A Freer Market for Heroin in Australia: Alternatives to Subsidising Organised Crime

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SUMMARY

THE problems associated with illicit drug use in general, and the illicit use of heroin in particular, have led to stringent attempts by Australian governments to enforce the laws against drug abuse. The strongest reaction of the criminal justice system has been towards heroin, with a total prohibition on heroin importation, manufacture, distribution, possession, and use. Before attempting to evaluate the extent and costs of heroin use today, this paper reviews the evolution of laws and social attitudes towards heroin in Australia. Using an economic framework for analysing the black market in heroin, the paper examines proposals for enforcing the prohibition by tightening the supply side, and by reducing the demand for heroin. It argues that attempts to restrict the supply have had the effect of increasing the costs borne not only by the users but by society at large, through increases in acquisitive crime and police corruption. On utilitarian grounds it concludes that the costs to society of the prohibition far outweigh the costs of a policy of freer availability, and suggests that a policy of government supply of price-controlled heroin and methadone would be far preferable to today's failed policy of prohibition.

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1. Introduction

ANY discussion of drug use in its private and social aspects must be qualified by the statement that "drug addiction is a complex phenomenon which has generated a good deal of heat and invited much speculation, but which continues to defy understanding and analysis as fast as it grows" (Willis 1978, p.370). For this paper the word "addiction" will be used to describe states in which "a person becomes apparently unable to stop taking a drug either because it gives pleasure or because the person experiences withdrawal symptoms if the drug is discontinued" (Willis 1978), although, without clinical tests, it is virtually impossible to distinguish addict from nonaddict. Indeed, the World Health Organisation does not recognise the condition of "addiction," preferring the term "drug dependence" (W.H.O. 1982).

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. Before examining some alternative policies for dealing with heroin use, we review the history of the present drug laws and usage of heroin in Australia. It seems clear that any serious attempt to reduce the social costs of heroin use will have to focus on the demand side.

To use Russell's words, in order to change the world, it is first necessary to interpret the world. To do that, to know who we are, it is necessary to know whence we have come. Especially in such an emotion-laden area as opiate policy, laws and public attitudes interact, the one reflecting the other reflecting the first as it was, and so on.

And yet it is possible to penetrate and to unravel. Using a framework which focuses on the market for illicit heroin, we examine policies directed at reducing the supply of heroin and policies directed at reducing the demand for the drug, before arguing that the prohibition against heroin manufacture, distribution, possession, and use has been a costly failure, and that the time has come to examine a radical departure: decriminalisation of heroin.

2. The Drug Problem Problem

PEYROT (1984), in discussing the development of the "drug problem" as a social issue in the U.S.A., argues that such social problems result from the interplay of political and historical forces, to which we might add economic. He formulates a cyclical model of the drug problem, comprising five stages: a period of "mobilising agitation," followed by official involvement in the "policy-formation stage" and the "policy-implementation

stage," after which the problem may persist despite the remedy, or application of the remedy may wane as the cure is seen to be worse than the disease. The fourth stage of the cycle comprises modification of the programme, when lack of success is seen as evidence not that the policy is a failure, but that the policy has not been applied sufficiently rigorously. Other possible modifications may be the development of "alternative" programmes, without challenge to the prevailing logical pattern of response, as embodied in the definition of the problem from stages one and two.

It may be that persistent lack of success allows previously uninfluential groups to establish an alternative definition of the problem. This will occur during and after a fifth stage of "reform agitation," accompanied by claims that the original policy is "bankrupt," that the programmes have been a "total failure," and may indeed have exacerbated the problem, rather alleviating it, as proposed. The fifth stage may mark the end of the first cycle and the beginning of a second, with a new definition of the problem and new policies. A radical alternative to a new cycle after the fifth stage is deregulation of the controls.

2.1 Drug Use in the U.S.A.

Peyrot uses his framework to analyse the U.S. drug problem as it developed from a completely free market with no legal restriction on the use of drugs before 1875 to the federal *Harrison Act* of 1914, which brought control of opiates clearly into the criminal-justice arena, although not prohibiting doctors from prescribing opiates for "legitimate" medical purposes. By 1922 a series of Supreme Court judgements had substantiated the position that prescribing opiates for existing users ("opiate maintenance") was not a "legitimate" medical practice. In twenty or so years following the enactment of the Harrison Act, "an estimated 25,000 physicians were arraigned on narcotics charges, and 3,000 served prison sentences" (Peyrot 1984, p.88). The drug problem was clearly seen as one for control by the criminal-justice system, rather than for treatment by the medical profession. This fourth stage of Peyrot's cycle lasted until the 1950s and 1960s, when the severity of punishment for narcotics violations was increased, and when there was upsurge in criticism of the criminal-justice approach, heralding the beginning of the fifth stage.

The cycle in the U.S.A. has not (yet) turned full circle, nor is there deregulation, as happened at the end of the Prohibition of alcohol. Instead, there is an uneasy relationship between the legal sanctions of the criminal-justice system (sale, possession, and use of heroin and morphine remain illegal) and the clinical treatments of the medical profession: opiate (viz. methadone) maintenance has been legal again since 1961, and there are "diversions" from the courts to medical treatment, which at the same time control by *requiring* drug users to submit to treatment, while lending legitimacy to the medical model of drug users as "sick" people who can be "cured" of their illegal drug use by appropriate clinical intervention.

The coexistence of these two contradictory approaches can also be seen in Australia, where there is no single, comprehensive policy towards opiate use (partly due to the constitutional powers of the States, which leave the Commonwealth with control only over the importing of illegal drugs, although if there were a relaxation of the prohibition on heroin, the Commonwealth could exercise some control via the financial arrangements for health care). In Australia, a series of royal commissions and inquiries

(Marriott 1971, Baume 1976/77, Durick 1978, Sackville 1979, Woodward 1979, Williams 1979/80, Senate 1979/80, Rankin 1981, Stewart 1983, and Costigan 1984) have underlined the criminal-justice approach to drug use, while the pressure for opiate (methadone) maintenance has grown (NISDA 1985), and diversion programmes thrive (Bush and Scagliotti 1983). Drew (1979, 1982) has been arguing for freer markets for heroin in the medical literature, but experience would suggest that the medical profession might not readily agree to deregulation when they are having some success at redefining the drug problem in their terms (Milner 1976).

2.2 Drug Use in Britain

The British have not (yet) succumbed to the criminal-justice-system approach to opiate use. Opium was one of the most widely used drugs in nineteenth-century Britain (Stimson and Oppenheimer 1982). From 1827 to 1859 average consumption had risen from 600 mg. to 1,410 mg. of opium per person per year. It was available in solid and liquid forms, and mainly taken by mouth. Stage one of Peyrot's cycle began after the *Arsenic Act* of 1851 regulated sales of that drug, with arguments that opium overdoses could be reduced by control over opium, although Stimson and Oppenheimer argue that the hidden agenda was monopoly power for chemists and druggists, competing with shopkeepers, stall-holders, and itinerant vendors.

Stages two ("policy formation") and three ("policy implementation") concluded with passage of the 1868 *Pharmacy Act,* which restricted to pharmacists the prerogative to sell opium (Kaplan 1983, p.155), and stage four took place as the Act was amended to tighten controls on opium-based patent medicines in the 1890s, and was followed by the 1908 *Poisons and Pharmacy Act.* These acts tightened the supply of opiates, but it was still easy to obtain them: all that was necessary was to be known by the pharmacist or be personally introduced, and to sign the poisons register. There was no need for a prescription.

