

Second, programmes in which the drugs and dosage are determined by a physician, who supplies the addict with a prescription to be filled by a pharmacist and administered by the addict. Again, we shall consider two versions of this form: first, *prescription methadone,* a situation which applies in Australia (under the National Policy on Methadone authorised physicians may prescribe maintenance doses of methadone syrup for drug-dependent patients) and in Britain (where methadone can be prescribed for addicts by any physician) (Williams 1980, pp.C26–33); and, second, *prescription heroin,* which was available in Britain before 1968.

Third, there are programmes with no medical supervision. Included in this category are the highly controversial policies of *freely available methadone* and *freely available heroin,* one example of which was the pre-First World War situation, when there were no restrictions on the sale or possession or use of heroin in Australia, Britain, and the U.S.A. There has never, to this writer's knowledge, been a time in which methadone was as freely available as was pre-1914 heroin. Consequently, there are no empirical data on the freely-available-methadone policy.

The pharmacological comparisons of morphine, heroin, and methadone are well known (see Marks 1974, p.78, and Kaplan 1983, pp.5–8, for more details). The drugs vary in several ways, which affect their apparent attractiveness (for the user and for the maintenance programme), their abuse potential, and their effects on the user's day-to-day living patterns. The major elements of variance involve the time before onset of withdrawal and the method of administration. Whereas all three of the drugs can be administered intravenously, heroin loses much potency when administered orally, since the liver neutralises most of the drug (Jaffe and Martin 1980). Oral methadone peaks after four hours, with a duration of 24 hours' slow

decline. Injected heroin peaks in less than 30 minutes, with a duration of between four and six hours and a rapid decline; morphine is almost as fast (Marks 1974, p.78). For these reasons, programme administrators have preferred to supply methadone (oral, no euphoria) rather than heroin (injected, euphoria): only one dose a day is needed to stabilise the user, without heroin's "disadvantages" of euphoria versus premature withdrawal.

There are few data for prescription methadone or methadone maintenance. But, in the only controlled trial to date to evaluate (injectable) heroin maintenance against (oral) methadone maintenance, Hartnoll et al. (1980) found no differences between the two in terms of employment, health, or consumption of non-opiate drugs; there was, however, a lower dropout rate with heroin maintenance (26%) than with methadone maintenance (71%) after twelve months. Another criterion for comparison is the crime rate: there was a slightly higher level of criminal activity among those denied heroin but offered oral methadone, but this is partly explained by a tendency for this group to have been more criminally active at intake.

Prescription heroin occurred during the forty years in Britain after the Rolleston Committee and before the Clinic system was introduced. Data are scarce and unreliable, but a study by Zacune (1971) of 25 Canadian addicts who immigrated to Britain in the early 1960s in search of cheap, pure heroin suggests a fall in the crime rate of between 30 and 90%; heroin was prohibited in Canada.

There has been criticism of methadone maintenance: first, there is opposition from some groups in society who deny that methadone is in any sense a treatment for opiate addiction; they see use of methadone as no better than use of heroin, but for its legality. Second, there may be "leakage" of legal methadone onto the street, the so-called "grey" market (Preble and Miller 1977). In the mid-1970s, Australia had the second highest per-capita consumption of methadone after the U.S.A., and in 1977 the Commonwealth restricted methadone prescribing. On the other hand, oral methadone has undoubted value if it reduces the user's reliance on the needle.

How is the money for the habit obtained? In the U.S.A., surveys have shown that over half of the user's weekly income may come from the "victimless" crimes of selling to other users, prostitution, and gambling; most of the balance may come from the proceeds of acquisitive crimes, and only a small amount from crimes against the person (Marks 1974, p.70). As Elliott (1982, p.23) points out, the need to engage in criminal activity to finance a heavy heroin habit is, in itself, a deterrent to use, so that users may well be accomplished criminals *before* they start using heroin. Wardlaw's study of the criminal records of 1,314 randomly chosen Australian drug offenders led him to conclude that the tendency for the drug habit to *cause* the user to embark on a criminal career had been exaggerated (Wardlaw 1981, p.45). Dobinson and Ward (1985, p.48), in their study of 225 property offenders in NSW gaols, found that, although 72% reported a first instance of property crime before the first use of heroin, only 42.6% reported that they progressed to "regular" crime before they became regular heroin users. They also found that as the rate of heroin consumption increased, so did the amounts spent on the drug and the amounts of money from property crime. Their findings agree with those of Brown and Silverman (1974), Silverman and Spruill (1977), and Parker and Newcombe (1987) that there is a broad relationship over time between the number of regular users—addicts—and the property-crime rate, and suggest that another of Brown and Silverman's findings—that there is a short-run positive correlation between increases in the

price of heroin and increases in property crime—might also apply in NSW.

3. The Social Costs of the Prohibition

3.1 Drug-Related Crime

As many authors have argued, the policy of prohibition restricts the supply of the illicit drug, which in the face of the inelastic demand for heroin results in high prices, which provide the incentives to flout the law by supplying, and which also result in an increase of crime by the drug users, apart of course from their illegally possessing and using the illicit drug. Evidence of the profitability of supplying was presented above, although the difference between the buying price of a kilo of 80%-pure heroin in Hong Kong ($12,000 to $15,000) and its landed price in Australia ($200,000 to $250,000) may be evidence enough.

