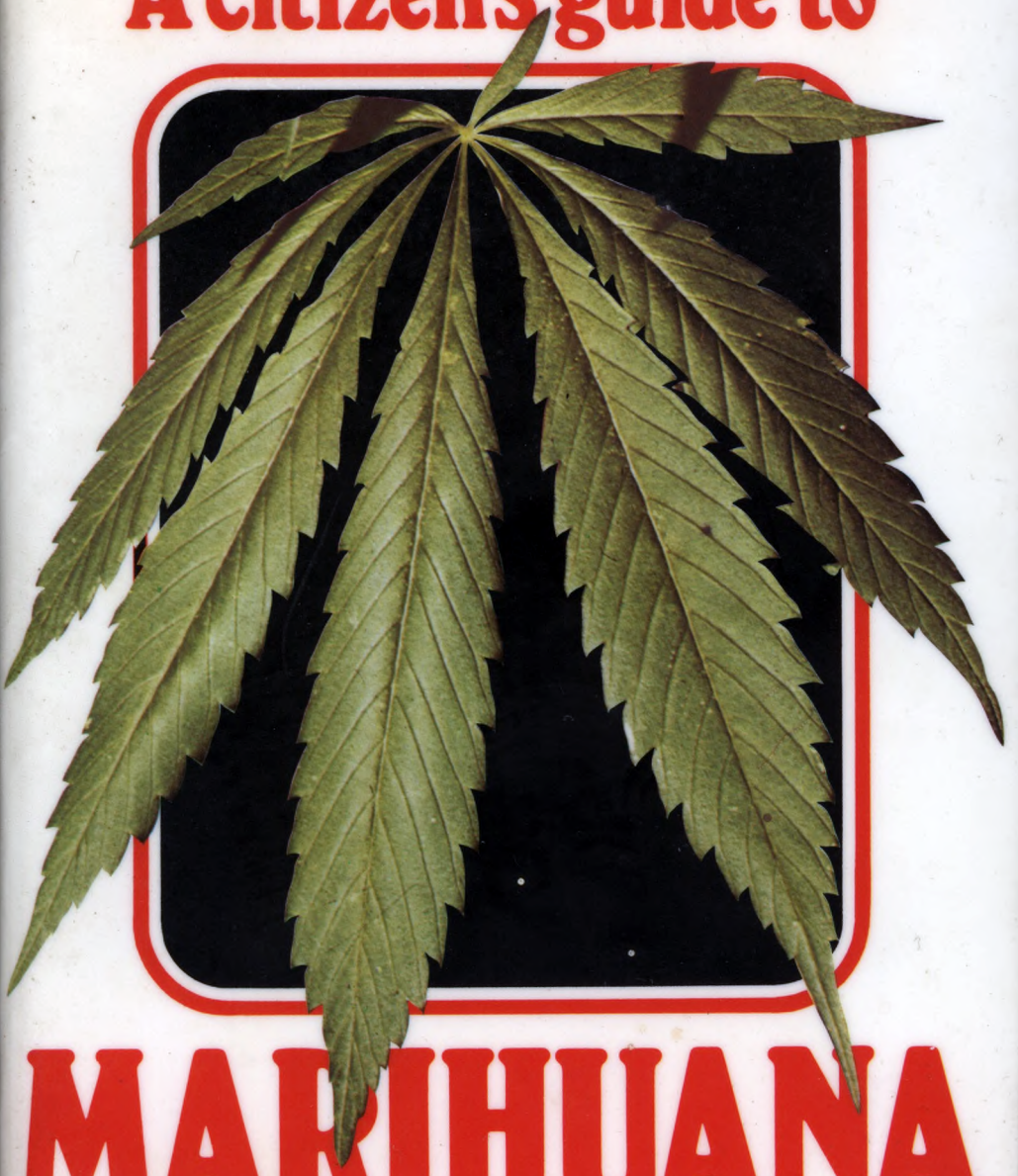
A citizen's guide to



MARIHUANA in Australia

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A Citizen's Guide to MARIHUANA in Australia

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DOPE

The drug marihuana—non-addictive—but habit-forming—its use a national pastime—possible hazards—the objectives of this book.

Marihuana is a drug. It consists of the crushed and dried leaves of the hemp plant *Cannabis sativa* L. It is hot poisonous. Used alone it has not killed anybody. It is not severely toxic; it does not supply calories, and so cannot become a substitute for food. It is not like the pep pills and sleeping tablets that so many people take, and it is nothing like heroin or LSD. It is not addictive and Australian hospitals are not full of its victims. Nor does it drive people to commit crime or suicide. But it is a habit-forming drug, and may be harmful to some people in certain doses, and in some circumstances, especially if used at the same time as some other drugs. Once called pot, weed, grass, Mary Jane, kif, dagga, ganja, bhang, tea, or a hundred or more other nicknames, it is now more generally known as dope, and in Australia it is illegal for anybody to possess it. No doctor may prescribe it, and nobody may give it to people to study their reactions; only one controlled scientific experiment has been permitted officially in Australia. Nevertheless it is widely used as a personal and social drug, because many people like the sensations it gives, and they may even benefit from its occasional use; it can induce relaxation and mild intoxication, and may therefore make people better able to relate to one another. It is also cheaper and quicker than alcohol in achieving the desired results and, at present, is non-taxable. Being produced without fermentation or distillation, it is readily home-grown and home-treated.

Smoking dope is one of Australia's nation-wide pastimes; marihuana is now the third recreational drug after alcohol and tobacco. However, like some of the other pleasures in life which are illegal or "immoral", marihuana does not improve cognitive abilities

or motor skills, and its use may affect personal hygiene, employment, sexual relations and marriage. If used in large amounts for long periods it can cause physical and psychological problems which are hazardous to individuals and to society; it may also have some long-term effects on present or future generations which are not yet known. It is not always completely harmless, and its use is not always a “victimless crime”.

Therefore, if you are smoking a joint of marihuana, do so with full knowledge of the likely consequences. This book attempts to explain what they are. It tries to sum up and to clarify for the benefit of Australians the accumulated botanical, chemical, physiological, psychological and other scientific findings which are spread throughout a host of books, journals, reports and documents not readily available to the general public. It also suggests that a study of the history and present use of marihuana will show that it would be better if Australians were legally allowed to make up their own minds about whether they want to use the stuff or not.

2

GETTING STONED

Learning the art—inhalation—effects of low doses—moderate doses—very high doses—definition of usage—physiological effects—the "munchies"—marihuana and learning—lethal doses in animals—use and abuse.

What's it like to get stoned? Is it fun? Millions of words have been written about the experience of using marihuana and hashish, and there is nothing new left to be said. Nevertheless, a few remarks may be useful to those who haven't yet tried it. The appreciation of marihuana has to be learned, and many people smoking it for the first time don't get, or don't know they are getting, any reactions. They need to be coached in recognising and responding to its effects. If you want to change the way you think and feel, then you have got to work at it. And it may not come easily. As with any psychotropic or mind-changing drug, altering the way you feel depends on the level of the dose and the strength of the dose, especially the amount you have absorbed of THC (tetrahydrocannabinol), the main psychoactive constituent of cannabis.

Indeed, amongst connoisseurs of the habit, one of its attractions is uncertainty about the sort of high which will be achieved, mainly because of the variability in potency and the instability of the drug. For these reasons many questions about the effects of marihuana can never be examined quantitatively: the introspective report of the person concerned is the only evidence that he is "high" on marihuana. It is often said, "We can't explain it to you. Why don't you try it?" Words are quite inadequate to describe it. It also depends on your general state of health, and your expectations, mood and circumstances, and particularly on whether the general situation is relaxed or stressful—whether you like the people you are with or you don't, whether you're feeling confident or socially uneasy.

The effects of the smoke will also vary in the same person in similar circumstances on different occasions. Furthermore, in the present marketing situation in Australia, no two samples of herbal material, buddha sticks or resin are the same. You might be smoking ordinary lawn grass and be getting no results; but you might be smoking some high quality material that has quick effects. There is therefore no such thing as a marihuana reaction that can be duplicated in a laboratory; there are only marihuana reactions, and the individual variations are greater than with any other drug. They are also much more interesting to the user than to the observer.

Marihuana is the most social and recreational of the non-medical drugs, and is most commonly smoked at parties, where the sharing of joints can provide an endless variety of relaxed and amusing situations because of its effects of exhilaration and loss of inhibition. Sharing joints is also a method of ensuring supplies of the drug and mutual protection from the police, as well as of generating new social attitudes; it has often been remarked that the smoking of cannabis resembles a rite of initiation into a new value system. The reactions are the same in a particular individual, whether alone or in a group, although some may be accentuated when there is group stimulation, particularly if the companions of the occasion are greatly liked or strongly detested. Nevertheless, it is usually necessary to learn how to have a good trip, to achieve a good average high, or to get stoned. Similarly, it is possible to learn how to titrate or regulate the dose, how to switch off the intoxication when a comfortable level has been reached and how to come down when you want to.

In Australia, as in America, cannabis is usually smoked in cigarettes once called reefers, now called joints, which have a distinctive smell and taste. These consist of the finely chopped-up leaves of the plant, and are similar to commercial cigarettes, only thicker and with the ends turned in, as dried cannabis is not as moist as tobacco (the average joint contains about 1 per cent THC). It is sometimes mixed with tobacco. A piece of hashish—the pure resin of the plant—can be placed on the end of a burning tobacco cigarette, but water pipes (hookahs) are preferable for smoking hashish, as they remove the tar and other irritating substances from the smoke before inhalation.

The drug is inhaled deeply for about twenty seconds and a buzz is felt in two to three minutes, or at least in ten minutes. A user must learn to recognise the effects of the drug as well as to smoke it effectively. The peak effect of absorption—the high—usually occurs after half an hour, and some effects last three to four hours for low doses, and up to twenty-four hours for others, depending on the strength of the dose. There is great variation amongst users. Sometimes the drug is taken orally as with kitchen herbs, in sweet wine, in hot beverages or in the form of hash cakes or hash cookies. Although the effects are the same, the time for onset is much longer. When

eating the drug, however, unlike smoking it, the effects cannot be easily limited, and you can't turn off if they begin to be unpleasant. As with conventional smoking, or eating, or doing all the other interesting things in life, it is the experienced user who gets the most benefit.

What's it like to turn on with dope? What's it like to be stoned out of your mind? In low doses—one joint, or 2.5 mg delivered tetrahydrocannabinol—some of the commonest recorded effects are said to be feelings of happiness, increased conviviality, a feeling of interpersonal rapport and communication, heightened sensitivity to humour and flights of imagination, exhilaration, sometimes uncontrolled giggling, heightened sensory perception, a slowed sense of time, changes in perception in spatial relations, sound and taste, increased and decreased energy and talkativeness, restlessness and mild confusion. Marihuana smokers claim that they see more meaningful designs in visual materials and hear more subtle changes in sound. Their sense of touch is more exciting; their taste and smell take on new qualities; they feel more tranquil or cool, and they feel able to communicate with greater understanding and discuss things which they would not usually talk about. Simple central nervous system functions are not affected by low doses of THC, whether in the form of herbs or resin, inhaled or swallowed.

With moderate doses what do you do and say? What happens to your mind and your feelings? The sensory changes are accentuated, there are rich fantasies and feelings of drifting and floating, but there is a loss in immediate memory, and it is difficult to continue a train of thought, especially verbally, or to retrace a period of conversation to the point which has been reached. Illogical reasoning is not noticed, and arguments don't seem to get anywhere though the discussion might be free-flowing. The feeling of relaxation is still evident and there is increased suggestibility. Increased personal understanding and creativity have been reported, but these are often only evident to the persons themselves and are probably rather suggested than actually experienced. Regular users seem to be able to make conscious allowance for the lengthened subjective sense of time when they are stoned. There can be some not so pleasant reactions, like fear and anxiety, irritability, nausea, dizziness, confusion and weakness. Regular users claim to be more aware of being nearly stoned than alcoholics are aware of being on the verge of drunkenness. Some also claim that smoking marihuana is a real aid to creative thinking and writing.

There is a saying in Morocco that "a little bit of kif warms, a lot burns". Cannabis in excess can cause acute mental disturbance which may last for some hours or days. With a very high dose (in excess of 10 mg of THC or five times that required for an ordinary high) hallucinations may be experienced in a wave-like fashion somewhat like those experienced with a bad trip on acid (LSD), unless the

person involved is very experienced and knows how to sit it out until it passes. However, the effects of these two drugs are quite distinct physiologically, behaviourally and subjectively, and a dose of cannabis will *not* produce a mild LSD experience. The hallucinations induced by cannabis may take the form of perceived depersonalisation, acute panic symptoms, extreme confusion, sensory hallucinations, and the fear of going insane or dying. These reactions occur almost invariably if the drug is taken in considerably higher doses than the person is accustomed to, but appear in enough users to warrant concern. A few regular smokers have claimed that hallucinatory symptoms recur much later, when not smoking, in the form of a flashback.

The drug can cause toxic psychosis, a temporary malfunction of the brain caused by the presence of a foreign substance in the bloodstream; this is non-specific and can be caused by a number of drugs. However, the occurrence of this panic-type phenomenon is rare, and is characteristic of the user, not of the drug. It is especially common amongst uptight middle-aged novice users. The drug merely triggers the psychosis; so might alcohol, LSD or an amphetamine.

Marihuana use and marihuana users cannot be put into clearcut classifications, although some idea of the extremes involved is given in the Official Report of the National Commission on Marihuana and Drug Abuse (Washington, 1972) which gives the following definitions of terms:

Experimental:	At least one trial to once a month or less.
Intermittent:	Two to ten times monthly.
Moderate:	Eleven times monthly to once daily.
Heavy:	Several times daily.
Very Heavy:	Almost constant intoxication with potent preparations: brain rarely drug-free.

However, it is important to realise that hashish preparations are far more potent than marihuana cigarettes, because they contain much more THC. Hence only one dose of hashish may produce the extensive hallucinogenic reactions of a very heavy dose, or of many successive doses of marihuana.

Marihuana is taken for its psychological effects, in particular because it changes the user's state of mind and consciousness, or perception of the world and oneself or ideation. It acts on those parts of the brain which govern awareness and emotional responsibility, and the psychological changes which occur are notoriously difficult to assess. But there are some physiological effects, apart from the occasional nausea mentioned previously, which can be determined accurately. The heart rate is increased—the degree of acceleration depending on the amount taken—but it is not so rapid as to make one aware of having a rapid pulse. There is also an increase in blood pressure with high doses. The eyes become reddened, but there is no alteration in the size of the pupils. Very frequently dryness of

the mouth and throat is experienced and there is a chance that heavy users may develop bronchitis. If they use marihuana and tobacco together, then they may also develop any diseases caused by tobacco-smoking. Occasionally a person trying the drug for the first time has a bout of vomiting. Appetite is usually stimulated, and urination is more frequent. Unlike alcohol, the use of marihuana involves no blackout which permits misbehaviour to be disregarded. Finally, because dope is a soporific, the smoker becomes drowsy and falls asleep, usually waking up without a hangover, but often with a strong feeling of lethargy, which may continue for a long period. Sometimes there is headache and nausea with some brief emotional upset, especially about the comments of friends during the session, and uncertainty about the right construction to put on them.

All in all, the short-term physiological effects are slight, and have little clinical significance. There are no lasting electrocardiographic changes, or in urine specific gravity or acidity, blood chemistry, testosterone level, body temperature, respiratory rate or liver function and there is no proof that the use of marihuana has caused brain, hormone or chromosome damage. Some people can ingest massive doses of THC and show no effects whatever. While it would be foolish to promise immunity from anything and everything, marihuana has been used in the largest single laboratory in the world's history, and the present generation of mankind shows no signs of being any the worse because of it; millions of the world's population are descendants of the smokers of marihuana and hashish. There is no new clinical reason to be disturbed about the drug itself; there is no demon in hemp, only in man. There is no evidence whatever to support the long-held view that marihuana is a 'killer drug'; that smokers become aggressive, violent and criminal if they were not so before. The smoking of marihuana in moderate amounts is one of the least dangerous of the social habits. There is no evidence that it causes crime—least of all, violent crime among teenagers. On the contrary, its euphoric effects are more likely to inhibit tendencies to violence, which are closely related to the use of alcohol. Marihuana does not by itself change basic personality traits or motivation. People who are introverted stay that way; others remain gregarious and outgoing. Nor does Hemp mean Vice. Dope does not cause young girls and women to lose their virtue, unless they wanted to do so in the first place; and it does not turn young men into Casanovas.

Most marihuana smokers experience the "munchies"—they have a craving for food rather like that experienced by many women during pregnancy, with a preference for varieties and combinations of sweet foods. This usually occurs after the psychotropic effects of smoking have passed. It is not clear whether it is always hunger and the need for food, or whether it is simply an increased interest in food and drink. Some people report having ravenously eaten sweets,

chocolates, milkshakes and spicy foods. No studies have been made on healthy individuals as to whether there is actual weight gain after smoking marihuana. The hunger reported is greater if the dose is high and follows smoking rather than ingestion. Controlled tests have shown that the phenomenon only occurs in about half the number of people surveyed. Increased ingestion of food has been shown to occur in rats after large oral doses of THC.

Because of altered sensory perception and reports of greater understanding by some writers, there have been suggestions that marihuana may in fact improve learning. However, students who suppose that they can perform better at examinations after smoking dope are much misled. Tests have shown that there is a significant general deterioration in both motor and simple cognitive skills. In some simple learning situations, students may think they are solving problems better under the influence of dope, but in fact their performance is worse. Immediate memory is quickly affected and smokers have difficulty in remembering from moment to moment logical trains of thought. This is observed in speech patterns. The heavy user often suffers a general disorientation and the performance of tasks appears to an observer to be quite laborious.

Unlike alcoholics, users of marihuana will not experience delirium tremens and the other severe reactions associated with excessive drinking. They will not suffer severe withdrawal symptoms. Nor will they die from dope. No death has ever been reported in humans solely from an overdose of marihuana. However, death has been brought about in experimental animals by intravenous injection of THC. There is considerable species difference, but the acute toxic dose for rats taken orally is 860 to 1910 mg/kg and can vary from 36 to 2000 mg/kg when given by injection, depending on the route of administration. A dose of 9000 mg/kg did not kill a rhesus monkey (*Annual Review of Pharmacology*, 1975, *15,* p. 200). To obtain comparable toxicity for inhaled Δ^9THC in man it would be necessary to smoke 600 joints in quick succession. This would kill 50 per cent of randomly selected men of average weight (J.D.P. Graham (ed.), *Cannabis and Health*, London, 1976, p. 279). The therapeutic index, which indicates a drug's safety margin, is 40,000 for cannabis compared with a value of 10 for alcohol (*New Physician*, November 1969). It is noteworthy that a dose of alcohol only five times greater than that required to achieve a social intoxication can put a person into a coma, which will be followed by death.

