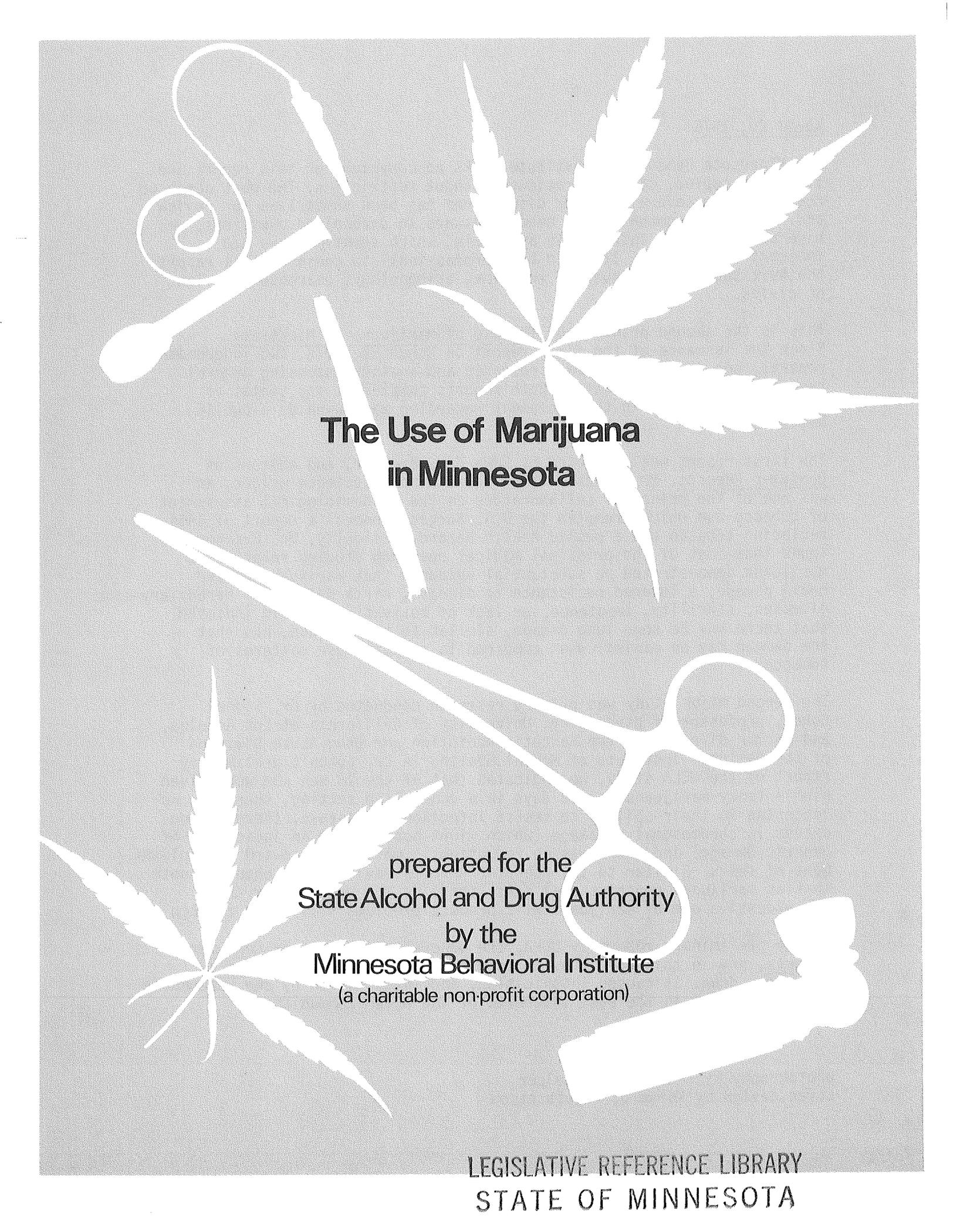


The Use of Marijuana in Minnesota



**Prepared for the
State Alcohol and Drug Authority
Minnesota Department of Public Welfare**
by the Minnesota Behavioral Institute



**The Use of Marijuana
in Minnesota**

prepared for the
State Alcohol and Drug Authority
by the
Minnesota Behavioral Institute
(a charitable non-profit corporation)

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STATE OF MINNESOTA

April 20, 1975

The Minnesota Behavioral Institute seeks no copyright on this report and it may be copied, cited or reviewed without restriction. The most advanced research from several complex disciplines has been summarized for review and, where the community has needed answers to unresolved questions, we have used the best information available, which sometimes has had inherent limitations. It would be unprofessional to consider this report the best source for issues of medicine, criminology, pharmacology, law or civics.

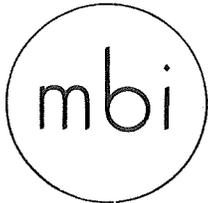
This is the second printing of The Use of Marijuana in Minnesota. Since the issuance of the first report on March 22, 1975, two independent reports, one involving primary research and another assessing general research, have been released. Both reports complement the tentative assessments reached in this document regarding marijuana as a public health threat.

The first report was completed by Edward M. Brecher, and editors of Consumer Reports. Mr. Brecher is an award-winning science writer, and was one of the principal collaborators on the epidemiological assessment of tobacco use which prompted the U.S. Surgeon General's report of 1964 declaring tobacco use a public health hazard. Basically, Mr. Brecher found that most of the principal medical research studies relating to marijuana demonstrated no substantial evidence that marijuana caused brain damage, a lowered resistance to disease, birth defects or hereditary diseases, sterility, impotence, or lack of motivation. He did indicate that there may be some lung damage, similar to tobacco use, but that the damage may be minimal when compared to standard use patterns of tobacco.

The second major study was primary research conducted by Dr. Sidney Cohen, professor of psychiatry, University of California at Los Angeles, and former director of the Narcotic Addiction and Drug Abuse Division of the National Institute of Mental Health. In Dr. Cohen's preliminary report of the UCLA study, he indicated that of the 28 men who were given high potency marijuana for 93 days in a controlled setting, there was no lessening in their ability to resist infection or disease, there was no excess in chromosomal breakage (which might possibly be an indication of genetic damage) and there was no reduction in motivation toward accomplishment of tasks. Similar to the Consumer Reports review, Dr. Cohen did note that as marijuana contains coal tars, there is the probability that the excessive use of marijuana will produce problems similar to tobacco use.

In the preliminary report by UCLA, the general assessment by Consumer Reports, and in this document, it is made clear that marijuana is a dangerous drug. It causes intoxication, and intoxication by any reasonable standard is not in the best interests of the human community.

photography by Kenneth R. Schelper
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March 22, 1975

Joel Egertson, Executive Director
Minnesota State Alcohol and Drug Authority
402 Metro Square Building
St. Paul, Minnesota 55101

Dear Mr. Egertson:

We are pleased to submit to the Minnesota State Alcohol and Drug Authority this assessment of the recreational use of marijuana in Minnesota.

This document is directed toward helping those people and institutions in Minnesota that must interface with marijuana issues.

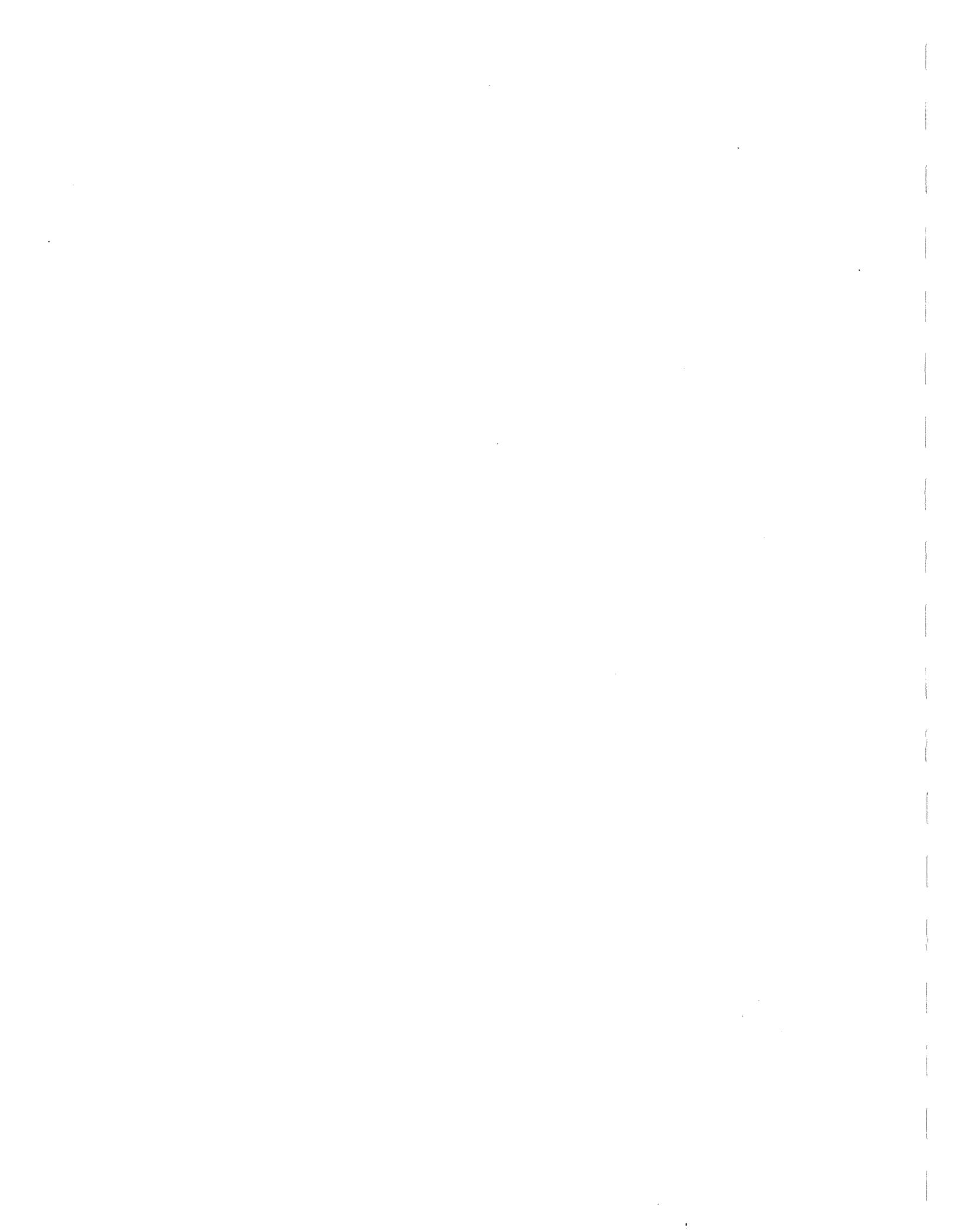
Families in Minnesota often encounter and must deal with marijuana, as does a rural high school, a metropolitan law enforcement system, a suburban newspaper, and virtually any other grouping of people that face community problems.

Because marijuana is formally prohibited, its clandestine use and distribution is difficult to comprehend; because it is an emotional issue, objective assessment is hard to find; and because its actions on the human organism are complex, grasping its potential for danger to health is frustrating. Hence, in our search, we sometimes were compelled to depart from conventional and preferred scientific inquiry and settle for what rational inferences we could find or develop. Our principal direction was always toward answering those questions that needed answering, as best or as clearly as we could, on behalf of those who need to be responsive to the realities of marijuana use in Minnesota in 1975.

As social and medical science progresses, we will have improved information and clearer insights. For the present, this document can help.

Sincerely,

Bruce Bomier, Executive Director
Minnesota Behavioral Institute



Preface

The Minnesota State Alcohol and Drug Authority is charged with helping the citizens of Minnesota face problems of recreational chemical use. This assessment of the recreational role that marijuana plays in Minnesota is designed to help meet that commitment to the people of Minnesota. Marijuana is an issue that needs addressing; an eighth of our adult population has tried the drug, and between one and two hundred thousand Minnesotans use it with regularity. Conversely, much of our population scorns and is fearful of marijuana use.

The disparity of high emotion regarding marijuana use rests behind deep and powerful general fears for nonalcoholic drug use in our community with a substantial minority of our population (usually younger adults) rejecting those fearful attitudes as archaic. This disparity of attitude taints rational assessment and makes an honest appraisal of marijuana hard to come by.

The best place to assess what is happening regarding marijuana and the marijuana prohibition in Minnesota is to look to those institutions that must work with the public health problems marijuana might create; or to those institutions that are close to the criminal justice process.

Neither the state's hospital emergency rooms nor the general practitioners we interviewed seemed to observe any substantial problem in health relating to Minnesotans' exposure to marijuana. The religious leaders we met with, who were generally in touch with community problems, were seeing no substantial problems relating to marijuana. A number of the state's high school students agree with previous studies in the state indicating that between 40% to 50% of the high school students have used marijuana. Educators who interfaced with these students stated they found some correlation between marijuana use and lack of motivation, but were not sure if those who lacked motivation went to marijuana use or if marijuana use actually created less motivation. Professionals in the area of drug and alcohol counseling and training in Minnesota also observed that there were a few observed incidents relating to marijuana in the area of motivation. Generally, they felt these related to "chronic" marijuana users. A few of the state's chemical dependency professionals noted that some times those that use marijuana went on to use other drugs and that often when someone was found using marijuana they were "labeled" by some of the institutions in the community and through that labeling process had serious problems. For instance the police, school systems or human service counselors may start thinking of a young person as misanthropic because of observed marijuana use. In thinking of him or treating him in that way he may be harmed.

A review of the medical/pharmacological clinical inferences regarding health and marijuana points to a true disparity in what we know and what is conceivable. While any activity connected with smoke inhalation is considered unhealthy, beyond a general warning of possible complications among pregnant women, people with serious heart conditions, and young males in puberty, we are left with few inferences alleging health problems, but nothing resembling a documented public health threat arising from community exposure to marijuana.

The criminal justice prohibitions were inspired by a fear of non-alcoholic drugs that has been with our Western culture for many centuries. These fears came to an emotional peak in the 1930s and again in the 1950s when its use was believed, among other things, to be part of a Red Chinese plot to weaken the fiber of the United States. Harsh laws on state and federal levels evolved and in Minnesota it became both a state and federal crime to possess marijuana.

Most local professionals in the criminal justice service support some sort of marijuana prohibition, but the arrests, convictions, and dispositions hardly reflect enthusiastic prosecution of law. While hundreds of thousands of Minnesotans violate the law annually, only a few thousand are arrested, and of those only a few hundred are convicted. In 1973 less than two dozen were actually incarcerated. Many local police arrest on a subjective basis and generally pursue an arrest only against those they feel threaten the community for some other reason. The state and federal law enforcement systems prioritize their efforts toward arrests, and go after the marijuana distributors who are expanding into an "organization." This has seemingly kept a true syndicate from forming around the massive underground marijuana distribution business in the state.

The district and county court systems also prioritize and usually a marijuana prosecution does not constitute a punitive disposition. Sometimes when communications between law enforcement, pre-sentence investigators, and the court break down, through plea negotiations those who have committed crimes, often threatening to the community, plead guilty to marijuana possession as opposed to other charges and receive lenient dispositions.

For nearly half a century the Agriculture Department has been trying to eradicate marijuana as a noxious weed. Although not an especially strong plant, marijuana is highly prolific and reproduces efficiently. The eradication process is a losing proposition by any standard in prohibiting recreational use. The primary characteristic of marijuana is that people enjoy its use, and a continued community demand is assured. The Minnesota illegal supply system remains a profitable, scattered patchwork of unorganized, semi-organized, and organized systems that drain millions of tax-free dollars from our community annually. Like the marijuana plant itself, these illegal systems are so prolific and easy to generate that they defy eradication.

Whether or not it is right or wrong to use marijuana or right or wrong to prevent its use in a free society is not a matter of measurable scientific assessment. It is an affair of ethics and rational decision making among individuals and institutions in our community. What follows will be helpful to those making those decisions.

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Introduction/Summary

...the picture of reality that shifts to the top of our great organizations and our society, is sometimes a dangerous mismatch with the real world.

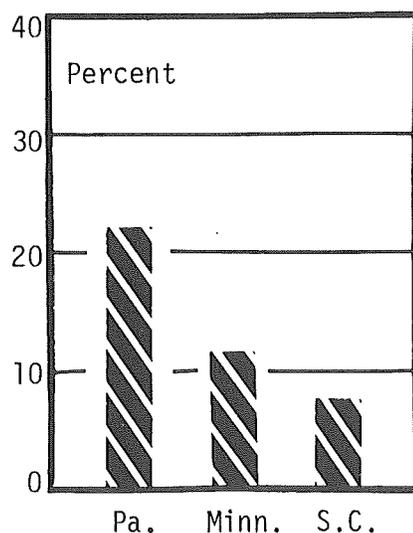
--John W. Gardner¹

The recreational use of marijuana in Minnesota is institutionalized. In spite of criminal justice prohibitions and a strong sense of fear among many Minnesotans regarding the use of any nonalcoholic drug for recreation, marijuana use has become a consistent part of our community. In order to effectively address the marijuana issue, Minnesota's organizations and institutions, public and private, formal and social, should be aware of and responsive to this change.

When one of Minnesota's high school students is discovered experimenting with marijuana, his subsequent expulsion from a Boy Scout organization, his shattered family relationship and his processing by the criminal justice system is not an appropriate response for Minnesota in 1975.

While most professionals are highly suspect of marijuana use and its potential for harm, it is clear that marijuana use neither instantly creates nor denotes a dangerous, evil, or unhealthy human being.

Percent of Those Over 15 Years of Age Who Admitted Ever Having Tried Marijuana



Source: Incidence and Prevalence Studies of Drug Use Within Various States, Chambers, C.

¹ John W. Gardner, Self Renewal, The Individual and the Innovative Society. New York, N. Y.: Harper & Rowe Publishers, 1971, p. 98.