Evidence of the effects of the demand for heroin on crime is summarised in Dobinson and Poletti (1988), who cannot clearly resolve the issue of whether heroin use causes additional crime, or whether heroin use is higher among people who would anyway be criminals, or whether both heroin use and crime are caused by a common antecedent. While data from all three of their studies (of imprisoned property offenders, of a group seeking treatment for drug dependence, and of a group of heroin user/dealers active within the Sydney community) demonstrate that property crime amongst these people appears to be predominantly motivated by the desire to support a level of heroin consumption, other factors may be involved. Given this, it would probably be incorrect to assert that a reduction in the price of heroin to a small fraction of its street price would entirely eliminate the crime now committed by drug users, some of whom would undoubtedly have become criminals anyway, and some of whom have almost certainly been inducted into property crime by their illicit-drug-using associates, and who may not readily stop.

The burglaries and thefts associated with drug use are indirectly paid for by all residents of Australian cities, through increasingly high insurance premiums. Nonetheless, the crimes associated with illicit drug use are serious, and not simply property crimes. Controlled supply of heroin of known purity and strength would eliminate the motivation for drug-related corruption in law-enforcement agencies, which unfortunately has been occurring (Cleeland 1989, pp. 82–84), and low prices would eliminate the wherewithall for this corruption.

As this discussion suggests, the consumption of heroin imposes significant costs on the rest of the community, including the involuntary redistribution of the addicts' incomes from acquisitive crimes, and the deadweight loss associated with the imperfect "fence" market. The community spends money to prevent crime and, later, to apprehend, try, punish, and rehabilitate criminals. These "social costs" also include medical expenses, forgone productivity, and premature deaths of addicts. The National Information Service on Drug Abuse (1985) reported that in 1983 opiates were involved in 155 cases of accidental deaths and in 41 cases of suicide; the report estimated that 7,560 years of life were lost in 1983 due to deaths caused by opiates. Finally, the unquantifiable but nonetheless real costs of fear and anxiety, avoidance of normal activity, and disruption of community life must not be ignored.

Other social costs are more sinister. Packer (1972) lists the existence of a profitable black market which leads to the consolidation of organised crime, undesirable police practices including corruption (Kaplan 1983, p. 97–8), the regressive burden on the poor who live in areas of high addiction, and the pressures on doctors who might legitimately want to prescribe

these drugs. Several seminars at the Institute of Criminology, University of Sydney Law School, have focused on the existence of corruption in the criminal-justice systems of Australia (Stewart 1984, Cunliffe 1985, Staples 1985, Wardlaw 1986).

3.2 Direct Costs

The Cleeland Report (1989, p.76) estimates a direct cost of $123.2 million for the prohibition of several drugs (including cannabis, cocaine, and amphetamines, as well as heroin), a figure which includes "not only the operational costs of the law enforcement agencies, but also the costs of the prosecution and defence lawyers, the costs of court time and staff involved in the hearing of the cases related to drug offences, and in more serious cases the costs of imprisonment". It does not include the law-enforcement costs in relation to offences committed by illicit-drug users in order to finance their drug consumption. It does not include capital costs (estimated at about $200,000 per high-security prison cell). Nor does it include the crowding costs and delays occurring in the courts because of drug-related cases (NSW Bar Association 1989).

The figure of $123.2 million is a direct cost to Australian tax-payers, and is a measure of the cost of the resources being directed at attempts to enforce the prohibition which could otherwise be employed elsewhere, or which could be returned to tax-payers in the form of lower taxes, if the prohibition were replaced by regulation. As the Committee notes (p.77), "Licensing cases, prosecutions for sale of alcohol to minors and prosecutions for evasion of State taxes on tobacco take up very little of the courts' time and rarely result in anyone going to gaol".

3.3 Health Costs

As we have remarked above, the AIDS pandemic has provided the impetus for many groups to question their support of the prohibition of heroin especially, but of other injected illicit drugs as well. Because the effect of needle-exchange schemes is limited, AIDS experts have proposed that "a pilot project should be established to evaluate the provision of injectable substances to IVDUs in a single-use syringe in carefully selected cases." (NACAIDS 1988, para.27). The social costs associated with AIDS are difficult to put into figures, but have been conservatively estimated to be $22,218 million (Coe 1987).

It may be that such drug-taking is merely the symptom of a more profound malaise in society, but the urgency of the need to slow or halt the spread of HIV infection means that many people have accepted that treating the symptom—if that's what drug-taking is—is the only public-health response, even if, at the level of the individual patient, that would be the wrong way to go about treatment. It might also be that the focus should be on needle-sharing, since that is the means of the spread of the infection, but, again, if relaxing the prohibition and providing pharmaceutical-quality drugs of known purity and dosage in one-use syringes under some form of regulated supply has a marked effect on the spread of disease, then public-health concerns urge that this step be taken, perhaps after a suitably designed pilot programme.