Doctors would have appreciated much stricter regulations over opiates than were provided in the 1868 Act. There was agitation that habitual use of drugs (opiates or alcohol) should be viewed as a disease. The British Medical Association campaigned against self-medication, and discussed ways of making some drugs available only on prescription, which would have increased the control of doctors over drug use and treatment. Meanwhile, after the turn of the century, international concern at opiate use in China, North America, and Britain led to pressure for controls over opiate use on the grounds that it was a social problem. Stage five was well under way, and the debate in Britain had moved away from concerns of who should be allowed to sell opiates, and from the view of habitual use of opiates as a disease, to questions of the circumstances in which people should be allowed to possess opiates (Stimson and Oppenheimer 1982, p.23): the criminal-justice approach.

During the First World War an order prohibited the gift or sale of cocaine to soldiers except on prescription; this was the first time that a doctor's prescription had been required, by law, for the purchase of a specified drug. In 1920 it became illegal for anyone to possess opium, morphine, heroin, or cocaine without a doctor's prescription. Stages two and three of the second cycle had occurred, and the criminal model was dominant to the extent of urging that the law had been broken when doctors had prescribed such drugs to habitual users: was such prescribing "necessary to medical

practice"?

The doctors argued that it was, and were backed up by the Rolleston Committee of 1926, which firmly defined "addiction" as a disease and as a problem for legitimate medical treatment, under certain conditions and for certain classes of "patients:" for those undergoing treatment by gradual withdrawal, for those for whom complete withdrawal would produce severe distress or even risk of life, and for those for whom a minimum dose of the drug was necessary to enable them to lead useful and relatively normal lives—maintenance doses. The government agreed, and this formed the basis of the "British system" for dealing with drug abuse. Drug policy remained in the context of the criminal-justice system—unauthorised possession was illegal—but the medical profession had successfully claimed the right to define the nature of addiction and to treat it, and to police itself. This fourth stage of the second cycle persisted for forty years.

Was it the British system which successfully prevented the size of drug-use problem seen in North America? Or was it successful precisely because there were few British drug users? It is not clear what prompted the review (the figures on drug-offence prosecutions and convictions remained level, as did the numbers of known addicts), but in 1958 the first Brain Committee met to review Rolleston's advice. In 1961 its report confirmed the medical model of addiction, and provided a rationale of maintenance as a positive treatment for addiction.

But the numbers of known addicts had started to rise: from 68 in 1959 to 2,240 in 1968, an average annual growth rate of 47.5% (Stimson and Oppenheimer 1982, pp.32–33). In 1964 the British government reported that of 237 known heroin addicts, 222 were neither therapeutic nor professional: they had become addicted using drugs illegally obtained. Moreover, 17 of them were younger than twenty. The stage-five response to the accompanying agitation was to reconvene the Brain Committee.

The second Brain Committee found that the major source of supply for the new addicts was a very few doctors who had prescribed "excessively". Although these doctors (no more than six) had acted within the law and according to their professional judgement, their actions meant that the "British system" was actually contributing to the growth of addiction by making supplies so readily available. In their report, the second Brain Committee shifted the emphasis of the medical model from one of treatment to one of control: too little control, and addiction will spread; too much, and "an organised illicit traffic" will develop. In treading a middle path, Brain recommended: that doctors other than those working at proposed treatment centres be prohibited from supplying, administering, or prescribing "dangerous drugs" to addicts; that special centres for treatment of addiction be set up; and that (in keeping with the model of addiction as a socially infectious condition) a central register be established for the compulsory notification by any doctor of an addict. It was left to doctors at the treatment centres (Clinics) to determine a course of treatment, including the possibility of maintenance, but there was a potential conflict for such doctors as they tried to achieve the two aims of control and treatment.

As a stage-two policy formation, the 1965 Brain Report was clear, but implementation took three years. On 16th April 1968 the new Clinic system started. If the implicit aim of the second Brain Committee was not eventually to curtail the individual addict's dosage of heroin and cocaine, then why did it not simply recommend that the six doctors be dealt with? It's possible that the Clinic system was a compromise

between the medical profession's desire to prescribe and the politicians' need for social control. At any rate, 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 doctors 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 doctors; 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 doctors, 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 1981 the Minister talked of withdrawing government funding. In the light of the difficulties of working with addicts, the apparent lack of immediate therapeutic success, and the move of the Clinics away from social control, stage five of the third cycle had been reached.

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). Recently, a doctor was stricken from the rolls because of her persistence in prescribing for addicts (Swan 1987).

2.3 Drug Use in Australia

The history of Australian attitudes towards opiate use and its control is not markedly different from that of the U.S.A. or Britain. But to attempt to describe the separate responses of the six colonies-turned-states and the Commonwealth is beyond the scope of this paper (see Lonie 1979, McCoy 1980, and Carney 1981). We shall concentrate

mainly on the most populous States, Victoria and New South Wales (NSW), together with the Commonwealth.

The social responses to concerns about drug use in Australia may be thought of as falling into four cycles, to use Peyrot's framework: poisons, Chinese opium dens, patent medicines, and international conventions. From an economist's viewpoint, these present a progression from attempts to regulate and control the supply side to attempts to control the demand side of the market for opiates (mainly in a criminal-justice context).

The first *Poisons Act* in Australia (South Australia 1862) antedated the equivalent British law by six years in its treatment of opium. Despite the objections of pharmacists, it required the labelling of opium as a poison, but, perhaps because of their objections, it excluded patent and proprietary medicines despite often high concentrations of opium (as the British Act was to do). Previously, vagrancy laws had stated that any person possessing any "deleterious" drug was deemed to be "idle and disorderly," probably in response to "hocussing," the use of stupefying drugs in cases of theft. The Poisons Acts were an attempt to deal with the increasing risk of accidental poisoning as the number of poisonous compounds in use increased, and later to establish "tracing" procedures with "poisons books," to deter would-be murderers.

Previous attempts in NSW and Victoria to pass Poisons Bills in 1849 and 1857, respectively, had foundered on the opposition of the pharmacists, who had complained of the "indiscriminate injustices" against them, arguing that the Bills favoured the business of unqualified merchants who sold drugs and poisons, especially in the country (McCoy 1980, p.49; and Carney 1981, p.174). At this time there was strong competition among pharmacists (a group seeking to break away from the image of suppliers of abortifacients and V.D. cures), general retailers (who could sell what pharmacists could sell), and doctors (who could dispense). Before the development of today's scientific medicine, beginning with the sulphanilamide antibiotics of the 1930s, there was little doctors could do for bacterial or viral infection apart from easing the pain, often with opiate-based medicines, the constipating effects of which were often useful for treatment of diarrhœa (Jaffe and Martin 1980). Moreover, the profession was not always as clearly delineated as today: not until 1898 did the law in NSW distinguish between the qualified and unqualified medical practitioner.

If most opiate use among European Australians was therapeutic, there was, however, a significant recreational use of opium, which was providing the revenue with a substantial source of income. The gold rushes of the 1850s had attracted many Chinese diggers, with their habit of smoking opium. In 1857, when an import duty was levied on opium, it is estimated that there were 25,000 Chinese in Victoria, which had imported 21,891 kg. of opium the previous year, valued at £56,979 (Carney 1981, p.175). The duty, of 10s. a pound, was levied for three reasons: revenue, because everyone else did it, and because few European Australians (or Victorians) indulged (Lonie 1979, p.1).