The conclusion of all known surveys is that marihuana produces no significant physical, biochemical or mental abnormalities, and if smoked in moderate doses is an agreeable intoxicant, euphoriant and relaxant. By itself it does not encourage people to commit crimes, or indulge in sexual excesses. Over-use will bring some unpleasant effects; the degree of unpleasantness is determined by the degree of abuse. In particular, chronic users of marihuana can never fully

compensate for their intoxication so as to carry on prolonged and intricate activities. The use of marihuana in moderate doses is not in general the sign of a deficient personality which needs extraordinary resort to fantasy or other kinds of escape. It is smoked for temporary pleasure because of the effects it produces, a situation found with moderate use of other social drugs, notably alcohol. A few years ago people were pressured by their friends to try marihuana at parties; now it is frequently there to take or leave. The friendship networks make it possible for most people who want it to get it. Marihuana is an extremely subjective drug; the most rigidly controlled, scientific interviews have elicited a great variety of reactions. The more controlled and scientific such experiments have been, the less they resemble the real world in which the smokers of marihuana undergo their endless variety of experiences. Thus the range of reactions emerging in the surveys is all the more significant.

3

SOME HISTORY

Origins of cannabis—early history of use—other plants used in religious practices—cannabis in the Western world—in the nineteenth century.

How long have marihuana and hashish been around? They were well-known long before recorded history began. They are obtained from the hemp plant *Cannabis sativa* L., and are amongst man's oldest and most widely used drugs. The plant from which they come is one of the oldest domesticated and economically useful plants known to mankind. Fibre from the bark of its stems was used from antiquity to make sacking and clothing, and also the rope which rigged the world's sailing ships before the age of steam; cannabis was a major agricultural crop until the invention of sisal and nylon rope. Oil has been obtained from its seeds for making soap and paints. The seeds also make good food for birds, and can be used as fish bait when treated in hot water. Hemp resin provides the drug which gives the plant its psychoactive properties. It grows freely as a weed in a number of countries, and was originally native to the temperate parts of Asia, probably near the Caspian Sea, but has spread to and become naturalised in China, Afghanistan, India, South-east Asia, the Middle East, Africa, Europe (particularly Russia), North and South America, Jamaica and parts of Australia. It grows to a greater height in the warmer zones than in the cold latitudes.

The resin of cannabis has been eaten, drunk, smoked and sniffed for several millennia. Archaeologists have found evidence of its use in Egypt, China, India, Greece and Africa, but the earliest documented account of its growth and cultivation is in a Chinese medical book dated at 2737 BC. The Chinese used the drug as an intoxicant and sometimes referred to it as the "Liberator of Sin". When the plant spread to India in the early Middle Ages it was used to aid religious meditation, and also as a ceremonial intoxicant and a folk medicine: it was sometimes called the "Giver of Life". Berlu in

his *Treasury of Drugs* (London, 1690) describes it as of "an infatuating quality and pernicious use". The Indians used three different preparations: bhang, a preparation from the tops of the plant, similar to Western marihuana; ganja, a more potent preparation but also made from the aerial parts of the plant; and charas, a preparation from the resin similar to hashish. High caste Indians were not permitted to use alcohol, but were allowed bhang, which they used to achieve a state of stupefaction. The lower castes used it in much the same way as Australian working men use beer.

The first Western author to mention cannabis was the Greek historian Herodotus, who recorded in the fifth century BC that the plant grew in Scythia, and that the Thracians used it for hempen garments as well as for the purpose of exciting effects similar to alcoholic intoxication. The Roman author Pliny noted that the hemp from Alabanda in Asia Minor was the best quality. In North Africa it was known as kif. The Anglo-Saxons knew how to prepare hemp, and the use of hempen cloth became common in central and southern Europe in the thirteenth century. In other cultures cannabis came into use as an intoxicant for religious and social purposes, especially in Jamaica and North America. Marihuana (also spelt marijuana) is thought to have been a Mexican-Spanish word for a poor grade of tobacco; it came into use at the end of the nineteenth century in North America to refer to cannabis cigars and cigarettes. The name pot, which has also been used to refer to marihuana, is thought to have come from the Mexican-Spanish word potaguaya.

Plants have been used in religious practices ever since it was understood that natural materials help in altering mental states and in divorcing the mind from worldly attractions. Probably the oldest is the soma of the Rigveda which is thought to be *Amanita muscaria,* the flyagaric mushroom which contains hallucinogenic principles. The Aztecs of Mexico used several hallucinogenic materials in their religious rites. One was peyotl, the little cactus, *Lophophora williamsii*, which is still used legitimately by the Christian Native American Church founded in Oklahoma in 1918. Others were teonanacatl, the mushroom *Psilocybe mexicana*, which has become popular more recently as a social drug, golden top, and ololiqui, from the climbers *Rivea corymbosa* and *Ipomea violacea*, the morning glories which contain derivatives of LSD. Much of this information will be familiar to readers of Carlos Castaneda's best-selling books. Nearer to Australia, Captain James Cook reported on the use of kava in Polynesian religious rites. The use of plants in divine worship was heresy to the Spanish conquistadores who tried unsuccessfully to stamp out the practice in Mexico. However, they never questioned their own use in church of incense, which is also derived from plants.

The cannabis plant was not cultivated for rope in Western Europe until the sixteenth century, when it was apparently introduced by the Spaniards, and its resin came into use as a social drug, though not a religious one. By the nineteenth century extracts of cannabis were

often prescribed in Western Europe for medicinal purposes. Indeed, preparations from hemp and opium were widely used, and it was not a criminal offence to smoke opium, medicate oneself with morphine, cocaine or laudanum, and smoke hash. Some of the world's most distinguished writers of the nineteenth century found that cannabis was "a pleasant assassin" of care, gloom and apprehension, in particular Baudelaire, Dumas, Coleridge, De Quincey and Gautier. In Australia, Marcus Clarke combined hashish with journalism and fiction-writing; evidence of his consequent heightened awareness may be found, for instance, in his newspaper articles in the *Australasian* in 1872-73, in which a fictional Dr Cannabis discussed important subjects, and in his article "Cannabis Indica", published in the *Colonial Monthly* in February 1868, in which he recounted his own experiences when under the influence of the drug. The Ninth Edition of the *Encyclopaedia Britannica*, published in 1880, included a note that

> Hemp, however consumed, acts in a most strange way upon the nervous system, but its effects differ greatly with races as well as with individuals. Generally the first effect of a small dose is to produce increase of appetite and cheerfulness. Larger doses produce hallucinations, delirium, sleep, and sometimes catalepsy. During the dreamy state induced by an average dose of hashish, the patient becomes the sport of rapidly shifting ideas. Errors of perception as to time and place are a conspicuous characteristic of its effects on the mind . . . Extract of hemp has been repeatedly tried in modern European medical practice without very consistent or satisfactory results. It has antispasmodic and anodyne characters, and has been employed in tetanus, spasmodic cough, hydrophobia, and some forms of mania. It is a quieter of the nervous system, but does not cause constipation, check the appetite, nor diminish the secretions like opium.

During the nineteenth century cannabis was mainly used for religious, medicinal and recreational purposes in Asia, the Middle East, Africa and North America. In other countries it was mainly cultivated for its fibre, particularly in Russia, and the world-wide naval strength of the British Empire depended as much on the quality of the hempen rigging of its ships as on their firepower. However, the smoking of hashish (the dried resin of cannabis) was a world-wide practice, and gave passing pleasure to many millions of people. It was not thought to undermine morality or civilisation, and at the close of the nineteenth century a major inquiry into its use and effects—the Indian Hemp Drugs Commission of 1894—gave it a clean bill of health. It was not until the twentieth century that Western nations began to suppose that there might be a demon in the weed.

4

THE WORLD DEBATE

World literature of cannabis—world usage—world debate—reports favouring legalisation or decriminalisation—the Oregon example—scientists disagree—Eastland's Committee—polarising of opinion—state of scientific knowledge.

If hemp has been used for thousands of years, and if millions of words have been written about marihuana and hashish, why is there so much argument about them? Especially, why is so much heat generated in the argument? Basically, because they are drugs. A pharmacological definition of a drug is that it is a substance having physiological effects which change the responses of the person or animal concerned at a particular time. And because cannabis gives rise to unusual physiological effects, it is a drug, and because it is a drug, its use has been the subject of world-wide debate through the past half-century. The literature of cannabis is vast and various as a patchwork quilt. Much of it consists of controversial, alarmist, impressionistic accounts of the effects of the drug, or ill-documented and poorly researched accounts of events and experiments. Most of it is incredibly unscientific and emotionally polemical. Much of the reference is to Asian cultures, with no valid application to Western societies; and much makes use of medical and criminal records which are atypical of the community at large.

There is no country where the use of cannabis is legal, but its use is both widespread and allowed on sufferance in some Asian and European countries. For example, it is readily available in Nepal, Jamaica and Holland. India and Pakistan have agreed to stop cultivation by the end of the 1980s. Its use is widespread and a criminal offence in Western countries. The world estimate for present-day users of marihuana—medical, religious and recreational—is 200 to 300 million. It has been estimated that twenty-four million

Americans have tried it, and that eight million use it regularly. It is thought that 500,000 Australians may have tried it, and that possibly about a quarter of that number still would like it regularly or occasionally. Use on this scale suggests that it is not merely the latest fashion in non-conformism, and that it is likely to be here for a long time to come.

There has been keen controversy about the benefits of the existing policy of criminalisation which began during the 1930s, and endless arguments about the uses, abuses and effects of the drug. The banning of marihuana in the 1930s in America, Britain and Australia took place at a time when there was little public interest and hardly any scientific knowledge about it. The available writings were mostly unsound or spurious, and some "reports" by such respectable law-enforcement agencies as the U.S. Federal Bureau of Narcotics were compounds of rumour and invention. They engendered what might be called the demonology of dope, and marihuana was falsely declared to be the "Assassin of Youth". During the next thirty years this led to a controversy which by now has reached epidemic proportions. Typical of the alarmist allegations was the statement by the Bureau's chief, Harry Anslinger, that "Much of the irrational juvenile violence and killing that has written a new chapter of shame and tragedy is traceable directly to this hemp intoxication." In Britain a sensation-prone evening newspaper gave full page treatment in 1939 to reports that: "Young girls, once beautiful, whose thin faces show the ravages of the weed they started smoking for a thrill" were in company with "young men who, in the throes of a hangover from the drug, find their only relief is dragging at yet another marihuana cigarette". This sort of publicity persuaded legislators in the Western world that marihuana incites its users to commit violent crimes and that its use turns some people into mad demons and traps innocent young people into becoming addicts.

One result has been the assumption that all dope fiends are the same; all drug users have come to be identified with the stereotype of the junkie hooked on hard drugs. Other assumptions have been that drug traffickers create the demand for marihuana, and that severe penalties would stamp out its use. In the 1960s, when the drug became popular, its banning was justified on the newly-discovered ground that there was a linear relationship between marihuana and heroin. All of these assumptions have been strongly challenged. Such widely separated reports as those of the Indian Hemp Drugs Commission of 1894, the Report on the Marihuana Problem in the City of New York in 1944 (the *La Guardia Report*), the British Advisory Committee on Drug Dependence of 1969 (the *Wootton Report*), the Commission of Inquiry into the Non-Medical Use of Drugs in Canada in 1970 (the *Le Dain Report*), and the United States National Commission on Marihuana and Drug Abuse of 1972 (the *Shafer Report*), agreed that the occasional use of marihuana was not deleterious to

health, that it could, on the contrary, be pleasant and relaxing and could bring at least temporary euphoria to the harassed. The behaviour of marihuana smokers was not aggressive or criminal. Smokers were able to stop the habit abruptly without any physical distress, and the drug did not change their basic personalities. Moderate use of the hemp plant did not injure anybody. The most recent of these reports suggest that marihuana is less dangerous than alcohol, barbiturates and amphetamines, and that there is no causal relationship whatever between marihuana and crime. Indeed, crime is more clearly and directly related to personality and to under-privilege than it is to the use of either alcohol or marihuana.

In 1973, partly in response to some of these reports, and also in response to definite changes in public opinion, which accompanied the spread of marihuana smoking outside the under-privileged ghettos and social minorities, the State of Oregon decriminalised the possession of not more than a very small amount (1 oz [28 g]) of marihuana for private use; a fine was substituted for the previous penalty of criminal prosecution followed by fine and/or imprisonment. This redefined usage as being in some ways a health problem rather than a courtroom problem, though the legislation did not affect pushers. Supporters of this policy claimed that the police were thereafter better able to pursue real criminals, and stood in better personal relationships with juveniles.

Seven other American states have followed suit, and advocates of decriminalisation have emerged at the highest levels of national government. The objective of the state legislators is to separate the private use of marihuana from that of hard drugs, but they differ markedly in respect to the details of enforcement and punishment. Complete decriminalisation has not been achieved anywhere in the United States, only partial prohibition, and it is still an offence in every state to possess any considerable amount of marihuana. The final answer to the problem can only be given by that body which legislates for the whole nation and which controls international trade and commerce, namely Congress.

The lead of those American state legislatures has not been followed in Britain or Australia, where the debate over the alleged physiological and psychological harmfulness of cannabis continues unabated, and where its use continues to be prosecuted with severe penalties and to be classified by the law and the police in the same group as the narcotics. Medical, scientific and other informed opinion is not unanimous on these issues, and it is easy to find reputable authorities to support contradictory opinions. It is particularly surprising that the gigantic scientific effort of the last decade has added so little to what was already known about the effects of the drug, medically or psychologically. We know little more now than was known a century ago about the possible cumulative detrimental effects of long continued use with regard to testosterone levels,

chromosome damage, brain damage, and genetic hazards. In this situation the moral crusaders and the sensation-oriented media have had their field days.

One of the most forthright reports directed against legalisation was the United States Senate Committee (Eastland's) on the Marihuana-Hashish Epidemic. This committee claimed in 1974 that THC (derived from cannabis resin) tended to accumulate in the body like the insecticide DDT; that marihuana caused massive cellular damage and could cause brain atrophy and genetic damage; that it produced worse respiratory complaints than tobacco, and that if used with tobacco, was carcinogenic; and that it led to the amotivation syndrome, which turned users into zombies and listless drop-outs open to manipulation by the unscrupulous. This report appealed to a public which had long since been conditioned to believe that pot smokers were sick, crazy or criminally-minded, or all three, even though the witnesses were only those known to have the same views as the members of Eastland's Committee. (There is a thorough analysis of the committee's statements in the Progress Report of the New South Wales Parliament's Joint Committee upon Drugs, published in March 1976.)

While the political and social debate has polarised around the extreme views, there are many scientists who are uncertain as to the effects of the products of cannabis, because some of the evidence cannot be tested until new experimental techniques have been devised. Furthermore, the scientific questions are so numerous that there cannot be any one answer, or any one set of answers, particularly in relation to brain, respiratory and genetic changes, hormone imbalance and reduced immune response. The answers must wait upon the completion of those long-term investigations which are still under way. Nevertheless, certain short-term effects are now well known, and certain long-term effects are sufficiently likely in given circumstances to warrant close attention.

It is these effects which Australian politicians should bear in mind when coming to grips with the assessment of individual rights, moral values, social needs and the public good. These effects can be identified by a brief survey of the botany and chemistry of cannabis, and some investigation of its medical uses.

5

BOTANY

Description of cannabis plant—leaves and flowers—hairs, resin and seeds—marihuana—hashish—THC—variation amongst plants—sub-species and varieties.

What are the features of the cannabis plant? *Cannabis sativa* L. (so named by the Swedish botanist Linnaeus in 1753) is a robust herbaceous plant, which means that its stem is like grass, not wood, and that it completes its life cycle in one year. It is also dioecious, which means that the male and female plants are separate; in the plant kingdom, this is uncommon. The plants grow rapidly to maturity in about five to eight months. The male plant is somewhat spindly and produces less foliage than the more bushy female. The seeds are usually planted in spring. They germinate in less than a week and the plants grow rapidly, reaching between 1 m and 5 m in height, depending on conditions. Some have been known to grow to 6 m. The stalk or stem has a thickness of from 1 cm to 4 cm, even up to 8 cm in very large plants, with a hollow centre at maturity. It is fluted and hexagonal, and has ridges running lengthwise; it may also have well-marked nodes at regular intervals. The stalks and stems are the parts used to manufacture rope, twine, mats, bags and paper. The root system consists of a taproot from 28 cm to 40 cm long with a layer of very fine lateral roots spreading outwards through the subsoil to a distance of from 18 cm to 25 cm. The best time for growing is spring into summer, but the plants can be sown at any time in temperate countries. Growth is inhibited by inadequate light, water and soil nutrients.

The leaf is the most distinctive feature of the cannabis plant, being composed of an uneven number (five to seven, or possibly three to eleven) of serrated leaflets joined at the base. Each leaflet is from 4 cm to 15 cm long, and is narrow and shaped like a tapered spearhead with saw-toothed edges; it is pointed almost equally at

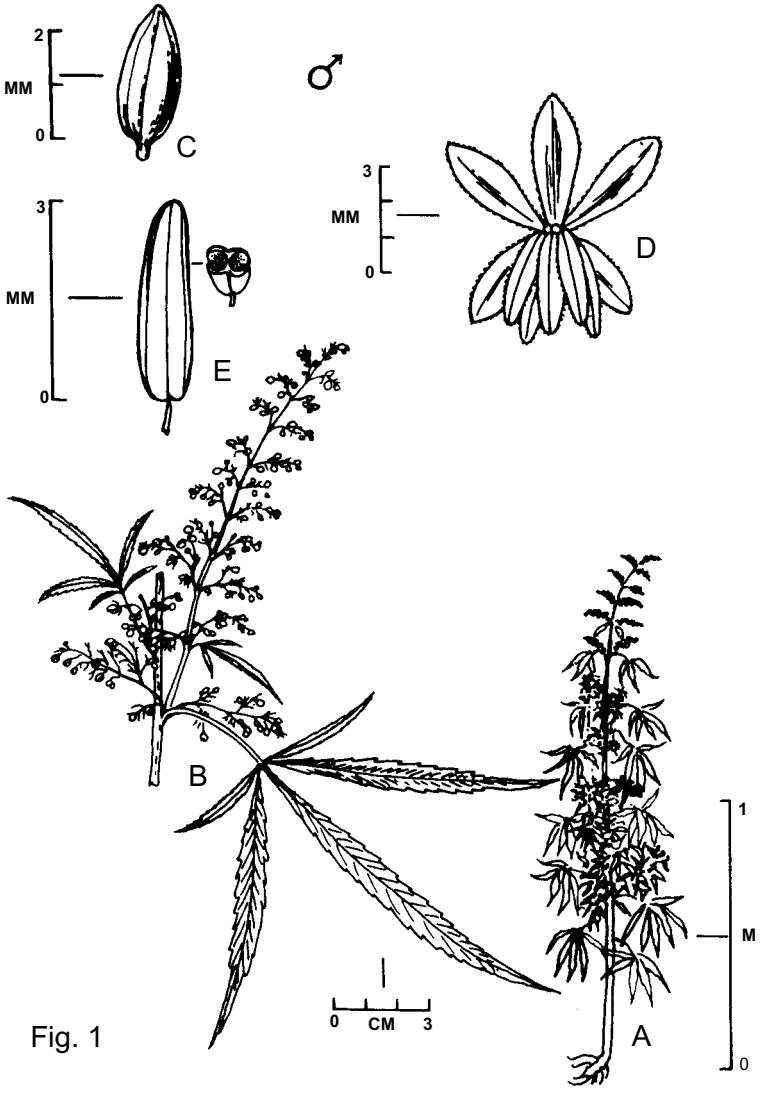


Fig. 1

A Male plant and vegetative leaves.
B Male flowering top.
C Male flower closed.
D Male flower open.
E Stamen.