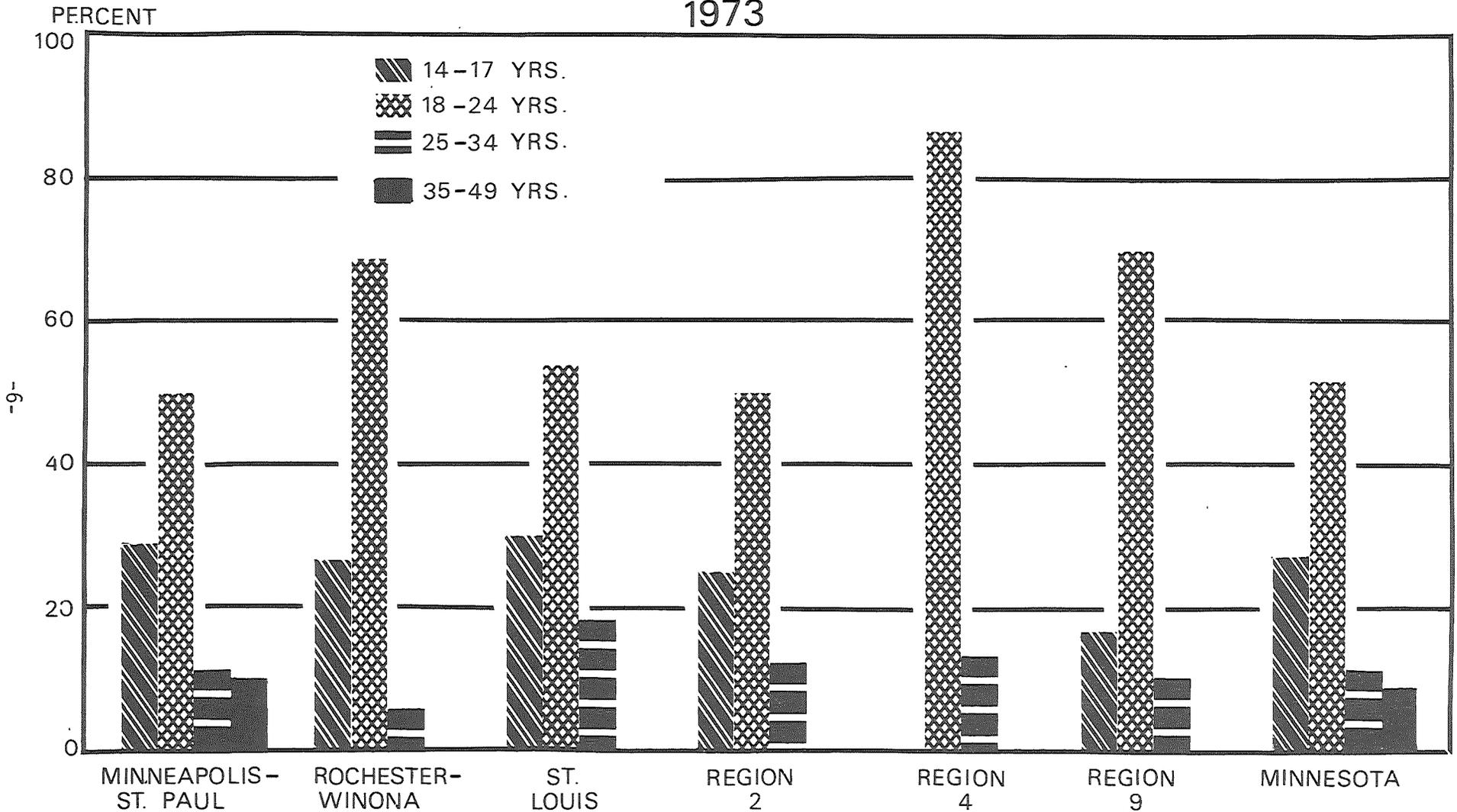
Marijuana use in Minnesota is not significantly higher or lower than that of other states. Clearly, however, a substantial minority of our citizens have violated the state's marijuana prohibition.

In 1973, the State of Minnesota conducted a comprehensive Incidence and Prevalence Study regarding the use of illegal and legal drugs within the state. The Study found that in Minnesota, there were 341,966 individuals who indicated they had tried marijuana. Some observers feel that because individuals are reluctant to admit violating a law, there may have been individuals questioned who had used marijuana but were reluctant to admit its use. At the very least, the Study indicated that 12.5% of Minnesota's adult population (14 years and older) have violated the state's criminal code relative to marijuana use.

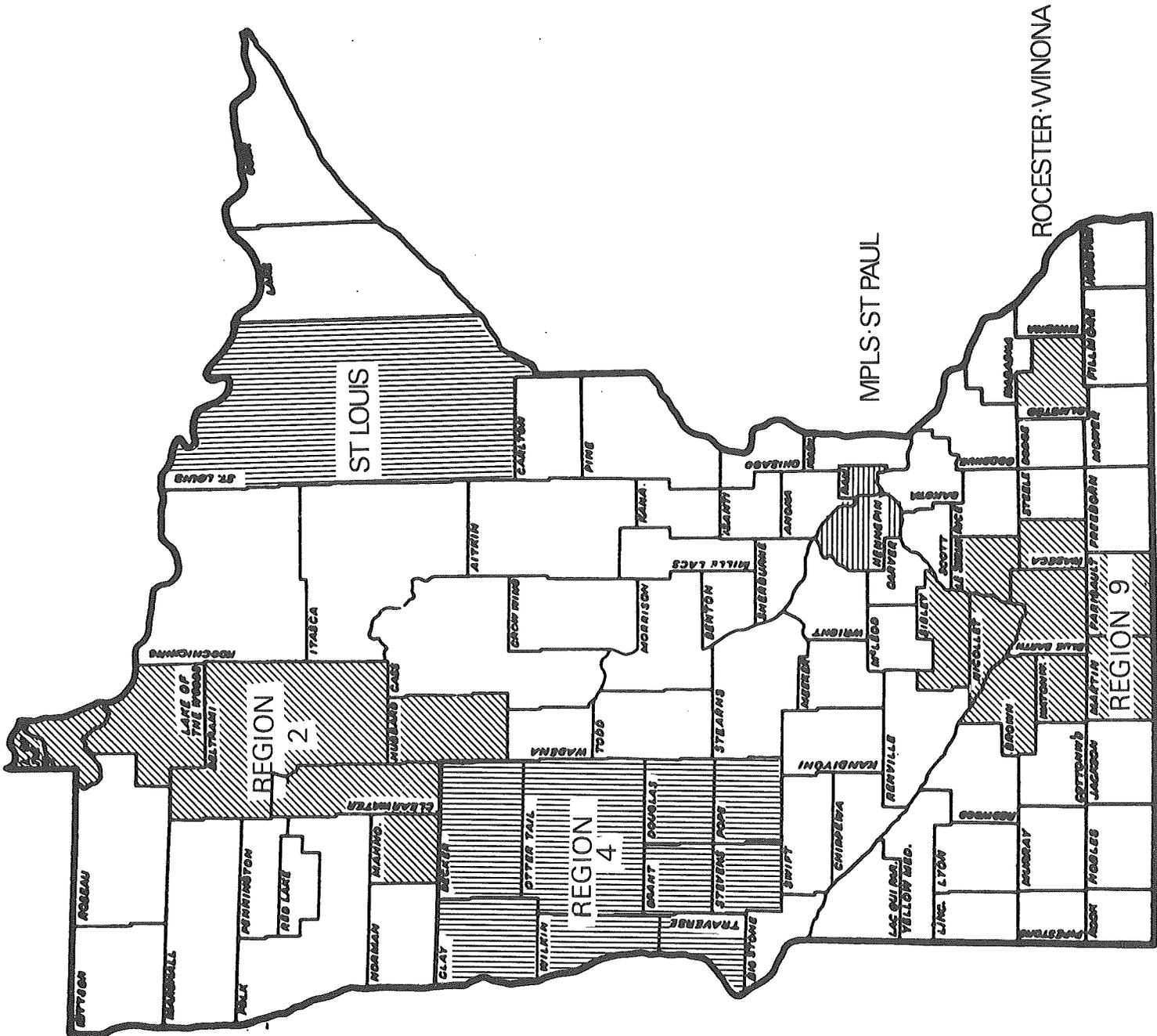
The study also found that approximately 6% of the Minnesota population, or specifically 153,201, are using marijuana on a consistent basis. The study determined that most of these regular users were under 25 years of age and about one-third were students.

The breakdown of regular users included geographic specific and age specific information graphically profiled on the following page.

DISTRIBUTION OF REGULAR MARIJUANA USERS WITHIN SPECIFIC AGE GROUPS, BY AREA, MINNESOTA, 1973



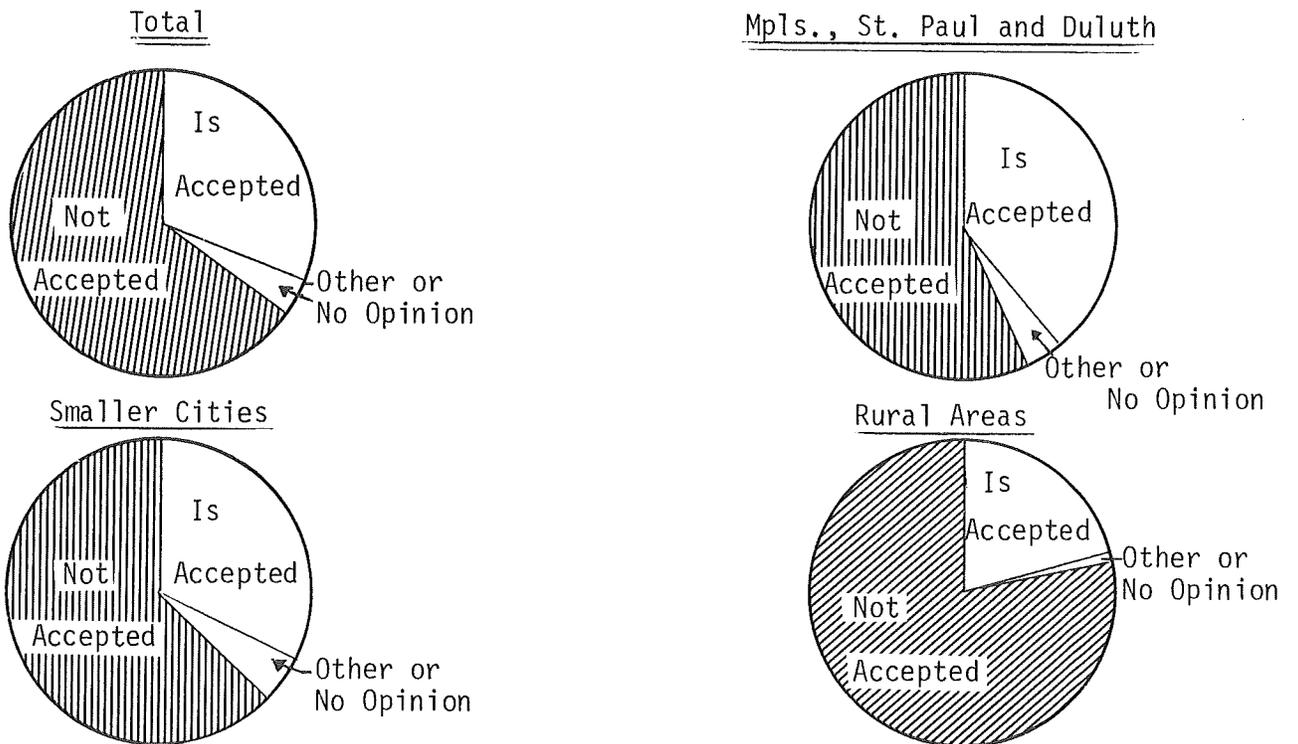
Source: An Assessment of the Incidence and Prevalence of Drug and Alcohol Use Within the General Population of the State of Minnesota, Chambers, C., April 1973, for the Minnesota State Alcohol and Drug Authority.



In all areas of the state the use of the drug was highest in the 18 to 24 year old category and it was usually a little less than double the size of the next highest group, the 14 to 17 year old category. One could speculate that if the Incidence and Prevalence Study had looked into the 10 to 13 year old age group, they would have also found individuals using marijuana. The smallest group of users included those who were between 35 and 49 years of age.

It is also significant to note those in the Minnesota community who accept the use of marijuana. In 1972, prior to the Incidence and Prevalence Study, a review was developed to determine if Minnesotans viewed marijuana use as a social custom. The results indicated that a substantial minority (between one-third and one-fourth) of Minnesota's adult population did indeed agree that social acceptance of marijuana does exist, even though their personal opinions might not agree with this acceptance.

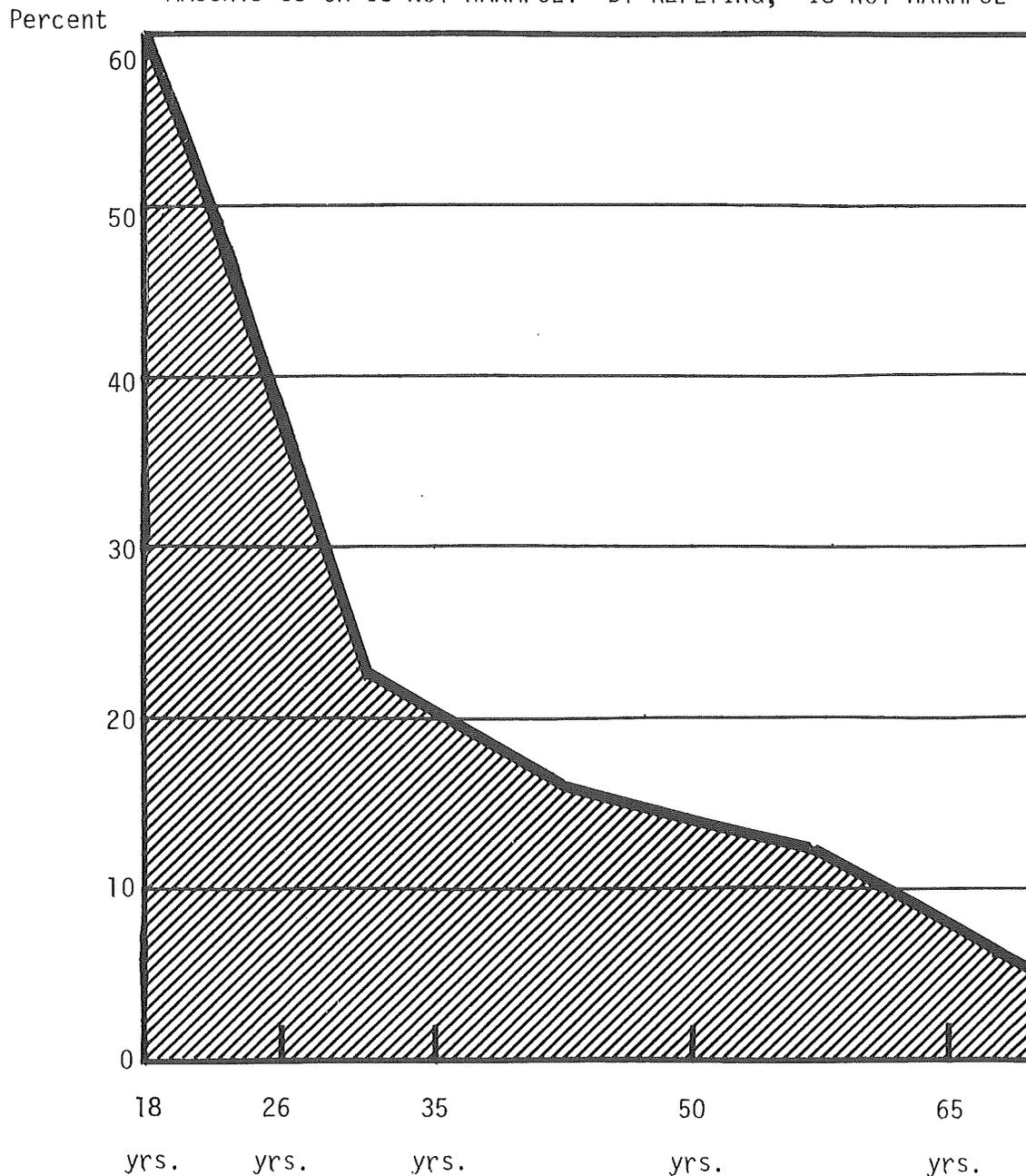
DO YOU FEEL THAT SMOKING MARIJUANA
IS OR IS NOT AN ACCEPTED SOCIAL CUSTOM?



Source: Minneapolis Tribune, January 23, 1972

One of the clearest dynamics relative to people's attitudes about marijuana is that their beliefs usually relate to their age.

THE PERCENTAGE OF MINNESOTANS (AGE SPECIFIC) WHO ANSWERED THE QUESTION: "DO YOU THINK THE SMOKING OF MARIJUANA IN MODERATE AMOUNTS IS OR IS NOT HARMFUL?" BY REPLYING, "IS NOT HARMFUL"

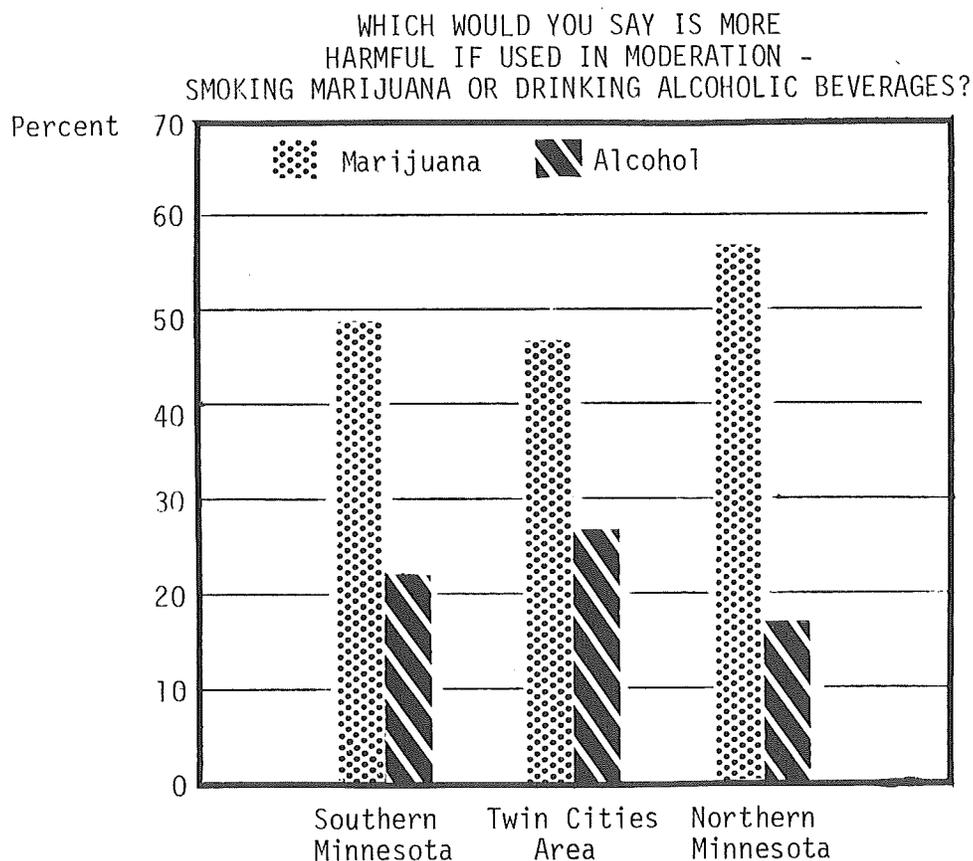


Source: Minneapolis Tribune, November 10, 1974

In response to this question, a true disparity emerged in terms of how various age groups regard recreational marijuana use. Among older Minnesotans the drug is clearly feared as being harmful, while the majority of younger Minnesotans believe that moderate use is not harmful.