Despite their contribution to the revenue, imports of non-medicinal opium became increasingly threatened as the tide of xenophobic, anti-Chinese sentiment rose in the 1880s and 1890s. In the 1880s there were still 12,000 Chinese in Victoria, and the annual imports of 8,000 to 9,000 kg. of opium were raising £21,000 in duty (Lonie 1979, p.2). The first successful attempts to use the law to prohibit the sale of a drug in Australia, however, were to prevent the use of opium by Aborigines in Queensland in 1891 and in South Australia in 1895. The debate in Adelaide introduced themes which would echo

through parliamentary chambers down the years: various speakers argued that a ban would not prove effective since users would go to any lengths to procure opium, that the proposed law was no more than an attempt to dictate to people how they should carry on their affairs, that since taking opium was not immoral it should not be banned, that using (but not supplying) opium was a personal choice, and that the ban would promote immorality and smuggling. Clauses forbidding the importation and use of non-medicinal opium were removed. There was a realisation that successful bans on importing would require concerted action by all colonies, and even that such a ban would increase smuggling, which was already occurring, in response to the duty of 30s. a pound. A particularly enlightened commentator, Quong Tart, argued in 1894 that if opium smoking could not be stamped out, then the proper alternative method of control would be the establishment of government-run offices to sell the drug to users (Lonie 1979, p.4). It may have been that the dominant sentiment was pro free trade, even in opium: one voice against banning imports to NSW said, "we are a British community and are not inclined to adopt the extreme measure of prohibition" (Lonie 1979, p.10).

In 1904 21,417 kg. of smoking opium was imported into the new Commonwealth, but in 1905, forgoing the £10,000 revenue from the duty (Lonie 1979, p.18), the new national government banned the import of non-medicinal opium, and required licences of medicinal-opium importers: doctors, manufacturing and wholesale chemists, and pharmacists. In the same year, both South Australia and Victoria prohibited the sale, manufacture, and use in dens of smoking opium, and the Victorian law attempted to outlaw its possession. In a move to impose controls over the demand for non-medicinal opium as well as over its supply, Queensland had banned unauthorised possession in 1897. But after Federation Chinese merchants had been able to obtain licences from Commonwealth Customs. This legal commerce ended with the import prohibition.

In the sometimes lengthy debates over the "oriental vice" of opium smoking, there seems to have been little awareness that there were cheap, plentiful substitutes for the activity. But, during the debate over the Victorian Bill in 1905, one member pointed out that:

> Unless we provide by legislation to prevent the morphia habit, we will have these people knowing that they will get the same result by injecting morphia or taking laudanum, relieving themselves by resorting to a vice which will have the same effect as the smoking of opium. (Lonie 1979, p.14)

Morphine had been extracted from opium in 1805 and produced commercially by E. Merck and Co. Invention of the hypodermic syringe in the 1850s had enabled the use of morphine as a painkiller. In 1898 the Bayer Co. had started to sell the new semi-synthetic opiate, diacetylmorphine, under their tradename of *Heroin* (McCoy 1980, p.52). Despite these more potent forms, opium in various guises had continued to be popular, both with the public and with the doctors, pharmacists, and general retailers.

Following the earlier defeats, 1876 saw the passage of Poisons Acts in both Victoria and NSW. The Victorian Act, as had the earlier South Australian, required labelling of opiates and the maintenance of sales records, and it authorised doctors, pharmacists and other certified sellers. But pharmacists were given the power of self-regulation, thus softening their failure to gain a much greater degree of monopoly of medicine sales. The pharmacists had argued that they needed some legal protection against "commercial necessity" in order to provide the highest standards of an "essential

community service" (Lonie 1979, p.24). They were threatened not only by the activities of dispensing doctors and general retailers, but individually by the pharmacy chains. In 1885 the Victorian Act made such chains of shops illegal. In NSW the chains prospered under the 1876 Act, which was very similar to that in Victoria, although it placed greater controls on laudanum (tincture of opium).

Meanwhile, the manufacturers of patent medicines relied on advertising and the addictive properties of the opiates in their products to maintain sales. Exempted from the provisions of the Poisons Acts, patent medicines were freely available to consumers mostly unaware of what they were dosing themselves with. As we have seen, the pharmacists in Melbourne were a more effective lobby than their colleagues in Sydney, and in 1890 the Victorian *Poisons Act* required a prescription for the sale of hypodermic "tablets" of morphine. In NSW the strength of the general retailers was such that they were able to block a pharmacy bill in 1896, to emasculate an 1897 pharmacy act (which would not have stopped the general sale of patent medicines), and to retain their right to sell such medicines in the 1902 *Poisons Act.*

In the 1890s there was increasing awareness among the medical profession that the new opiate analgesics were addictive. Given the preëminence of these medicines, many patients had developed a therapeutic addiction, which may explain why drug addiction was usually regarded as a disease, not a socially criminal offence. In 1904 Victoria established institutions to treat "inebriates" (from alcohol or narcotic drugs). A proposal that a doctor's prescription be required for the purchase of opiates and opiate-based medicines was defeated.

Between 500 and 600 different brands of patent medicines were being imported into Australia soon after Federation (Lonie 1979, p.31), and even their manufacturers acknowledged the problem of therapeutic addiction (McCoy 1980, p.67). Despite this, these firms were in the vanguard of lobbying to prevent implementation of the Commonwealth *Commerce Act* 1905, which set limits on alcohol and opiates in imported medicines, and of the Victorian *Pure Food Act* 1906 which did likewise for domestic medicines (McCoy 1980, p.68).

While pharmacists were prevailing over the general retailers, pressures for labelling of all medicines and for no-repeat prescriptions for narcotic-based medicines were beginning to build. The pharmacists opposed labelling, and argumented that it would promote hardship on the poorer and middle classes, that it would frighten the buying public to know what the medicines contained, and that the public would self-administer if they knew what the active ingredients were, which might induce them to become addicted (Lonie 1979, p.34). Medicines were exempted from the labelling requirements, in general. But in 1913 Victoria legislated to require prescriptions for "narcotics" (opiates and cocaine), and in 1923 limited the repeat filling of a prescription to four times.

Meanwhile, in 1909 the Western Australian Parliament had rejected a bill to introduce the Poisons Act "tracing controls" for opium. In discussion the Commonwealth Comptroller of Customs suggested that prohibition of opium would simply force up the price of opium on the illicit market, stimulating the ingenuity of smugglers, resulting in more organised importation, which would make tracing even more difficult. Had he but lived …

From the revenue-raising cycle of import duties, the criminal-justice cycle of the prohibitions of non-medicinal opium, to the consumerist cycle of the pure food laws, the

new federation was influenced by events abroad. Australia became a signatory to the international Hague Convention on Narcotics in 1913, and a year later introduced a system of import licencing for wholesale and manufacturing chemists, pharmacists, and doctors. With fits and starts, the States proceeded to tighten their legal controls over authorised importers, manufacturers, wholesalers, dispensers, and users, with an increasing emphasis on controlling the user.