There is evidence that a programme of prescription drugs in Liverpool (where prescribing them is legal) has checked the spread of HIV infection, certainly when compared with Edinburgh, where, in the absence of any doctors prepared to prescribe, HIV infection among IVDUs grew from nil in 1983 to 51% in 1986 (Cleeland 1989, p.84).

The common thread in this is that changing people's behaviour is much more difficult than altering the environment in which they live, so that their actions are less harmful to

themselves and to others.

3.4 High Prices and Administration of the Drug

The high prices of the illicit drugs (a consequence of the prohibition and attempts to enforce it) have a further effect, as Marks (1974) and others have remarked. In Vietnam and in Hong Kong, when increased enforcement resulted in higher prices, users were observed to change their method of administration from snorting and smoking to the more cost-effective method of IV injecting, with the concomitants of greater risk of infection through shared needles, as well as other risks of disease (collapsed veins, thrombosis). There is some evidence, as Marks (1990) discusses, that when the price falls, this is partly reversed, but, once over the hurdle of feelings of repulsion towards self-injecting, users may not always want to revert to other, less effective methods of administration.

4. Policy Issues

4.1 Australian Attitudes

Two recent surveys (Irving Saulwick and Associates 1985, 1988) provide evidence of changing Australian attitudes towards heroin addicts. The 2,000 people surveyed in 1985 were asked which of three possible courses of action was "the most important as far as they were concerned." The suggested courses were:

(1) to provide more police resources and heavier penalties for those involved;
(2) to provide more treatment centres and help for heroin addicts; or
(3) to provide free heroin or methadone for registered addicts.

We can identify the first with the criminal-justice approach, the second with the treatment approach, and the third with the social-control approach discussed above. The responses were: (1) 55%, (2) 39%, (3) 8% across all respondents. Across sub-groups of respondents the criminal-justice approach was most popular (62%) with Liberal Party voters, and least popular (37%) with the 18–24 year-olds. Popularity of the treatment approach varied inversely with popularity of the criminal-justice approach, while the popularity of the social-control approach remained low, across all sub-groups.

No question was asked about decriminalisation of heroin use in 1985, but the 1988 survey focused on this issue: "It has recently been suggested that in an attempt to reduce crime and the spread of AIDS, registered heroin addicts should be given free heroin under supervision. Others suggest that this will not solve the problem and will lead to more addiction. From what you know at the moment, would you support or oppose the supply of free heroin under supervision to registered addicts?" Of the 1,000 registered voters polled, 35% said yes, 60% said no, and 5% were undecided. Amongst all sub-groups (by age, sex, politics), support in favour was greatest (41%, 57%, 2%) amongst the 18–24 year-olds, and least (25%, 69%, 7%) amongst the 55+ age group. Will the growing severity of the AIDS epidemic provide the impetus for us to accept that the prohibition has failed?

As the Saulwick surveys showed, Australian views of the addict as a criminal rather than an ill person—at least to the extent of preferring to increase the pressure of the criminal-justice system on him rather than to cure him or to attempt to reduce the social costs by providing free heroin—appear to be changing, perhaps in response to the AIDS epidemic. Since it has been

clearly established that, taken in proper doses, heroin has few if any permanent physical or psychological effects (apart from addiction itself), some have argued that most addicts would function normally and lead every-day lives if given a steady supply of good-quality drugs of known concentrations.

4.2 A Framework for Policy Analysis

Any attempts at solving "the heroin problem" must be judged by their ability to deal with both aspects of the issue: the individual users and society. It is not immediately obvious what the objectives of possible solutions should be. Sadly, the prohibition is not effective. Should we say that this lack of success is *not* evidence that the policy of prohibition was always doomed to failure, but rather that the policy has been applied insufficiently rigorously, and modify it accordingly? This, after all, has been the response of several of the inquiries and royal commissions, the Williams Report (1980) in particular. Or should we see the lack of success of the prohibition, despite our best endeavours to date as a society, as evidence that the policy and perhaps even the aims underlying it need wholesale revision? We argue that the time is ripe for a wholesale revision of goals and policies, of ends and means.

The framework we shall use is that of economic efficiency, in which costs and benefits are equated at the margin (Culyer 1973). We argue that the social costs of "the insanely expensive and damaging" (Elliott 1982, p.43) policy of prohibition far outweigh the social benefits of the policy. We have listed possible costs to society above. The costs to the individual user are not so easily handled, but it can be argued that the attempted prohibition has severely increased these costs as well. They include: ignorance of the purity and strength of the street heroin, the risk of apprehension and gaol, and the risk of infectious diseases from sharing needles. To reduce the public-health risks, governments have instituted needle-exchange schemes for civilians, but not yet for prisoners. This shows the way forward: with a supply of legal, low-cost heroin, these costs would largely disappear for the existing user.