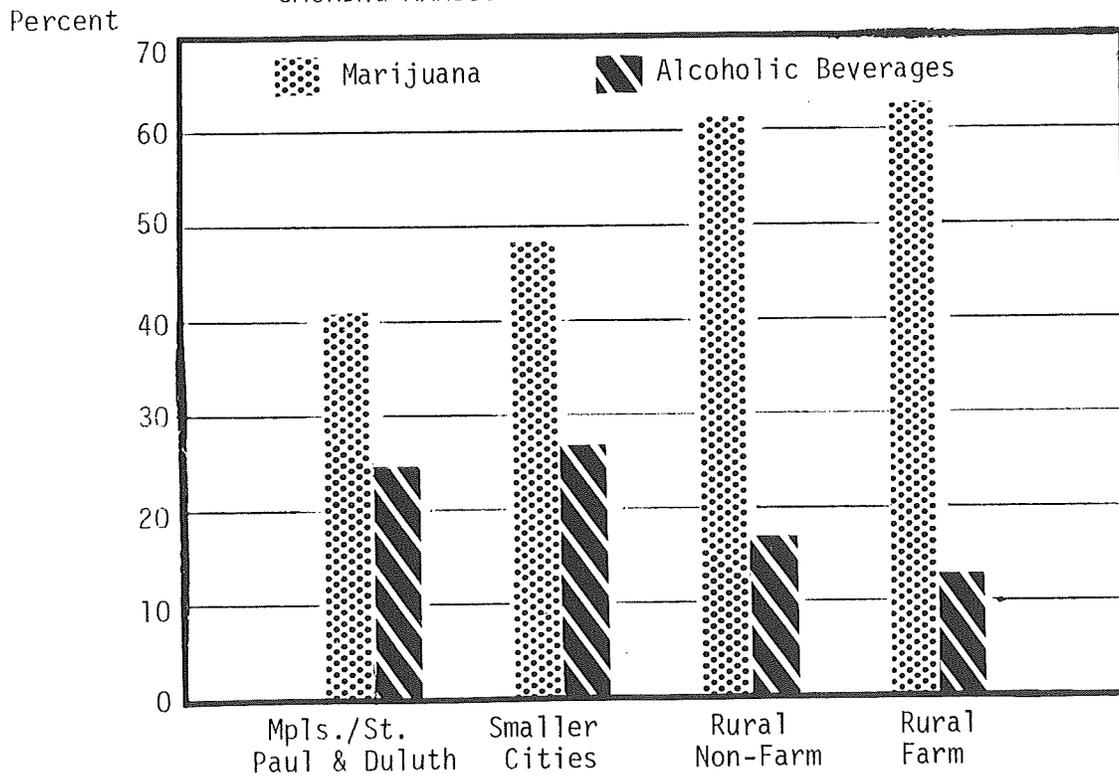
When Minnesotans were asked to compare the use of marijuana to alcohol, the majority felt that marijuana was more harmful, with a substantial minority considering alcohol more dangerous. It is interesting that proportionately, these relationships did not seem to vary a great deal relative to the size of the community or the geographical location of the community.

Comparing marijuana and alcohol is a valid process for understanding impressions relating to marijuana. Alcohol is a known quantity that is used recreationally by many Minnesotans and the significant characteristics of alcohol use are generally understood. To extrapolate from a known quantity to a less known quantity provides a landmark for judging opinion.



Source: Minneapolis Tribune, January 9, 1972

WHICH WOULD YOU SAY IS MORE
HARMFUL IF USED IN MODERATION -
SMOKING MARIJUANA OR DRINKING ALCOHOLIC BEVERAGES?



Source: Minneapolis Tribune, January 9, 1972

In spite of geographic area, urban, suburban or rural residence, marijuana use is a consistent factor, especially among young adults. A high percentage of those under 25 appear to be accepting of the drug's use and a good number of them have used the drug experimentally, many with some consistency. Conversely, people over 40, regardless of geographical area or size of community, have not used the drug and appear to be fearful of it.

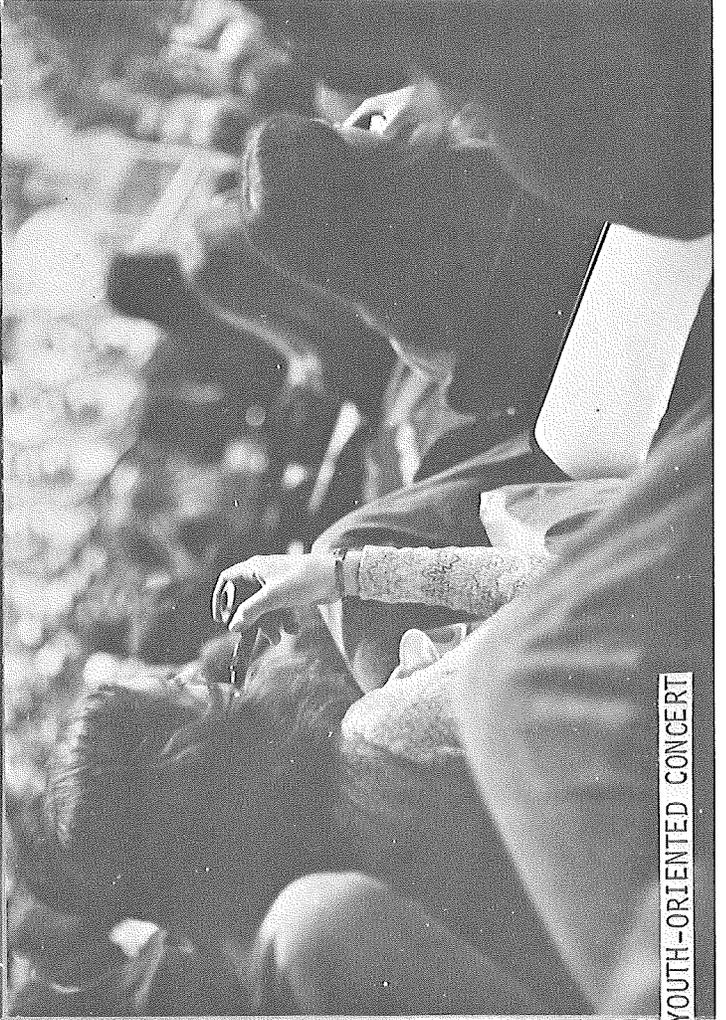
In the late 1960's, the Justice Department became concerned about the increasing use of marijuana and attempted to determine exactly how many Americans were using the drug. The researcher, Prof. William H. McGlothlin, used various methods to determine the number of people nationally involved with marijuana. He was reluctant to place too much emphasis on arrests or amounts of drugs seized, but instead began looking into the amount of paraphernalia for marijuana smoking that was being sold.

There is no accurate way to determine how many devices for use of marijuana are being lawfully sold in Minnesota. Quite simply, too many outlets have been established since the late 1960's for marijuana-oriented paraphernalia. It is interesting to note that one can find batteries of special stores emerging whose principal products are marijuana related pipes, specially colored cigarette papers, special devices for smoking marijuana in an efficient way, etc. Stores of this nature have been located in the following communities:

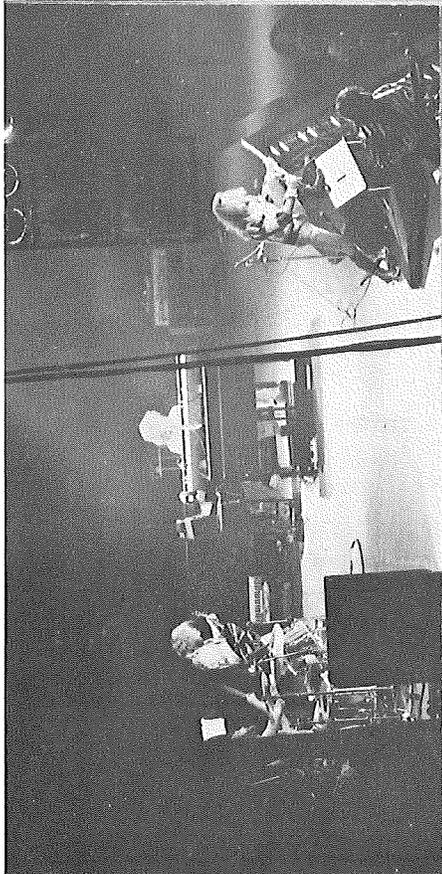
- Brooklyn Center
- Coon Rapids
- Excelsior
- Fairmont
- Golden Valley
- Hastings
- Hibbing
- Hopkins
- Mankato
- Marshall
- Minneapolis
- Owatonna
- Rochester
- Roseville
- St. Paul
- Wayzata

Under Dr. McGlothlin's principles of investigation, the presence and nature of such material outlets can be useful toward inferring how much marijuana use is occurring in the community.

Other signs of the institutionalization of marijuana can be found in many youth-oriented gatherings, even those that are fairly well administered and regulated. Recently in the state's metropolitan areas during youth-oriented concerts, there has been a need to have law officers actually search those entering the concert auditoriums for marijuana. Formal attempts to shut down such concerts have occurred because many younger Minnesotans were using the drug when assembled together.



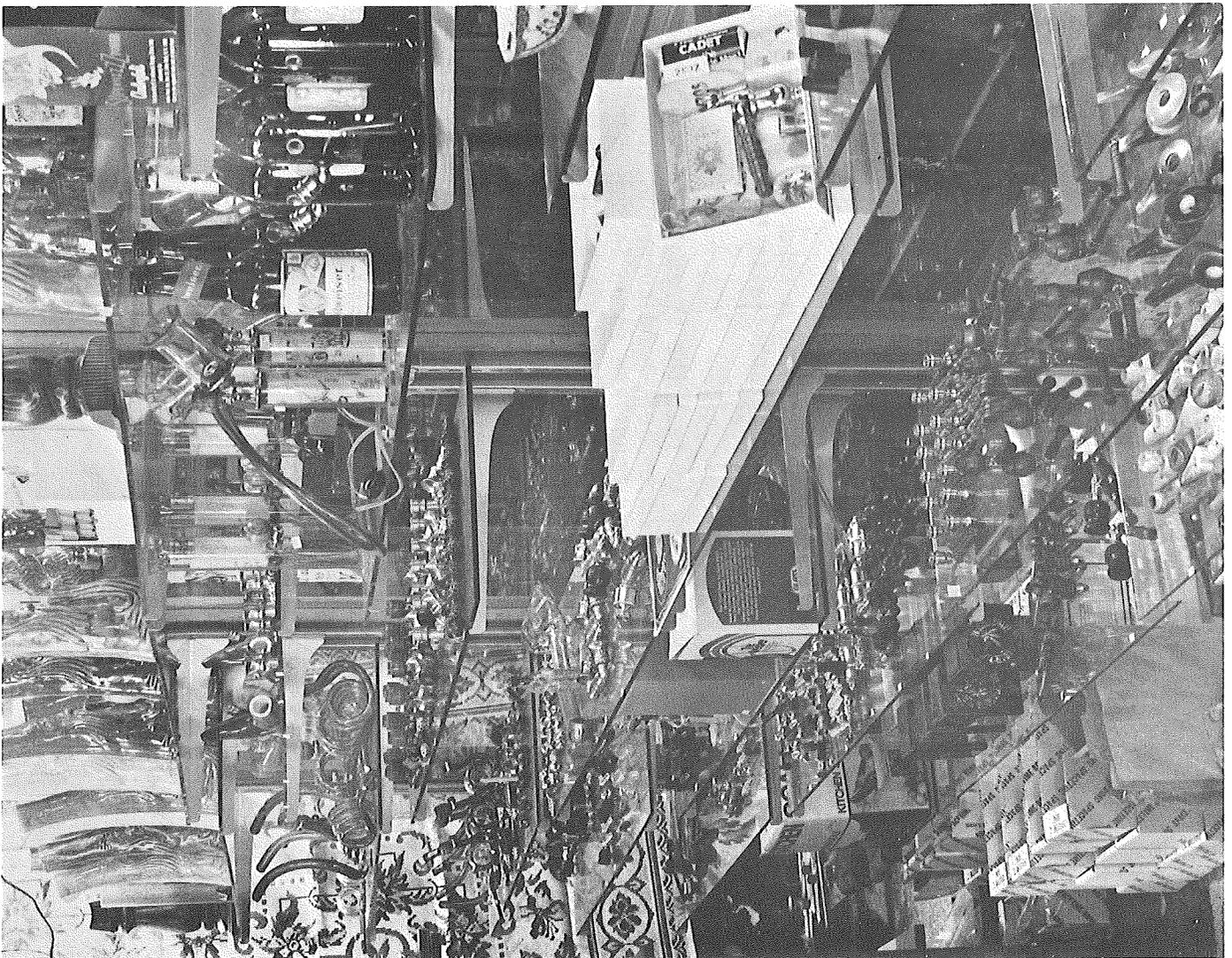
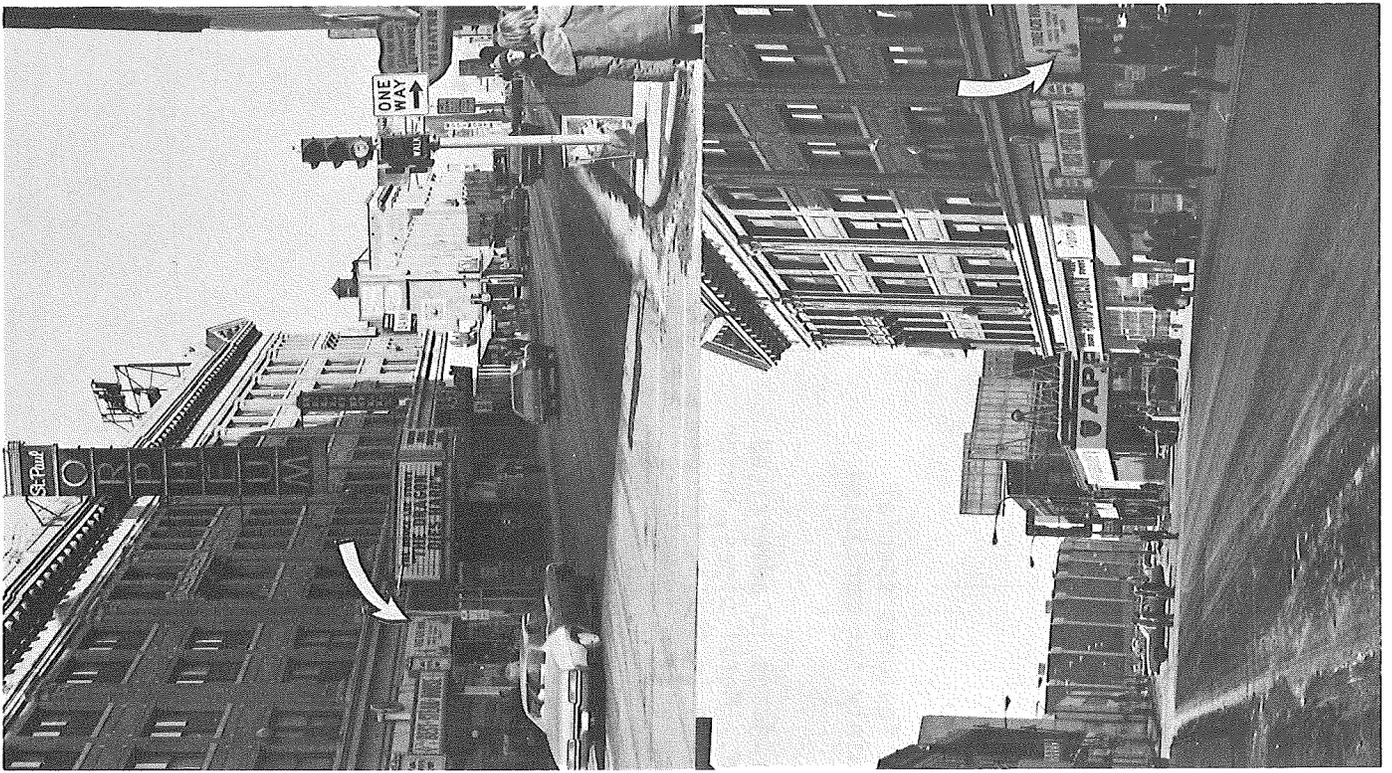
A METROPOLITAN AREA YOUTH-ORIENTED CONCERT



Three Acre Wood

Three Acre Wood is located in downtown St. Paul and, interestingly enough, is located roughly three blocks from the State Alcohol and Drug Authority headquarters.