As the controls tightened, the opportunities for profiteering on the black market grew. Indeed, this was recognised in a 1927 debate on a NSW bill to provide for criminal sanctions against the recreational use of opium and other drugs: "by forcing the minor recreational use of drugs into the nether world of gangs and pushers, the state created the conditions whereby good profits could be realised by [drug] runners and necessarily required the police to seek more and more powers and the criminalising of more and more related activities" (Lonie 1979, pp.72,73). The pharmacists' advocate claimed that the greater the number of drugs placed on the dangerous drugs list, the greater the potential for crime, the greater the number of opportunities for the black marketeer, and so the greater the need for police. The bill would promote expansion of the police force. But in 1934 the bill passed, and the pharmacists lost the right to self-regulation.

Perhaps because of the effects of cocaine sniffing after the First World War, or perhaps in response to the criminalisation of the opiates, or the growing black market in recreational narcotic drugs, the image of drug taking was changing (Lonie 1979, p.64). Rather than an illness, it began to be looked at as a hereditary psychological flaw, with corresponding disapproval: in 1926 the Queensland Health Commissioner referred to drug users as "perverts" (Lonie 1979, p.79). Lonie (1979, p.60) reports a trafficker who claimed he could make 1,000% profit from smuggled opium in 1931.

The import prohibition on recreational opiates was not unchallenged after 1915. In response to reports that the Japanese occupiers of Taiwan had adopted a successful policy of opium maintenance and withdrawal, supplying addicts with the highest quality opium in order to stop smuggling and to "wean addicts off opium" (Lonie 1979, p.78), the Commonwealth sounded out the States in 1925 about a similar policy in Australia. All were negative. In 1935 the Chief Medical Officer of the Northern Territory made a similar suggestion, but objections were even stronger, (Lonie 1979, p.79). "Because of the possible international repercussions," a conference of Commonwealth and State "Protectors of Aborigines" in 1937, although expressing agreement with the principle involved, rejected a resolution asking the Commonwealth "to supply certified [opium] addicts in the Northern Territory with opium at a price that would render illicit importation uneconomic" (*The Age*, April 23, 1937).

Despite the tight controls on legal opiate use, Australian consumption remained high: in 1936 Australians were consuming 14% and 7.5% of the world's legal supply of morphine and heroin, respectively—in per-capita terms three times the British consumption of heroin (McCoy 1980, pp.42,92). Despite U.N. figures that showed that in per-capita terms Australian heroin consumption had risen by 70% since 1935 to the world's highest of 4.2 mg. per person per year in 1951, heroin addiction was reported as "rare" (Davies 1986, pp.40–1). Nonetheless, in 1954 Australia banned heroin imports unconditionally, and it became a prohibited drug in all States except Victoria (Williams 1980, p.A94). Protests by individual doctors followed, but a request in 1956 by the Australian council of the British Medical Association—forerunner of the Australian

Medical Association—that the Commonwealth lift the ban on prescription heroin was unsuccessful (Davies 1986, p.43). Although it has been possible since December 1974 to import heroin for scientific research—and small amounts have been imported for samples and forensic purposes—the general prohibition has remained in force, despite testimony to the unique properties of heroin for use in the treatment of a limited number of special medical conditions (Williams 1980, pp.C178–195). Canada has recently allowed heroin for analgesic use in the case of terminally ill patients (Swan 1987).

By 1955 the Victorian police announced that there were no heroin addicts in that state, but by November 1963 heroin—smoked, not injected, in the Chinese community of Melbourne—was back in the headlines. In 1964 a record amount of heroin was seized by Customs officers, and by 1965 increasing numbers of non-Chinese were being charged with opiate offences. In 1966 a seminar organised by the Department of Customs and Excise in conjunction with the Institute of Criminology in Sydney heard of the growing problem of heroin and morphine abuse in Australia, even before Australian and American servicemen had begun the acceleration in demand for heroin which accompanied the Vietnam war. Kenneth Shatwell suggested that perhaps a system of legally distributed heroin would eliminate growth of the black market and its consequences, but the debate died without issue. In 1966 with nine members the NSW Drug Squad made 39 arrests; in 1978 with 46 members the Squad made 1,461 arrests (Davies 1986 pp.41–48).

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 oby 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 move to Peyrot's stage five in

dealing with heroin use, and accept that the prohibition has failed?

3. The Size of the Heroin Problem 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 in 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 is no reliable evidence to allow an estimate of the number of heroin users, and that no firm estimates can 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 others.

As Egger (1985) comments, royal commissions provide the most authoritative estimates of the size of the problem, and yet virtually ignore the methodology of the social sciences, using instead the legal processes of cross-examination of experienced witnesses, which are inadequate to the task. She makes the valid point that empirical studies costing a fraction of the amounts spent on recent royal commissions would yield more-informed decisions, and so better policy. Elliott (1982, 1983) has scrutinised the Woodward (1979), Williams (1980), and Stewart (1983) royal commissions in their "mythology formulation" in the light of "recalcitrant and incomplete data" (Elliot 1982, p.7). The Williams Report states that in 1978 there were between 14,200 and 20,300 "hard-core heroin addicts" in Australia (Williams 1980, p.A350). The Woodward Report estimates that approximately 10,000 people in NSW regularly used illicit opiates in 1978 (Woodward 1979, p.199). The Sackville Report, using the same "indicator-dilution" method, estimated that in 1977–78 there were between 500 and 1,500 non-therapeutic opiate users in South Australia, people whose use of opiates was likely to lead to treatment, arrest, or autopsy (Sackville 1979, p.119). Despite the differences in terminology among the Reports, Elliott feels that these figures, together with anecdotal data from professional advisors in other States, lends "some degree of credibility" to the Williams estimate (Elliott 1982, p.11). Sandland (1986) reviews the assumptions necessary for use of the indicator-dilution method, and from police arrest data he estimates a more flexible model which takes into account individuals beginning and stopping heroin use, individuals whose arrest histories are aberrant, and changes in police

practice; he estimates that the number of heroin users in NSW over the period 1979–1984 trebled, from about 4,000 to almost 12,000.

There is an eagerness to agree on numbers, and perhaps there is an urge on the part of many in the field to exaggerate the numbers to amplify the importance of the issue (Reuter 1984): we should not forget that the licit drugs of alcohol and nicotine are implicated in a much larger number of deaths in Australia than are the illicit opiates. Nonetheless, the research of Sandland and the figures plotted in Figure 1 do strongly suggest that the number of heroin users has been growing amazingly fast, despite the prohibition. If we accept that there were about 8,000 regular users of illicit opiates in 1978, what can we say about (**a**) the numbers of heroin users then, and (**b**) the situation more recently? It is well known that heroin is overwhelmingly the users' illicit opiate of choice; moreover, as Table 1 shows, no more than 25% of opiate-related charges involved other drugs. Let us assume 8,000 regular users of illicit heroin in 1978.

TABLE 1: Indicators of heroin use in Australia, 1977–1985

	1977	1978	1979	1980	1981	1982	1983	1984	1985
Opiate-related deaths per 100,000 [a]	0.4	0.7	0.8	0.6	0.9	1.0	1.3	1.5	1.8
Heroin seizures (kg.) [a]	11.7	17.9	29.3	7.9	9.5	32.0	97.1	101.6	57.9
Deaths in NSW: [b]									
Morphine-type drug dependence	na	na	na	30	51	69	77	77	111
Opiates and related narcotics—accidental poisoning	na	na	na	6	na	8	19	24	11
Charges associated with specific drugs: [c]									
Heroin	2,346	3,278	2,408	1,861	2,256	na	na	na	na
Methadone	465	296	288	125	114	na	na	na	na
Morphine	118	178	190	101	383	na	na	na	na
Opium	48	29	23	21	109	na	na	na	na
Codeine	107	70	46	55	118	na	na	na	na
Total	3,084	3,851	2,955	2,163	2,980	na	na	na	na
Heroin/Total (%)	76	85	82	86	76	na	na	na	na
Criminal charges associated with specific drugs: [a]									
Narcotics	3,676	4,262	3,520	2,611	3,745	na	na	na	na

Sources: a. *Statistics on Drug Abuse in Australia* [SDAA] (1986).
b. NSW Drug and Alcohol Authority Annual Report [NSWD&AA] (1986).
c. CEIDA: National Drug Education Program (1984).