Moore (1976) makes the point that few could object to the strategic objectives of reducing the number of heroin users and/or improving their behaviour and condition. If their socially and privately costly behaviour were improved, or if there were fewer of them, or both, then the heroin problem would be less severe. Although the heroin user's behaviour may be affected by his consumption of the drug itself, by his skills, habits, and attitudes before the onset of heroin use, by the set of opportunities accessible to him, and by his participation in supervised programmes, of most profound impact on the heroin user's behaviour is the prohibition. As we have seen, because of this the user faces high prices, heroin of unknown purity and potency, and of irregular supply. Consequently, the user's autonomy is reduced, he may commit more crime, and his risk of premature death is increased. Moreover, he is liable to arrest and conviction *merely for being an addict,* which brands him for life.

Moore argues that if illicit heroin consumption is the problem, then eliminating heroin use entirely (whether by effectively enforcing the supply side prohibition, or by eliminating the demand for heroin use) is a policy alternative to legalising all heroin use. To advocate legalisation is to believe that legalisation is easier or less costly than elimination *and* to believe that legalisation will not change other objectives of society. Australia has tried elimination of heroin use with the prohibition. It has been a costly failure. Now is the time to consider a radical departure: decriminalisation of the market for heroin.

4.3 Prohibition or Regulation?

In response to the social costs outlined above, seven different responses have been suggested (Cleeland 1989, pp.91–116):

- tougher penalties to "finish the job" and entirely eliminate the use of the illicit drugs;
- de facto decriminalisation, in which relaxation of the prohibition against personal use and possession of the drugs occurs, while maintaining the prohibition on commercial growing, manufacture, imports, exports, and sale;
- de jure decriminalisation, which avoids possible abuse of discretionary powers possible under the de facto scheme, but which gives the State no rôle in consumer protection;
- prescription of currently illegal drugs to registered drug users, along the lines of the U.K. experience, at least after the Clinics were established in 1968;
- licensing drug users as we now license firearms owners, to enable them to purchase over-the-counter drugs, while at the same time being monitored;
- commercial supply of the illegal drugs, using the regulatory apparatus already in place to control the manufacture and sale of alcohol and tobacco; and
- government monopoly supply, perhaps through outlets similar to the State and Provincial alcohol stores in a majority of the United States and in many Canadian provinces, with mandatory labelling of purity and strength, with no advertising or price promotions.

It is significant that this list does not include any attempt to "cure" the addicts of their addictive habits, although the medical concern is evident through the fear of the spread of HIV infection.

For over fifteen years policy analysts have been asking what the goals of the prohibition of certain drugs are (Marks 1974, 1990; Moore 1976, 1977; and others). Is it to reduce the numbers of users at any cost? Has it changed—the first laws restricting the use of opiates in Australia were clearly anti-Chinese (Marks 1990). Whatever the reasons in the past—and the fourfold aspects of heroin outlined in Section 1 demonstrate the many possibilities—they are of little more than historical significance, although the images of drug users projected by the anti-AIDS television advertisements can have a strong influence on people's views and attitudes, so the past cannot wholly be overlooked. Instead, we should be asking: what should our laws and customs be attempting to achieve?

The Cleeland Report (p.91) suggests that an alternative aim of drug laws should be to minimise self-harm, with an emphasis on safe use, rather than the apparent punitive goals of the present laws, with their extremely high costs both for the drug user and, as we have seen, for society at large. In this paper we shall confine ourselves to a framework which considers the balancing of social costs and social benefits. We assert that on balance government regulation, as described below, is preferable to the lawless laissez-faire of the existing markets, in which the apparatus of the criminal-justice system performs as some kind of de facto price-setting mechanism.

Although the Cleeland Report argues that the previous estimates of the number of regular heroin users in Australia have been much too high, and presents lower figures of its own, the Report acknowledges the evidence that the numbers of regular users has been growing rapidly, as Marks (1990, Figure 1) suggests. Moreover, the Report accepts the recent evidence that there are ten occasional heroin users for every regular user, and that this army of "weekend

tasters" has remained unobserved because they have controlled their use, and so have not come to the attention of the criminal-justice system or the hospitals. Before outlining our regulatory proposal, we shall briefly examine others mentioned above.

4.3.1 Harsher Penalties This is more of the same. Perhaps better data would convince advocates of this approach that it has not worked in any society that we would consider free and civilised. If we were prepared to pay the direct and indirect costs associated with a tougher effort to enforce the prohibition, it would first result in higher prices on the black market. If dealers were incarcerated, the higher returns would attract additional unscrupulous entrepreneurs into the networks. The higher penalties would provide a greater incentive for drug dealers to attempt to subvert the criminal-justice system, and the higher prices would provide them with the higher returns necessary to achieve these nefarious ends. The evidence from New York City in the mid-1970s, when Governor Rockefeller instituted harsher penalties, is that the courts and prisons became overcrowded with drug offenders, and that there was a marked increase in the use of under-age youth by the distribution system, since the penalties for them were more lenient. Such an approach might provide the cynical politician with the appearance of success—in terms of more drug seizures and more people in prison—but the acid test must be a reduction in the flow of the drug to the streets, and there is strong evidence that the Australian electorate would not accept the curtailment of civil liberties sufficient to achieve this goal using these means. As Coombs put it in the NSW Bar Association evidence before the Cleeland Committee, "If you cannot keep drugs out of Long Bay and if you cannot keep drugs out of Mulawa, how are you going to keep drugs out of Australia?"