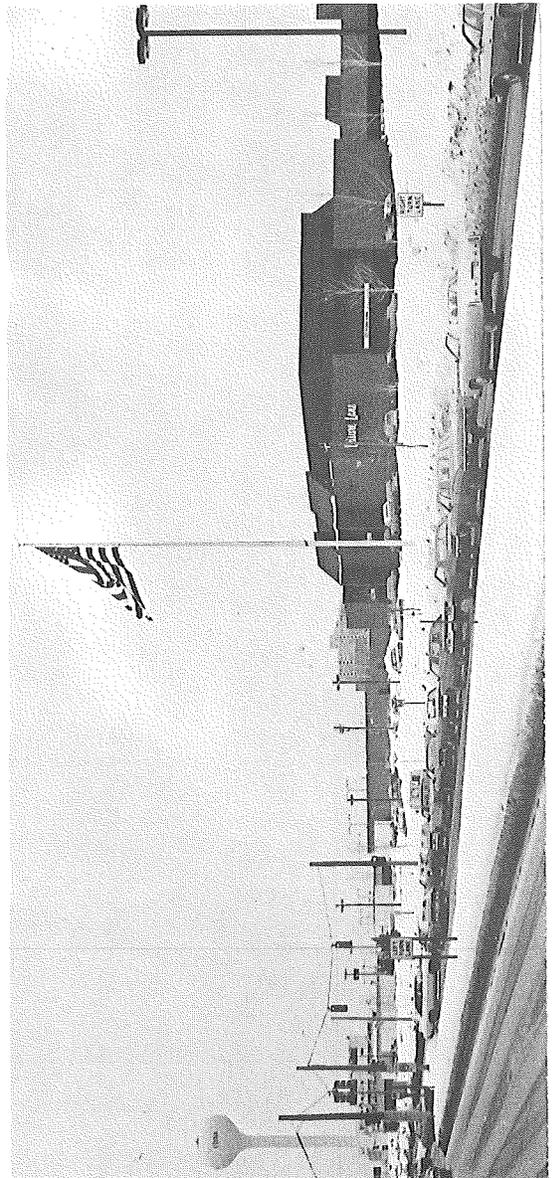
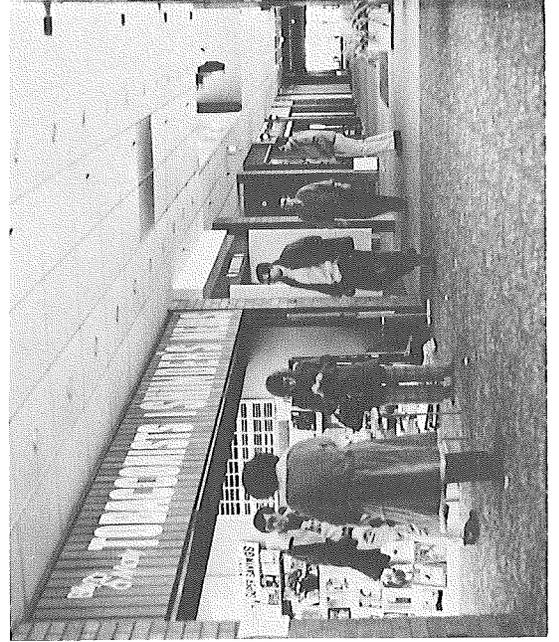
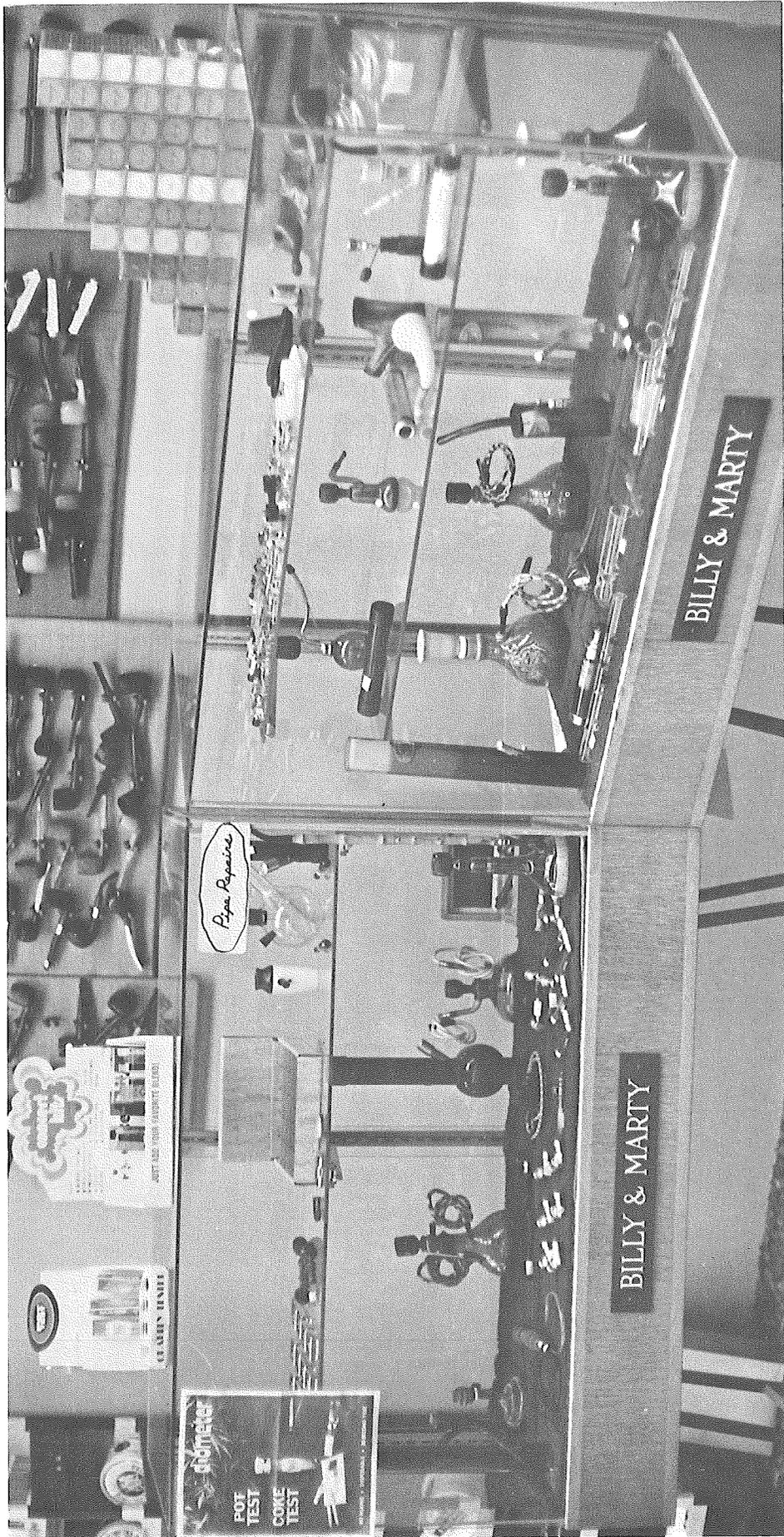
As can be seen from the picture on the left, they have a number of pipes which are either coated with special fire-resistant material or are metal, thereby allowing the hotter-burning marijuana not to scorch the normally wooden tobacco pipes.



Billy and Marty

A tobacconist shop in a suburban shopping center features special equipment and paraphernalia that is almost certainly for marijuana use.

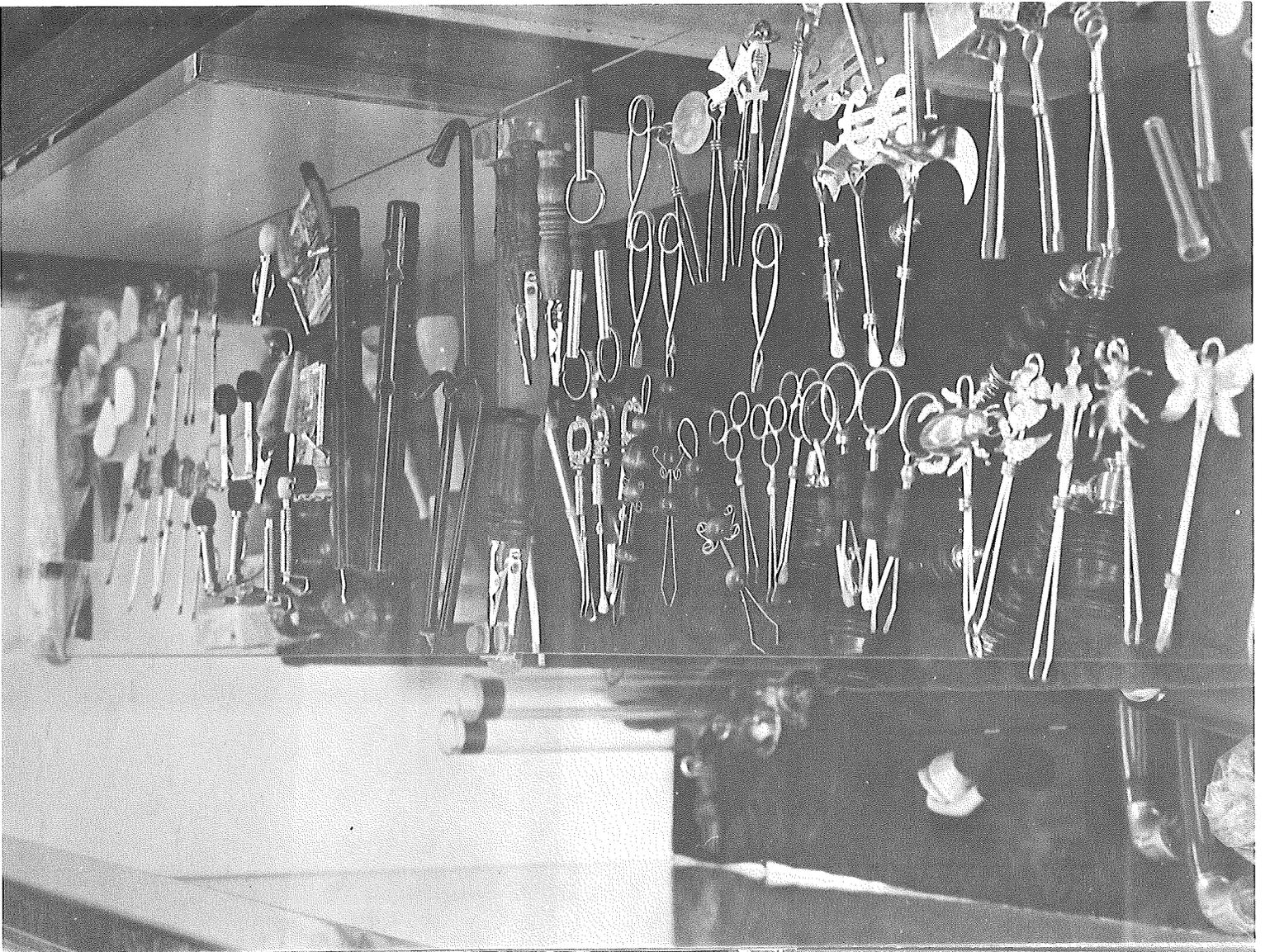
A device to test the strength or validity of marijuana is advertised in the upper left-hand corner of the top picture. Metal pipes, water pipes and bongs are shown in the display. The bong in the center of the display is a long glass tube with a small projectile in which a small amount of marijuana is placed. It allows marijuana to be used more efficiently with one gulping puff of smoke coming through the pipe.



Gimcray

In Fairmont, Minnesota, population 10,751, the marijuana paraphernalia store is located on the same street as a number of single family dwellings, a church and a school.

The store features a number of bongs and, as seen in the photograph on the right, they have an intricate collection of "roach clips." These clamping devices are used by marijuana smokers to clamp onto the end of a "roach" or the short non-burning end of a marijuana cigarette.



Photos showing two displays of paraphernalia being sold
by two competing stores, both located in downtown
Rochester, Minnesota.



Lost Chord

The Lost Chord is located on the main street of Mankato, and, like the other institutionalized businesses in the Mankato area, has been authorized an award by the local Chamber of Commerce.

*Congratulations
and Best Wishes*

TO
LOST CHORD
624 South Front Street

MAY THE CONFIDENCE YOU HAVE SHOWN IN THIS COMMUNITY AND
ITS ECONOMY BE REWARDED WITH A LIFETIME OF SUCCESS.



TO HELP YOU ACHIEVE THIS GOAL, THE



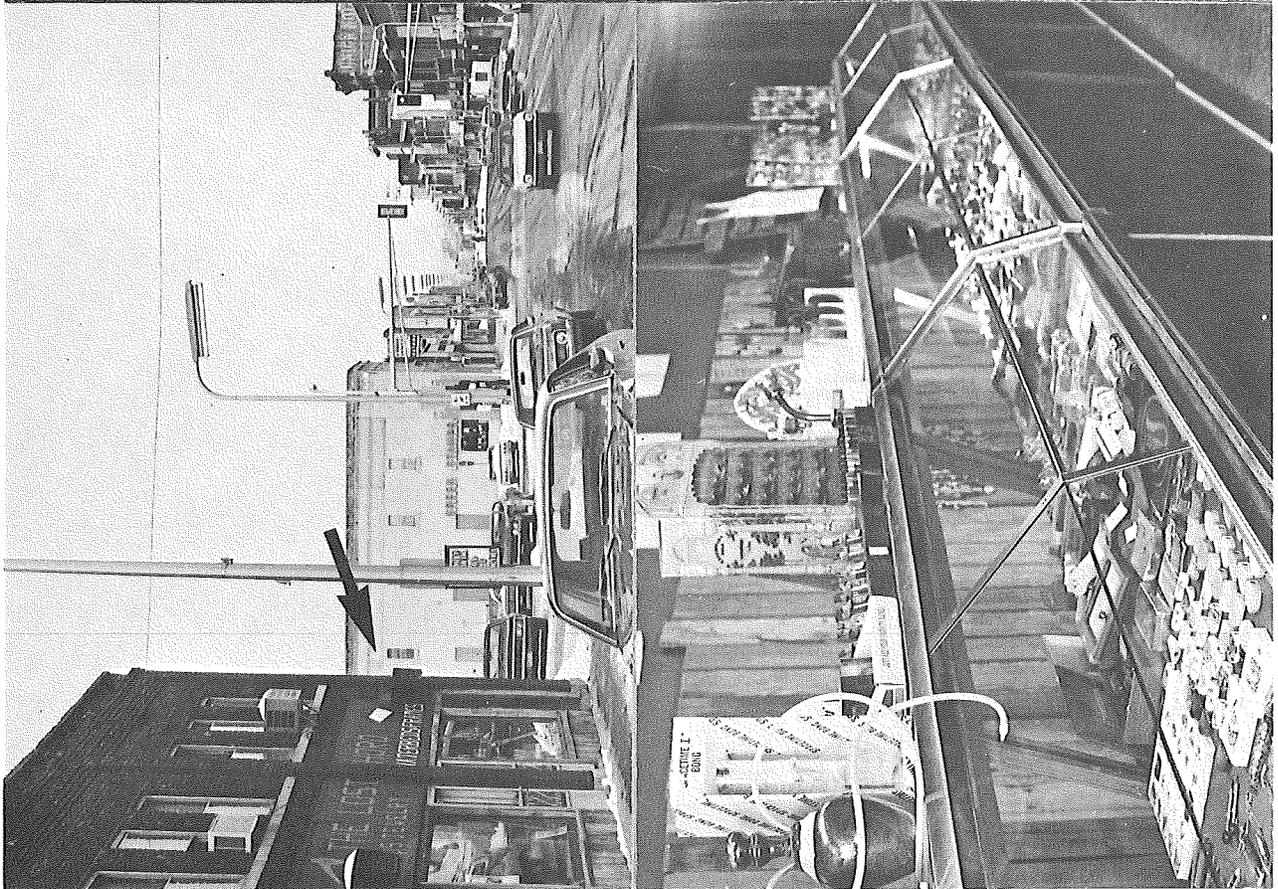
Markato Area Chamber of Commerce

PRESENT: YOU

YOUR FIRST DOLLAR OF CLEAR PROFIT

John D. Miller
EXECUTIVE VICE PRESIDENT

David E. Smith
PRESIDENT



B. Dalton Bookstore in Edina

This store offers a good deal of literature on the recreational use of marijuana, including several guides explaining how to grow the substance and several books explaining how to use the drug in a way that will enhance enjoyment.

In the upper right hand corner, an indoor marijuana plant being grown in a closet and in the lower right hand corner a poster of the legal hazards of being apprehended with marijuana is displayed in a Rochester paraphernalia shop.

The fact that marijuana is a part of the Minnesota community is not significant in assessing the danger inherent in the recreational use of marijuana. There are a number of dangerous and reckless institutionalized activities that are prominent in our community. Similarly, it is not always feasible that changes in laws be undertaken simply because a number of people choose to violate that law.

In the end, personal individual judgment is perhaps the best criterion in determining to what extent a free society's laws should be used to inspire preferred behavior.

What is conclusive and beyond question is that the extensive use of marijuana is part of life in Minnesota and therefore our public and private institutions should be responsive to this significant change in community behavior.

Certainly all of Minnesota's public and private institutions are affected by those using the drug. Family institutions are exposed to the marijuana issue when members use the substance; religious institutions may come into contact with it in their congregations; criminal justice systems are markedly affected since they must make an assessment in actually dealing with offenders; educational institutions are exposed to many marijuana users and must effectively address the issue both to the benefit of the students and the community to which they are responsible; law makers must establish formal codes; and finally, therapy organizations must be constantly aware of community changes resulting from the use of marijuana by a larger number of people.

One of the best ways to see what is happening is to look to these institutions and see what they are perceiving relative to marijuana use and marijuana production.

The state has a battery of organizations throughout Minnesota for addressing chemical dependency problems, the Area Mental Health Centers. If, in fact, 153,000 Minnesotans are using marijuana and a substantial proportion are becoming chemically dependent on marijuana, these mental health center institutions would be the first to become sensitive to the emerging problems.

Through a study included in this report, it appears that a little less than one-half of the students in our state's high schools have been involved with marijuana experimentation. If the exposure of thousands and thousands of our high school age Minnesotans to marijuana was creating a serious threat, it is likely that the educators in the state would perceive it and could explain some of the threatening characteristics.

In simple terms, as long as marijuana is a widespread recreation in this state, and if marijuana recreation is threatening to the community, the people who staff our principal helping institutions would be expected to perceive something morbid and tragic happening.

The structure for probing these institutions involves the selection of an individual who was part of an institution investigated, and then training the person in the techniques of asking questions and reporting back the answers in an objective fashion.

A series of debriefings was then established where the individual would explain what he had observed in each of his interviews, separately to three debriefers. Each debriefer represented a different perspective and a different professional discipline.

The debriefers then probed the interviewer in various aspects of the interviews he had held. For instance, a police officer was trained to interview other police officers throughout Minnesota. After each interview, the police officer reported back separately to each of the debriefers explaining what had occurred. The debriefers then filed separate reports regarding what they perceived occurring relative to the arrests. These three reports were then compiled and assessed. The result was a profile of the dynamics of marijuana arrests in Minnesota.

The most frustrating problem in investigating the marijuana issue is that there is often a reluctance to share conduct that could be criticized among agencies and individuals. It was impossible to use a simple questionnaire form, and developing confidentiality was important.

For this reason, we had a senior medical student interview physicians, a police officer interview police officers, a person with a religious background interview religious leaders, a chemical dependency worker interview other chemical dependency workers, someone familiar with the state's educational system interview educators, and a formal officer of the court interview other officers of the court.

In each case, we formally assured confidentiality for all the principals involved in the process. In two cases, notably the interview with religious leaders and those with the chemical dependency workers, we were fortunate in having individuals well trained in interviewing techniques and data interpretation. In these two cases we did not follow the formal debriefing system, but actually had the interviewers help to build the assessment.