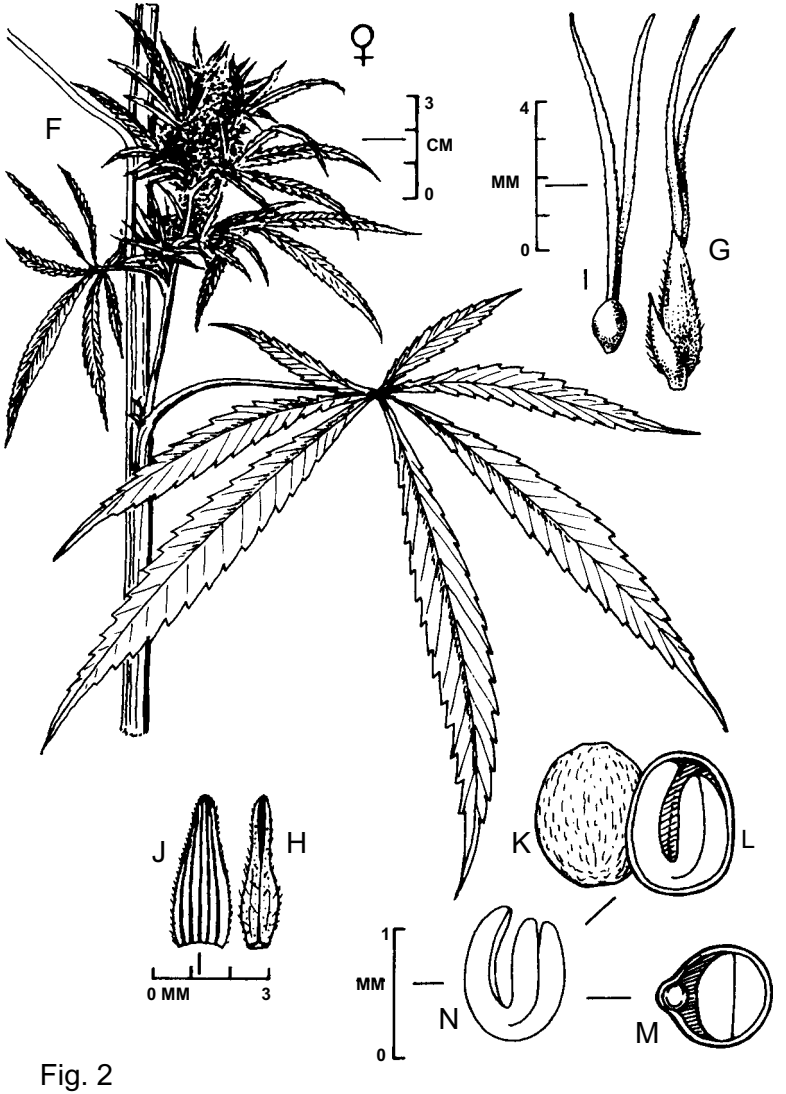


Fig. 2

F Female flowering top and vegetative leaves.
G, I Female flowers showing stigmas.
H, J Bract or calyx of female flower.
K Fruit, usually known as seed.
L,M Cut seed showing embryo.
N Embryo.

both ends, and rough to the touch. The leaves have pronounced ridges running from the centre diagonally to the edges; they are dark green on top, light green underneath. They have minute hairs on the upper surface and more profuse and longer hairs on the lower surface. They hang downwards on the plant, giving it a formally attractive shape. One mature female plant can produce five pounds, or approximately 2.5 kilograms of dried marihuana leaves.

The plant does not produce conventional flowers. The male produces a collection of pale greenish stamens which hang down and are surrounded by small leaves. The stamens project beyond the leaves and when mature, release their pollen which is carried by the wind to the female plants, on which flowers are produced in considerable numbers on the upper part of the plant. The female flower is more compact, consisting of an ovary enclosed by one small leaf or bracteole. At the base of this leaf is another smaller leaf or stipule. The ovary contains a single seed which, after fertilisation, develops into what is usually known as the seed of the plant but is in fact the fruit, a small globular green structure with netlike encircling ridges. Fertilisation is brought about by the wind blowing the pollen from the male to the female plant; bees and other insects are not attracted.

The leaves feel rough because of the bristly hairs containing crystals of calcium carbonate which can be seen with a magnifying glass. These are used in identifying samples of crushed cannabis but their presence alone is not conclusive; very similar hairs are found on some other plants. The cannabis leaf also bears glandular hairs which secrete an amber-coloured resin, a thick, translucent liquid with a distinct odour. The resin contains the psychotropic constituents—that is, those chemical principles which make the plant a drug. The hairs are many-celled and may have stalks; they can be seen only under a microscope. It is the combination of these resin-secreting hairs and the bristly hairs which identifies the plant. The glandular hairs are found all over both male and female plants but are concentrated around the flowering tops, especially of the female plant.

Marihuana is produced by cutting the stem beneath the lowest branches, then stripping seeds, flowers, leaves and small stems from these branches and air-drying them. Stems and seeds are usually removed by sifting through mesh screens, which produces "manicured" marihuana. Sometimes the flowering tops are pressed together to produce a greenish-brown matted mass. The dried, pulverised or powdered fragments of the leaves and the flowering tops usually retain their green colour, but may become brown-spotted, depending on the methods of curing. They also have a scent like that of alfalfa. The dried aerial part—marihuana, the "grass" or "dope"—is the product most commonly used in Australia and contains about 5 to 10 per cent resin. It is usually smoked in cigarettes

—joints—and appears to burn brighter than an ordinary tobacco cigarette because it is inhaled more deeply. It can be eaten by sprinkling it on or into food in the same way as any other herb, or can be drunk with soup, wine, tea or any warm fluid.

Hashish is obtained by separating the glandular hairs from the rest of the plant by careful sifting or rubbing. This produces a thick, sticky brown liquid which hardens on exposure to the air. The sifted hairs are compressed into pale brown masses which become stone-like, but crumble easily. In Asian countries the resin is sometimes obtained by beating the plants on sacking with sticks. The resin sticks to the sacking and is later scraped off. Hashish is occasionally produced in Australia, but is not easy to obtain. It is said that the state of the art is not sufficiently advanced to yield a good local product, and that the hasty methods of harvesting necessitated by police surveillance prevent proper attention being given to quality control. Hash is also smoked, but quite often used in food, the most popular form being the hash cookie or biscuit. Hashish is more potent than marihuana on a weight basis, containing about 40 per cent resin, but the quickest action is achieved from smoking any preparation. The chemical constituents of marihuana and hashish are the same, therefore the physiological reactions are similar.

A product known as hashish oil may be prepared by hot extraction and distillation with solvents like alcohol, benzene or petrol. This is concentrated into an amber liquid which was known as the red oil of cannabis. More recently it has been known as white oil. The extract known as red oil was the first preparation to be tested for euphoric effects in the 1940s. It is a potent preparation which present-day analysis has shown to contain about 60 per cent of active constituents. Cannabis does contain a volatile oil, but this is not the same chemically as the resin, nor is it responsible for the euphoric effects. It is, however, responsible for the characteristic odour. It contains a number of chemical constituents, some of which are found in other volatile oils, for instance, those from cloves, cinnamon and lemons.

Contrary to a widely-held opinion, the resin obtained from the male plants is as potent as that from the female. However, the female plants produce more foliage and more resin, while the male plant produces more rope and less resin. The strength or potency of marihuana or hashish depends on the concentration and composition of the resin. In spite of some rule-of-thumb methods suggested by growers, sex can only truly be determined at flowering. The traditional preference for the flowering tops is justified, but the belief that the rest of the plant is inert is false. The flowering tops have the highest THC content, followed by the small leaves near the tops, then the larger leaves; traces have even been found in the stems.

Plants grown in warm climates produce more resin than those in cool climates, but this does not necessarily mean a higher content of

THC. The plant grows best on well-drained, loose soils which are fairly high in organic materials, but the THC content is dependent on the original genetic strain; that is, plants with high THC content produce offspring with high THC content, no matter where they are grown. Recently it has been suggested that after several generations environment may have some effect on THC content. Cannabis of high potency has been found in samples grown in a London garden, although Mexico, South Africa and Thailand are considered to produce the best quality samples. Australian-grown samples were not considered to be of high potency when the drug first became popular in Australia, but samples from the Hunter Valley, New South Wales, have been found to compare favourably with Mexican and Thai samples.

There is very great variation in the amount of THC from plant to plant and from crop to crop. Devotees go to a great deal of trouble and even invoke ritual in the storing of marihuana, but careful drying and storage in airtight containers in a cool, dark place is quite adequate. Female flowering tops stored this way can retain their potency for as long as five years. Not only does the plant vary in the amount of its chemical constituents, but the whole plant is subject to variation in form, shape and other features. This has led to controversy as to whether there is more than one species of cannabis. A species may be defined as the largest group of organisms of a certain type potentially capable of interbreeding to produce fertile offspring for many generations. Considerable research has been done lately on the taxonomy of cannabis, because of the forensic implications. In the course of recent criminal prosecutions in Australia, defence lawyers have suggested that there could be more than one species, or have questioned the distinctiveness of the species, and have even made the suggestion that cannabis might be grafted on to a similar plant. There are still differences among the experts, but following a detailed study more recently by two Canadian botanists, and published in *Taxon* in August 1976, it seems certain that there is a single highly variable species; a case can be made for the existence of two subspecies and several varieties. Their conclusions were as follows:

> The present pattern of variation is due in large part to the influence of man. Two widespread classes of plant are discernible: a group of generally northern plants of relatively limited intoxicant potential, influenced particularly by selection for fibre and oil agronomic qualities, and a group of generally southern plants of considerable intoxicant potential, influenced particularly by selection for inebriant qualities. These two groups are treated respectively as subsp. *sativa* and *indica,* of *C. sativa,* the only species of the genus *Cannabis.* Within each subspecies two parallel phases are recognizable. The 'wild' (weedy, naturalized or indigenous) phase is more or less distinguishable from the

domesticated (cultivated or spontaneous) phase by means of an adaptive syndrome of fruit characteristics. The resulting four discernible groups are recognized as varieties.

Botanically, *Cannabis sativa* is a most interesting plant, and a great deal more investigation of its properties remains to be done.

6

CHEMISTRY

Discovery of cannabinol—its chemical constituents—ripening—THC—in the body—disappearance from the plasma—the buzz and the high—excretion—testing for cannabis—detecting users—RIA techniques.

The resin secreted by the glandular hairs of *Cannabis sativa* L. contains many complex chemical substances. In the 1930s an extract of the plant was found to produce the euphoric effects associated with preparations of the whole plant. This was the "red oil" of cannabis, and was called cannabinol. However, it was not until the 1960s that massive research programmes were inaugurated in the United States and Britain into the constituents of cannabis. These were aided by the advent of sophisticated analytical methods, and were stimulated by the sociological implications of the uses of the plant. Indeed, no other plant in history has been subjected to such intensive and widespread research. For example, the authors of a lengthy paper on "Recent Advances in the Chemistry and Biochemistry of Cannabis" published in *Chemical Reviews* (Vol. 76, 1976) noted that in the last few months of 1974 their literature was growing at the rate of a paper a day. By 1977 the volume of daily publication is staggering, as cannabis research is now being carried on simultaneously by hundreds of pharmacologists, biochemists, psychologists, psychiatrists and sociologists.

The "red oil", which is an unrefined extract of the resin, was found to contain many chemical constituents. The major ones were cannabidiol (CBD), tetrahydrocannabinol (THC) and cannabinol (CBN). They were given the group name of cannabinoids. This term has since been extended to a number of other cannabis constituents which have similar chemical structures; thirty-seven natural cannabinoids had been isolated up to 1976. Because of their structures, these compounds are relatively unstable, and what has

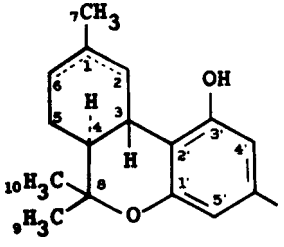
been termed a chemical ripening occurs in the plant: cannabidiol changes to tetrahydrocannabinol, which in turn changes to cannabinol. In the fresh plant these constituents occur as their acids, for example cannabidiolic acid rather than cannabidiol. The acid form is changed during drying, extraction and smoking. The chemical ripening, CBD→THC→CBN, seems to occur regardless of conditions, and of course the amount of a particular constituent in a given plant depends on where the process stops. Careful harvesting and storage help to ensure that the potency of a sample is maintained. Samples badly crushed and exposed to heat and light deteriorate very quickly, while samples kept in dark, airtight containers in cool places keep their potency for a considerable time. However, the unstable nature of the constituents means that different samples vary greatly in potency.

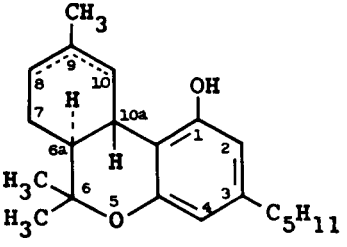
With the separation and purification of CBD, THC and CBN and other minor constituents, it was possible to prove by animal and human experiments that it is THC which is responsible for the euphoric or psychoactive effects of cannabis. It has also been shown that although CBD and CBN do not give the euphoric effect by themselves, they may add to the effects of THC, and that this is especially true of CBD. This means that the preparations of the whole plant are more effective than pure THC.

Tetrahydrocannabinol is a group name given to a number of compounds which differ only slightly in their chemical formulae. To differentiate between them, international systems of symbols and numbers have been established. Unfortunately there is more than one system, but the principal and most potent euphoria-producing constituent of cannabis is most commonly referred in American publications as Δ^9—tetrahydrocannabinol (A = the Greek symbol delta). The 8-compound also has some euphoric effects. (In the other less common system used in Europe, Δ^9 THC becomes Δ^1 and Δ^8 becomes Δ^6). In 1972 another group of cannabinoids was isolated and its tetrahydro-derivative was found to have a euphoric effect. However, it has been found only in cannabis samples from parts of Asia and has only a fifth of the activity of Δ^9 THC in mice. Continuing analysis of cannabis may produce some other minor constituents with euphoric effects, and these will no doubt affect the potency of preparations from the whole plant. However, during more than ten years of intensive research Δ^9 THC still remains the principal psychoactive compound, which, when absorbed through the lungs after smoking or through the stomach after swallowing, is transported in the blood to the brain, where it interacts with the brain's normal metabolic process. Its retention in the brain is comparatively short-lived.

The following is the chemical formula for A^9 THC: the sign Δ indicates a double bond in the chemical formula, i.e. Δ^9 means a double line between 9 and 10.

Alternate numbering systems





Δ^{1}-THC = Δ^{9}-THC

Δ^{6}-THC = $\Delta^{1(6)}$-THC = Δ^{8}-THC

(From the Merck Index: *An Encyclopedia of Chemicals and Drugs*, New Jersey, 1976, p. 8930).

The study of what happens in the body to cannabis preparations, and particularly to THC, did not make much progress until it was possible to prepare radioactively labelled THC and so trace its fate. This was done in the United States in 1968, and it was then possible to administer radioactive THC in known standardised doses. The most significant chemical advances in recent research have been the development of ways of determining cannabinoids in body fluids and a detailed study of their metabolism. THC is changed in the body to a metabolite (7-hydroxy THC), which is very active, and without doubt is chiefly responsible for the vivid effects of the drug on humans. This does not occur in the plant. To examine how the drug is changed in the body and how it is stored, THC was administered in three different ways: by intravenous injection (IV), orally, and by inhalation. At the same time, observations were made of the difference between non-users and daily users. These studies indicate that THC disappears from the plasma in two stages. First, there is the initial and rapid stage, which represents the changes that occur in the compound in the liver and the redistribution from the blood to the tissues. The second stage is slower, and represents tissue retention, slow release and subsequent changes. In non-users, THC stays in the body for about three days and for users about a day and a half. This suggests that constant use builds up an enzyme system for coping with THC.

The first effects of the drug (the buzz) appear about two or three minutes after IV injection or inhalation through mouth and/or nose. Smoking seems to act nearly as quickly as injection, except that the dose is not always as constant, because of the amount lost through burning when it is left in the cigarette or else inhaled ineffectively. The peak effect (the high) is experienced in about twenty to thirty minutes and can last up to ninety minutes. Oral ingestion is less

effective for a high, and much slower in onset. Symptoms start about one to two hours after intake, but last from three to eight hours depending on the person.

The active principles of cannabis are poorly soluble in water. In studies with humans it has been found that most of the THC or its breakdown products (metabolites), are excreted in the urine; of this, only 1 per cent is unchanged THC. The rest is composed of the metabolites formed in the body. Because of the chemical nature of the compound the drug may accumulate in fat or in lung tissue, and may persist in the body for long periods. Animal experiments have confirmed that THC accumulates in these tissues. Fat-solubility means that it can penetrate to almost all parts of the body, but experiments have shown that there is no affinity for the central nervous tissue. The long-term consequences of the accumulation of metabolites in the tissues are so far unknown. The mere presence of a chemical in the tissue is, by itself, neither beneficial nor harmful; its accumulation means only that if it is later found to be harmful, then the chronic user will suffer most.

Because of the use of cannabis as an illegal social drug, a great deal of attention has been paid to methods of testing and analysis. The potency of samples depends not only on the amount of the resin, but also on its composition, and both vary greatly depending on the strain of the plant. Furthermore, what is sold illegally as cannabis may contain only a very small proportion of active constituents or none at all, because of widespread dishonesty in dealing practices. Some of the cannabis on sale in Sydney is said to contain 20 per cent or more of the herb oregano, and even lucerne and lawn clippings. Hashish containing 25 per cent caramel candy or cow dung has been pushed.