From Table 1 and Figure 1 we can see several indicators of more recent heroin use.

The amount of heroin seized by federal agencies has fluctuated, but in 1983 was five

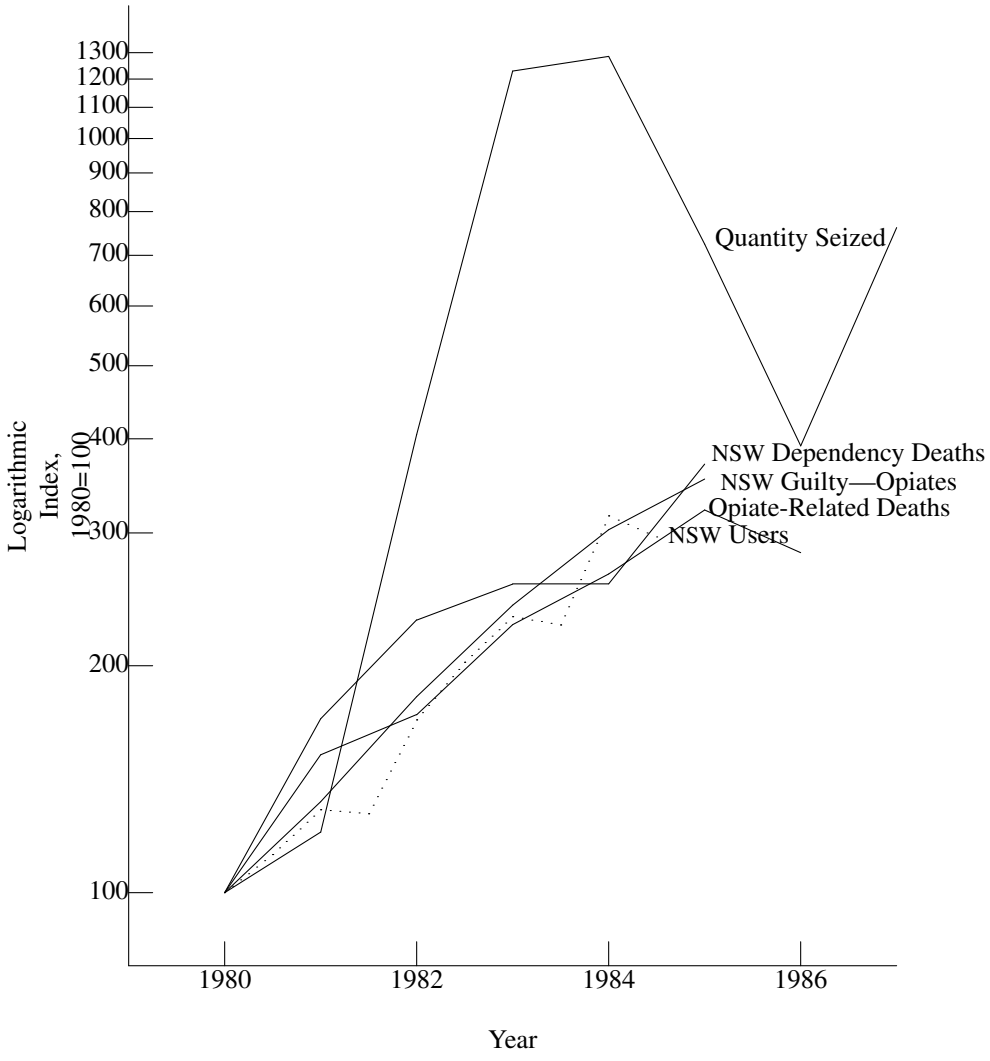

Figure 1: Indicators of Heroin Use, 1980–1985.

Notes:

1. *Quantity Seized* is amount of heroin seized by Federal agencies (SDAA).
2. *NSW Dependency Deaths* are the estimated number of deaths in NSW, related to morphine-type drug dependence (NSWD&AA).
3. *NSW Guilty—Opiates* are the number of court appearances for drug offences which resulted in a finding of guilty, from the NSW *Court Statistics 1984*, NSW Bureau of Crime Statistics and Research (NSWD&AA).
4. *Opiate-Related Deaths* is the product of the death rate per 100,000 population when opiates were involved for Australia and the total population (SDAA).
5. *NSW Users* is the estimated size of heroin user population in NSW from police arrest data (NSWD&AA).

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? 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. Figure 1 shows a steady increase in the four indicators of NSW heroin users (Sandland's method), morphine-type dependency deaths in NSW, opiate-related convictions in NSW, and Australian opiate-related deaths. All have tripled over the period 1980–1985. 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.

This estimate approximately agrees with press reports of estimates by Mr Paul Fitzwarryne's Health Research Associates of between 15,000 to 20,000 "heavy narcotics users," most of whom are between 21 and 35 years of age, and 80% of whom are male (Lawrence 1985). Fitzwarryne is also reported as estimating that "heavy users" typically each spend $80,000 to $100,000 a year on drugs. If the average user consumes for only 70% of the year (256 days), and if Fitzwarryne's estimate of 5%-pure heroin costing $250–$400 per gram is correct, and if the user buys all his drug at retail or "street" prices, then he is consuming on average between 39 mg. and 78 mg. of pure heroin per consuming day, or between 10 and 20 grams of pure heroin a year. If some purchases are made at a lower, wholesale price—and the Woodward Report assumes that on average a third are—then the amounts consumed will be larger.

Nonetheless, the amounts implicit in Fitzwarryne's figures are close to amounts calculated by Elliot from Woodward's estimates (Elliot 1982, p.15): 67 mg. per consuming day, or 16.2 grams of pure heroin a year. Elliott refers to Moore's 1977 estimate of 45 mg. a day or 9.4 grams a year (Moore 1977, p.90), and Holahan's of 55 mg. a day (Holahan 1972, p.290). Moreover, Fitzwarryne's estimate of a "landed" price of $25–$40 per gram of 80–90%-pure heroin is close to Elliott's figure for 85%-pure "landed" heroin in 1977–78 of $34.30 a gram in 1983–84 dollars. Fitzwarryne's figures imply a maximum gross profit of 1,000% as the kilogram of heroin moves down the distribution chain from the wharves towards the street, being successively cut and divided into smaller quantities, assuming no final sales at wholesale prices.

We can compare Fitzwarryne's figures with an analysis by Leader-Elliott (1986), based on Dobinson and Ward's (1985) survey. He extrapolates from a small number (78) of user thieves who reported a median income of $1,500 per week from property crime; a median heroin consumption of 1.4 grams (pure) per week; and a median expenditure of $2,000 per week (the difference mainly from dealing) to a group of perhaps 600 user thieves in NSW who were responsible for about one fifth of the unrecovered stolen property in 1981. At the same time, Leader-Elliott postulates a further 10,000 users buying a weekly 10 mg., which is 5 grams a year, for about $7,800 per user. He argues that users in other states buy less individually for higher prices than do the users in NSW.