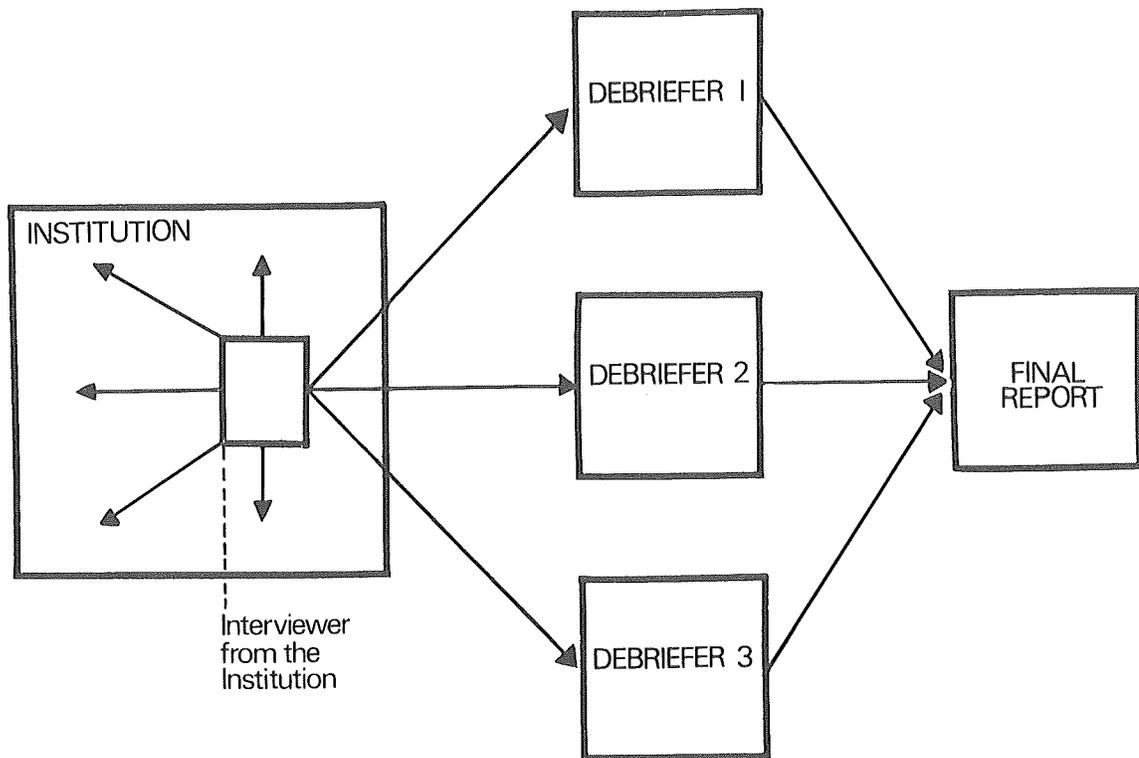
The three individual debriefers were from basically different academic and professional disciplines. The first is presently the director of one of the larger private counseling organizations in Minnesota. However, his most extensive background is in business and industrial research. He had formerly served as research director of one of the nation's largest industrial conglomerates. The special skills he brought into the debriefing process involved his background in result-oriented research and his sensitivity to effective and ineffective organizational responses.

The second debriefer holds a PhD in communications and has an extensive background in criminal justice systems. He also has had special

training in chemical dependency and chemical problems and has done a substantial amount of government managerial consulting. His basic attribute toward the debriefing process was a sensitivity toward subtle, emotion-laden communications. Specifically, he felt he was able to differentiate self-serving unqualified statements from information honestly reflecting what was occurring in the community.

The third debriefer has a background in public health systems, especially how the various public institutions are responding to drug problems.

The following diagram reflects the communication process used to build the probes into the principal community institutions that are interfacing or would normally be expected to interface with marijuana problems.



On several occasions, we also performed surveys to supplement the debriefing interviews and used what guards we could to assure confidentiality. Beyond concern for confidentiality, gathering or developing information on marijuana is difficult due to the strong emotions that often dominate any review of marijuana use.

The Dominant Factor

The dominant factor in assessing the major aspects of marijuana involves the high emotional pitch through which marijuana information is viewed. For thousands of years, the Western culture in general and the American culture in particular, has looked with fear upon the use of any nonalcoholic chemical for recreation. When tea, coffee and tobacco first came into the Western community, there were formal and informal attempts to prohibit its use. These prohibitions were generally not on health grounds, but on moral grounds. Although formal Christian-Judaic creeds do not prohibit the use of nonalcoholic chemicals, there is a firm Western cultural phobia relating to the use of any nonalcoholic drug for recreation.

Among those images that serve to create an attitude hostile to recreational marijuana use, the following beliefs are the most salient:

1. Marijuana use is entwined with an undesirable foreignness or primitiveness.
2. Marijuana use relates to impotency or weakness.
3. Marijuana use is identified with personal degeneracy, laziness, addiction, mental problems and poverty.
4. Marijuana use is entwined with a social disorder (disrespect for established Western institutions and codes of conduct).
5. Marijuana use causes physical disorders and health problems.

The historical progress of Western acceptance of marijuana to its institutionalization cannot be put in perspective. It is simply too recent a phenomena. However, some of the following pro-marijuana imagery that seems to relate towards its acceptance is as follows:

1. Marijuana use is a mark of modern "sophistication."
2. Marijuana is conducive to a number of exciting, entertaining activities.
3. Marijuana is entwined with a humanistic (possibly religious) spirit that is responsive to the human condition.
4. Marijuana use is a symbol of resistance or personal independence in the face of the intimidating and often oppressive "system."

5. Marijuana use is emblematic of a non-aggressive, peaceful lifestyle.

With these powerful images operating at variance, the serious disagreement regarding the appropriate way with which marijuana recreational use should be handled in our community is understandable.

If through discipline, one can put away the "pro" or "con" imagery, the conditions surrounding its use can be evaluated in an objective way, better serving oneself and the community.

Marijuana and Minnesota's Public Health

There are presently 10,000 chemicals used with some consistency by Americans and 100,000 that are used infrequently. We know little about the consequences of any one of them, except that all have some potential for danger. The danger level of marijuana use for a human population is unknown and turning to professional scientific assessment is an uncertain process.

In the first week of January 1975, a team of internationally known research scientists gathered in Washington to try to come to some closure on the danger level marijuana presents to the human community. After hours of discussion, Dr. Daniel Friedman of the University of Chicago, summarized the scientific meeting by stating:

"We do not have any reliable data to reliably guide people as to how they should behave."

Although later in this document we will review the highly publicized medical/clinical inferences that have emerged involving a potential threat to the community health from marijuana, it is appropriate to look first at the Minnesota community to see the effects of our substantial exposure to marijuana use.

In selecting and interviewing a limited number of general practitioners from throughout Minnesota, a senior medical student found that generally the physicians interviewed had not seen any medical casualties they believed related to marijuana use. Some of the physicians were convinced that marijuana was being used, but there simply seemed to be no real "casualties" resulting from its use. Since the indication of this brief probe was that general practitioners are not extensively exposed to marijuana problems, we moved to the review of drug-related hospital emergency room admissions.

Among 500 drug-related hospital emergency room admissions, only five cases were found to involve marijuana. Among those five cases, three included the use of marijuana and other drugs, while two involved the singular use of marijuana.

In comparing marijuana emergency room admissions to admissions for other kinds of recreational drug use, cases involving marijuana use

either singularly or in conjunction with other drugs are relatively infrequent. If there is a serious public health threat involving the community's use of marijuana, it was not observed in the emergency room assessment.

If there is a health problem involving marijuana use it is possible that it is not the kind of problem a member of the Minnesota community would carry to a physician or emergency room, but would instead carry to someone dealing with therapeutic counseling. For this reason, we instituted a second brief probe into what various religious leaders were observing in terms of how their congregations were faring relative to marijuana use. Although lamenting the community's use of the substance, they did not perceive the use of marijuana as a debilitating factor in the lives of their congregation or in the communities in which they resided.

Because the 1973 Incidence and Prevalence Study pointed to a substantial portion of marijuana use taking place among high school age Minnesotans, a general survey was instituted involving 118 urban, suburban and rural high school students from throughout Minnesota. There were guards on the survey attempting to insure reliable answers. It appeared that in the high schools, somewhere between 40% and 50% of the student population had been exposed to the drug. About one-half the students felt their school structures were adequately responsive to drug issues and were meeting the needs of the students regarding drug use realistically. Also, about one-half the students believed that there was some sort of "organized system" of marijuana distribution in their school structure. A profile emerged of a state-wide school structure where marijuana is common, with a rather consistent exposure to marijuana for those in the school structure who would seek out its use.

To isolate the disabilities that this exposure might be causing, we again dispatched an interviewer into the school structure. The interviewer was directed to various high schools throughout the state and once in the school, attempted to seek out the educator who seemed to best understand what was happening with the students in terms of drug use. We were interested in understanding what the most sensitive people in an organization that consistently interfaced with marijuana thought the drug was doing to the health of the population for which they have responsibility.

A number of educators stated they had been sensitive to a sort of lethargy or laziness that seemed to be found among students who used excessive amounts of marijuana. It was unclear whether those who were lazy and lethargic sought out marijuana use or whether people who used marijuana excessively became somewhat more lethargic. There were also educators who stated that sometimes marijuana use denoted a positive intellectual curiosity.

Many of the instructors saw the marijuana use in their school as a sporadic incident that might go away or was caused by a few erratic personalities in the school structure. Others saw the extensive use

of marijuana in the school as something that was simply reflective of the larger community and as part of the American culture, would be around for a long time.

If there is a serious public health problem evolving out of the community's extensive use of marijuana, the one discipline that would certainly observe the problem are those in the state who work with chemical problems. We surveyed 197 chemical dependency workers and attempted to determine exactly how many marijuana casualties they were seeing as well as what were the characteristics of those casualties. On a rank order basis, professionals in the area of training on topics of chemical dependencies and those involved in counseling made the following list in terms of what drugs provide the most serious health threats to the Minnesota community:

- Alcohol
- Barbiturates
- Amphetamines
- Marijuana
- Opiates

The low ranking of opiates (including heroin) probably relates to the relatively few number of Minnesotans who actually use this substance.

Generally, it appeared that marijuana somehow relates to approximately 10% of the drug and alcohol problems observed by these counselors. Problems evolving from marijuana use as a singular entity seems to create approximately 7% of the total chemical problems observed or addressed by the professionals. It should be pointed out that a few chemical dependency workers perceived a substantial number of marijuana cases and others saw none or very few. The 7% and 10% are a result of compiling both categories. The most serious problem they perceived was that marijuana might lead to the use of other drugs.

Another problem mentioned was the development of a "psychological state" that was unhealthy. Through follow-up interviews, it seemed this psychological state usually related to a lack of motivation. Only a few felt that there was some observable related physical problem.

In expanding this important part of the investigation, another battery of person-to-person interviews was conducted. This involved the interviewing of chemical dependency mental health center coordinators. Those who had observed problems said they principally involved marijuana users in school settings. Several stated they had independently observed or learned from teachers or other counselors that scholastic ability or in some cases the ability to function effectively at a place of employment seemed to decrease with increased use of marijuana. The point should be made that they were uncertain whether people who are generally less productive, or feeling less productive for some other social reason, turn to the use of marijuana, or whether marijuana use actually makes someone less productive. Generally,

they stated that they had simply observed the two seemingly occurring together.

An interesting point was made by several of the interviewees who believed that often institutions, both formally and informally, negatively labeled people who were discovered using marijuana. For instance, in several communities a juvenile or young person observed using marijuana is automatically folded into the program of a mental health center. In the 20th century Minnesota community, it is still not particularly conducive to one's social status or career development to be known as a recipient of mental health care. Some of the mental health center coordinators interviewed indicated that they had observed families arguing over the issue of whether or not one family member should be able to use marijuana. Intense cases of this nature are being seen less frequently.

The idea of there having "once" been a problem, specifically in the late 60's or early 70's is mentioned several times in various interviews.

To some degree, individuals who use marijuana to excess are found in the mental health centers or other counseling systems. Whether this is a result of community labeling or a marijuana induced health problem is unresolved. It must be remembered that people working in mental health centers or with therapeutic counseling services see people who generally need therapy and counseling. If there were a great many healthy marijuana smokers, these institutions would not be exposed to them, but they are exposed to virtually anyone in the community who develops a problem with drug use.

In summarizing the general probe into the Minnesota community, it seems that with between one and two hundred thousand individuals in the state using marijuana with some consistency, the only problems arising are seen by those professionals in the community who are constantly exposed to a great number of individuals who use marijuana (high school educators) or those who are constantly exposed only to individuals who have problems in the area of chemical abuse (chemical dependency workers). There are concerns among the professionals that marijuana use might place some people in a sub-culture where they may be exposed to other dangerous drugs. The generally observed complaint relating to chronic marijuana users is that somehow marijuana use seems identified with a general lack of motivation.

Medical/Clinical Research

There have been many recent clinical investigations relating to marijuana and there are presently many more being undertaken. Many of the more interesting findings have received a good deal of publicity, while some of the better findings in terms of research have had little popular impact.

One of the more comprehensive studies produced some years ago was a study of the health of a population that had used marijuana heavily for generations. It was assumed that if marijuana use created health problems, it could be detected among the marijuana-using population of Jamaica.

This Study will be reviewed prior to assessing the cases resting behind many of the inferences toward medical hazards relating to marijuana use.

The Jamaica Study

In 1972, a major comprehensive study of the effects of marijuana in Jamaica was completed. It is outlined here because it is an example of excellent epidemiological (community health) research and because it is repeatedly cited in other portions of this report.

A study population with generations of customary marijuana use would predictably give clearly observable evidence of the abnormalities and detrimental effects which have only been postulated from electrode, X-ray, test tube and laboratory animal studies. Jamaica was selected for study because of its long experience with marijuana use and the proximity to suitable controlled clinical facilities for study.

Anthropological field work documented that marijuana use is deeply ingrained in the folkways (customs, superstitions and medicinal applications) of Jamaicans. In group labor situations, it culturally is believed to increase the social cohesiveness and render what is considered tedious unpleasant work tolerable. Thirty male marijuana users were matched for age and socio-economic status with 30 non-users. The users had been smoking marijuana for an average 17.5 years each, at a rate of at least eight marijuana cigarettes per day (the drug intake being considerably higher than that of the average U. S. consumer). The thirty users and matched non-users were housed in the University Hospital of the West Indies for controlled medical and psychological evaluation and testing.

Physical examination revealed no significant physiological abnormalities attributed to marijuana use. Chest X-rays were normal; pulmonary function tests were normal (allowing for inhaling smoke, whether tobacco or marijuana). Since the marijuana smokers in the Jamaica Study were also quite likely the children and grandchildren of those who smoked marijuana, and since many of them were probably exposed to marijuana before birth as well as during infancy, childhood, adolescence and adult life, the study of their chromosomes by Dr. Marigold J. Thorburn of the University of the West Indies is of interest. Briefly, the chromosomes of the marijuana smokers showed no abnormalities. In fact, they showed slightly fewer abnormalities than were found in the control group, though the difference is not statistically significant. It should be pointed out that the lineage of the non-smokers may have included marijuana use.

Thorough psychiatric examinations, personality and intelligence tests did not demonstrate statistically significant differences between the groups. There was no evidence which suggested brain damage. Similarly, marijuana use did not seem to affect regularity of employment or career development.

Possibilities of Brain Damage

The actual operating parameters of the brain are a complex electrochemical phenomena that are only beginning to be understood by modern science. Almost any conclusive statement made now about the performance characteristics of the brain will most likely need modification in the near future. How it works, how much of it we use, the degree to which an undamaged portion can take over functions of a damaged area, and many other questions fundamental to assessing and understanding complexities of brain damage are presently unanswered.

As an example of the remarkable characteristics of this organ, some years ago a person who had undergone a surgical removal of one hemisphere of the brain, nearly half the brain (hemispherectomy), graduated from the University of Minnesota with superior marks.

Obviously, relating the destruction of small portions of the brain to social dysfunctioning is, at best, an imperfect science and is certainly not an area where one can be comfortable with generalizations. Usually, brain damage from physical blows, tumorous growths or other problems where damage consists of destruction that can be observed visually or by any direct measurement is relatively simple to diagnose and assess. If there is damage to the brain from the use of marijuana, up to this point in time, it has been suggested only from secondary observations. Some of these observations involve the abnormal enlargement of ventricular spaces (small cavities along the center of the brain), inferring that brain tissue has become somehow smaller. From the observation of abnormal subjective behavior the enlargement occurs among some people who have used marijuana.

Existing studies involving human beings are confounded by the presence of other possible contributing factors which are often uncontrolled. Many reported studies using laboratory animals as a "model" for determining neurological effects have yielded inconsistent results and, in any event, cannot necessarily be equated with potential reactions in human beings. Subjective evaluations of behavior in human beings that might reasonably imply irreversible brain damage relate almost exclusively to long-term (many years) heavy (daily multiple dose) use. Such studies are by no means adequately controlled to rule out other sources of cause for any observed abnormal behavior, especially including the use of other drugs. Long term (decades and over several generations) marijuana use in Jamaica specifically could not be related to brain damage or abnormal behavior.

There has been no scientifically conclusive proof of irreversible brain damage in human beings from the moderate use of marijuana. In fact, subjective evidence from consistent users appears to show that performance, at least in the academic world, can be maintained at a high level. There is some evidence that heavy use over long periods of time may result in damage to the brain. It is also true that the active components of marijuana are fat soluble, i.e., are absorbed by fat-containing cell membranes, and find easier passage past the blood-brain barrier and through the cell walls into the structure of the cell (many therapeutic medications have the same property). Exactly what this means in terms of human health, if anything, regarding destructive danger to the brain is unknown, but many have viewed it as potentially threatening.

At the present time, based upon conflicting basic research and the aforementioned Jamaica Study, there is little to indicate that community exposure to marijuana will give rise to significantly increased social dysfunction because of widespread brain damage among individuals in the community.

Effects on the Heart

In human beings, the use of marijuana causes the heart to beat faster (tachycardia). In dogs, marijuana causes the heart to beat slower (bradycardia). Neither condition, by itself, has pathological significance. However, it can be argued that patients with hearts that are diseased or otherwise "overloaded" and stressed should be warned that marijuana might add the increment of strain which could aggravate heart problems. Thus, in the same sense that heart patients, without appropriate precautions, should not shovel snow or run to catch buses, they should not smoke marijuana.

Normally, marijuana is not dangerous to the human heart. But in conjunction with pre-existing heart problems, it is possible that health would be jeopardized.

Potential Carcinogenic (Cancer Causing) Action

Fat soluble substances, such as the active ingredients of marijuana, can enter and are retained by the cellular structure of the lungs more readily than water soluble chemicals. There is evidence that this facilitates retention of foreign substances in the lungs. Cancer-causing (carcinogenic) tars and other combustibles occur in marijuana and represent a similar risk as do those in tobacco. In comparison, on the one hand, users inhale and smoke from only a relatively few marijuana cigarettes. Ten marijuana cigarettes per day on a consistent basis would be considered at least a cultural maximum relative to present consumption rates. The tobacco smokers, however, commonly consumes two to three times as many tobacco cigarettes and this activity has been clearly shown to constitute a public health danger.