A number of chemical colour tests have been devised for the identification of cannabis and its preparations. The three most commonly used were the Bean (1911), the Ghamravy (1937) and the Duquenois (1938). Although of some use and still used, they have the disadvantage of giving false positives with a few other plants. More sophisticated techniques were applied to cannabis in the 1960s. Thin layer chromatography using Fast Blue Salt B as spray reagent is probably the most useful for identification, and gas-liquid chromatography for quantitative analysis. More recently other techniques such as mass spectroscopy and nuclear magnetic resonance (NMR) have also been used for analysis. These analytical methods need equipment and skills of variable but considerable complication.

When “pot” first became a popular and illegal drug in Western society, attempts were made to set up tests to apply to the pot smoker. Except for the reddening of the eyes, there are few physiological signs whereby smokers may be identified, especially if they are experienced users and are compensating. A procedure was devised which picked up traces of cannabinoids from the hands.

Another test was a mouthwash, but this was less certain than the finger swabs. A breath test was evolved by some South African researchers whereby the suspect was obliged to breathe on to paper impregnated with Fast Blue Salt B. However, this test did not always give true positives, and had to be followed by analysis.

Tests have been devised for the cannabinoids present in urine and blood samples, but in general analyses must be conducted with gas-liquid chromatography—mass spectrometry—to detect the amounts present, and this is an expensive and complex procedure which requires large amounts of blood and urine. No simple test comparable to the breathalyser for alcohol has yet been found for cannabis. However, in 1974 an accurate test was devised in Britain for testing small samples of urine and blood for THC and its metabolites. It is known as the radio-immunoassay (RIA) technique, and involves the production of an antiserum against Δ^9 THC, which cross-reacts with a number of other cannabinoids. This test was put into practice in 1976 in Britain when a young man, who had been driving erratically, was involved in a fatal car accident, and was found to have high amounts of cannabinoids in his plasma and urine (*Lancet*, 24 April 1976). The assay is sensitive enough to detect cannabinoids in the urine of a smoker forty-eight hours after smoking a single joint, but these urine levels are no real guide to the amount of cannabis taken, nor the degree of actual intoxication by cannabis. Furthermore, metabolites are detectable in the urine weeks after the last dose of cannabis has been ingested.

In sum, THC is a chemical substance which is fat-soluble and cumulative, possessing a wide variety of biochemical and pharmacological actions, not all of which are fully known. Hence it is not yet known whether all of the short-term or long-term uses of extracts or substances found in cannabis are harmful, beneficial or neutral. Meanwhile, millions of people throughout the world are smoking and eating cannabis products of varying potency. Only the legalisation of its use would enable the plant to be grown and its products prepared in such a fashion as to guarantee a standardised dose, whose biochemical effects would then be fully known and understood.

7

MEDICAL USES

Early medical uses—experiments by W. G. O'Shaughnessy—prescriptions in the nineteenth century—decline in the twentieth century—legal prohibition—cannabis indica preparations—1958 Martindale—as a sedative—analgesic and anti-convulsant—to alleviate withdrawal symptoms—immune response—as a possible patent medicine—use during pregnancy ill-advised—respiratory ailments—the question of brain damage.

Preparations from cannabis have a long history of use in medicine; only in recent years have they come into disfavour. Constipation, "female weakness" (menstrual complaints), gout, malaria, beri beri, rheumatism and absent-mindedness were all maladies for which preparations of cannabis were recommended by the Chinese in classical times; and extracts of the plant could be found on the shelves of pharmacies in Australia as recently as the 1950s. Cannabis was used medicinally to treat a variety of ailments in ancient Greece, and later in India, the Middle East and Africa. It is thought that the plant was introduced into Europe about the sixteenth century.

The medicinal use of the drug was first promoted by an Irish physician, W. B. O'Shaughnessy, who published several articles on the drug in the *Transactions of the Medical Society of Bengal* in 1839-40. He had carefully researched the use of cannabis in Indian medicine and had also conducted animal experiments as to toxicity and dosage. He found that cannabis relieved pain, and also acted as a muscle relaxant and anti-convulsant; he later published a book called *Preparation of Indian Hemp or Gunjah*. Physicians in Britain and Europe thought his findings useful, and reports appeared in medical journals of the application of cannabis to a number of con-

ditions like menstrual cramps, asthma, post-puerperal depression, quinsy, coughing (especially that accompanying tuberculosis), insomnia, migraine headaches, chorea, and withdrawal from opiates. It was a valuable hypnotic, producing sleep and tending to quieten spasm in those conditions that involved twitching and writhing of the face and extremities. It did not produce constipation as did analgesics like morphine. It was used not only to alleviate migraine but also as a prophylactic for this condition, the recommended dose being twice daily, night and morning. It was considered by several physicians specific in menorrhagia (excessive menstrual flow). In America the Ohio State Medical Society in 1860 convened a committee to examine the use of cannabis in medicine and claimed successful treatment of neuralgic pain, dysmenorrhoea, uterine bleeding, hysteria, delirium tremens, whooping cough, palsy, infantile convulsions, asthma, gonorrhoea, nervous rheumatism, chronic bronchitis, muscular spasm, tetanus, epilepsy and lack of appetite.

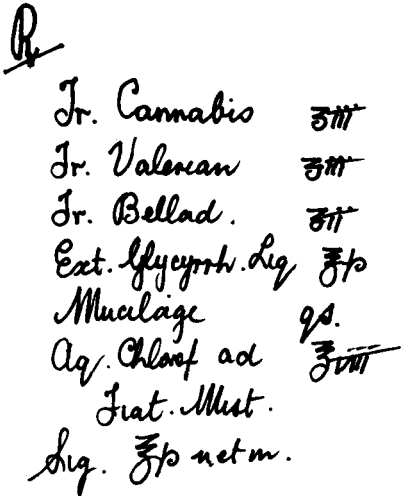
Perhaps the nineteenth century medical and pharmaceutical reports should be interpreted with due caution; but it is interesting that none commented on any intoxicating or hallucinatory symptoms in patients using cannabis, many thousands of whom must have been regularly or even continuously stoned. However, all of the reports were adamant that cannabis did not produce tolerance (which necessitates increased dosage); did not lead to physical dependence or constipation; was far less toxic than the opiates; and though unable to kill the pain of kidney stone or heart attack, was beneficial for menstrual cramps and migraine. In Western medicine cannabis was used mainly as a sedative-hypnotic, a mild analgesic and an anti-spasmodic. This use had been substantiated by its pharmacological properties of relaxing and causing sleep, relieving pain, and helping to prevent muscle spasm.

In medicine the name cannabis indica (Indian hemp) was given as the official title of *Cannabis sativa* L. A number of preparations were made from the plant but only two were included in the British Pharmacopoeia, the book of standards for drugs in current use as medicines. A number of countries have their own books of standards; Australia uses the British Pharmacopoeia and the companion book, the British Pharmaceutical Codex. Additions and deletions are made to these books from time to time in accordance with changes in medical practice. The last official American compendium of drugs to include tincture of cannabis was the United States Pharmacopoeia of 1938. It was, however, included in the Indian Pharmacopoeia of 1955. The British Pharmaceutical Codex of 1954 deleted cannabis preparations for the first time in official British pharmaceutical publications.

The two official preparations of cannabis were the extract, prepared by extraction with alcohol, and the tincture, also an alcoholic extract but less potent than the extract. Other, non-official,

preparations were Fluidextractum Cannabis Indicae, a potent liquid extract with alcohol; Cannabinae Tannas, a yellow amorphous powder, and Cannabinon, a soft resinous substance of 10 per cent cannabis mixed with milk sugar (lactose). These were used frequently, but for unknown reasons were not included by the expert committee in the British Pharmacopoeia. A London pharmaceutical manufacturer, Oppenheimer and Son, in 1922 offered a proprietary preparation of the tincture called cannabis "Palatinoids", which were recommended as being 'constant and reliable'.

The extract was usually dispensed mixed with a powder (liquorice, for instance), or else as a pill. The tincture was made into a mixture, or else taken straight on a spoonful of sugar. A suitable formula for a sedative mixture prescribed when cannabis was in common use is as follows:



R_x

Tincture Cannabis
Tincture Valerian
Tincture Belladonna
Ext. Glycyrrhiza Liq.
Mucilage
Aq. Chlorof.
Take one tablespoonful night and morning

The 1958 *Martindale*: *The Extra Pharmacopoeia*, a reference book kept by all pharmacies, included the following entries on cannabis:

> *Toxic Effects*. Toxic doses cause vertigo and collapse but serious poisoning is rare and fatalities unknown since the margin between the effective and the fatal dose is wide. Addiction does not give rise to serious physical consequences and, except in severe cases, withdrawal symptoms are insignificant. Continued use of the drug may lead to mental deterioration but insanity is a rare sequel.
>
> *Uses*. Doses of 2 grains or more, whether ingested or smoked, cause euphoria, mental confusion, hallucinations and motor excitement. The initial phase of inebriation is succeeded by irritability and somnolence, and after some hours by a comatose sleep. Cannabis was formerly employed in mania and nervous disorders as a cerebral

sedative or narcotic but, owing to the uncertainty of its action, it is now seldom used. It has occasionally been used for the relief of migraine and of headache due to hypertension.

[D-P1-S1] Ext. Cannab. (*B.P.C. 1949*). Extract of Cannabis. A soft extract prepared by percolation with alcohol (90%). *Protect* from moisture. *Dose*: 16 to 60 mg (1/4 to 1 grain). It was usually given in pill form with lycopodium.

[D-P1-S1] Mis. Cannab. Indic. (*formerly Chelsea Hosp. for Women*). Tincture of cannabis 10 m, spirit of nitrous ether 30 m, dilute solution of ammonium acetate 60 m, mucilage q. s., camphor water to 1 fl. oz.

[D-P1-S1] Tinct. Cannab. (*B.P.C. 1949*, *Ind.P.*). Tincture of Cannabis. Extract of cannabis 5 g, alcohol (90%) to 100 ml. When dispensed in mixtures, mucilage must be added to suspend the resin. *Dose*: 0.3 to 1 ml (5 to 15 minims). *Belg. P.*, *Fr. P.*, and *Span. P.*, 1 in 10.

As with other crude plant extracts, its effects were fairly general and it was difficult to produce an exact dose. Its use declined in Western countries from the beginning of the twentieth century because of standardisation problems, and also because it took so long to act when taken orally. Being insoluble in water, it could not be injected intravenously by the hypodermic syringe, as was the case with morphine. Also, newer and more specific drugs were being developed, such as synthetic analgesics and hypnotics.

With the acceleration of research that followed the upsurge in the 1960s of cannabis use in the Western countries as a social drug, some attention was also directed towards medicinal uses. The preparation of pure THC in a laboratory in Israel in 1964 made it easier to obtain reproducible results and obviated the problem of variation. Since then new and better methods have been developed, and in 1976 one of the leading chemical journals reviewed the existing methods of making synthetic THC (*Chemical Reviews,* Vol. 76, No. 1, 1976). When isolated and purified, it is in the form of a thick oil which must be kept under refrigeration and nitrogen, and could probably be produced by a Ph.D. graduate in organic chemistry with access to a well-equipped laboratory. However, no quick and simple method of synthesis has yet been evolved. Possession of synthetic THC is illegal, because it is the same as natural THC, the euphoric constituent of cannabis. No one in Australia may manufacture any prohibited drug except under licence.

Since cannabis had been used as an anti-convulsant, it was tried in Britain in 1949 on five epileptic children who had not responded to any other therapy. (This case was reported in the *Technical Papers* of the National Commission on Marihuana and Drug Abuse, New York, 1972.) Three of these children showed improvement; one was

almost completely cured, while the fifth showed no convulsions at all. Since then, controlled experiments with animals have shown that cannabis does act as an anti-spasmodic. In October 1975 a report was published in the *Journal of the American Medical Association* on a twenty-four year old patient who had been taking seizures. It was judged necessary to use marihuana as well as the conventional therapy of substances like phenytoin and barbiturates. In the 1960s research showed that one of the non-intoxicant constituents of cannabis was an antibiotic, effective against a number of bacteria and similar in its action to penicillin. However, the World Health Organisation recommended that since it was regarded by some as no better than penicillin, the plant should not be cultivated especially for this constituent.

Smoked cannabis, THC and a synthetic derivative pyrahexyl have been used to alleviate the symptoms of withdrawal in alcoholism, narcotic addiction and barbiturate abuse. The benefits were more obvious with alcoholics, but there was also some success with opiate addicts. One recent finding (reported in the *American Journal of Ophthalmology* in 1972) is the effect of cannabis on reducing pressure in the eye, which can lead to glaucoma and eventual blindness. Increasing doses of marihuana have been found to decrease such pressure by up to 30 per cent. However, more clinical work is needed in these areas. There have been reports that THC is useful in the treatment of asthma. The reports are conflicting but some results from the University of North Carolina in 1976 suggest that THC in the form of an aerosol inhalant may be advantageous (*Journal of Pharmacy and Pharmacology*, 28 January 1976).

Preparations of cannabis have also been found to reduce the immune response in humans. This is the recognition, response to and disposal by the body of foreign material. It has therefore been argued that chronic cannabis smokers are more susceptible to disease. However, drugs are used to suppress the immune response in transplant operations and prevent the body making unwanted cells as in cancer. It has been suggested that cannabis may be useful in transplant operations and some forms of cancer. Cannabis was shown in a report published in the September 1975 issue of the *Journal of the National Cancer Institute*, Washington to reduce tumours in mice.

In Australia, preparations were used occasionally until the Poisons Acts of the state parliaments in the 1960s declared cannabis a prohibited drug. This action seems to have been induced by the various scare-enacted laws in the United States in the 1930s and the 1960s, which were the result of that demonology which, as we have noted, ascribed all manner of evil to the weed. In consequence, no prescription written in 1977 containing a cannabis product could legally be dispensed, even if the pharmacist could obtain the preparation in question.

So far, the medical uses of marihuana, even when clinically substantiated, have not proved superior to other drugs in the field. However, more research has been directed towards its use as a social drug; and now, since pharmacy offers a possible form of legal control, some drug manufacturing houses are examining ways of slightly altering the THC molecule in order to patent it as a medicine. (No patent will be granted for the natural substance.) To date, only one water-soluble compound has been clinically tested on animals. The following advertisement could readily be used for promotional purposes if the patent is successful:

> DRUG X
>
> *Indications* (uses): Insomnia, anxiety and tension states, muscle spasm, facilitation of labour.
>
> *Side effects*: May cause drowsiness, muscle weakness. Patient should avoid alcohol; may affect driving ability. Although no teratogenic effects have been reported, precautions should be observed early in pregnancy.
>
> *Toxic dose*: Exceptionally wide therapeutic margin. 100 × normal therapeutic dose has caused no fatality.

This does not refer to cannabis, but to an existing well-known and widely used prescription tranquilliser.

Since the discovery in 1961 that numerous infantile deformities could be traced to the use of thalidomide, all drugs have become suspect in relation to pregnancy. One of the arguments often used against cannabis is the possibility that malformed children might be born to mothers who used it. Three isolated cases were reported, but when these were examined further, these women were found to have been using several other drugs, including LSD (Appendix, Vol. I, p. 46, of the United States National Commission on Marihuana and Drug Abuse, 1972). Laboratory studies on experimental animals such as mice, rats, hamsters and rabbits, have shown an association between cannabis intake and foetal abnormalities, with considerable differences between the different species. The dose given to these animals is difficult to extrapolate in terms of human use but its equivalent would be extremely high. No cases of deformity caused by cannabis *alone* have been reported in humans, and no woman smoking cannabis has produced "monster children". However, any drug use in the first trimester of pregnancy has some dangers; even aspirin can cause temporary blood defects in the foetus. It is known that THC can cross the placenta (J. D. P. Graham (ed.), *Cannabis and Health*, London, 1976, p. 298) so that abstention during pregnancy, especially in the first three months, is advisable.

Marihuana is most commonly smoked, and therefore involves the same risk as tobacco in regard to respiratory disorders, like bronchitis and lung cancer. Chronic bronchitis has been reported in long-term users of marihuana, but the number of joints smoked in any one period is so much less than a tobacco smoker's average total of

cigarettes that the risk of serious lung damage is not as great, unless tobacco and marihuana are used simultaneously.

There is no evidence for any cumulative deleterious effect on the central nervous system, but mention must be made of the claim of brain damage. This is a particularly difficult matter to determine if reliance is placed on psychological tests, and not on physical damage. Furthermore, brain damage may be caused by a great variety of factors: ageing, alcohol, and various illnesses which are difficult to isolate. Cerebral atrophy was reported in the *Lancet* in December 1971 in ten males (average age twenty-two) who were heavy smokers and had been so for approximately three years. They also took other drugs, though in small doses. The phenomenon has not been reported again, and the condition has been found in other people, some who abuse alcohol, and some who do not take drugs at all. This form of brain damage cannot therefore be blamed on cannabis, but should not be discounted as an occasional possible result of the over-use of drugs. Experiments in America carried out on Rhesus monkeys, who inhaled marihuana smoke over a period of six months, showed brain changes. The implications of these changes are not conclusive.

The reports about brain damage, like so many other charges laid against marihuana, have been quickly taken up by sensation-seeking media, and then painstakingly demolished in the scientific journals. One such charge is that of damage to chromosomes, the carriers of genetic material passed from parent to offspring. The findings on chromosome damage are open to question and more research is needed and is being done throughout the world. Alcohol has been used in enormous quantities by many of the world's outstanding intellectuals and artists; some have apparently suffered no harm, while others have died of it. We should perhaps regard marihuana, which as far as we know has killed no one, with at least the same indulgence as that traditionally accorded wine, cognac and absinth.

8

WITH SEX?

Cannabis blamed for sexual excesses—in Europe—in the Middle East—and in New York—conflicting results of surveys—reactions highly subjective—possible decrease in sexual desire—moderate use may improve performance—marihuana and homosexuality.

Does dope make you sexy? Is sex better with or without it? One of the oft-repeated allegations during the anti-marihuana campaign of the 1930s in the United States was that it produced uncontrollable sexual excesses. The American public was encouraged to believe that marihuana was a sex drug, and that the gaols were full of rapists, child murderers and fornicators who went wild with pot. These charges stemmed from a number of apocryphal horror stories deliberately circulated by zealous narcotics officers in the American police forces. Probably the best known is the fantasy that connected the words "hashish" and "assassin" with the alleged activities of the followers of Hasan ibn al-Sabbah in the eleventh century. Lurid tales of their atrocities were embellished with equally lurid tales of their debauchery, and both were attributed to their use of the crumbling blackish-yellow resin of the cannabis plant. No doubt the use of the drug made them more suggestible, and with the promise of eternal pleasure if killed in battle, they would perform deeds of extreme violence. But their use of cannabis was not the cause of their desire to kill, to fornicate and rape.

Another reason for attributing sexual powers to marihuana was the use of the resin in preparations given by Middle East courtesans to their clientele. However, such preparations contained other ingredients with more claim to aphrodisiac power than cannabis, for example, such substances as cantharides (Spanish fly). Cantharides is a urinary tract irritant which may therefore cause erection.