4.3.2 De Facto Decriminalisation This is similar to the "Dutch" system for soft and hard drugs, in which the prohibition against personal use and possession is relaxed, while commercial growing, manufacture, refinement, imports, exports, and selling remain illegal. Cleeland (1989, pp.98–99) provides evidence that, despite the disquiet of its EEC neighbours, the Dutch system has been successful, but argues that it would provide an implicit signal to potential users that the government approved of the use of these drugs. Of course, there are already mixed signals with regard to the legal drugs of alcohol and tobacco: their advertising is severely restricted, and their purchase and consumption are also controlled. A more telling argument, given Mr. Tony Fitzgerald's words at the beginning of this paper, is that allowing discretionary powers in the enforcement of the law is just asking for corruption of those with the power to exercise discretion, as he chronicles with respect of gambling and prostitution in Queensland.

4.3.3 De Jure Decriminalisation This avoids the temptations and pitfalls of the discretionary powers of the de facto decriminalisation, but Cleeland (1989, p.100) argues, convincingly I think, that it is more appropriate for cannabis, which can be consumed with a minimum of processing of the raw plant material, than it is for the opiates in general, and for heroin in particular. Nonetheless, several United States have decriminalised the use of marihuana, and it is interesting to note that the threatened flood of users has not eventuated, as figures quoted by Cleeland (p.101) demonstrate. (This is confirmed by the South Australian experience of its "expiation system for possession, cultivation, and private use of small amounts of cannabis by adults", [Sarre 1989].) Given the altogether different qualities of the two drugs, it is doubtful whether extrapolation from this experience to what might happen with decriminalisation of opiates would be valid, although opium poppies will grow throughout temperate Australia, the

Tasmanian opium farms being some of the world's most productive growers for pharmaceutical morphine.

4.3.4 Prescription Heroin The medical model of drug use is one that has survived most strongly in the U.K., where physicians retained the right to prescribe heroin and cocaine long after their professional colleagues had lost it in Australia and the U.S. Marks (1990) describes the evolution of the British experience, including analysis of what happened after the Clinics were established in 1968. Some have argued that it was an experiment that failed, but to close observers (Stimson 1987; Bennett 1988; Spear 1989) it was never an experiment but a continuous evolution of a way of dealing with a demand for drug use that was not dwindling, and which was not appropriate for legal controls alone. (We consider this further in section 5.1 below.) As others have argued, a system where heroin is only available to those who can demonstrate a prior addictive habit is one that provides a strong incentive to users not to remain occasional tasters.

Nonetheless, thinking observers (such as Hamer 1989) have argued that the medical approach of prescription drug supply is a better way of approaching the problem than our present system, and is not very different from the methadone maintenance programmes which are treating over 6,000 drug users in Australia today (Cleeland 1989, p.44). The most significant difference between heroin and methadone is that one is legally available and the other is absolutely prohibited. There are minor differences in other respects, such as the period to the onset of withdrawal, but a key difference is that addicts evidently prefer heroin to methadone, and often supplement their legal intake of methadone with illicit, street heroin.

The outcome of the National Health and Medical Research Council trials of providing IVDUs with injectible drugs on prescription, to remove any need to share needles (Foy et al. 1989) should answer the questions raised by Hawks (1988) and others about the practicality of the procedure.

4.3.5 Licensing Mugford (1988) has argued that a system of licensing drug users provides society with the assurance that completely unrestricted access to drugs is prevented, but at the same time removes the profit incentives of the black market, as we saw in Table 1 above. Under his proposal, over-the-counter drugs would be available at a low charge to licensed users, with some record kept of the extent of drug use for each user. To obtain a licence, one would have to follow a procedure similar to that for obtaining a firearms licence: be over 18 years old, have taken a course in drug education, and wait for a "cooling-off" period of some days before the licence was issued. Since the drugs in pharmaceutical form are of no threat to others, there is no reason—unlike a gun licence—why a criminal record would be a bar; indeed, given Dobinson and Poletti's data, preventing people who had a criminal record from becoming licenced drug users would be asking the black market to continue. For, if high-quality drugs were freely available, and if adults could relatively easily obtain drug-users' licences, then there would be virtually no demand for black-market drugs, certainly not enough to support the profitability that the surveys revealed in Table 1 above.

4.3.6 Commercial Supply Although one heard rumours of the tobacco companies having registered trade names suitable for marihuana products some years ago, society has been moving towards greater restrictions on the commercial alcohol and tobacco concerns, and politically it is virtually impossible to imagine a government opening up a commercial market for opiates in general, and heroin in particular, even if regulated to the extent that the supply of

alcohol and tobacco is now (no under-age smoking or drinking, the products sold only from licensed premises, restrictions on advertising, restrictions on places of consumption—even if there are health reasons for some of these restrictions, and, importantly for tax-payers, high rates of excise levied on their sale). Perhaps there is some memory of the turn-of-the-century patent medicines, virtually all of which included opiates, and none of which in the absence of pure food laws provided information of their ingredients.