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.

Fitzwarryne is reported as estimating that $386 million was used to purchase "narcotics" (opiates) in Australia in 1984–85, comprising property theft of $278 million (72%), prostitution $82 million (21%), other illegal activities $24 million (6%), and legal income $2 million (1%) (Lawrence 1985). From his implicit assumption that thieves can realise 48% of the value of stolen property, we can calculate that theft to finance opiate purchases would have been responsible for almost a third (32.2%) of the $1,800 million worth of property stolen in 1984–85. Fitzwarryne estimated that the "narcotics industry" employed 310 people full-time and 1,650 part-time, not counting the 20,000 "heavy users" employed indirectly in raising the money for their next fix. He forecast a profit to the "industry" of $295 million, net of import costs, of the legal wages forgone by people employed in the "industry," and of "$8 million to $10 million for bribing officials, such as police and customs officers" (Lawrence 1985).

As these estimates suggest, 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).

In the past three years the severity and ultimate extent of the AIDS epidemic has been seriously debated. The initial carriers of the HIV virus into Australia were likely male homosexuals and, so long as the disease was confined to this group, there was no implication for drug policy. But the sharing of needles among intravenous drug users (IVDU) has become both a second mechanism of contagion and a means—via heterosexual drug users and prostitutes—of infecting the majority, heterosexual group. Unless urgent action is taken to reduce the transmission of the HIV virus among IVDU, AIDS experts predict a second wave of HIV infection in Australia (NACAIDS 1988).

Concerned for the health of both groups in society, AIDS specialists have argued for needle-exchange schemes, so that at least there is no need for users to share unsterile needles and perhaps the HIV virus: at one Sydney hospital 10% of exchanged needles show seropositive blood, compared with 1% twelve months earlier (NACAIDS 1988). Unfortunately, a group at risk both from homosexual contacts and from shared needles—male prisoners—has not been able to benefit from condoms or clean needles, due to the intransigence of prison guards. But AIDS public-health experts argue that the effect of needle-exchange schemes is limited, and that to reduce the AIDS risk "a pilot project should be established to evaluate the provision of injectable substances to IVDU in a single-use syringe in carefully selected cases." (NACAIDS 1988, para. 27). This has led to negative responses from the leader writers, but unfortunately provides an additional argument in favour of relaxation of the heroin prohibition, as Elliott (1985) sadly foresaw. Moreover, illicit IV drugs users with AIDS are often in a poor state of health before HIV infection occurs and may have few social supports other than dependents who are also at risk of infection. These costs are very difficult to put into figures, but exacerbate the social costs of AIDS itself, conservatively estimated to be $22,218 million (Coe 1987).

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. Street heroin is always adulterated, sometimes with dilutants harmful to the addict, and sickness can also be caused by careless injection of the drug (see references in Marks 1974).

Any attempts at solving "the heroin problem" must be judged by their ability to deal with both aspects of the issue: that of the individual user and that of society. Moreover, the solutions' long-run consequences must also be considered.

It is not immediately obvious what the objectives of possible solutions should be. If the prohibition on heroin use were effective, there might still exist other consequences, but it's unlikely that they would be seen as part of the "heroin problem." 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, as described by Peyrot's fourth stage (Peyrot 1984)? 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, as described by Peyrot's fifth stage? We intend to argue that the time is ripe for such 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 shall 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, the risk of infectious diseases from sharing needles. Recently, as predicted by Elliot (1985), AIDS has been spread by needle-sharing. 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. It is not clear how these costs to the individual users should be weighted in evaluating alternative policies.

4. Supply-Side Policies

THERE is a (black) market for heroin. It is useful to classify possible policies by their effects on the supply of, and demand for, black-market heroin. In this section we consider two policies, not necessarily mutually exclusive, for reducing the supply of heroin to the user:

(1) tighter customs searches, to prevent entry of heroin into Australia, and
(2) increased enforcement to prevent the "landed" drug from reaching the user on the street.

Opium is the hardened milky fluid obtained from pods of the opium poppy (*Papaver somniferum*) several days after the flowering in mid-summer. Morphine and codeine are two of the natural alkaloids of opium. On average, ten kg. of crude opium make one kg. of morphine base, and when this is heated in the presence of acetic acid and other chemicals, a little more than one kg. of heroin is produced. McCoy (1980, pp.20–24) asserts that all of Australia's supply of illicit heroin comes from south-east Asia, mainly through Bangkok, and the Williams Report (1980, p.A178) corroborates this.

4.1 Customs and Smuggling

The importation of heroin is prohibited, yet the prohibition is ineffective. If we assume 20,000 regular users of heroin, then annual consumption per user of 10 grams of pure heroin implies imports of 250 kg. of 80%-pure heroin; 20 grams implies 500 kg. The figure in Table 1 of 97.1 kg. seized in 1983, *if 80% pure,* would correspond to 38.8% or 19.4%, respectively, of these totals. Economic theory suggests that, with a short-run price-inelastic demand curve, such a significant reduction in supply as even 20% would be accompanied by a significant increase in the market-clearing price (of at least 20%). The comparison in the previous section of Elliott's recalculation of the Woodward Report's prices for 1977–78 with Fitzwarryne's prices for 1984–85 suggests that no such

increase has occurred.

There are four possible explanations: (*a*) the average purity of the seized drug approached the 5% of the street, so that it corresponded to a maximum of 2.5% of annual supply, which would not cause a noticeable jump in price; (*b*) importers were able to make up the shortfall with further imports, so that the price rise, even if it occurred, did not persist; (*c*) the demand is price-elastic, perhaps because users turned to substitute drugs, or perhaps because of limits to the users' abilities to raise money to pay for the higher prices inelastic demand would result in, so that prices did not rise greatly as supply was reduced; (*d*) the total amount imported is much greater than the estimated lower limit of 250 kg., perhaps because the "heavy-user" population greatly exceeds 20,000, and may use more than 67 mg. of pure heroin per consuming day per user, on average.

We examine these possibilities one-by-one. First, since the amount of 97.1 kg. was seized by *federal* agencies, including the Australian Federal Police and the Customs Bureau, the purity is likely to be closer to the 80% of the "landed" drug than to the 5% of the street heroin seized in addition by State police forces. Second, if the structure of the importing "industry" and the level of official surveillance were such as to have allowed the shortfall to be made up by further imports, then the difficulties of attempting to staunch the flow are revealed. If, however, the shortfall was not made up, and yet the prices did not rise appreciably, then we must seek an explanation elsewhere.

Third, Moore (1977, p.9) argues that the aggregate demand for heroin is likely to be price-inelastic, but not perfectly price-inelastic, that is, a reduction in the consumption of heroin will lead to a large price increase (more than proportionate, but finite), and an increase in amount paid. If we take the empirical estimates of Silverman and Spruill (1977, p.97) of a long-run price elasticity of demand of around −0.25, then a 20% fall in the amount consumed would correspond to an 80% rise in the price, ceteris paribus. As remarked above, there is no evidence of such a price rise in 1983.