It is recognised medically that drugs taken orally cannot be proved to be sex stimulants. The use of cannabis by the courtesans probably did no more than put their clientele into a relaxed and suggestible condition.

A more recent reason for labelling pot a sex stimulant was the tea-pad style of party held in the Harlem area of New York in the early 1940s. The tea-pads were apartments set aside for the smoking of marihuana, and the common inference was that they were also brothels. However, during the La Guardia Commission's investigation of 1944, many such places were investigated and only one was found to be a house of prostitution. Recently, the impression generated in Australia by press, radio and numerous American television series is that all drugs turn average people into perverts, rapists, sadists, and killers. Perhaps of greater relevance is the coincidence, during the 1960s and 1970s, of a rapid growth in the use of marihuana with much greater sexual activity amongst younger people, particularly since the availability of the contraceptive pill; the former has not caused the latter, but they are frequently found together. There is no scientific warrant for labelling cannabis an aphrodisiac; nevertheless it has been rightly called "the mascot plant of the unisex generation", for there is no doubt that by reducing inhibitions it makes sex easier, while the contraceptive pill has taken much of the risk out of sexual relations.

Surveys about sex and marihuana have produced conflicting results, and the available evidence is at best inconclusive. In 1968 an American college survey of 200 students at Philadelphia showed that 36 per cent said their interest in sex was high when using pot, but no higher than usual; 13 per cent said the effect depended on their mood and/or partner; 5 per cent said the effect was negative, and 44 per cent that there was a definite increase in sexual desire (quoted in Appendix, Vol. 1, p. 435, of the United States National Commission on Marihuana and Drug Abuse). The effect was more pronounced in women than in men; young people reported increased effect more than older people; and frequent users more than occasional users. Those who expected to be sexually aroused were more likely to be aroused than those who did not expect this reaction. An interpretative study of the individual effects of marihuana and hashish published in Britain in 1974 (*The Cannabis Experience*) showed that an overwhelming majority of the people studied believed that the drug made them more sensuous and sexually aware, and that it greatly improved and extended love-making, especially by prolonging orgasm.

No equivalent surveys have been conducted in Australia, but interviews conducted by the authors suggest that the position is similar to that in Britain and the United States. The reactions to the drug are highly subjective, and the added sexual pleasure claimed by those who experience it is evidently due to the release of

restraints and inhibitions. This would probably apply more to women than to men, because women in Australia are still brought up and educated toward more sexual restraint than men.

The drug has come under close scrutiny by researchers in the last few years, and some chemical and biochemical evidence suggests that instead of stimulating sexual activity, it may decrease it in some people; it suggests that maybe the Indian priests were correct in taking ganja in order to quell libido. Researchers in England in 1971 found a substance like atropine in extracts of cannabis (*Nature*, *228,* 1971, p. 134). Atropine is a drug from the nightshade family of plants (Solanaceae), of which belladonna is one. It is used in medicine for its effects on the gastrointestinal system when given orally. One of the unwanted side effects of atropine and related substances is impotence. No research has been carried out on humans with the substance found in cannabis. The suggestion is that because of the similarity in molecular structure to atropine, impotence could be, for some people, a consequence of intake.

More relevant to the consideration of marihuana and sex is the well-controlled study conducted at Missouri and St Louis on twenty males aged between eighteen and twenty-eight, which was reported in the *New England Journal of Medicine* in April 1974. These subjects used marihuana at least four days a week for a minimum of six months without other drugs, and it was considered that they were heavy users. The study showed that there was a significant drop in their levels of plasma testosterone (the male hormone). Subsequent abstention from the drug, and some treatment with other hormones, produced marked increase in the levels. Only two of the subjects suffered any continuing sexual deficiency. One of these had been experiencing sexual problems over the preceding year; the other reported general loss of libido.

It therefore seems likely that the heavy use of dope will reduce sexual potency in the male, and may also reduce the sex drive. Moderate use may add to the appreciation of sex in both sexes, in much the same way as some people will respond to unusual physical and sensual stimuli, such as different positions for sex, mirrors, perfumes and music. The altered sense of time may also make it appear that an orgasm lasts longer than it actually does. It is questionable that intoxication with dope breaks down moral barriers that are not already broken down, or are not soon to be broken in any case.

Because marihuana and homosexuality are both illegal in a number of countries, the two have sometimes been connected. Two studies of cannabis use in the American Army in 1945 and 1946 concluded that it encouraged homosexual activities (M. Schofield, *The Strange Case of Pot*, London, 1971, p. 125) and it is not hard to believe that suppressed homosexual desires may be released under the influence of cannabis, since it gives release from inhibitions in

general. The underlying desire was already present; the cannabis merely brought it to the surface. No amount of dope will turn straights into gays, nor vice versa; our sexual preferences are not so simple.

9

WITH ALCOHOL?

Marihuana and alcohol—inconclusive results—subjective responses—marihuana and driving—don't take dope and drive.

Which is best or safest—pot by itself, grog by itself, or the two together? Since marihuana has become a popular social drug, questions arise about its relationship to alcohol. Of all social drugs, alcohol is the most popular in Western countries. In Australia it is not only socially acceptable and consumed in vast quantities, but is regarded as a desirable and characteristic element in the Australian way of life: it is seen as being related to our optimism, energy and so on. Most drinkers use it in moderation and do not abuse it to the extent of becoming alcoholics or criminals. They drink to relax and to lessen their anxieties; they drink because it helps them get together; they drink to escape from the demons of tedium and drudgery, from job-frustrations, the fear of ageing, parent-child conflicts, and boring and quarrelsome marriages.

Do marihuana smokers also drink alcohol at the same time or at different times? What are the effects of using both drugs together? These problems have been studied to some extent, but not enough for any definite conclusions to be made. Surveys conducted in the United States when the drug first became popular in the 1960s suggested that regular users reduced their consumption of alcohol because it interfered with the sensations resulting from the use of cannabis. However, more recent surveys suggest that many people use both drugs either separately or together—the latter because social situations are often such that both are freely available—but that neither is abused more than the other. A report on the monitoring of drug use in New South Wales from 1971 to 1973, published by the Health Commission, pointed strongly to the rapid growth of multiple drug use in high schools and technical colleges:

an increasing number of students combined drinking with smoking both nicotine and marihuana, sometimes using other drugs as well.

The effects of combining alcohol and marihuana are dose-dependent, and are also influenced by the time interval between drink and dope. Some researchers found an additive effect on the deterioration in motor skills. Other researchers found that cannabis and alcohol had similar depressant effects on the central nervous system; effects which were, however, less powerful than those produced by combining alcohol and the barbiturates. Research is under way at the University of Sydney on the effects of using alcohol and cannabis together, but as yet no conclusive results have been produced. Recent personal interviews with marihuana users in Sydney give conflicting evidence. Either there is additive effect with a powerful reaction—'it just puts me out'—or the users vomit. Many prefer not to use the two together. Although there is, as yet, no conclusive scientific evidence to support this trial-and-error judgment, it seems to be a sound one.

There is also an obvious distinction amongst excessive users of the two drugs. Alcoholics are likely to be aggressive, violent and criminal, given especially to sexual crime; they are likely also to suffer physical deterioration, to become addicted, and to lose all sense of judgment when drunk. In contrast, dope users are likely to be less aggressive and more passive when they're stoned; they do not suffer from the shakes, delirium tremens or alcoholic dementia. The evidence suggests strongly that the continued legal repression of marihuana, if made more effective, will compel marihuana users to change to alcohol, the ill-effects of which are already well known, when it is abused. Marihuana certainly does not ravage the heart and lungs like cigarette smoking, nor pickle the vital organs like the continuous drinking of alcohol.

Considering that the combination of drink and driving amounts to a major social problem, some research attention has been focused on marihuana and driving. Tests have shown that psychomotor skills and simple cognitive skills deteriorate significantly in many people after smoking dope, because they suffer a distortion in their sense of time and speed. It is unwise to drive a motor car or an aeroplane when under the influence of marihuana, even if you are experienced and even if the dose is moderate. To drive at any time under the influence of an intoxicant is to increase the risk of injury both to oneself and to others. A survey carried out by the State of Washington Department of Motor Vehicles in 1969 showed that at levels needed for what subjects considered a social high, marihuana affected the driving skills of the experienced user very little; certainly less than a social high with alcohol. The effect on inexperienced smokers was greater than on the experienced users, which suggests that the latter compensate efficiently (quoted in Appendix, Vol. I, pp. 471-2, of the United States National Commission on Marihuana

and Drug Abuse). Experienced users in the Sydney interviews previously mentioned considered that their driving skills were unimpaired because they had no fuzzy perception and no double vision, but were well aware that they were less efficient than normally, and therefore put extra effort into driving. However, reactions are very subjective. A group of men in their mid-twenties, interviewed by the authors in 1977, included one who was proud of the fact that he had, when quite stoned, driven a taxi around Sydney. Another, who had taken hashish orally, felt the effects after he had started driving home and found them horrifying.

Both alcohol and marihuana produce pleasurable effects, but both drugs in moderate doses impair normal functions to such an extent that the use of either before driving or riding is unsafe. The same applies to directing aircraft from a control tower, or operating in a hospital, or steering a ferry, or any other activity directly affecting other people's lives. Although there are breathalysers and blood tests for suspected drunken drivers, there are none yet for pot smokers. Nevertheless, while marihuana does not seriously impair the reflexes nor dilate the pupils, it does affect ordinary motor skills. The interaction of the two drugs, or either of them with any other drug, may further worsen the situation. It is certain that marihuana and driving do not mix, and people who drive under the influence of marihuana should understand that they are risking both prosecution and accident.

10

HABIT OR ADDICTION?

A drug defined—habit and addiction distinguished—dependence defined by WHO—psychological dependence—withdrawal—tolerance—marihuana smoking is a habit—breaking habits—adult smokers—teenage smokers—the amotivational syndrome—parental example.

"Speed kills", as everybody knows who knows about methedrine. But what does dope do? Marihuana is a drug, and its effects are therefore dose-related. By "drug" is meant a substance, not a food, which has a physiological effect significantly different from "normal" or "natural" responses. These responses are used medically to change pathological conditions, or used socially to relieve anxiety and tension, escape from problems or boredom, release inhibitions, induce any other feelings that are considered socially desirable, to capture new experiences, or even methods of self-protection against society and its institutions. It is commonly believed that drugs open up new limits of awareness, or can enhance creativity, or even bring greater insight into the mysteries of the universe.

"Drug" does not necessarily mean a narcotic, which brings addiction; marihuana is not a drug of addiction, but a hallucinogenic intoxicant. The main reasons why it is thought to be addictive are that the present laws in Australia say so, and that police officers act as though it had the same effect as heroin. Medically, addiction is defined as an overpowering compulsion to take a particular substance and obtain it by any means; there is also a marked tendency to increase the amount taken, and psychological and physical dependence on the effects of the drug substance. All these characteristics are present in drugs of addiction; morphine and heroin are the classic examples.

On the other hand, with non-habit-forming drugs the detriment

to the individual and to society is less severe; the desire to take the drugs is less compelling, and the physical dependence does not develop. The World Health Organisation in 1965 decided that it would be more meaningful to talk of dependence of various types when dealing with problems of drug abuse, rather than use the terms addictive and non-addictive. The WHO committee described dependence of the cannabis type as the desire for repeated administration of the drug arising from its subjective effects, with little or no tendency to increase the dose; and a psychic dependence, related to subjective appreciation, but an absence of physical dependence. The conclusion was drawn that cannabis was habit-forming, but not to such a degree as tobacco or alcohol.

Certainly with marihuana a psychological dependence may develop, though this is difficult to describe except very generally, namely, that people will be upset when deprived of something. Some may also go to a lot of trouble to get fresh supplies. However, this has been belittled by some psychologists, who believe that it has no more significance than being dependent on bacon and eggs, motor cars or Sunday newspapers. Nevertheless, the drug has been taken to produce a relaxed euphoric state, and therefore a person may keep on seeking this state because of external stress conditions. However, there is no overwhelming compulsion, as there is with heroin, to obtain the drug no matter what the cost or the difficulties. A survey of 500 users in Britain published in 1974 showed that 356 reported being able to give up using cannabis without any difficulty (J. Berke and G. Hernan, *The Cannabis Experience,* London, 1974). Some of the comments were: "I stopped smoking for a year about three years ago"; "I did stop at one time for four months just to prove I could"; "Have given up for weeks or months—dead easy."

With drugs that produce physical dependence, severe withdrawal symptoms are manifest when the drug is discontinued and supply is cut off. The symptoms are more severe if the drug is cut off abruptly. With heroin, which probably produces the worst withdrawal symptoms—the cold turkey—the symptoms are actually caused by the body's reaction to the withdrawal of the drug. The person experiences nausea, vomiting, chills, flushes, sweating, diarrhoea, respiratory difficulty and muscle pains, all of which are severe and frightening. These symptoms last about three days and then gradually subside. Marihuana does not cause physical dependence in the true sense of altering the body's needs. However, up to 10 per cent of users experience unpleasant symptoms in varying degrees if the use is regular and there is a sudden abstention. The symptoms are restlessness, irritation, stomach pains and headache. They are not very severe, and pass off fairly quickly. The heavier and more regular the use, the more likely it is that these unpleasant symptoms will recur.

"Tolerance", in relation to drug use, is the desire or need to keep

on increasing the amount taken to obtain the desired effect. Tolerance occurs with many drugs, and the process is complex and still not completely known. With marihuana it was first thought that there was a reverse tolerance, in that inexperienced smokers needed more grass to achieve a high than experienced smokers. There is evidence that this happens, but it may be rather psychological than physical—a yearning to get high. Regular users can take small doses to achieve the desired effect. However, tolerance to marihuana has also been observed, and a few smokers do seem to need increasingly higher doses. In laboratory animals injected IV, tolerance develops with very heavy doses, and appears to be quite long-lasting. However, with low doses, while tolerance develops, it disappears in a day. It has been reported from Afghanistan that some chronic smokers increase their doses tenfold over a period of twenty years, decreasing the dosage rapidly upon reaching their sixties. In Greece a group of heavy hashish users were able to halve their dose without apparent suffering when supplies became scarce.

Marihuana is habit-forming because of the subjective pleasure it gives, which is not an inherent property of the substance itself. Like all intoxicants, it can play a part in neurosis or psychosis. It is also used by a large number of people who are regarded as mature and normal in their social relations; who have accepted the joint after work, or at weekend parties, as being no more and no less natural than playing a game of squash or a round of golf. Marihuana does not engender a craving for its continued use; it does not produce more than mild abstention symptoms; it does not cause physical dependence; it is not disabling; and any tolerance that develops is due rather to supply and social context than need. It therefore does not generate addiction, but may become a habit which seems to depend on the desire of the user to go on with it or not. When the habit is acquired and maintained as a gregarious one, it is more easily abandoned than when practised alone. It is much easier for a marihuana smoker to give up than it is for drinkers to give up alcohol or smokers to give up tobacco.

So what's the risk? If you do get turned on with dope, just how easy is it to give it away? Marihuana is a habit-forming drug and engenders psychological dependence of varying degrees. If you want to stop smoking marihuana, you must have the desire to break the habit, or at least not care about continuing. You must feel that giving up the habit has more benefits than going on with it. With adult smokers, this sometimes happens; changing trends, new interests, new work and more responsibility mean that dope and person just drift apart. If the effort is more willed and conscious, without the change of other habits there may be some mild physical symptoms, and, depending on the degree of use, a certain psychological loss, a general restlessness and irritability. This has been likened to giving up tobacco smoking, but it is less impelling because

nicotine produces addiction, whereas marihuana does not. Adults have been known to give up using it, and then occasionally come back to it for social reasons, without becoming regular users again. In clinics that cater for people who have abused drugs, dexamphetamine is used to counteract the grosser depressive states of alcohol; chloropromazine, a major tranquilliser, to counter overdoses of LSD; but reassurance is sufficient after even large doses of cannabis.

With younger users, giving up may be more difficult because of the reasons why the drug was used in the first place. For parents, this is probably the most important question. However, a sane attitude should be adopted, especially if the only drug being used is marihuana. Nobody should be made to feel that smoking a joint is tantamount to entering the criminal underworld. School teachers can also help by talking to children about drugs factually and unemotionally in much the same fashion as they can talk about the use and abuse of tobacco, alcohol and statistics.

It is not known whether long-continued use of cannabis causes permanent personality changes of the amotivational type. This occurs when the person becomes apathetic, with little or no drive to action of any sort. He or she becomes a loser and a layabout, without apparent interest in his or her own life and career, dropping out of ordinary day-to-day living. This quiet, tranquil, uncaring state may be sought with approval in various hippie communities in Australia and the United States, or in some quietist religious groups, particularly those attuned to varieties of Eastern mysticism. But it is not approved in the achievement-oriented, social-service minded and affluent Western countries, which tend to disapprove of drop-outs, however validly they may be motivated, and count the financial cost to the community of "dole-bludgers", who neither earn nor produce "material wealth", and therefore seem to constitute a threat to the Puritan ethic, which prescribes that we should seek hard work and material wellbeing by means of that work, thereby keeping out of mischief and not spending too much time on pleasure. It is also condemned because it is sometimes accompanied by a positive hostility to work and to the general view of success and by an uncaring attitude to hygiene. Some people fear that it could create a permanent core of socially as well as economically disadvantaged drifters and juvenile paupers.

These fears may be exaggerated; they are nonetheless real. It is hard for the professional middle class to watch their children showing evident contempt for what the parents see as necessary and honourable work and achievement. Hence their sensitivity, and the vehemence with which they condemn the often imaginary "dole-bludgers", droppers-out, and dope. Sometimes, too, such parents really dislike their own work, having been less successful in it than they hoped. In that case they will often resent and deplore the anti-

materialism of the young even more vigorously. Smoking marihuana has become a symbol of youthful protest against the older generations, who often resent, and are jealous of, the evident pleasure which young people get from it. Young people get other things at the same time. Present-day adolescents are getting sexual satisfaction much more easily than their parents could in the 1940s, when they were helping to win World War II, or in the early 1950s when they struggled with a disillusioning peace.

It should be understood that the surrounding social conditions make drug taking for some a way of life with no cure or wish for cure. This is not restricted to the young, and certainly in Australia the major problem with drugs is the abuse of the analgesic/tranquilliser group of drugs, one in four women using them regularly. In such circumstances it is difficult to set an example for the younger generation, if indeed examples are needed.

11

ESCALATION?

Cannabis use not causally related to hard drugs—multiple drug users—drug pushers—social group the prime determinant—personality also important.