On the other hand, it is stated (correctly) that marijuana smokers usually inhale more deeply and retain smoke longer in the lungs, thus increasing the risk of absorption of carcinogenic tars. Based solely on the presently understood carcinogenic effects of inhaled tars and combustion products caused by burning plant leaves of any species, pulmonary carcinogenic risk from marijuana smoking is probably in the same order of magnitude as smoking tobacco cigarettes.

There have been arguments relating the increased incidence of emphysema in age groups (especially younger groups) during the years in which marijuana use became popular. The possibility of such a relationship cannot be ruled out but there is no evidence on which reasonable, statistical inferences can be based and there are numerous other coincidental conditions that seem at least equally reasonable (e.g., the generally increasing atmospheric pollution).

The community exposure to marijuana is likely to increase the amount of foreign substances introduced into the human lungs and, similar to exposure from burning tobacco or air pollution, this will jeopardize health.

Chromosome Damage

A great deal of publicity has been given to the correlation of "chromosome breakage" with the use of marijuana, its derivatives, or synthesized compounds. Similar interest concerns a reduction in the rate of cell development in conjunction with cell exposure to marijuana. There are several significant points to emphasize prior to drawing conclusions in this area of experimentation. First, the research has been conducted primarily in the test tube (in vitro) rather than in a living organism. Obviously, what occurs in glass tubes may be quite different from the projected response in human beings. It should be noted here that both aspirin and caffeine also appear to produce chromosome changes in vitro.

Living organism (in vivo) studies of chromosome damage have produced conflicting evidence. Marijuana use may produce a statistical increase of chromosomal abnormalities in white blood cells in some individuals, but not in others. If indeed the pathological consequence is conclusively demonstrated in the future, clinical interpretation will still be controversial. First chromosome breaks may occur spontaneously from natural and physical causes, X-rays, or natural earth radiation. Chromosomes possess a remarkable capacity for self-repair, so usually no clinical evidence comes to light. Second, to date, only somatic (body) cells have been studied and not reproductive cells such as spermatazoa and eggs which are responsible for future generations.

In short, extrapolation of results from test tube experiments to humans may not be warranted. Furthermore, chromosome alterations, if indeed they occur, cannot be associated clinically at this time with morbidity (sickness ratio).

Potential for Birth Defects

There have been allusions to projected morbidity or mortality (death ratio) among offspring because of the above-mentioned chromosome breakage. In a number of studies of large non-Western populations (Jamaica and the Far East) where marijuana has been widely used for many generations at dosage levels considerably in excess of those in the United States, there are no indications of excessive numbers of abnormal births. However, one must consider that such statistical data may have been gathered by less sophisticated medical personnel than those who conduct similar evaluations in Western countries.

The subject of possible damage to an unborn child, however remote, is difficult to equate with the pleasure the potential mother might derive from smoking marijuana during pregnancy. There is no significant evidence of birth abnormality directly traceable to marijuana from chromosome changes or any other aspect of its use. There is some substantial evidence relating tobacco smoking to decreased birth weight and even infant mortality. Whether or not marijuana produces a similar effect is unknown at this time.

The horror of the thalidomide tragedy of the 1950's gives rise to a special sensitivity among professionals and the public in the area of assessing drug intake among pregnant women. Pregnancy, especially the first trimester (first three months of pregnancy when fetal organ systems are developing) is such a critical episode in development that the use of any drug, including marijuana as well as medicinal drugs, should be avoided unless prescribed by a physician.

Lethal Possibilities

There are no well-documented cases of human deaths as a result of an "overdose" relating to smoking marijuana. There have been some documented cases of individuals attempting to inject the substance and death occurred thereafter, but even among those, there are less than a half dozen poorly documented cases. An "overdose" from smoking marijuana is not impossible, only extremely unlikely.

Sexuality

There has been recent publicity in the news media particularly pertinent to the effects of marijuana use on sexuality. It exemplifies the discrepancies arising in an attempt to study effects in human beings. Two publications reported a decrease in serum testosterone (a principal male sex hormone). A third report found no difference in testosterone levels between users and non-users of marijuana. A primary effect on the control centers of the central nervous system (hypothalamus and/or pituitary), rather than directly upon the gonads, is implied as several of the individuals with lowered testosterone also experienced a decreased sperm count. Discontinuation of marijuana use in all studies returned testosterone levels to

normal. There have been a few reports of secondary impotence (involving no previous history of inability to attain erection), but most of these were reversible.

Despite this reversibility of effects, two age groups have been postulated to be at risk. The developing male fetus requires critical amounts of testosterone for proper differentiation of sexual characteristics. Even a temporary decrease in testosterone, perhaps stimulated by active components of cannabis transmitted via the placenta from maternal smoking during pregnancy, might have adverse effects on the sexual differentiation of the fetus. The second critical growth stage postulated to be at potential risk is prepubescence in young boys in which decreased serum testosterone may modify secondary sex characteristics, e.g., hair growth, voice characteristics, etc.

The Jamaica Study revealed no physical or mental abnormalities characterizing the subjects using marijuana. By standards of American cultural use, Jamaican users represent the epitome of exposure to marijuana. Use on this island has been customary for at least several generations (even during pregnancy) and consists of more potent cannabis than available to most Americans. It is also initiated earlier in life as part of Jamaican folkways. From the Consumer Reports description of the Study: "Children are introduced to ganja (marijuana) quite early." the Jamaica report notes, "first as a medicament in 'bush tea' or in a crude method of vaporizing, where adults blow smoke at an infant with respiratory congestion." Increasing doses of marijuana tea throughout infancy are recommended as a prophylaxis against disease. Schoolboys are urged to smoke marijuana to 'help them study,' to 'improve memory,' and to 'help pass examinations.'" Despite this background of extensive use, no evidence of demasculinization was found in the male users.

In a different aspect of sexuality, marijuana use subjectively alters the experience of sexual intercourse. Dr. Charles Tart, in his book On Being Stoned: A Psychological Study of Marijuana Intoxication, (Science and Behavior Books, Palo Alto), summarized the responses of 150 experienced marijuana users to a questionnaire. In assessing the response, he stated: "For practically all experienced users, marijuana intoxication greatly intensifies the sensations experienced in sexual intercourse."

The use of marijuana may cause the production of male hormones to decrease temporarily and as a mood-altering substance may enhance or reduce the pleasure of sex, depending upon the individual and environment. In a few reported cases, this has been associated with temporary impotence.

However, in the overview, no major threat to the public health appears inherent regarding marijuana's impact on adult human sexuality.

Motivation

A general belief among many observers is that with substantial marijuana use, there is a definite tendency toward lower general motivations. That belief has not been convincingly confirmed nor disproven in spite of many investigations. There are at least as many well documented reports of no effect, or even positive effects, on motivation as there are reports of a negative effect on motivation. Criticisms of these studies arise from the various subject populations from different ethnic and socio-economic backgrounds. However, there are reports of low and high motivation coming from a variety of apparently well controlled investigations, including: broad-based studies of large foreign populations, low level labor groups, and American college level students. The most likely explanation is that motivation is a function of a constellation of factors, one of which may be the mood elicited by the use of marijuana. It is also possible that as marijuana effects moods, subsequent motivation may increase or decrease. In contrast, motivation may not be secondary to mood alteration, but marijuana use may appeal more to people who are highly or lowly motivated. Conceivably, unmotivated personalities may tend to use drugs in a more recreational fashion more often than other people. In any event, the relationship between a system of mood alterations which frustrates human motivation is often alluded to, but not scientifically validated, hence no significant danger to the public health is convincingly demonstrated by clinical inference.

Mental Illness

Western civilization has generally directed the treatment of drug abuse problems toward institutions that specialize in mental illness. Among the mental health centers and state hospitals in Minnesota, this has generally been accepted as a practical and productive way of utilizing treatment facilities. Such bureaucratic decisions, however, should not be used as justification that marijuana use relates to psychotic conditions. There are reported cases where a single dose of marijuana has resulted in what is similar to a psychotic episode. There are also reports indicating severe psychotic conditions as a consequence of long-term heavy use of the drug. There are few, if any, reliable reports where previous psychotic tendencies or the use of other drugs were clearly not a factor. In contrast, marijuana has been reliably reported as a tranquilizer that eliminated or minimized psychotic episodes. Extensive psychiatric evaluation of the Jamaica Study populations revealed that one chronic user and one non-user reported a past history of mental illness. Other psychometric measures were equivalent between the two groups.

Marijuana is a substance that can change the moods of those who use it; whether the mood shift is pleasant or not is dependent on the individual and probably his expectations and immediate environment. No threat to the public health can be assumed, yet some unpleasant mood alterations will occur given enough episodes of use. Just as a single incidence of intoxication does not justify a diagnosis of alcoholism or mental illness, neither does a non-alcoholic drug "high" imply drug dependency or mental illness.

Is the Use of Marijuana Dangerous to the Public Health?

The effects of all drugs, in fact the effects of all things that modify the living human organism, are influenced by an infinite number of coincidental dynamics. Dramatically dangerous activity is usually perceived rapidly, but subtle dangers will go undetected and may not be perceived by social or medical technology. Science cannot label the use of marijuana "safe" any more than physical education instructors can label the activity of skiing "safe." The question becomes: "With the limited knowledge we have, how dangerous is marijuana use to our community?"

Realizing that policy decisions have to be made in spite of limited information, the best answer for 1975 is: "Moderate marijuana use presents a probable danger to a small minority of the public (those with heart problems, near psychotic conditions, etc.), a possible danger to others (adolescent males, developing fetuses, etc.), and a conceivable danger to others (future research?), but there is presently nothing to substantiate that marijuana use presents a danger to the public health of ours or any normal human community.

Marijuana and Minnesota's Criminal Justice System

The level of danger that a substance or activity presents to the community is not always a significant factor in determining what level of statutory prohibition should be regimented against that activity. Prohibition against alcohol was not repealed because alcohol was found safe, but because the law was found unresponsive to what was occurring in the community.

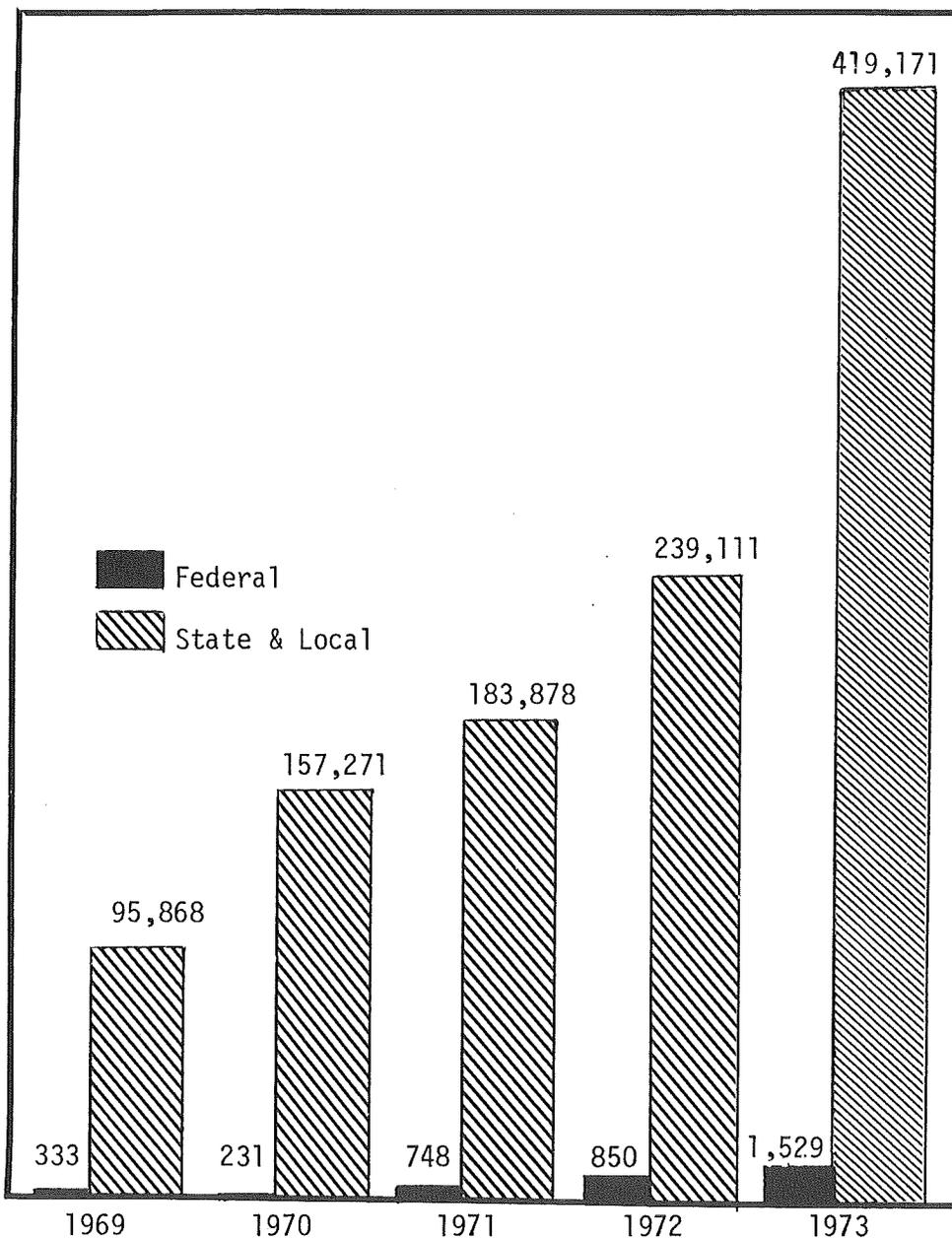
The following charts and graphs illustrate an evaluation of our formal criminal justice response, who is being punitively processed by whom, and how our criminal justice professionals and general population react to the present prohibitions.

EVOLUTION OF THE CRIMINAL JUSTICE RESPONSE
TO RECREATIONAL MARIJUANA USE

Year	Minnesota	Federal	International
1914		<u>HARRISON ACT</u> - Federal attempt to control drug use by taxation but did not include marijuana.	
1930		<u>FEDERAL BUREAU OF NARCOTICS FORMED</u> -and they began to work toward state passage of the <u>UNIFORM NARCOTIC DRUG ACT</u> . Marijuana prohibitions are included by some states under this act - not Minnesota.	
1937	<u>UNIFORM NARCOTIC DRUG ACT</u> passed but State excludes all references to marijuana prohibitions.	<u>MARIJUANA TAX ACT</u> -Federal taxation of marijuana allows federal jurisdiction within any state. Memo from FBN orders agents not to bother with "small users".	Aborted attempt by FBN to enter into international treaties prohibiting marijuana use.
1939	<u>INDIA HEMP ACT</u> -Commissioner of Agriculture charged with eradicating marijuana. Possession or sale becomes a misdemeanor.		
1951		<u>BOGGS ACT</u> -More severe penalties recommended. <u>MARIJUANA TAX ACT</u> and <u>NARCOTIC DRUG IMPORT & EXPORT ACT</u> combined.	
1953	<u>1937 UNIFORM NARCOTIC DRUG ACT</u> is amended to include marijuana possession as a felony.		
1956		<u>NARCOTIC CONTROL ACT</u> -further escalation of penalties.	
1957	<u>NARCOTIC CONTROL ACT</u> Adopted from Fed.model.		
1961			<u>1961 SINGEL CONVENTION ON NARCOTIC DRUGS</u> - calls for marijuana prohibition. (Does not have the force of law.)
1970		<u>CONTROLLED SUBSTANCES ACT</u> - The 1961 Singel Convention's concepts are adopted under this Act. There are presently misdemeanor provisions for marijuana possession.	
1972	Marijuana possession reduced to a gross misdemeanor.	<u>PRESIDENTIAL COMMISSION</u> calls decriminalization of marijuana possession appropriate.	
1973	Marijuana possession of under 1.5 ounces reduced to a misdemeanor.		

It can be observed that in terms of numbers, the federal government plays only a small role in marijuana arrests. Generally the arrests are carried out by local law enforcement officers under state authorized prohibitions.

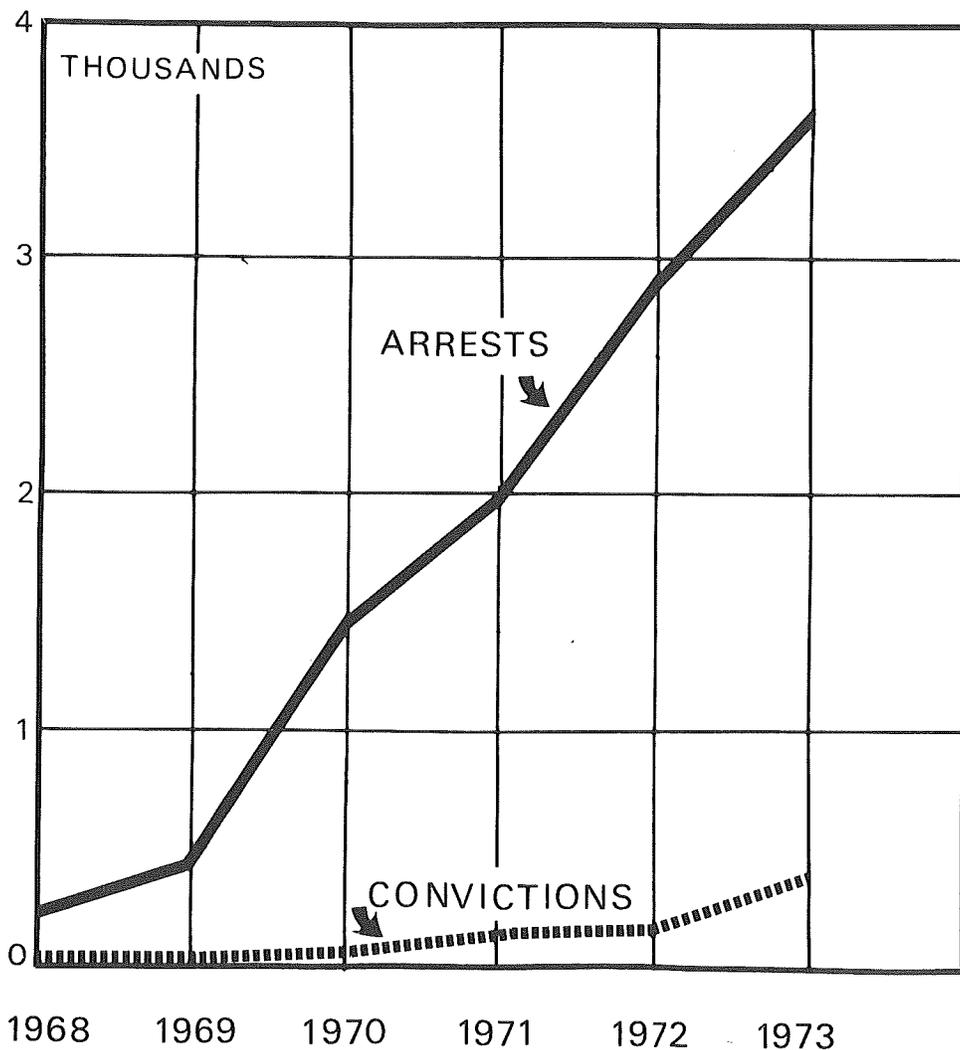
ALL NATIONALLY REPORTED
LOCAL, STATE AND FEDERAL ARRESTS
FOR MARIJUANA VIOLATIONS