Fourth, it may be that the opiate-related deaths shown in Table 1 are a true indicator of current numbers, and that, instead of 20,000 heavy users each consuming 20 grams of pure heroin a year, there are 40,000 heavy users each consuming 25.5 grams of pure heroin a year. [This corresponds to a daily habit of 100 mg. of pure heroin, or an annual habit of 32 grams of 80%-pure heroin, and is based on Elliott's recalculation of the Williams Report estimates (Elliott 1982, p.15).] In this case, the seizure of 97.1 kg., even if of 80% purity, would correspond to only 7.6% of the total quantity imported of 1,280 kg., which could result in a 30% price rise given a price elasticity of demand equal to −0.25. This is consistent with the statement in 1985 of the then head of the joint federal/NSW Joint Task Force on Drug Trafficking, Detective Chief Superintendent Jim Willis, that only four to seven per cent of imported illegal drugs were being interdicted (Davies 1986, p.133). If we take the estimate of price elasticity of demand as roughly correct, we must conclude that absence of a significant price rise in 1983 means that (1) our previous estimate of the amount of imported heroin of 250 kg. must have been a severe underestimate, and (2) the increased effort which led to the seizure figure of 97.1 kg. will have to be magnified many times to make the prohibition absolute. As this effort is successfully rewarded with higher seizure figures, the prices of "landed" and "street" heroin will rise dramatically, and with them the potential for greatly increased costs: to

the addicts, to property owners, and to the criminal-justice system itself.

4.2 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, as Andrews forecast at the 1985 ANZAAS conference (Levinson 1986, p.169). 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).

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, by resulting in a greater turnover of the network, as discussed above. 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.

As Elliott (1982, p.25) reminds us: "Where heroin is difficult to obtain, and expensive, the expedients adopted by the user in securing his supply constitute a major component of the social problem of heroin use … The distinctive form of the social problem constituted by heroin use is a consequence of the illicit market which results

from prohibition."

5. Managing Demand

EMAND" 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 is 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.

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 together provide the driving force behind the acquisitive crimes, the distribution networks, the smuggling, and the original farming of the poppy fields in Asia, together with the costs of the law-enforcement effort directed towards the prohibition, and the social costs of corruption, of illness and death, which the illegality results in. If the demand for heroin were zero, there would be no heroin problem.

5.1 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. "The problem is fundamental: the desire to have the incentive conflicts with the desire to minimise the damage done to people who do not respond to the incentive" (Moore 1977, p.237). If one needs only a modest disincentive to discourage users, then one can do a great deal 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 are there for 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 (*Sydney Morning Herald*, November 21, 1984). 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. (Marks 1974, p.75, and Kaplan 1983, pp.127–9, discuss the evidence confirming this.) 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 (see the example in Elliott 1982, p.6). This is what

Brecher (1972) calls "the lure of the warning." The 1985 "drug summit" in Canberra has 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: "Anyone that says heroin is bad, heroin is evil, will lose all credibility with addicts because they know better, they know how good it is." (Mr Kevin O'Neil, NSW Department of Health spokesman, as quoted in the *Sydney Morning Herald* of November 21, 1984).

For an effective policy of deterrence, better understanding of the causes of heroin use is essential. In a comprehensive discussion of the psychological, sociological, and pharmacological/physiological possibilities, 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." It is not as though one needle is enough: in experiments in which volunteers received injections of morphine (only slightly less potent than heroin), fewer than 10% liked the experience (Chein 1964; see also McAuliffe 1975), and in a controlled double-blind experiment in which heroin was injected, only about 10% of the subjects were enthusiastic or mildly pleased (Lasagna 1955). It usually takes several weeks of using between 50 and 100 mg. a day to acquire any noticeable physical dependence, although even that is not infallible (Ashley 1972, p.61), and, on the street, addiction is rare within six weeks of a user's first experience with the drug (McAuliffe and Gordon 1974). 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 (Peyrot's stage four), or is it to look for radical alternatives (Peyrot's stage five)?

5.2 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. Is there an element of wishful thinking associated with wanting to cure the addict? At the same time as asserting the addict's helplessness to stop being an addict, conventional wisdom has it that "outside forces" can cure the addict: a claim of our power to influence others—in this case, addicts—through legislation, punishment, and perhaps medical treatment (Kaplan 1983, p.38)? Indeed, the three characteristics of a disease—that the diseased suffers, that the sufferer has no control when diseased, and that the medical profession has primary competence to cure or alleviate the disease—may not be satisfied by heroin addiction. Nonetheless, the medical model is very influential. Lennings (1981, p.379) reviews recent outcome studies, and 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 (Wodak 1985). 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 (*Sydney Morning Herald*, November 21, 1984); 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.

5.3 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. (Meyers 1980 considers a fourth—medical and drug treatment research—which is not relevant to the social problems we address here.) 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 doctor, 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 doctors may prescribe maintenance doses of methadone syrup for drug-dependent patients) and in Britain (where methadone can be prescribed for addicts by any doctor) (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. Methadone is a opioid analgesic which was first synthesised in 1941 by I.G. Farben chemists in response the war-time blockade of opium imports to Germany from which to refine morphine (Bellis 1981, p.38). 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.

Another possible candidate for inclusion among the continuing programmes is treatment with an opiate "antagonist," a drug which, if administered before heroin is taken, blocks both the relief and the euphoric effect of the heroin, or, if administered after, precipitates withdrawal. In neither case does the antagonist ease the craving for heroin, or even allow the heroin, if then taken, to relieve the craving itself. It seems a particularly cruel sort of treatment to impose on an addict, who would presumably not chose it for himself. The main value of the antagonist drugs appears to be in the treatment of victims of acute opiate overdose, who may otherwise die of respiratory depression.

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. For any drug the first of these varies with mode of administration: intravenous administration results in a higher peak effect (euphoric and analgesic) and a shorter duration until withdrawal than does oral 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). In Britain and Australia both injectable and oral forms of methadone may be prescribed for addicts. In the U.S.A. methadone is only dispensed in syrup form for oral administration, blocking withdrawal and heroin craving, but not the resulting euphoria. 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 nonopiate 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. The authors caution against extrapolation of their findings in Britain to proposals abroad, in agreement with Wodak (1985).

As suggested above, 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 in 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.

The Australian National Policy on Methadone distinguishes methadone maintenance from the use of methadone withdrawal (Williams 1980, p.C25). Both are permitted by the Policy for "patients" who are over 18 years of age, who have a well-established physical addiction (usually demonstrated by use of an antagonist), and who have a history of fairly continuous opiate usage over at least one full year (methadone withdrawal) or two full years (methadone maintenance). In addition, admission to methadone maintenance requires that the "patient" has attempted other treatment alternatives extending over a period of at least six months and including at least two withdrawals.

Baldwin (1987) has made a close study of the costs of public and private methadone maintenance programs in NSW and finds that the mean cost of public clinics was $113 per client per month in early 1986, with a range of $61 to $239 depending on support services offered. The mean cost of clinical management alone is similar for both private and public clinics, but the private pathology laboratories are much dearer than the NSW government laboratory's charges. These figures must be considered as lower bounds for heroin maintenance clinics, given the need for more frequent visits by clients, because of the shorter effective duration of heroin's effects.