4.3.7 A Regulated Supply As an alternative to the completely unregulated, completely illegal markets for heroin under the existing prohibition, this author and others have argued for a regulated market, in which drugs are made available through government outlets, which would ensure that drugs were clearly marked with their purity and strength, in which minors would be precluded, with no advertising, and which might provide the government with some excise revenue. Under this scheme, the price might have to be very low initially, in order to completely undercut the black market. Such a scheme would require Australian withdrawal from our international obligations under the Single Convention on Narcotic Drugs, but as a sovereign state Australia can legally institute such a scheme, given the political will. The Americans, always at the vanguard of drug control, might be unhappy, but there is growing realisation in the U.S. that their drug policy may be an unpopular export abroad (Nadelmann 1988). The most recent example of the U.S. exporting their domestic policy is the U.N. (1989) convention against drug trafficking, which Australia has already signed. If we ratify the convention, with accompanying enabling legislation, it will be that much more difficult to acknowledge the failure of the punitive, supply-side campaign against heroin use and to liberalise the availability of the drug.

The Cleeland Report (1989, pp. 112–13) puts the case for this scheme very well, in an analysis that attempts to balance the benefits of the existing prohibition in deterring new drug users and encouraging existing users to seek treatment, against its costs both to society and to the users themselves. Against any increase in (regulated) drug use:

> must be balanced the benefits which would flow from the elimination of the illicit market. Even if legal supplies were heavily taxed to act as a disincentive to widespread use, it would still be possible to undercut the illicit market, which would therefore die away. There would be savings in law-enforcement costs, in court time, and in the costs of imprisonment. At the same time, the proceeds derived from the taxes could be used to fund drug-education and -rehabilitation programmes. The costs to the community of drug-related organised crime, corruption and property crime would be eliminated. Crime and corruption would, of course, not disappear, but they would no longer be fuelled by the need to purchase drugs at artificially inflated black-market prices. The illegal drugs would no longer have the glamour of forbidden fruit. Heroin users would no longer suffer the consequences of injecting drugs of uncertain strength and purity, and barriers to their seeking medical treatment would be removed. No longer pariahs to mainstream society, they would come forward more readily for medical treatment, and could be targetted for education on such issues as the risk of sharing needles in the age of AIDS. Cheaper heroin, in particular, could be expected to lead to a reduction in injection and a change to other methods of administration which pose fewer dangers to the health of the user. Informal social controls might develop which would operate as barriers to heavy use and addiction. [Cleeland 1989, p. 113]

An example of social controls over drinking which we take for granted are the disapproval that greets solitary drinking and drinking before lunch.

Opponents of this view argue, for instance, that organised crime would move into other

areas if denied the existing profitability of the heroin black markets. Of course, if such potentially profitable opportunities exist now with no barriers to entry, then there will be unscrupulous individuals or organisations seizing them already; otherwise, such actions will be very much "second-best", with a lower rate of return. Indeed, on such an argument Prohibition should never have been repealed in the U.S.—which overlooks the dynamic nature of the markets and the evidence that the longer the prohibition—of alcohol or opiates—the wealthier, and hence more powerful, those who profit from the illicit trade become.

5. Possible Consequences of Regulated Supply of Heroin

The big imponderable is the number of users under the new regime. To the extent that the demand for heroin among the regular users is price-inelastic in the face of black-market price rises—which is the basis for the profitability of the illicit suppliers—then a fall in the price will also reveal an inelastic demand, with a relatively small (10%−15%) increase in the numbers of regular users. Numbers aside, in a regulated systen these users would anyway not pose the social problem of the junkies under the prohibition. A recently perceived phenomenon is the hidden bulk of the iceberg of occasional users. If theirs is a more elastic demand, then their numbers may well grow proportionately more rapidly as the price falls, but their previous invisibility should give us pause: why should we be concerned, so long as there are few external effects from their use. The most significant possible externality is the public-health risk of HIV infection spreading from shared needles. To repeat, if we are not prepared to tolerate any increase in the numbers of drug users, however private, then we should persevere with our existing, costly, punitive, but nonetheless ineffective policy, with its dire public-health risks and social costs. Since opponents of regulated supply have attempted to argue that "such a policy has failed in Britain" we consider the post-1968 experience in that country before discussing heroin use in other situations and in traditional communities which have had long access to opium.

5.1 Drug Use in Britain

On 16th April 1968 the "Clinic system" was established, possibly as a compromise between the medical profession's desire to prescribe and the politicians' need for social control. The previous regime, described in Marks (1990), was not prohibition, but rather a situation in which any physician had the right to prescribe heroin as he or she saw fit. The reasons for the change, which entailed a curtailment of this right, are not clear, despite two reports preceding it. The Clinic system was successful in reducing the diversion of prescribed heroin to the "grey" market, on which prices doubled in response (Kaplan 1983, p.159).