Source: Uniform Crime Report

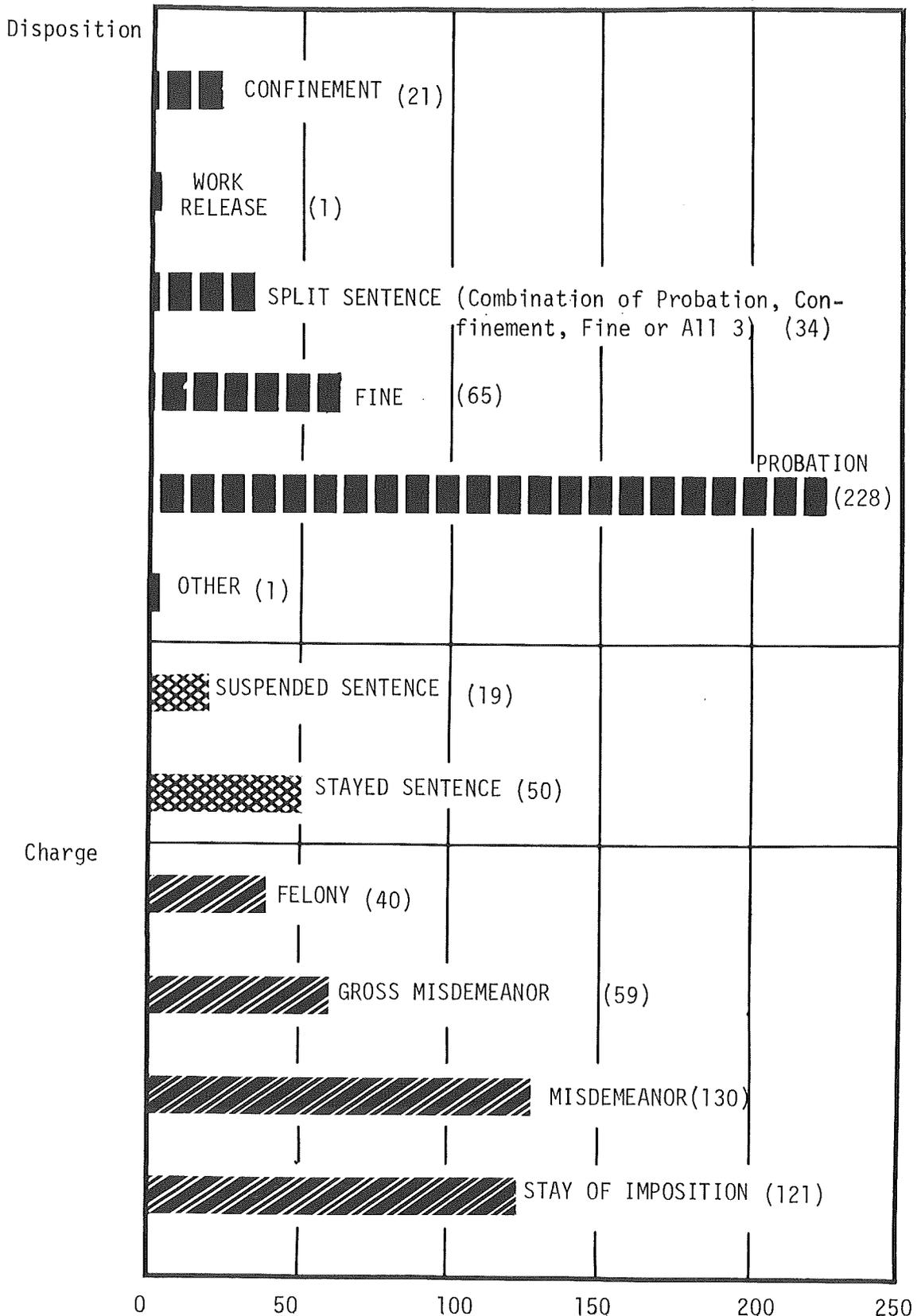
The disparity between arrests and convictions is extremely wide and the gap continues to increase. It should be remembered that a much larger gap exists between those who violate the law and are arrested.

ARRESTS AND CONVICTIONS FOR POSSESSION OF MARIJUANA MINNESOTA, 1968-73



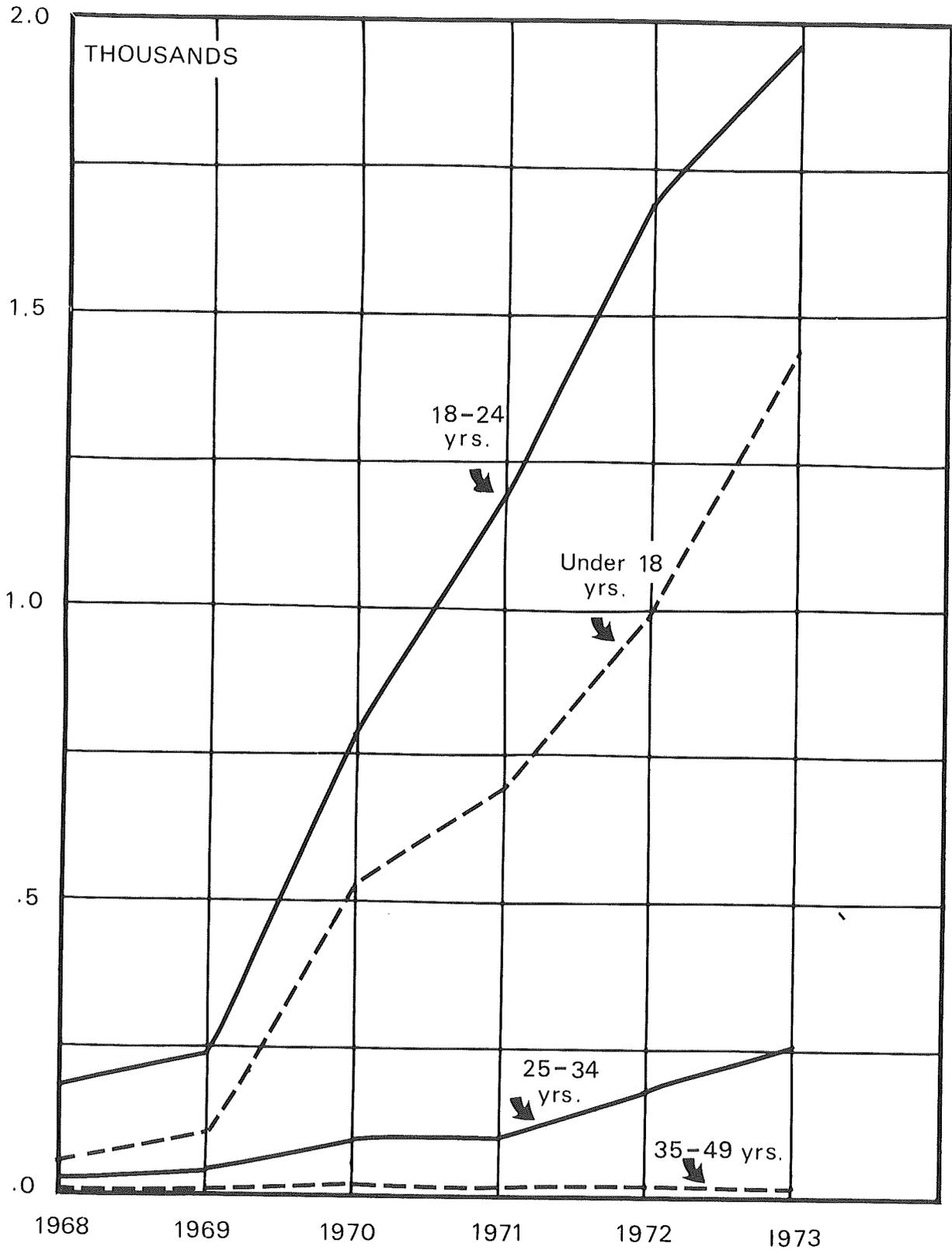
Source: Bureau of Criminal Apprehension data 1974 (although not a large number, some county courts had not reported convictions to the BCA when this data was gathered).

JUDICIAL SENTENCING REPORT RELATING TO
 POSSESSION OF MARIJUANA IN 1973
 BY DISPOSITION AND FORMAL CHARGE*



*Source: Bureau of Criminal Apprehension (although not a large number, some county courts had not reported convictions to the BCA when this data was gathered).

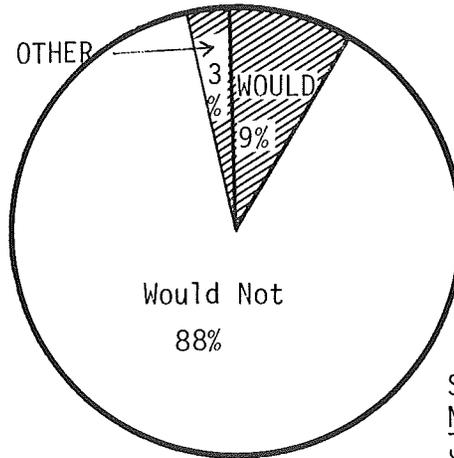
POSSESSION OF MARIJUANA ARRESTS, DISTRIBUTION WITHIN SPECIFIC AGE GROUPS MINNESOTA, 1968-73



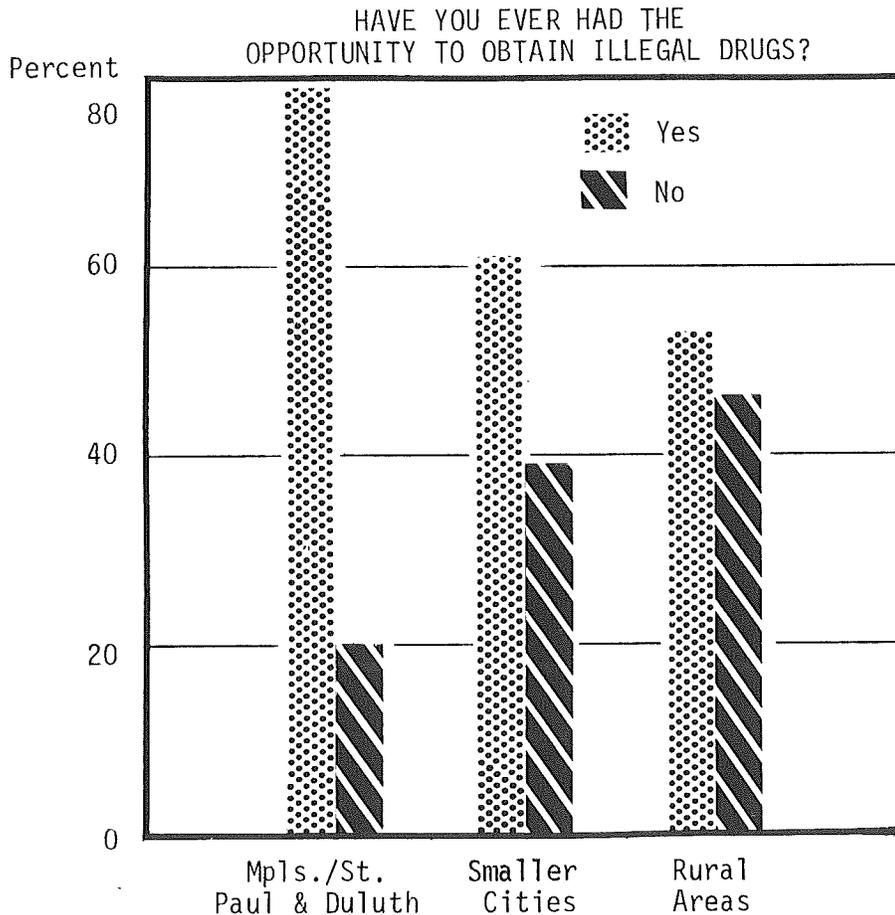
Source: Minnesota Bureau of Criminal Apprehension

The opinions of Minnesotans regarding the marijuana prohibition seem to indicate that the formal prohibition may not be the reason most do not use the substance and that, in spite of prohibition, much of the community is exposed to illegal recreational drug use.

IF MARIJUANA WERE LEGAL, DO YOU THINK YOU WOULD OR WOULD NOT TRY IT?



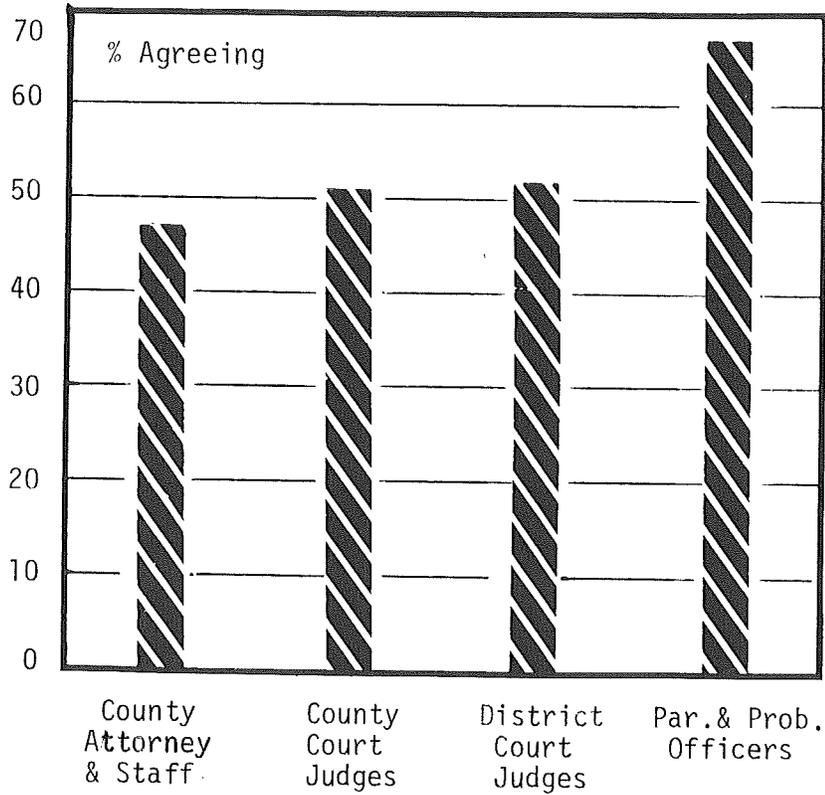
Source:
Minneapolis Tribune,
July 2, 1972



Source:
Minneapolis Tribune,
January 23, 1972

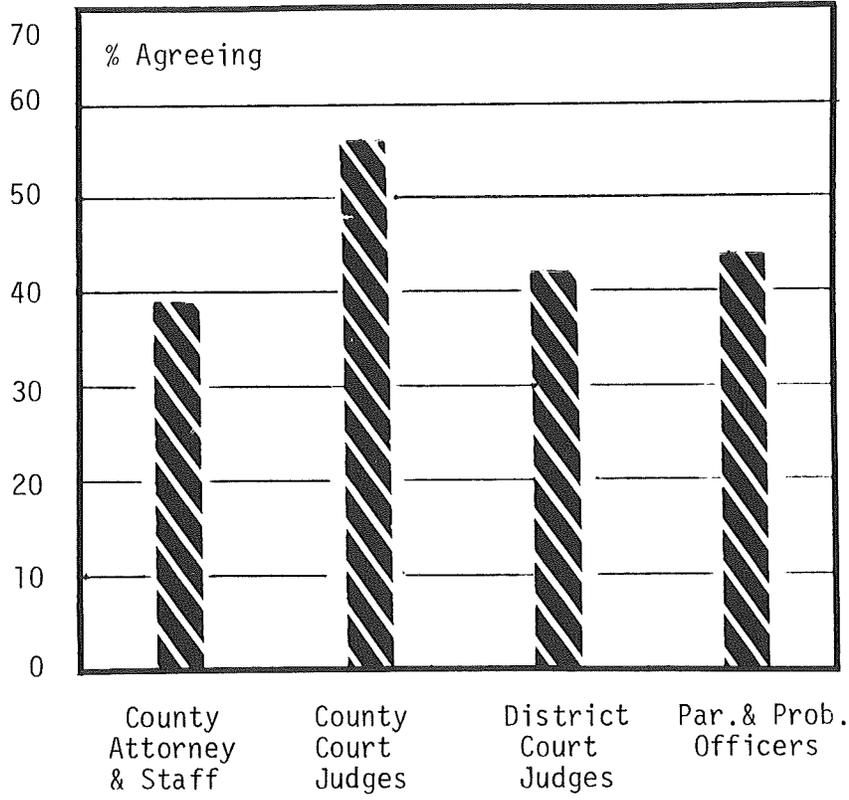
Among the professionals who worked with the marijuana offenders in a court setting (prior to the misdemeanor legislation), there was limited support for some sort of new disposition alternative.

IT WOULD BE BETTER TO SENTENCE
THE MINIMAL DRUG OFFENDER TO A BLOCK
OF ENCOUNTER AND DRUG EDUCATION



Source: Minneapolis Tribune, October 4, 1972

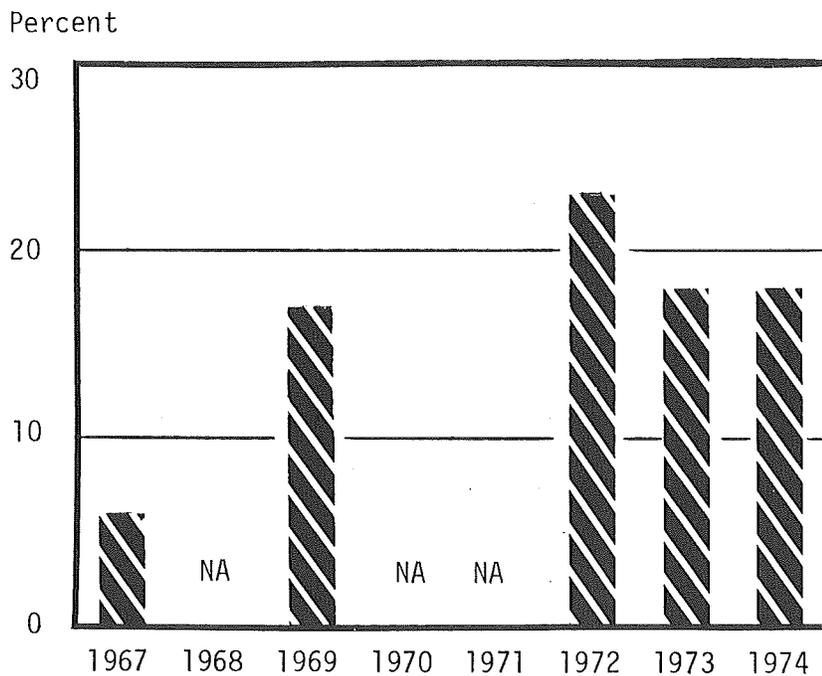
FOR MINIMAL MARIJUANA OFFENDERS
THEY SHOULD CREATE SOME NEW TYPE
OF EDUCATIONAL OR REHABILITATION FACILITY



Source: Minneapolis Tribune, October 4, 1972

In the general Minnesota community, the present criminal justice prohibition is questioned but clearly most (roughly 80%) of the community do not support legalization of marijuana. Many, however, do support more lenient penalties.