There has been criticism of methadone maintenance in general and the National Policy in particular: 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. If withdrawal from opiate use were alleviated by methadone, this criticism might be muted. Unfortunately, daily methadone usage below 20 mg. sometimes results in withdrawal symptoms, the so-called "20 mg. barrier;" indeed, it has been argued that withdrawal from methadone is sometimes more difficult than withdrawal from heroin (Williams 1980, p.C30). Second, there may be "leakage" of legal methadone onto the street, the so-called "grey" market (Preble and Miller 1977). In 1976 approximately two-thirds of persons receiving methadone had received no prior treatment for drug dependency, and many unauthorised doctors were prescribing methadone; the Williams Report (1980, p.C27) notes that the National Policy

has not always been observed. 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 under the National Health Scheme to treat disabling pain from transient disorders or malignant cancers which had defied treatment with non-opiate analgesics. On the other hand, oral methadone has undoubted value if it reduces the user's reliance on the needle.

6. The Policy of Choice

WE have examined the history of social responses to different perceptions of opiate use in three societies: the U.S.A., Britain, and Australia. We have seen the coincidence of social developments, medical advances, community concerns, and international agreements which have resulted not only in the laws we have today, but also in the social beliefs about, and attitudes towards, opiate use in general, and heroin use in particular. With the scant data available we have attempted to discern the shape and extent of the heroin problem in Australia today.

In analysing alternative policies towards the use of illicit heroin, we have examined first the supply side of the black market and then the demand side. On the supply side we have looked at two possibilities for tightening enforcement of the prohibition of heroin use: first, more effective customs searches, to prevent entry of heroin into Australia; and, second, better policing, to stop the "landed" drug from reaching the user on the street. On the demand side we have considered policies of deterrence against heroin use, policies of cure of heroin addiction, and continuing policies, which included maintenance programmes, prescription, and decriminalisation of heroin and/or methadone, its close substitute. Can we now make a positive proposal?

In a paper which should be compulsory (and compulsive) reading for all who grapple with the dilemma of heroin policy, Moore (1976) lays bare the heroin problem in a way that has not been equalled. To summarise: the choice of policies to deal with the heroin problem can be substantially affected by the definition of the problem. Definition of the problem entails exhaustively listing its attributes (broadly, the effects on heroin users and the effects on others), listing the government's rôle and objectives, and listing possible policy instruments.

Moore lists two areas of the heroin problem's effects on users: health (including mortality, morbidity, and intoxication), and dignity and autonomy (economic independence, conventional responsibilities, and satisfaction with life); and four areas of its effects on others: crimes (economic losses to victims, private costs of protection, and fear and anxiety), contagion, public resources (special services provided to heroin users, their share of general services, the value of public facilities to others, and the impact on the balance of payments and on taxation and local government revenues), and the overall morale of society (the state of civil liberties, the power of organised crime, the integrity of the police and customs officials, the degree of upward mobility, and finally morality and æsthetics). He argues that these attributes should be included in any discussion of policy alternatives towards the heroin problem.

The government's rôle and objectives are more controversial. Moore lists three possible boundaries to the government's rôle: first, the government should intervene in private decisions only when these have a harmful effect on others. This belief implies that the government should not concern itself with the "private" costs of heroin use, but

only with the "externalities" of crime and contagion. Second, government intervention in private decisions is justified when the decision maker is either unable to determine or incompetent to evaluate the decisions' consequences—hence laws for the protection of minors and the insane. Third, the government, perhaps through Hardin's (1968) "mutual coercion, mutually agreed upon," has an obligation to enable every citizen to enjoy a life consistent with current views of human dignity—hence, the government provision of "merit" goods; moreover, this view might provide justification for laws against selling oneself into slavery, or against choosing to go to hell via the heroin route, for example. Depending on one's view of the rôle of government, its objectives might include: improving the health of heroin users, enhancing their dignity and autonomy, reducing the crimes they commit, reducing the spread of heroin use, bolstering society's morale, and reducing the drain of public resources caused by heroin users.

We have considered some of the government's policy instruments in Sections 4 and 5 above. Moore posits a 2×2 classification scheme: policies that affect the behaviour of the general society versus policies that affect the behaviour of current heroin users only; policies that affect a broad range of behaviour versus policies that affect heroin use only. This scheme ranges from policies which influence the macro "causes" such as unemployment, to policies which influence the symptoms only, such as current users' heroin consumption. Policies for prevention and cure lie between.

Moore 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: the fact that the manufacture, distribution, possession, and use of heroin are virtually absolutely prohibited throughout Australia. 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. It is now time to move beyond Peyrot's stage-four muddling to stage one of a new cycle: decriminalisation of the market for heroin.

In a short paper some years ago Dr L.R.H. Drew, the Senior Medical Advisor on Alcohol and Drug Dependence in the Commonwealth Department of Health, asked four questions about illegal narcotics [heroin] use: "are narcotics a threat to national security? are narcotics a threat to law and order? are narcotics a threat to the personal development, and lifelong contribution to society, of young people? and are narcotics a threat to the health of the young?" (Drew 1979). He argued that the real threat to national security lies

not in the drug use, but in the possibilities for corruption and organised crime, and that: "drug abuse and crime are what we choose to make them," in the words of Goldman (1981). That is, both heroin abuse and crime are socially defined, not inherent: both are artefacts of prohibition. Moreover, as Wardlaw (1981) and Dobinson and Ward (1985) argued, the crime antedated the drug taking, on the whole. Drew answered the third question by noting that "the more we know of drug use and drug takers the more it appears that drug dependence is more often a symptom than a primary cause of maladjustment. The drug-using subculture and lifestyle may be the best adjustment possible for some people at some times in their lives" (Drew 1979, p.158). He notes that, although more freely available heroin would result in some experimentation with an increase in drug use, "drug problems would only follow suit if our community is raising a very maladjusted generation of young people," in which event problems would occur, drugs or no drugs.

6.1 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 "naïve 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. Up to a point we are the victims of our own myth-making: we have already noted (in Section 5.1 above) that use does not 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 inelastic, relaxation of the prohibition will increase the numbers of users, although many might be expected to be moderate, infrequent users, such as Zinberg (1979) has reported finding.

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 are in general those who most strongly believe that prohibition and the criminal-justice system have been successful, despite the evidence of this paper. They point to the "gin epidemic" of eighteenth-century England and the

growth in the consumption of spirits in post-Revolutionary America, but these episodes may not be germaine since, as Aaron and Musto (1981, p.137) argue, "[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 no way around it. Libertarians would see no dilemma: Szasz (1972) argues that every adult should have the right to self-administer whatever substances he pleases, even it they lead to addiction, so long as he is subject to existing laws which preserve the rights of every person not to be hurt, physically or financially, by the actions of another. Szasz would argue for complete legalisation of heroin, which, as we have argued above, would be unlikely to result in the disaster foreseen by some. A step in the right direction would be to allow any doctor to prescribe National Health Service heroin (or methadone) for any patient, whether dependent or not. Or might this not be another example of stage-four muddling through? Harking back to 1937 in the Northern Territory and foreshadowing Wardlaw (1982), Marks (1974) suggests 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 will reduce the subsidy to organised crime from all Australians, as reflected in our home insurance premiums, via the benighted heroin users.

7. Conclusion

IN Australia in 1988 the prohibition against heroin use has failed, despite our society's best endeavours. There is no escaping the trade-off: any restrictions on the market for legal heroin will result in stimulation of the demand for illegal heroin on the black market. And this demand will be met, at a cost, not only to the user, but to society at large. In utilitarian terms the costs of the prohibition far outweigh the costs of a policy of free heroin. The time has come for a radical reassessment of the Australian drug laws by academics, by politicians, by the media, and by the public. Almost one Australian in ten already sees the wisdom of providing free heroin or methadone to registered addicts; the debate must continue.

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