The Clinic system meant that the physicians had become government agents of social control: for the most part users were able to continue obtaining prescriptions for injectable heroin at high rates of dosage. In 1969 the Clinics began prescribing methadone. In 1970 54% of prescribed opiates were heroin, 35.2% injectable methadone, and 11.8% methadone syrup for oral administration; in 1978 the percentages were 21.3%, 35.0%, and 43.7%, respectively (Stimson and Oppenheimer 1982, p.100). What might have looked like a medically administered heroin-maintenance programme at its beginning had changed into a treatment programme, as Clinic staff confronted addicts and attempted to "treat" them, to "cure" their opiate use. Stimson and Oppenheimer quote Clinic staff as arguing that, first, prescribing had not led to the withering away of the black market; second, controlling opiate use and its spread was not a rôle for physicians; and, third, there was the practical issue of maintaining on

injectable drugs people with no usable veins left. Numbers of addicts grew steadily, with 5,116 notified addicts in 1980, and perhaps another 5,000 unrecorded. There was a thriving black market, with customs seizures growing from 1.14 kg. in 1971 to 60 kg. in 1978 (Stimson and Oppenheimer 1982, p.210).

Statements by Clinic staff and addicts obtained by Stimson and Oppenheimer clearly show that the move away from prescribing injectable heroin to prescribing oral methadone was a deliberate policy by many Clinic physicians, and, equally, was resisted by many addicts. The well known study comparing the effects of prescribing heroin against prescribing oral methadone (Hartnoll et al. 1980) showed that after twelve months, 74% of the heroin-treated remained patients, but only 29% of the methadone-treated. It appears that a side-effect of the move towards treatment of addicts at the Clinics and away from social control of addiction was to increase the numbers of addicts leaving, or perhaps never presenting at, the Clinics. Did this move away from social control towards individual treatment give the Conservative government the excuse it needed to foreshadow reduced government money for the Clinics, or was it the rhetoric of "smaller government"?

In the last few years the British system has moved further away from the medical model, and there are signs that the Conservative government is being recruited to the "war on drugs." These changes have left British drug policy without any clear direction (Madden 1987) or distinctive approach (Stimson 1987).

5.2 The Patterns of Heroin Use

This question of the spread of heroin use with easier availability is one that several researchers have addressed. It appears to be the main reason why the Rankin Report—on the legal provision of heroin to diminish crime associated with its supply and use—refused the fence: despite agreement among all witnesses that "the only possible way to eliminate the organised black market in heroin would be to make the drug available over the counter on demand, free of charge or very cheap, to all who wanted it" (Rankin 1981, p.29), and despite its recognition that the more restrictive the policy of legal heroin, the larger the illicit black market in response, it argued that the social cost of the rise in *addiction* which would inevitably follow would be "wholly unacceptable." The Williams report agreed, characterising the proposal for freely available heroin as "naive and unrealistic" (Williams 1980, p.D10), and argued against prescription heroin for the paradoxical reason that a significant proportion of young heroin users would *not* be attracted to it (Williams 1980, p.C197).

But, although freer availability of heroin may be *necessary* for a large growth in its use, it may not be *sufficient* for this to occur; nor does heroin use inevitably lead to addiction. A policy of easier access to heroin for all adults—not only those already habituated to its use—raises the issue of the new patterns of use: the number of subsequent new users and the extent to which some of these people would become problem users, with regular and heavy habits. So long as the demand for heroin is not completely price-inelastic, relaxation of the prohibition will increase the numbers of users, although many might be expected to be moderate, occasional users.

In the absence of previous experience of the relaxation of a prohibition against opiates, we can turn to experiences with alcohol, and also look at the behaviour of groups with easier access to opiates than most: physicians and Vietnam servicemen and villagers in societies where opium is grown or readily available.

Those who fear that easier access to opiates would result in a large, disruptive increase in

the number of users point to the "gin epidemic" of eighteenth-century England and the growth in the consumption of spirits in post-Revolutionary America. These episodes relate to periods of social dislocation and may therefore not be germaine. Aaron and Musto (1981, p.137) argue that "[a]s in England, when the gin epidemic spread during a period of social and economic transformation, the sharp rise in the amounts of alcohol consumed coupled with the deterioration of drinking behavior reflected the deepening cultural turmoil and impaired the capacity of institutions to relegitimate themselves." The evolution of cultural norms (Axelrod 1986) will result in a stable regime emerging.

If it is accepted that some patterns of heroin use—of the occasional user—are benign, then the question must be to what extent easier access will result in significant increase in heavy use. There are two arguments to suggest that the number of heavy users will not grow greatly, at least not proportionately. Meyers (1980) argues that the distribution of drug-using behaviour of most psychoactive substances (alcohol, for instance) is usually skewed towards light use, with few heavy users on the right-hand tail, and that recent studies (Robins 1979; Zinberg 1979) have suggested that this is true for heroin, too. Then a relaxation of the prohibition would result in more users, but relatively few heavy users. Moreover, to the extent that heavy users' elasticity of demand is less than light users', the reduction in effective price of heroin from the relaxation will result in a lower *proportional* increase in heavy users than in light users.