After dope, what? More dope, less dope, or the straight path to the hard stuff?—"THE DEADLY PATH TO ADDICTION"—as a banner headline proclaimed in a London newspaper in 1939. One of the most widely accepted reasons for retaining criminal penalties for marihuana smoking is that it leads to the use of more harmful drugs. Most of the evidence on this is highly dubious. Many people who try marihuana either try it once and never use it again, or try it several times and give it up. There is reason to believe that many don't try it more than once because it did nothing for them immediately, or because they were afraid of being caught by parents or police, or because the opportunity didn't arise a second time. However, there are many millions who are regular users, and some of them do substitute harder drugs or else take them in addition to marihuana.

A great deal of guilt has been generated by word association. The mere repetition of statements like "marihuana is the stepping stone", it "whets the appetite" or is "a calling card to hard narcotic use", does not settle the issue. The early fears of escalation, or graduation from marihuana to the hard drugs for the sake of a bigger kick, have not been substantiated. In the seventy or so years of research into the marihuana problem undertaken by commissions of inquiry into social problems and of scientific research by physicians, chemists, and pharmacologists, no single causal relationship has been established between using cannabis and using opiates like morphine and heroin. Most users of marihuana do not graduate to hard drugs—if they did the gaols would have been jammed tight long since—and many users of hard drugs did not begin drug-taking with marihuana. It is illogical to state that marihuana smokers will go on to

hard drugs because most heroin addicts have used marihuana. Most marihuana smokers do not associate with junkies; the hard drug problem is a separate issue and should be dealt with as such. The myth of the inevitable progression or escalation from marihuana to the hard drugs is part of the demonology of dope.

Nevertheless, there are some obvious connections. For example the false claim by some opponents of marihuana that it produces the hallucinogenic effects of LSD may encourage some users to try LSD. Further, many drug addicts are multiple drug users, and a case can be made for any drug as a starter to the use of narcotics. Then, people who have used one recreational drug, like tobacco or alcohol, are more likely to have taken other drugs. A number of hard-drug addicts have used cannabis, and a number used cannabis as their first illegal drug, and hence its use could have been one of a number of causes for the use of other drugs. However, every variety of drug use may have been caused by something else. A survey of drug abuse and drug dependence by the Health Commission in New South Wales between 1965 and 1969 showed that of the 2182 cases studied, 26 started with marihuana, 26 with amphetamines, and 24 pot smokers went straight to IV morphine. The head of the New South Wales Drug Squad claims that 80 per cent of all convicted hard-drug users started with marihuana, though that does not mean that 80 per cent of all joint smokers would graduate to hard drugs (*Progress Report* of the New South Wales Parliament's Joint Committee upon Drugs, March 1976). Two cases of persons serving sentences for drug abuse in Victoria show the variety of drugs that are taken (*Medical Journal of Australia,* April 1967, p. 653). Both were nineteen-year-old males and their histories were: 1. ritalin, benzedrine, barbiturates, marihuana, cocaine, morphine, Morning Glory (LSD); 2. alcohol, Purple Hearts, methedrine, hashish, barbiturates, cocaine, opium. There is evidence that a number of hard-drug takers use marihuana recreationally between their ordinary bouts of serious drug taking.

On the other hand, there are many drug addicts who have never used marihuana. In the United States a survey reported by John Kaplan in his book *Marijuana*: *The New Prohibition* showed that between 1960 and 1968 in California arrests for cannabis use increased by 700 per cent, but arrests for heroin rose by only 7 per cent. In Britain a survey (reported in the *Medical Journal of Australia* in December 1970) of teenagers who were regular users of pot showed that about 16 per cent eventually tried heroin, and it cannot be said that they would have tried heroin if they had not tried marihuana. These surveys were conducted on addicts, or on those who had been charged with drug offences. But there are those who have tried it once or twice; those who smoke it intermittently; regular social users; and the pot-heads, who are high most of the time. Only a small percentage of these come into contact with the law or become hard-drug addicts.

The other problem is related to the fact that marihuana is an illegal drug and often sold by the pushers who sell heroin, cocaine, barbiturates, LSD, methedrine and methadone, which, being more expensive and less bulky, are also more profitable. There is also the possibility of cannabis being laced with narcotics, especially powdered opium. Although smoking opium is less addictive than IV morphine or heroin, there is a danger. This was early recognised by the pot sub-culture, which emphasised the need to grow your own cannabis. In fact, most people first obtain cannabis from friends; little is first bought from dealers.

The most extensive survey of marihuana use is the Official Report of the National Commission on Marihuana and Drug Abuse in the United States, published in 1972. The Report indicates that the most important factor in the rate of progression to other drugs is not the drug the person started with, but the social group of the user, as determined by sex, race, class and religious upbringing. Marihuana does not dictate the rate of progression, if any, or to which other drug the user progresses. However, cannabis users have a greater chance of trying and using a wide range of other drugs than non-users, particularly LSD or the amphetamines rather than the narcotics. But the social group is the principal determinant. The Report also found that it was the user of hard drugs who was most likely to be a multiple drug user.

Drug-taking, whether it is heavy drinking, marihuana-smoking, or tablet-taking, is part of the fabric of society because it is both pleasurable and a common method of problem-shelving; it is also frequently innocuous. Some people are predisposed to take drugs and others are not, as some children who go to Luna Park like to be whirled around in a furious fashion, or thrown up and down, and seem to enjoy it, while others dislike it or are terrified by it. Many people are not happy or contented without the presence of a psycho-active drug in their body and others will constantly seek to use a drug for thrills, kicks or mind-expanding. If drugs are readily available they will be used, and the number and variety of reasons for their use will be legion. In Australia the drug traditionally abused amongst men has been alcohol, and amongst women, analgesic/sedatives. Some of these people will become hard-drug addicts, but the causal agent will not be in alcohol, valium or dope, but in the whole personality and in the interaction of the individual and society. The demand for psychotropic drugs is not limited to those regarded as being abnormal or belonging to the lunatic fringe. There have been few human societies in which drugs were not used. No society in human history has been without its opiates—chemical, economic, emotional or religious.

12

CANNABIS IN AUSTRALIA

Francis Campbell advocates hemp cultivation—outbreaks of cannabis—local production and marketing—penal laws on possession and trafficking—the 1971 Senate Committee.

Why wasn't hemp cultivated in Australia when there was a world-wide demand for rope? Why didn't the farmers of nineteenth century Australia take advantage of Britain's need for large quantities of hempen products? Probably because the rearing of sheep and cattle and the export of wool and wheat were more profitable. It is also likely that hemp was grown very cheaply in India, as were the spurious hemps such as Manila hemp, sunn hemp, Bombay hemp, jute hemp and pita hemp.

But the plant was not without a local advocate. In 1845 Francis Campbell, M.D., published in Sydney *A Treatise on the Culture of Flax and Hemp*, in which he recommended the hemp plant as a sound agricultural crop for farmers in New South Wales. He advocated that it should be exported to Britain, where it was much in demand for ships' rigging, most of which then came from Russia. He calculated that it took 180,000 lb of hemp to rig a first-rate man-of-war, which required 320 acres of land yielding 560 lb per acre. He had found it growing wild in the greatest luxuriance on the sandy banks of the Hunter River near Patrick's Plains, and the seeds which he obtained did very well in his own garden. He claimed that:

> In respect to soils, no country in the world can boast of any that are better fitted for the cultivation of hemp than New South Wales . . . Of those districts of the country which I know, I shall only enumerate the alluvial tracts, and the drained swampy lands in the districts of the Hunter, the Wollombi, the William, and the Paterson Rivers; the aquatic meadows of the Parramatta River, where they have been

drained, the low flat lands of the Hawkesbury, the Nepean, and the fine rich loams of the Shoalheaven.

In his *Treatise* he described the best soil for cultivation, the best time to sow, and the quantity of seed to use, as well as the methods of harvesting. The book was republished in 1864 and 1866. However, his advice apparently went unheeded and Australia continued to import its requirements from overseas countries.

Since that time the plant has appeared occasionally in New South Wales. There were reports from Murrurundi in 1899 and from Penrith, Mudgee and some Sydney suburbs between 1900 and 1930. In 1963 there was a record outbreak in the Hunter Valley between Dalwood and Raymond Terrace where, ironically, it was close neighbour to several celebrated vineyards. When the plant was recognised it was promptly eradicated by the Department of Agriculture. Some small plots of cannabis have been grown experimentally for fibre, but the plant was never grown commercially in New South Wales until the end of the 1960s, when it was cultivated to supply the illicit market for marihuana.

Up to 1969 there were no records of cannabis in Victoria, Tasmania or Western Australia, and only one plant had been recorded in South Australia. In Queensland, because of the ecological conditions which are conducive to growth of the plant, extensive searches were made for naturalised plants. However no spontaneous growth was recorded. As cannabis is not native to Australia, the chance appearance of the plants from time to time was attributed to viable bird seed. Since the mid 1960s marihuana has gained popularity in Australia as a social drug in the youth sub-culture, following the trend in the United States, and the cannabis plant has been cultivated in many rural districts, as well as in market garden areas, in suburban gardens, and even on the balconies of city home units.

Nobody knows how much cannabis is imported into Australia from abroad, or cultivated locally, though most appears to be locally grown. From time to time police raids on farms, communes and other country properties—presumably acting on information received from informers and/or moral crusaders—have indicated likely areas of home production. Back-yarding is apparently as important as rural production. Most of the marihuana smoked in Australia is probably grown in eastern Australia north of the Victorian border, especially in the Riverina and Murrumbidgee districts, and in most of the areas recommended by Francis Campbell. Cannabis in other forms, such as hashish, buddha sticks and hash oil or marihuana laced with opium, is imported.

Although some journalists appear to believe that syndicates, monopolisers, standover merchants and Mister Bigs have already emerged on the Australian scene, no evidence has yet been made public by the police or by committees of inquiry appointed by Australian parliaments and governments. A good deal of the distribution

appears to be in the hands of the user network. In the present marihuana market the distinction between user and seller is often so blurred as to be almost meaningless, and the system is continuously changing as people get busted, lie low, go overseas, or just stop dealing. However, this does not imply that the overall supply situation is similarly shared. Recent disclosures in New South Wales suggest that there is a pyramid type distribution in which a relatively small number of financiers and wholesalers frequently make initial arrangements for cultivation and harvesting. Writing under the heading "The Marijuana Pot of Gold" in the Sydney *Bulletin* (27 April 1974) David Marr estimated that after a shaky start the marihuana trade had organised itself into a lucrative and efficient industry of BHP proportions. More than three years later events at Griffith, New South Wales, suggested that the industry was helping to prop up the nation's rural economy.

Since the end of the nineteenth century, all seven Australian parliaments have legislated to prevent both the medicinal and recreational use of cannabis. Early in the twentieth century the import of opium was banned, followed by that of cannabis. The federal parliament prevented the plant or its product being imported; the state parliaments prevented it being used in Australia.

When criminalising its possession and use the state parliaments generally followed similar patterns, all of them being more concerned to stamp out trafficking and dealing than mere possession. There is an up-to-date summary of the state of the law in the book by Roman Tomasic, *Drugs*, *Alcohol and Community Control*, Sydney, 1977, Ch. 8. The medicinal use of tincture of cannabis gradually went out of favour, although gaily decorated tins of addictive cough lozenges, marketed under the trade name Chlorodyne and containing morphine, chloroform, cannabis and prussic acid stood on the counters of pharmacies and sweet shops for many years. By the 1950s few pharmacies retained supplies of any cannabis products. At that time the British Pharmaceutical Codex deleted cannabis preparations, and in the 1960s the Australian Poisons Acts prohibited doctors from prescribing and pharmacists from preparing any cannabis medicines.

Australia also became a signatory to the United Nations Single Convention on Narcotic Drugs of 1961, one of its provisions being that adequate penalities, particularly imprisonment, must be imposed on drug offenders. The Convention imposed the same controls on the production and distribution of cannabis and cannabis resin as were applicable to opium and other drugs, especially with a view to bringing to an end the non-medical use of the drug in certain Asian countries. Australia also conforms to the 1971 Convention on Psychotropic Substances. Australian laws do not distinguish cannabis from the narcotic drugs, and thus they impose heavy fines and/or imprisonment for possession of or trafficking in cannabis. Australian

police officers do not differentiate amongst drug offenders. A senior police inspector in Victoria recently remarked that there was no need to distinguish between drugs; he said, "Drugs are drugs, a soft drug of today becomes a hard drug tomorrow." Australian courts of law treat all drug offenders as common criminals, and people who sell any sort of prohibited drugs for monetary gain are thought to be the worst of the professional criminals. All these practices and the activities which they generate are sustained by the sensation-prone mass media.

The most important of several recent investigations in Australia was carried out by the federal Senate Select Committee on Drug Trafficking and Drug Abuse in 1971, which found that alcohol, tobacco, barbiturates, sedatives, bromoureides and the minor analgesics created harm to the greatest number of people in Australia. In its Report the Committee concluded that while modern medical science had not established a therapeutic use for any of the cannabis derivatives, and that while their long-term use might be dangerous, taken in moderate doses they do not cause physical damage, only psychological dependence. The Committee recommended that cannabis should not be classified together with heroin, since it was clearly not of equal danger to users, but that its use should continue to be prohibited, with lesser penalties for first offenders. The Committee also remarked that the delights of its use appear to be overrated by those who use it, and its dangers similarly exaggerated by those who seek to maintain its prohibition. One of the members of the Committee, in a dissenting opinion, commented that "society will find it difficult to maintain the continued illegality of the drug unless its attitudes to tobacco and alcohol are drastically reviewed".

The recommendations and comments of the Senate Committee have a twofold significance. They uphold the status quo in Australia, whereby to possess any marihuana is a criminal offence. They also draw attention to the power of the federal legislature over nation-wide customs and excise policy. Were the Senate and the House of Representatives to allow the free importation of cannabis, it would not be practicable for any of the states to prevent its use within their map-boundaries.

13

DRUGS IN AUSTRALIA

Marihuana well established in Australia—nineteenth century social issues—twentieth century social issues—Australia a drug-oriented nation?—illegality inhibits effective inquiries about usage—various estimates—dope a major problem

The marihuana question is now among the most important social issues being discussed in Australia. The use of marihuana became popular in Australia only in the mid to late 1960s when it was smoked at country-music dances, pop festivals and rock concerts. Passing a joint around quickly became popular amongst high school students, and the custom soon spread amongst teenagers and twenty-year-olds. By the late 1960s it was the young-trendy social drug, and by the early 1970s it had come into use by many of the over-twenties. Since then it has become Australia's most popular illicit drug. The controversy over its use has been one of the important public controversies of the seventies, and seems likely to continue unabated as a current affair for some time to come.

Australia has had a long and fairly healthy record of vigorous public debate over social issues. This began with controversy over Sunday observance early in the nineteenth century, and was later concerned with such matters as temperance, prohibition, the early closing of hotels, local option, the use of opium by Chinese and Aborigines, lotteries, gambling, starting price (off-course) betting, state aid to churches and church schools, and mixed marriages between Catholics and Protestants. Early in the present century there was intense argument between progressives and reactionaries over mixed bathing among the sexes, mixed drinking of men and women in hotels, the employment of barmaids, and public dancing. After the war of 1914-18 there was controversy over the supposed ease of divorce, the length of women's dresses, women smoking in public and wearing lipstick at Church Communion services,

the size of men's bathing costumes, the advertising of condoms and the availability of public urinals.

More recently there has been vigorous debate over similar issues. For example, many people have got worked up about abortion, censorship, prostitution, homosexuality, poker machines, conservation of the environment and green bans to enforce it, nude bathing, drug-taking, womens' liberation, the removal of adultery as grounds for divorce, the rights of Aborigines and other minorities, child pornography, gambling casinos, sexual permissiveness, tobacco advertising, and smoking in public transport. All these arguments have reflected changing opinions within Australian society, and most have been followed by significant changes in customs and laws. Indeed, what has been considered immoral or even criminal by one generation has frequently been accepted as normal and legal by its successor.

It does not require a very deep knowledge of Australian history to recognise that year by year the Christian authority which has lain at the basis of our law and morality has been eroded. This does not mean that all rules of conduct have been destroyed, or that the community has disintegrated. It means that each new generation has been quicker than the last to adapt the rules to their needs. Australia is a remarkably orderly, peaceful and conformist society, which does not tolerate murder, assault, rape, and robbery; which does not allow people to walk around the streets with guns or other offensive weapons; and which does not really like deviance from its principal norms, nor even strong degrees of non-conventionality. As the United States National Commission on Marihuana and Drug Abuse remarked, "The fundamental principles and values upon which the society rests are far too enduring to go up in the smoke of a marihuana cigarette."

Australia is also an affluent society, despite its high level of unemployment, its under-privileged minorities, and its pockets of poverty among immigrants and the elderly. There is no widespread malnutrition or pauperism, and the marihuana problem, like the drug problem in general, is as much a product of affluence and the changing nature of society and its habits as of the attractions of the drug itself. It would be true to say of Australia, as was said of the United States in the Report quoted above, that the youth of today are "better fed, better housed, more mobile, more affluent, more schooled and probably more bored with their lives than any generation which has preceded them".

Although the present situation is heavily charged with emotion, it is not difficult to identify and classify the opinions and arguments being used on the question of the public and private use of marihuana. But first, what is the situation in the community at large? Is it a drug-dependent society? Is it an intoxicated community? Are most Australians drunk or drugged most of the time? Are the legally used drugs more harmful than the illegal drugs? Which drugs are abused? Who are the addicts? It is not possible to give accurate answers to most of these questions because there have not been a sufficient number of

proper surveys by trained sociologists and psychologists, and also because the present state of the law and the conduct of the police make it difficult to obtain useful information. Furthermore, the words "drug", "use", "abuse", "dependent", "addict", "deviant" and "delinquent" mean different things to different people. Still, some broad generalisations can be made which will probably be acceptable to most people.

First, in terms of drug use, the rarest Australian is the one who takes no mind-altering drugs. Second, Australia by the mid 1970s had become a multiple-drug-taking nation on a grand scale. We live in a society in which the use of many types of drugs is accepted as normal, and which condones severe addiction to several of them. In contemporary Australia a very high proportion of the population continuously and legally uses alcohol and tobacco in very large quantities; possibly 75 per cent of men and women drink alcoholic beverages and 50 per cent smoke tobacco and a very high proportion both drink and smoke. In contrast, a very small proportion of the population illegally uses opiates and LSD. A large proportion legally and regularly uses barbiturates, bromoureides and other sedatives, as well as minor analgesics like aspirin, and probably many of them also drink and/or smoke. A survey of the drinking and drug-taking patterns of 8500 adults in Sydney who had been through a Medicheck screening in 1976 (published in the *Medical Journal of Australia* in November 1976) showed that frequent heavy drinking was found to be predominantly a male phenomenon (30 per cent of men and 9 per cent of women were at risk), but that few heavy drinkers thought they had a drinking problem. Heavy drinking was not infrequently combined with regular use of psychotropic drugs. The regular taking of analgesics and psychotropic drugs was predominantly a female phenomenon (25 per cent of women took either psychotropic drugs or analgesics regularly). One third of both men and women also smoked tobacco.