Prohibition of alcohol production, transport, and sale in the U.S.A. led to falls in alcohol consumption as reflected in arrests for public drunkenness, incidence of alcoholic psychosis, acute alcohol over-dose deaths, and the rate of mortality due to liver cirrhosis (Aaron and Musto 1981), but at the same time drinking customs persisted—possession and consumption were not generally illegal—a crucial supply network quickly arose, and the law was increasingly held in contempt. Despite the fears of the U.S. prohibitionists, the repeal of the Volstead Act and the 18th Amendment did not result in wide-spread inebriation (Aaron and Musto 1981). Kaplan (1983, p.146) argues that had the prohibition against alcohol lasted seventy years—the length of the prohibition against heroin in the U.S.—then the level of inebriation may have been higher, and he points to the first effects of alcohol on societies previously innocent of the drug, such as the Eskimos of Alaska and the Indian tribes of the U.S. Northwest. It is not clear, however, that the analogy will hold: the "firewater" was but one introduction of a conquering culture to an ignorant people. Relaxation of the prohibition against heroin would occur with full knowledge of the drug's nature. Indeed, despite their unfamiliarity with alcohol when first introduced to it by the Europeans, Aborigines in the Northern Territory have a much higher rate of abstinence (60%) than do the population at large (12%), although the incidence of tobacco smoking is twice as high among Aborigines than among Australians at large (Watson and Fleming 1988).

Although the rate of opiate addiction is much higher (twenty times) among U.S. physicians than in the population as a whole (Kaplan 1983, p.113), it is not a problem, despite their greater easy access to pharmaceutical-quality morphine.

Rosenthal (1979, p.460) discusses research on U.S. servicemen in Vietnam which suggests that addiction, if acquired, need not persist, and that the route of drug administration is significant. Robins (1979) reports that up to 14% of servicemen became "actively addicted"—a high figure, perhaps resulting from the high levels of boredom, alienation, and fear of the war zone. Of those actively addicted just before departure from Vietnam, 50% used no opiates after returning to the U.S.A., and only 14% became readdicted. Most servicemen in Vietnam (where

the heroin was good, plentiful, and cheap) preferred smoking or sniffing the drug to injecting it. It was only when the Army's anti-heroin campaign raised prices from $2–3 to $12 per 250 mg. that injecting increased as users administered their supplies for the same cost-effectiveness (Marks 1974, fn.25). Moreover, Kaplan (1983, p.10) notes that "in Iran and Hong Kong, where heroin, though illegal, is far cheaper than in the United States, the drug is much more frequently inhaled." Those who had injected heroin in Vietnam were almost four times as likely to use it on their return to the States as those who had not injected, but, whereas 75% of those who had injected heroin before Vietnam continued to use it afterwards, only 25% of those who had first injected in Vietnam continued to use the drug on their return. There are high rates of heroin use without addiction, and it is likely that most users do not become addicts (Rosenthal 1979, p.460).

To this author's knowledge, there are only three studies of the use of opiates in traditional societies: Akcasu (1976) found that although opiates are widely available in Turkey, Pakistan, and India, they seem to be used by only a very small percentage of the population. McGlothlin et al. (1978) studied Pakistani opium users in the city of Rawalpindi and in a small village with an unusually high level of opium use. Opium eating is legal in Pakistan but smoking it is forbidden. The city users were less addicted (only 59% were liable to suffer severe withdrawal symptoms) and they regarded their use as mainly therapeutic; only one (of 90) ate the opium. The village users were addicted (100%) and saw their usage primarily as social and recreational; of the 28 subjects, 24 smoked, 2 ate, and 2 both smoked and ate. Despite the low cost of opium in Pakistan (20¢ U.S. per gram legally or 10¢ U.S. per gram illegally), users were spending up to 15% of their income for eating opium, or 30% for smoking. But both groups were atypical: the authors estimated that no more than 0.5% of all city dwellers ate opium frequently, and that in the North West Frontier Province the proportion of opium smokers in the 1.2 million population was about 1 in 2,000 (McGlothlin et al. 1978)—forty times lower than the 2% of the Australian population estimated to have injected illicit drugs in the last twelve months (NACAIDS 1988). Similarly, in Thailand Suwanwela et al. (1978) report a low proportion of opium smokers among the hill tribes. Both surveys reveal a strong social stigma attached to opium use, and users' disapproval towards opium use by their children; indeed, McGlothlin et al. remark that a significant number would likely apply for treatment to give up opium use were it available.

Nonetheless, it is undeniable that a policy of freely available heroin or methadone would lead to more widespread use, even if not addictive use, than would prescription heroin or methadone (Trebach 1982, p.277). The trade-off is the rise of the black, or grey, market. There is no way around it. A step in the right direction would be to allow any physician to prescribe National Health Service heroin (or methadone) for any patient, whether dependent or not. Harking back to 1937 in the Northern Territory and foreshadowing Wardlaw (1982), Marks (1974) suggested an alternative in which the government would control the prices of over-the-counter heroin and methadone, making heroin sufficiently more expensive than methadone that its "excessive" use was discouraged, but cheap enough to completely undermine the black market, with its attendant evils. In the light of our understanding of the trade-off, complete collapse of the black market would require virtually no restrictions on the sale of heroin, and a price very close to that of methadone. Thus, the proposal would reduce the subsidy to organised crime from all Australians, as reflected in our home insurance premiums, via the benighted heroin users.

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