An unknown but significant number of people of all ages and from all sections of the community have turned on with marihuana or hashish in one form or another, for short or long periods, or intermittently, and many of the regular users are also distributors. The majority of marihuana smokers are teenagers or in their early twenties, but an increasing number of the over-twenties and thirties have adopted the habit, and in the big cities few suburbs are without their devotees, who are of all ages and socio-economic classes. The widespread use of marihuana is a reflection of the so-called permissive society, which allows greater enjoyment of sex, food, the arts, and anything else that stimulates the senses.

Because it is illegal to possess or distribute marihuana, it is not possible to assess annual consumption as we can by imposing import duties and excise taxes on alcoholic drinks and tobacco. Nor is it possible to assess accurately the population of users and therefore to determine whether or not Australia is going to pot. Protagonists of legalisation tend

to over-estimate the number of users. Government crime statistics of the number caught, which also show that a high proportion of convicted drug offenders have used marihuana, tell us more about the vigour of the police and politicians' barometing of electoral opinion than about community use of the drug. Statistics compiled by the Central Crime Intelligence Bureau showed a nation-wide increase in offenders from 1874 to 6709 in the years 1972-74, and the rate has been accelerating since then in response to media campaigns suggesting that the police are "not doing enough" about the "drug scene", and strongly hinting that perhaps some of them are involved in it, as well as in organised crime and even the Mafia. However, official statistics always understate drug usage amongst older age groups and residents of affluent suburbs. Similarly, hospital admission statistics do not reflect marihuana usage. Scattered surveys of school students and suburbs in various parts of Australia during the late 1960s and early 1970s using different techniques suggested that the use of marihuana amongst young people aged between fifteen and twenty-five was increasing steadily, and that support for the legalisation of the drug was increasing (P. Healy, *Use of Psychotropic Drugs in Australia*, Sydney, Health Commission, 1975). As in many other ways, the Australian experience was thereby similar to, and about a decade later than, its predecessors in Britain and North America.

Perhaps 4 or 5 per cent of the total population has been acquainted with the products of cannabis at one time or another, though of those a substantial proportion may have taken only single puffs of joints passed around at parties and then gone back to beer, spirits, wine, yoga or meditation. There are so many other things to do besides sitting around smoking dope and drifting off to sleep. Probably more than 20 per cent of the young people living in Sydney, Melbourne and the smaller cities have tried it several times. Estimates given at a Sydney seminar on victimless crime in 1977 suggested that as many as half a million Australians use dope at least once a month, and that usage amongst both casuals and regulars is increasing steadily. But of course there are changes from day to day, and it is not possible to identify the people involved, especially those who use it only for the occasional kick. Most would not want to talk about it. However, one of Australia's leading scientists in this area estimated in an article in the *Australian Journal of Alcoholism and Drug Dependence* (November 1976) that hardly anybody over thirty uses the drug, that only 5 per cent of young people use it regularly, and that that percentage is stable. Another expert in the same journal believed that about 10 per cent of the population of Australia between eighteen and thirty-five used cannabis once a month or more often. He concluded that "a group equal in number to the population of a fairly large city is supporting a rural industry of which the annual retail value is perhaps thirty million dollars".

Statistics published by the Health Commission of New South Wales in November 1976 under the title *Monitoring Drug Use in New South*

Wales: *Part 3*: *Correlations of Trends*, *Deviance and Attitudes* suggest that marihuana is in the phase of "early majority adoption" and that trial use is likely to increase rapidly for some time to come, perhaps for ten to fifteen years. The rates of marihuana use in New South Wales among the fifteen to nineteen age group appeared to increase in the years 1971-73, from 7.5 to 15.3 per cent amongst current users. It was also noted that "in some groups availability of the drug increased, the perception of danger diminished and attitudes became more permissive". A study by the same Health Commission, which monitored drug use in New South Wales in 1971-73 amongst high school students (5000 of the 7000 sample), technical college students, trainee nurses, prisoners, probationers and delinquent youths found that the use of marihuana was increasing proportionately, and so too were permissive attitudes towards it, with a correspondingly reduced perception of its dangers. The survey pointed particularly to the growth of multiple drug use; users of marihuana were more likely to use legal drugs than non-users, and particularly likely to use other illegal drugs.

It is reasonable to assume that the police are not going to take action against such a large number of otherwise law-abiding citizens. The gaols would not be big enough to accommodate them, and many of the secondary school teachers would have few pupils to teach. But it is also reasonable to assume that a small proportion of people endanger themselves and their fellow citizens by abusing the drug, either by over-indulgence, or by the ways in which they affect others when they are using it—by their conduct and their conversation, and by driving cars when stoned. In those contexts, smoking marihuana is not a victimless crime, and the public needs some protection from the abusers. But because it is illegal to possess any part of the hemp plant, it is not possible to identify and to get to know enough about those abusers in order to help them. Nor is it possible to control them, except when they commit some other offence.

Despite the annual increase in prosecutions for possessing marihuana and hashish, the number of those deterred from using the hemp drug by the law and the police, which has been large, is steadily growing smaller. This situation poses a major political problem in Australia which will not fade away, or be muscled out of existence. As Roman Tomasic correctly observed in his recently-published study of drugs and alcohol in Australia, "If it is true that there are about 400,000 marijuana users in Australia, such stigmatization becomes a political act of major significance." It is also mixed up with other problems arising from the many changes in attitudes and behaviour which have occurred in Australia in the last five to ten years. In these circumstances, what should be done? What does society want?

14

WHO'S FOR? WHO'S AGAINST?

Four possible answers—suppress it—decriminalise it—control its manufacture—legalise it.

What should the politicians do about cannabis? To this question four broad answers can be given, each of which creates further difficulties.

First, suppress the use of marihuana and hashish in all their forms by vigorously enforcing the law; punish those caught using it; and severely punish those caught growing, providing or selling it. This is the present policy of Australia's seven parliaments. It assumes that marihuana and hashish are dangerous narcotics, and that the onus of proof lies with the users to show that they are not.

Second, recognise the widespread use of the drug, but attempt to control its consumption by indirectly controlling its supply. This is to be achieved by "decriminalising" its use, that is, by not calling the possession of marihuana or hashish (in small amounts) a crime punishable by a large fine and/or imprisonment, but a misdemeanour punishable by a minor fine. It is also envisaged that offenders will be educated, persuaded or treated to believe that smoking or eating marihuana and hashish are health hazards. Sellers will be more severely punished than previously. It is expected that in such ways the use and hence the supply of marihuana will be contained or decline, and that the "fad" will then pass away.

Thirdly, recognise the widespread use of the drug, and allow it to be used, but strictly control its quantity and quality. This could be achieved by licensing local growers and manufacturers; by the government itself importing, growing or manufacturing it, and constituting a statutory board or commission to do it; by authorising pharmacists to import it and sell it; or by allowing medical practitioners to prescribe it; or by a combination of all such methods, as is presently done with some other drugs. This view implies that citizens sometimes need protecting

against themselves, and also that society has a right to regulate the supply of drugs in the community.

Fourthly, allow the importation, cultivation and use of cannabis products without any controls whatever, except the type of control applied to tobacco and alcohol, by imposing tariffs and excise duties to raise government revenue and protect local industries from overseas competition; and also by imposing minimum quality controls over the products in order to protect the health of the public. This would involve no control over quantity or price, allowing private enterprise full scope for investment and speculation, subject only to the industrial, employment and advertising restraints imposed on all Australian industries by governments and trade unions.

Suppress it? Decriminalise it? Control its manufacture? Legalise it? Each of these answers attracts different groups of people in contemporary Australia, each with religious, moral, rational, ideological or occupational motives. And the resulting controversy has generated a great deal of emotional steam and moral posturing.

The *first* view sees marihuana as a highly dangerous drug which menaces public health, safety, welfare and morality, and which is corrupting Australia criminologically, sexually, and genetically. In particular, dealers in marihuana are thought to be people whose trade and profit are based on human misery. This view attracts most of the church leaders, especially the Protestant Evangelicals and the leaders of the Festival of Light; they have always been convinced that immorality, crime, drugs and irreligion are inseparable and mutually corrupting, and that social change is the same thing as social decay. In their opinion, marihuana smoking is a crime, a sin, a disease and a disorder, and smokers will end up on the social scrapheap alongside the mainliners and metho-drinkers. In their opinion the only hope for society lies in more effective controls by parents and police and a campaign for moral regeneration.

This pulpit viewpoint is promoted with genuinely passionate conviction, and for the time being has the great advantage of being "on the side of the law", and because the public is not yet ready to accept a major change in that law. Its supporters believe that liberalising the law would be a further surrender to pleasure-seeking, self-indulgence, permissiveness, debauchery and sinfulness, and would be tantamount to condoning or even encouraging the use of marihuana. They object not only to the abuse, but also to the use of marihuana, a view which was well expressed by Dr E. Cunningham Dax in the *Medical Journal of Australia* in December 1972. He wrote:

> The commonest theory heard is that the ill effects of marihuana are no worse than alcohol, and that marihuana is the drug of youth, to which youth is entitled. The simple answer amongst a series of others is that we cannot afford the luxury of the complications of yet a third major drug which

> for practical purposes cannot be standardized. We have enough problems on our hands with tobacco and alcohol, both of which have already been incorporated into our culture.

Others believe that if marihuana were readily available it would lead to a more widespread use of all other drugs, as well as to an increase in crime, especially sexual offences, and to an increase in broken marriages, "dole-bludging" and vagrancy. Furthermore, they object to what they think is the unconventional and undesirable life-style of many of the young people who use the drug, a life-style which they believe constitutes a threat to all established virtues.

They share this view with many others in the community, amounting in all (the authors' guess) to more than half the total population. All these groups have, however, very confused ideas about what marihuana really is, and about the likely effects of changing certain policies. The supporters of the status quo also have some strange companions. There is, for example, the liquor lobby, which would otherwise face steep competition from an alternative stimulant, in a market which must assuredly have already reached saturation point. There are others who feel instinctively that it is all right to drink beer and wine, but that there is something alien and unclean about a drug which comes from those parts of Asia which might yet send forth the dreaded avalanche of coloured termites to undermine the Australian way of life.

Then there are many who identify marihuana use with the sorts of leftish radical or anarchist activism they find disturbing and offensive. They view the people who joined the protest marches against the Vietnam war, and the people who are militant on issues of racism, "redevelopment", and prison conditions, as "troublemakers", and they believe that dope and trouble-making go hand in hand at every issue-mongering demo. There are also those country members in the state parliaments whose long-standing conservatism about moral issues, especially urban issues, probably stems from their deeply-felt distrust of all cities. They have always thought that country life is in most respects more productive, more healthy, and more upright than life in the towns. At present, they are almost all strongly opposed to any change in the drug laws.

There are also many medical practitioners, psychiatrists, sociologists, psychologists and research scientists who are alarmed at the recent growth of multiple drug use, or who believe that the pharmacology and toxicology of the cannabis plant are still uncertain, and that the dispute about the psychiatric and physical morbidity associated with its use is sufficient to demand extreme caution. As one of them said recently, "For myself, I worry about any smoke! I worry about the fire that generates it, its source, purpose and function. We must always attend to the signals from any quarter that indicate that there *may* be unanticipated consequences of drug use" (J. R. Tinklenberg, ed., *Marijuana and Health Hazards*, New York, 1975, p. 167). Some

scientists believe that marihuana destroys brain cells, exposes people to disease, induces impotence in men, and leaves all its users psychologically scarred or wallowing in a dulling, nothing-matters, amotivational torpor. A survey of general medical practitioners in Sydney in 1973 (published by the New South Wales Health Commission under the title *Alcoholism and Drug Dependence*) showed that two-thirds of those who responded were opposed to the legalisation of marihuana, and that only 14 per cent favoured any change — a thoroughly foreseeable result in a profession known for its caution and conformity, and yet one which has been chiefly responsible for saturating the women of Australia, at their request, with tranquillisers and excitants. Furthermore, Australian doctors know very little about cannabis, because it is not prescribed, and regular users visit a general practitioner only when they have some other reason to do so. You do not go to a doctor to stop getting stoned.

Australia-wide surveys between 1969 and 1973 indicated a growing percentage in favour of legalisation of marihuana use, reaching 16 per cent in 1973, but later surveys suggest that the trend has been tailing off, and that there is no "historical inevitability" about a majority coming to favour it. However, it would not be improper to suggest that this is an entirely misinformed public opinion; that the public at large has little knowledge about the beneficial or harmful effects of the drug, and that generally-held views have been conditioned by a mythology disseminated by special interest groups through sensation-oriented media.

These views still have strong support throughout Australia, although it is less than was the case ten years ago. Nevertheless, as in the past, the prevailing consensus will continue to be respected by state and federal politicians who are not going to support proposals which their political parties believe to be electorally disastrous. Votes *do* count more than reform, as has been well illustrated in New South Wales politics during the first half of 1977, when a mildly conservative campaign quickly caused local politicians to go cold on decriminalisation. The consensus will also continue to be enforced by the long-established instruments of public morality, namely, the state police and the stipendiary magistrates. When fining a mother for providing joints at a party given by one of her children, an astonished Wollongong (NSW) magistrate recently remarked, "Heaven help the young people." (Shortly afterwards there was a media-inspired campaign to "turn in a pusher").

And there is a further line of defence for existing policy. Like censorship, drug control is shared between federal and state authorities, the former generally controlling imports, the latter usage, and this situation will make it extremely difficult for any one of the seven governments to decide on a unilateral policy to turn a state, or Australia, into a "Mecca for Marihuana". The only practical way to change the law is to persuade the federal parliament to change its

view, which would then compel the state parliaments to follow suit. It would not be possible for state governments to ban dope if the federal government permitted it to be imported.

The existing policy has several obvious ill effects. It involves the repression of contrary opinion, and also threatens to make dominant prejudices even more confused. Fears about dissent and division, and anxiety for consensus are probably exaggerated when one considers, for example, the range of permitted views and life-styles now common in the United States. We must try to distinguish the substantial issues about dope and other drugs from views about long hair, demonstrating students, living in communes, and/or on the dole, and (in a rather different category) responses to trendy token republicanism. A significant segment of the low-risk population does not agree that smoking dope is hurtful, wrongful and immoral, or that smokers are criminals.

Furthermore, the existing policy is slowly but increasingly making a substantial addition to the criminal population, as each offence for possession or sale of marihuana creates an ineradicable criminal record in the police files. To break the law is to run grave risk of getting a police record, which is likely to be held against offenders for the rest of their lives. This is important for the non-droppers-out, for career-oriented young people who intend becoming civil servants, teachers, pharmacists, doctors, engineers, or lawyers. Although society is nowadays much less severe and unbending on youthful offenders than it was a generation ago, nevertheless smoking dope is a proscribed anti-social act, and they should be fully aware of the likely consequences of being caught. In such circumstances, the long-term effects on employment, prestige and the feelings associated with ambition, will be much greater than the known physiological effects.

This is bad enough. But if an even more vigorous attempt is made to tighten the law and accelerate the current rate of youthful offences it will inevitably be regarded as further persecution of “us” by “them”. The long-term family, educational and occupational consequences of such a policy would be horrendous, and grossly out of proportion to the nature of the offence. The only people to benefit will be the police who are needed to administer the law, and the lawyers who will try to defend the accused; the latter will have very few contented clients. The recent spate of prosecutions has practically exhausted the supply of scientific tricks about the potency, species and varieties of *Cannabis sativa* L.

The *second* view, which assumes that the banning of cannabis use is by now both unrealistic and impracticable, has attracted a strong following among professional people and tertiary students, and some support from progressive Labor and Liberal politicians; it was recently supported by a majority of a New South Wales Joint Committee of both houses of parliament. Nevertheless, even among these people there is a wide range of opinions. Some think that marihuana is a harmless social lubricant which creates a feeling of euphoria, taps the well-springs of

creativity, and heightens the perception and enjoyment of music, art, literature, food and sex, and that users should not be classed as common criminals. They believe that other drugs like alcohol, tobacco and hard narcotics are not only injurious to health, but also have far greater and more clearly provable ill effects on society. They argue, for example, that alcohol consumption has increased in Australia by more than 30 per cent in a decade, and continues to do so at the rate of 3 per cent per annum and the greatest single social problem is drunken driving. They also think that the continued proscription of marihuana itself promotes anti-social behaviour, because it forces users to obtain supplies illegally and preoccupies the time of the police.

But among the progressives there are many who, while accepting the fact of widespread cannabis use, still think of it as a vice and wish to restrict its availability; they only want to remove the criminal penalties imposed on users and thereby cut down the cost of police action, by reducing the number of criminal arrests and trials. They think that the government should continue to disapprove of dope, and impose some penalty on those who commit a "victimless crime".

In North America and Britain this view is often referred to as a policy of containment; it assumes either that the problem will not become greater, or that it will fade away. The belief that marihuana smoking is a transient phenomenon which will diminish once it has been de-symbolised, de-mythologised and de-emphasised was the reason why the United States National Commission on Marihuana and Drug Abuse recommended in 1972 that its use should continue to be discouraged, especially amongst the youth. The Commission was worried that a policy of approval or even neutrality by the government might institutionalise the habit, thereby flouting the clearly expressed views of the majority of the population, and making it possible for youngsters to become chronic users of the drug with unforeseeable consequences. A similar policy of containment has been adopted in Britain; the British Government has expressed the hope that cannabis use has already reached its plateau and will no longer increase.

The real strength of this range of opinion on decriminalisation is difficult to gauge. Although some indication is given by opinion polls, the issue of drug use has become entangled in public discussion with other social and moral issues, in particular multiple drug use, homosexuality, feminism, abortion and conservation; and it is unusual for the trendies, whether of left or right political persuasion, to favour only one of a group of current progressive (permissive? small "1" liberal?) measures. As frequently occurs in such situations, the argument about marihuana is taking place in the midst of the perennial argument about law and morality. Still, the evidence suggests that there have been marked changes in Australian attitudes to sexual and moral issues in recent years, and the growing popularity of dope has had some influence on that situation.

Debate on this and other social issues has accustomed the public to

the jargon of "consensual" (or victimless) crime, and the reformers who know the practical use of slogans and rhetoric feel that they have cause for optimism about future community attitudes towards decriminalisation. Favourable signs have also appeared from the courts of law. While the penalties for the use or possession of marihuana are severe in the statute books of the state parliaments, it is seldom that anybody is sent to prison, first up, for possessing small amounts, a fine equal in value of two deals of dope at $30, or a bond or referral to a treatment centre being generally substituted. Magistrates appear to be accommodating their practice, in some degree, to changing attitudes.

However, the activities of the police usually operate against youthful users of cannabis (mostly young men), especially those from working class families in the under-privileged areas of the big cities. A survey in 1970 from Sydney CIB files (*Medical Journal of Australia*, December 1970) showed that most drug offenders were between eighteen and twenty-five, and that unskilled and semi-skilled workers were the more numerous; 44 per cent of those charged were in possession of marihuana. In 1976 25 per cent of drug offenders were between fifteen and seventeen years of age. Keith Windschuttle, writing in *Nation Review* on 23 April 1976 about the situation in New South Wales, remarked that "The Rich Get Stoned, the Poor Busted", and hence the magistrates are seldom dealing with the children of "good families". The profile of the drug user most likely to be caught is "male: a school drop-out, working at an unskilled job". The drug user most likely to get away with it "has a father with a professional or managerial job and is at school, particularly in sixth form. If such a person also happens to be female, her chances of being caught are almost minimal." Windschuttle also remarked that the police find drug convictions are useful in keeping working class roughs and rowdies under control (their own estimate of their proper role). Furthermore, as was remarked by a member of the British Advisory Committee on Drug Dependence, "Nothing emphasizes the generation gap more than a drug offence. The drug user and the magistrate are basically out of sympathy. The cannabis-user is partaking in a form of enjoyment—that is how he looks at it—which was unknown to the magistrate when he was young. In addition to this the clothes, hair style and attitudes of many young drug-takers are unlikely to please the magistrates."

There are many unresolved issues likely to arise from decriminalisation. For example, would there be a marked rise in use? Would there be more violent crimes? Would more people suffer from severe psychological problems? Would industrial productivity decline? Would reduced punishments have any effect on violators of the law? Would there be a fall in the price of a deal? Would supplies of "small amounts for personal use" be able to keep up with rising demand, especially when most of the existing wholesalers were serving long terms in gaol? Would the existing underground source of supply become an underworld controlled by professional criminals? Or would users turn

to alcohol, common analgesics, or to acid, speed, smack and other hard drugs? or even to datura? If smoking marihuana is to be no more serious an offence than a breach of the parking regulations, is there any point in being ruthless and relentless towards those who supply it? And how will the users be differentiated from the suppliers, in a situation where at least half the regulars are also suppliers?

In some respects the proposal to decriminalise marihuana use resembles the present compromising attitude of the community to prostitution. No penalties are imposed on those wanting sex with prostitutes (unless, of course they are punished by receiving a disease they did not want), and no penalties on those who supply it privately; only on those who solicit it publicly, or who live on the earnings of those who sell it either way, or who do not tell the Taxation Department how much they earn from it. However, the proposal to "soft pedal" on the consumers but "go hell for leather" after the suppliers assumes (rather too optimistically), that the police will not go ferreting out and busting people for private use; that somehow the existing criminal records will be put out of sight somewhere, or even conveniently lost; and that most users will stop smoking when they are caught, or when they are persuaded that it is a vice or a habit which is harmful to them. And it does not take into account what is likely to happen when the supply becomes difficult to obtain by those who want dope, who have the money to pay for it, and keep on paying their fines. Where are they going to get it from? Their own back-yards? Somebody else's? Much of the argument for decriminalisation sounds like the well-meaning rhetoric of do-gooders who haven't yet thought their solution right through.

The *third* answer to the question, which removes all criminal sanctions on users and suppliers, but retains strict government or clinical control over manufacturing and usage, has attracted little support so far; though it could well appeal to those manufacturers of cigarette papers, aluminium foil and plastic bags who are doing very handsomely at present from the present illegal trade in dope. Those who argue in favour of government manufacture will be confronted by the right-wing opponents of socialistic enterprise, as well as by the powerful chemical, pharmaceutical and tobacco manufacturing interests, who would have both the expertise and the capital to provide the whole of the Australian market in return for assured and handsome profits: it would be possible for them to market competing brands of marihuana alongside the cartons of beer and whisky in the supermarkets. However, such commercialism would not appeal to the political left, which thinks that most large-scale private enterprise is bad, and that monopoly manufacture is wicked, unless of course the whole affair is to be managed by the ACTU, or by one of its subsidiaries, or by worker-management. If hemp growing were treated in the same way as dairying, presumably the farmers would be amongst the first to press for price stabilisation, zone quotas, and the orderly

domestic and overseas marketing of cannabis, meanwhile banning the import of grass produced by cheap (coloured?) labour in foreign countries.

However, some technical difficulties would arise during the manufacturing process. It would be difficult and complex, but not impracticable or impossible, to manufacture synthetic cannabinoids which would satisfy the established criteria for the information required about all new drugs; though the results would be expensive. But in the case of herbal (natural) cannabis or its resin, the variety of the product is so much greater, for example, than in the case of tobacco, that it raises grave doubts as to the possibility of quality control. It could possibly only be done by standardising THC content. The standard, however, would be extremely difficult to maintain, especially once a cigarette or a deal of hash had left the factory and been exposed to sunlight; and the products—possibly in individually sealed containers like some brands of cigars—would be expensive.

Distribution would also pose difficult problems. A proposal that sales should only be allowed through registered pharmacies would be strongly opposed by the giant retailers, who have already undermined the profitability of pharmacies by breaking the nexus between pharmacists and manufacturers on many tied lines. Those who argue that a medical prescription should be issued to certify that users are therapeutically but not recreationally in need of the drug, would be opposed by those who feel that the medical profession has already too much power in Australia, and that it has made too much money out of Medibank to be given another ticket to a fortune.

All in all, this third answer smacks of old-fashioned state paternalism. It would give great power and profits either to the government, to private manufacturers, to pharmacists, or to medical practitioners, though past Australian experience would suggest that if the policy were adopted in the long run the government and its bureaucrats would be the main beneficiaries. Big Brother would look after everybody concerned at the price of endless form-filling, e.g. Form M(1)L. Application for a Permit to Smoke Marihuana: One Year: Learner.

The *fourth* answer to the problem is to remove all controls over production and all penalties over use, except perhaps to raise some government revenue and to protect the public against the hazards of adulterated products. It is possible that this might one day appeal to revenue-hungry politicians, though they might find themselves in strange company. The Cannabis Research Foundation of Australia believes that the following gains will follow the legalisation of marihuana:

> The individual user (know any?) will no longer be a potential criminal; Drug offenders will be freed from jail and the stigma of a criminal record (know any?) abolished; Police, court and jail costs will be removed, saving a packet

> for the tax payer (know any?); Governments will be provided with a legitimate source of revenue, benefiting all people instead of just organized crime; The paper industry will be provided with a raw material which is a hundred ways more preferable than wood chip; The integration of a sub-culture into a currently but needlessly divided society; Police attention will be more strongly focused on criminal activities against people and property; The proposed Cannabis Control Board will be responsible for quality control, ensuring supply and purity, thus reducing the risk factor of going on to hard drugs; Medical benefits may aid asthma, glaucoma, insomnia, dysentery, poor appetite, improve digestion, control dandruff, relieve headaches and earaches, catarrh, diarrhoea and many other complaints for which there is presently no efficient treatment; The restoration of the silent majorities' concept of justice (*The Australasian Weed*, May 1977).

There is one obvious economic advantage with potential electoral appeal. The legalising of marihuana would create a major new agricultural industry in all the temperate districts of Australia, which would not only have an assured domestic market for rope, hempen products, bird seed, paint oil, marihuana cigarettes, hash cakes, buddha sticks and the like, but almost limitless markets overseas, especially in eight of the United States of America. It would be able to rescue impoverished dairy farmers and beef producers from imminent bankruptcy, provide jobs for the unemployed, and improve Australia's overseas balance of trade. What better policy to appeal to farmer-pressured and grazier-oriented politicians?

Still, supporters of this and the previous view must also speculate on the likely long-term effects of an open-go policy. Would there be a very substantial increase in usage? And would it matter if there was? Would those smoking dope and hash be the same as the present half-million alcoholics in Australia? Or would there be a new and similarly large population of users and abusers? Would advertising be allowed? Would it really be feasible to treat marihuana in the same fashion as supermarket foods and maintain minimum standards of quality and packaging, and, as is done with alcohol, to restrict the number of dealers and outlets, the age of users, and the hours of sale? Perhaps the stage has been reached when the authors should answer some of their own questions.

15

SOME MESSAGES

The wider issues—the role of scientific investigation—results of present policy—widening of marihuana usage—a marihuana-free Australia no longer possible—an open-go policy not likely to be accepted—marihuana should have same social status as tobacco and alcohol—Australians can be trusted to be sensible—the law should be changed—respect for the law should be maintained—a lesson from history.

This book does not advocate that more people should be smoking dope. Nor does it advocate that the law as it is should be broken. We advocate changes in the law so that those who now enjoy getting stoned should be left alone to do so. "Dope is here to stay"—so reads one of the popular graffiti slogans. It is probably a true forecast, but it would be very unwise for anybody to predict the final outcome of the Australian debate about marihuana. This is because it is part of the wider debate about drugs, drug abuse, and multiple drug use in the community, and because it is wrapped up with so many other emotion-laden social and moral issues, like the attack on the nuclear family, and deviance and alienation amongst youth. There are also many moral campaigners who have determined that a battle against permissiveness and sin shall be fought on fields of grass. They are convinced that unless they defeat the Devil's Weed now, there will be an even greater use of all drugs, and therefore a further erosion of moral values in Australia, especially amongst the younger generation. Indeed, it is already apparent that the results of scientific investigations will not change their minds, any more than they will change the views of most of their opponents, who want the existing laws changed at any cost so as to safeguard the civil liberties of citizens and especially the privacy of their homes.

Nor can the scientists themselves resolve social controversies, or even

determine science policy. In any case, it is probably already too late. The time and the opportunity for leisurely scientific experimentation has run out, and it has done so at a time when the conclusion of most scientists seems to be that nothing definite can be said about the long-term effects of the chronic use of dope, except that there is a need for more research.

It is also the time for a calculated risk to be taken. The issues of the controversy are social and political rather than medical or scientific. We are not being asked whether or not marihuana should be used, and whether or not the problem can be "nipped in the bud" before it gets too big. It is already in use and we have got to learn to live with it. Nor are we faced with a health hazard of the order of the plague. We are not dealing with a communicable disease like gonorrhoea or syphilis. We are not dealing with sick people. We are facing a social habit. A large number of Australians will continue to smoke marihuana, in defiance of the law and of the police, and probably also in defiance of any scientific discoveries; and an activity which gives so much pleasure cannot be valueless, even if the drug which provides it is not the ideal recreational drug.

Many of the younger smokers will also continue to believe that the present prohibition is no more morally binding than was military conscription during the Vietnam war; they have noticed that both compulsions have been enforced by the same group of their elders. The law does not deter those who want to smoke dope, and there are grounds for asserting that it has created a social problem of greater magnitude than the crime it was originally intended to punish, namely, a new class of youthful criminals and potential criminals, many of whom will become so by being imprisoned with professional criminals. It serves mainly to alienate a large section of the community from the police and the politicians. It also serves to the younger generation as a further example of the hypocrisy of some of the beer-swilling, chain-cigarette-smoking older generations of Australian men, and their overweight, barbiturated and aspirin-saturated wives. These people do not practise what they preach. ("If smoking marihuana is so evil, why is drinking in a pub so good?"; "If being stoned is so wicked, why is being drunk so funny?")

When adolescents see their parents also using drugs, they may well conclude—rightly or not—that the grown-ups too are having trouble knowing what it's all about; and they will be all the less likely to take notice of overt moralising. The use of drugs by young people can often be correlated with parents' patterns of use, and there is reason to believe that parental example is often a major incentive to dope smoking. Parents who drink, smoke and take pills will be more likely to have children who use the illegal as well as the legal drugs.

Australian society and government must therefore come to terms with the problem of marihuana, before the financial and social cost of enforcement increases to such an extent that it far outweighs any or all

of the supposed benefits arising from the existing state of criminalisation. They must do so also before the activities of the police, drug referral centres and other interested persons combine to create an army of juveniles with criminal records. Marihuana and hashish are banned in Australia by legislation, which undoubtedly reflects the prevailing consensus. But it does so to the disadvantage of a sizeable and diverse minority in the community. These people are no longer a small sub-culture of protesters and drop-outs, alleged misfits who feel alienated from majority values and believe that marihuana provides the way to Enlightenment. The number of recreational users from among the middle socio-economic classes probably equals the population of the drug culture groups, and also includes an increasing number of creative, educated, articulate, intelligent, and professionally-motivated young people. Hippie communes and drop-out crash pads are not the only places where old-fashioned morality goes up in smoke. The "insiders" of society are just as likely to pass around a joint as are the "outsiders"; they can just as easily turn on, tune in, and not drop out. One effect of legalisation might be that many respectable citizens on one hand, and many deviants and dissenters on the other, will discover that the separation between their life-styles and ideologies is less dramatic than they had supposed.

The legalisation of marihuana would not, however, bring alienation and deviance to an end, or solve any other social problems. It probably would not stop people from using it to harm themselves or others. It might even increase its use. But what are the practical alternatives? A marihuana-free Australia is no longer possible or practicable, unless a revolutionary movement were to abolish the present parliamentary system of government. Absolute suppression is no longer feasible in Australia because of the logistics of the situation, and because of the very great harm likely to be inflicted on the reputation of law enforcement. All the king's horses and all the king's men have not been able to pull up all the weed or burn all the dope, and are never likely to apprehend even a hundredth of the existing number of law-breakers. Marihuana is already in the public repertoire of intoxicants, and those who want it will get it, and those who can supply it will traffic in it, the law notwithstanding.

Further, "reformation" of these drug users is impracticable, as most of them are convinced that the use of marihuana is no more than a pleasurable experience like drinking beer and smoking tobacco, which many of them also enjoy. On the other hand, an open-go policy seems unlikely in the present state of public opinion and because of the electoral strength of vocal minorities opposed to it. In these circumstances, some form of compromise needs to be devised which will redefine the community's attitude to marihuana and other mild drugs, and will also remove the disparity in policy towards alcohol and marihuana. It should also be one that will encourage a responsible use

of the drug, and in so doing de-symbolise its present socially divisive status.

The law on marihuana in Australia which links marihuana with the narcotics is not supported by existing scientific knowledge; it never has been, and is never likely to be. It has given marihuana an unwarranted stigma. The legislators and law enforcers must learn that the prohibition of mild non-addictive and recreational drugs, minor tranquillisers and pain relievers, will not make Australians more healthy or conformist, or more faithful to their churches, wives or husbands; and that neither lesser nor greater penalties can be used to suppress the use of the minor pleasures of Australian suburbia. Australians are quite able to take dope with care, and especially if they prefer it to beer, spirits, wines or tobacco. Indeed, for some people marihuana smoking would be a great deal better than consuming large quantities of beer and wine: the morbidity and mortality from alcohol is well known and very high, and is amply illustrated by the beer gut and the bereavement notices. Hence, we believe that while marihuana is not harmless, it should have the same legal status as alcohol and nicotine, and should be available under the same licensing controls as are applied to those long-accepted drugs.

It has been said that the advocates of a change in the law have exaggerated the cost of present policy and over-estimated the benefits of a different one. No doubt they have done so in their zeal for change, but there can be no doubt about the effects of the present system in creating criminal records, diverting the energies of the police, and financing an underground tax-free marketing system. We think that the politicians should by now be convinced that there are no moral or social grounds for distinguishing in legislation between alcohol, tobacco and marihuana, and that they should resolve the existing contradictions as soon as possible. Such a resolution would possibly get them re-elected to parliament, at a time when the eighteen to twenty-five year old vote is rapidly increasing in relative size. The problems of the production and distribution of marihuana are very difficult, but will be solved only when a decision is made as to the type of licensing to be exercised. In such circumstances, the law and the police would recognise the existence of a widespread and mostly harmless hobby, whose principal hazard at the present time is the danger of being caught using it, not the danger of catching something from it.

The Establishment has a problem: how to maintain respect for law and order without punishing thousands of people who, in the absence of the present law, would never be classed as criminals. The law should not be allowed to fall into disrespect because it is constantly being defied; nor should it become a dead letter from not being enforced. A moratorium would enable the community to find out whether or not dope is a passing fad; but it would amount to *de facto* legalisation and

would be almost impossible to reverse. A tough law-and-order policy of prohibition and repressive police action increases the amount of crime in the community. This sort of policy has not solved drug problems in other civilised non-totalitarian societies, and it is not likely to do so in Australia, as Michael Schofield so aptly commented: "The permissive society has its drawbacks, but the repressive society far many more."

Now is the time for optimism. There could be a sudden and remarkable acceptance of the situation, and marihuana could become socially accepted as simply as beer and cigarettes. Social historians of twentieth-century Australia have been astonished at how quickly a once puritanical community has accepted so many of the erstwhile symbols of Satan. In less than forty years Australia has accepted as a normal part of life many things which would have horrified our grandfathers, and caused our grandmothers to reach for the smelling salts, which, incidentally, consisted of ammonium carbonate, dissolved in a mixture of strong ammonia solution with a distillate of lemon oil, nutmeg oil, alcohol and water. Men and women can drink together in public, and can live together, more or less publicly, without being married and also without fear of ostracism; and homosexuals can now be avowedly so and move freely in society (or at least some sections of it) with their chosen partners. You can indulge in several sorts of legal gambling. You can play poker machines in many sporting clubs, and watch once-inadmissible degrees of nudity on TV or at the cinema. You can buy condoms in public toilets, and also buy the sex aids and sex literature you want from specialist shops. You can get an abortion if you really want it, and you can get divorced with comparative ease and speed. These are comparatively new liberties, but we have quickly come to take most of them for granted.

Perhaps we will also get used to marihuana packaged like cigarettes and hashish sold like kitchen herbs. One lesson to be learned from the study of history is that humanity can and does learn to expect the unexpected, to think the unthinkable, and finds much genuine liberation in doing so.

16

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MARIHUANA

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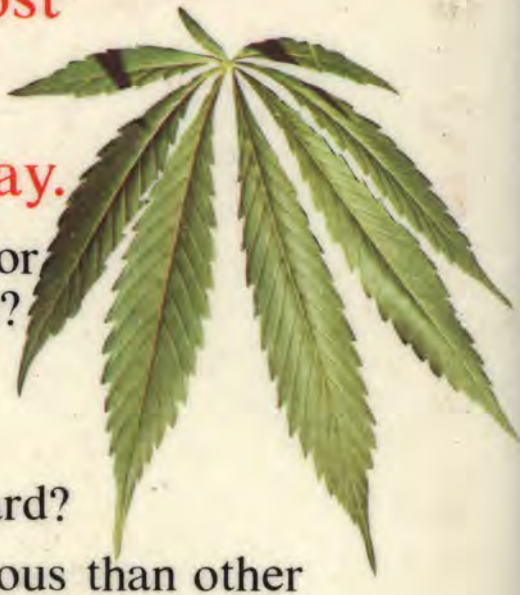

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