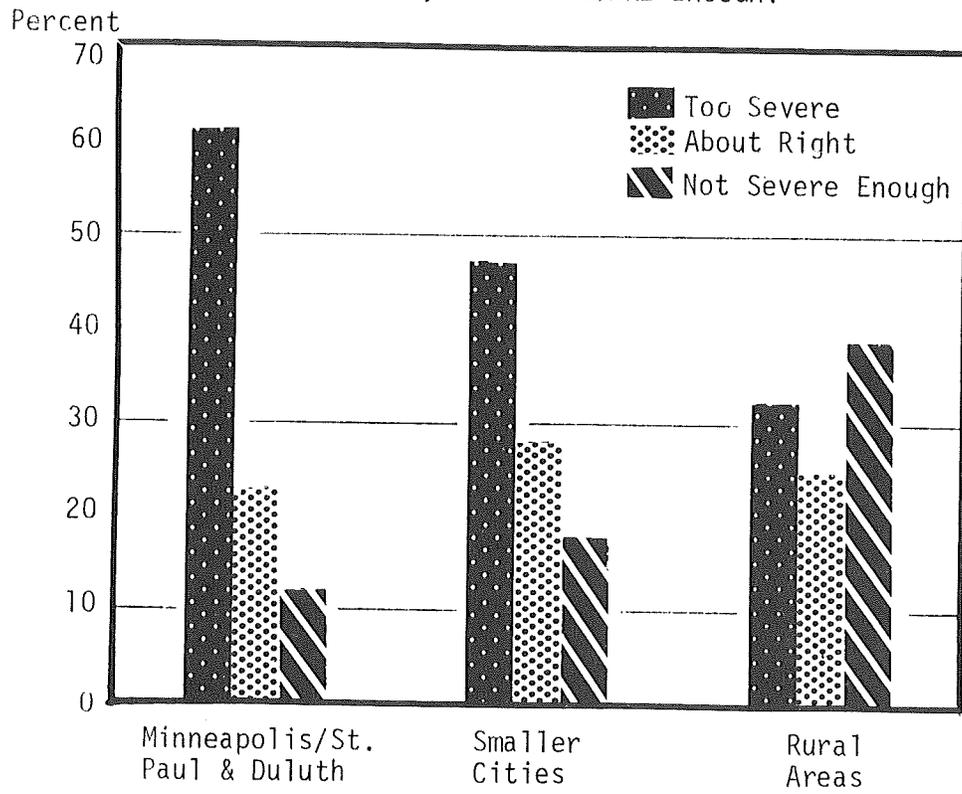
PERCENTAGE OF MINNESOTA CITIZENS
FAVORING MARIJUANA LEGALIZATION,
1967-74



NA = Not Available.

Source:
Minneapolis Tribune,
November 10, 1974

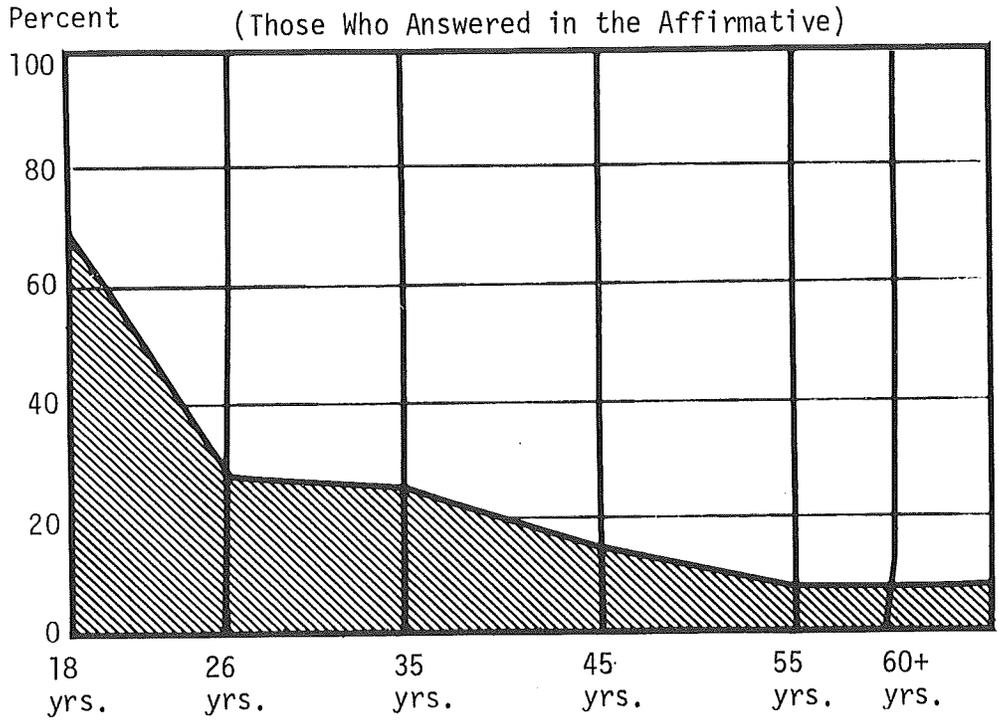
DO YOU THINK THE LEGAL PENALTIES FOR
POSSESSION OF MARIJUANA ARE TOO SEVERE,
ABOUT RIGHT, OR NOT SEVERE ENOUGH?



Source: Minneapolis Tribune, January 23, 1972

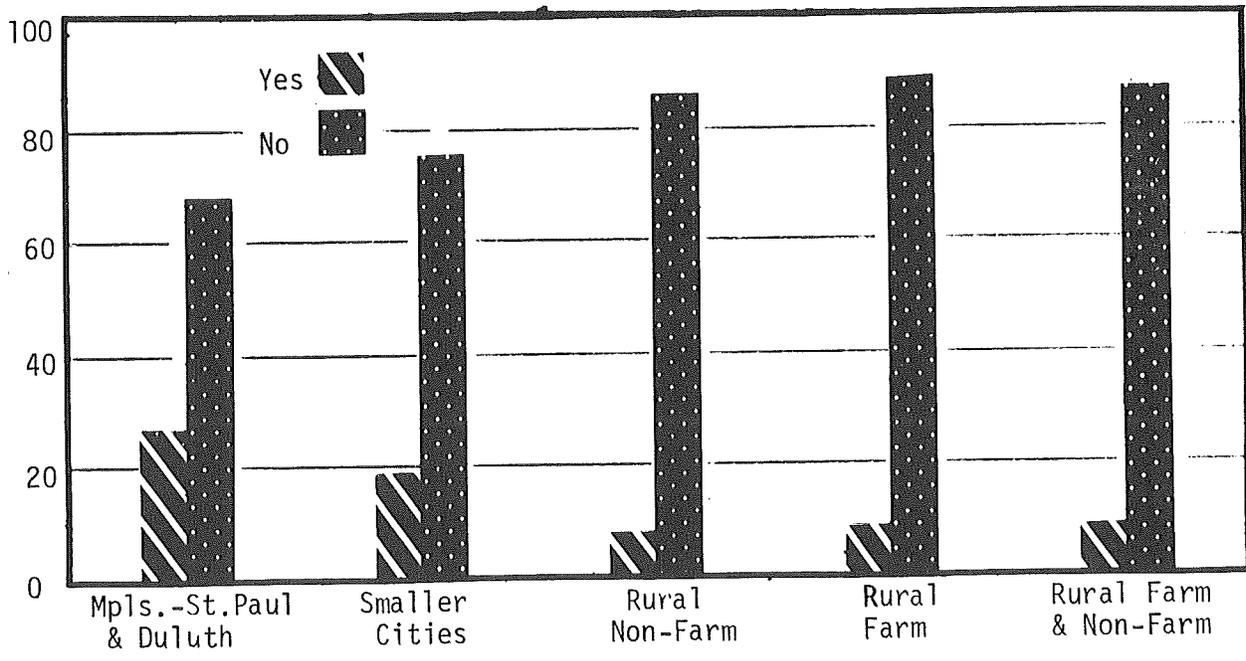
Generally, support for allowing marijuana is related to age, as opposed to area of residence.

IT IS AGAINST THE LAW TO USE MARIJUANA IN MINNESOTA. DO YOU THINK THE LAW SHOULD OR SHOULD NOT BE CHANGED TO ALLOW ITS USE?



IT IS AGAINST THE LAW TO USE MARIJUANA IN MINNESOTA. DO YOU THINK THE LAW SHOULD OR SHOULD NOT BE CHANGED TO ALLOW ITS USE?

Percent



Source: Minneapolis Tribune, March 19, 1973

What stands out statistically is that there are literally hundreds of thousands of Minnesotans who violate the law, yet there are only a few thousand who are arrested. Of those arrested, only a few hundred are convicted, and of those convicted, under two dozen find themselves incarcerated as a result of their disposition.

Numbers themselves do not profile what is occurring in the criminal justice sector. For instance, with the criminal justice system of plea negotiating, an individual who in reality robbed or bludgeoned someone, while in possession of a small amount of marijuana, might convince the prosecutor that he will plead guilty to possession of marijuana and receive a punitive disposition if the other matter is dropped. Thus, hidden in the statistics are dispositions or formal charges that may not truly be reflective of who was sentenced to what, for what. It is important to look behind the formal record in determining exactly what the present marijuana prohibitions are doing within the Minnesota criminal justice process and more especially, how they interface with the Minnesota community.

Minnesota initiated its first anti-marijuana statute in 1939 amidst a true fervor in the community directed against the use of the drug. At that time, there was a general consensus in the community that marijuana was a seriously dangerous substance. It is interesting that even though marijuana had been with the Minnesota Community since the early Western settlements in the form of rope, cloth, or paper, the act outlawing marijuana was termed the "India Hemp Act." Amid the "anti-dope" fervor in the community of the 1930s marijuana was pictured as an Asian commodity and Chinese warlords were blamed for importing the drug into the state.

An intensive effort was developed on the part of the Federal Bureau of Narcotics to inspire community groups to pressure for criminal justice prohibitions against the possession or sale of marijuana. There presently is a mixture of federal, state and even international codes and laws that compile to prohibit and limit the range of what the state legislature can do regarding marijuana. For instance, there is federal jurisdiction against possession of marijuana within Minnesota. Although there are few federal arrests involving marijuana in our state, it would be impossible for the state to legally establish a chartered system of production of the drug.

Nothing prohibits the state of Minnesota from taking criminal prohibitions against marijuana off the state statute books, but local and state law enforcement agencies would still have the right and in some sense the duty, to arrest those in possession of marijuana under the federal law. How federal prosecutors would handle the matter is an unknown.

The federal prosecutor's office in Oregon, where the possession of a small amount of the drug is no longer a crime but a civil offense, has made no move toward seeking criminal prosecution of those Oregon citizens who are found in possession of marijuana.

In attempting to determine exactly what was happening with the law, beyond the raw numbers of use, arrests and conviction, we attempted an interview probe of various local law enforcement agencies, to include county sheriffs as well as local law enforcement officers, through the interview-debriefing process. A law officer of eight years experience was recruited and trained in interviewing techniques. He was given selected geographic areas in which to find law officers and discuss with them how they and their contemporaries decide who and when to arrest for possession of marijuana.

It seems that law officers to one degree or another make subjective decisions regarding how and when they institute an arrest. One of the greatest inhibitors toward making an arrest is the actual arresting process. This process, including search and seizure, etc., is difficult and in the eyes of many law officers somewhat constraining.

Secondly, the law officers used personalized value systems in determining who deserves and does not deserve to get arrested. One officer stated that he was sensitive to individuals who were rich and flaunted the law. He arrested rich individuals, but tried to let ones who were financially poor, off with a "break." Another officer stated he looked for "dirty cars" coming into his suburban community. In some rural areas, the law officers stated they knew who the trouble makers were in the community, and would arrest the trouble makers, but give others a second chance. In the non-rural areas, officers generally stated that if the individual they stopped, using marijuana or in possession of marijuana, was polite and seemed frightened, they would let the matter drop, but if the individual appeared hostile or belligerent, they would institute an arrest.

In terms of who gets arrested in Minnesota by local police, it appears that the police both individually and as groups, set standards in terms of how much leeway they allow themselves in incorporating the code of law in their personal value system. If they feel an individual is threatening, or in some cases simply obnoxious, they are probably a more likely candidate for arrest. Another prohibition to making an arrest is the formal criminal justice process for arresting. In many cases it seems to prevent officers from instituting an arrest. To some officers the arrest is a punitive measure that will provide hardships for the individuals they arrest, while others see arrest as a way of possibly getting someone who needs help, exposure to helping institutions, or at least scaring them out of the perceived bad habits they are developing. For instance, one officer stated that he would arrest individuals in an attempt to get them into a treatment structure, and as it has been seen in the interviews of chemical dependency counselors, quite often an arrest does actually bring an individual, especially a juvenile, into a helping institution at the court's bidding.

The role of the State Bureau of Criminal Apprehension involving marijuana is one of offering advice to local law enforcement units as well as actually moving against larger systems of drug trafficking.

BCA officers make managerial decisions prioritizing which cases they will invest the time and manpower toward pursuing an arrest. The priorities they work with are:

1. Amount of drugs involved;
2. Amount of sophistication or organization that is entwined with the marijuana distribution system;
3. Level of community concern registered by the local law enforcement agencies that ask for assistance.

The BCA does not see marijuana as a separate category of drugs and moves to pursue an arrest based on the above prioritization regardless of whether the drug involves heroin or marijuana. BCA agents believe that marijuana distribution is an easy business to get into and there are a number of low level marijuana distribution organizations in Minnesota. They also indicated that it would be difficult to conceive of any organization or syndicate capturing the marijuana market in Minnesota as was the case during alcohol prohibition. This seems to relate to the ease with which marijuana can be purchased in quantity or grown locally.

The Federal Drug Enforcement Administration in Minnesota still operates under the directive toward prioritizing that was issued to federal agents in 1937 by the then Commissioner of the Federal Bureau of Narcotics. The memo directed that they should simply not bother with small arrests. That prioritizing by the federal government includes the following three characteristics:

1. The level of organization and sophistication of the operation distributing the illegal drugs;
2. Amount of capital that seems to be involved in the operation;
3. The quantity of the drug supply involved.

Again, the federal agents make absolutely no distinction between marijuana and other illegal drugs in terms of pursuing an arrest.

To gain some perspective of the different levels on which the BCA and DEA operate; the BCA tells of a 1,000 lb. marijuana seizure being one of the highlights of the year; the DEA told of helping to break a national network scheme that netted a seizure of 42 tons of marijuana in a Mexican border state.

Similar to the BCA, the DEA stated that it seemed to them unlikely that some sort of sophisticated syndicate would capture a significant quantity of the marijuana business in Minnesota. The marijuana business is simply too easy to get into and hence there are too many competitors.

The Court and Marijuana in Minnesota

Once the law officers choose to implement the law and formally make an arrest, the state's court organizations swing into action. Because possession of a small amount of marijuana is a misdemeanor, and possession of more than 1.5 oz. is a gross misdemeanor, both the district and county courts are involved in processing marijuana violators.

One court system studied was in a suburban area adjacent to the Minneapolis-St. Paul metropolitan area. There, both juveniles and adults who were arrested for possession of marijuana were given a 60 to 90 day continuance, during which time a pre-sentence investigation was developed. The usual disposition was one year's probation and the use of various statutory mechanisms to remove any criminal record.

The director of the suburban court service system stated that quite often they would confront young individuals arrested for marijuana who appeared to be having problems with alcohol, and then threaten them with a punitive disposition unless they sought treatment for their alcoholism. It was interesting to note that in this suburban community the issue of whether or not to arrest marijuana offenders had been discussed among the police. Formally, they had been ordered to arrest everyone they confronted using marijuana, but the directors of four of the six components had advised their officers to simply use their own judgment.

The second structure assessed was in a rural community area, and here the interviewer learned that usually individuals found with marijuana are not arrested, but lectured by the police. There is a rule of arresting only those who appear to be dealing. At the time of the interview, the chief of police in the community was indignant because after a good deal of what he termed "undercover sleuthing" with the help of the BCA, several marijuana dealers had been set free by plea bargaining down to marijuana possession. He felt the marijuana possession law was actually inspiring an abusive use of the plea bargaining system.

When marijuana cases do go to court (for either first, second or third offenses) probation is generally the disposition. Both law officers and probation officers were frustrated with the system because quite often individuals who had plea bargained down to possession of marijuana really were perceived as threatening to the community. The problem seemed to be communications between law enforcement, the probation department and the court.

In reviewing one metropolitan court structure, the interviewer found that because of the large number of cases there were actually two separate offices handling marijuana cases. One office handled county court or municipal offenses, and the other handled district offenses. In the district court the disposition had been generally probation for marijuana possession. It was understood by the probation officers that usually when someone came to them because of possession, they were nearly always involved in sales but were being prosecuted for possession of more than a small amount of marijuana.

The presentence investigators had learned that quite often plea negotiations were allowing lenient sentences for individuals who may be threatening to the community in other matters. For instance, an individual found involved with large scale distribution of underground prescription drugs will also be apprehended with a small quantity of marijuana and then charged under marijuana possession as opposed to the other offense.

This communications gap was addressed by this rather sophisticated court services system by going to the judge prior to the offense and sharing with him precisely the characteristics of the individual and the characteristics of the conduct that had resulted in the plea negotiation to marijuana possession. On many occasions they had recommended that the negotiated plea not be accepted.

While the formal records might show that a number of individuals are receiving rather punitive dispositions for marijuana possession, they possibly are really being sentenced for some other activity.

In the county court of this metropolitan area, the preponderance of the marijuana cases that were seen were coming from what was termed "accidental" arrests. For example, an individual with a flat tire would be encountered by a police officer trying to help him who then would find marijuana in the trunk of the car, etc. The general disposition was probation, and among the staff of the metropolitan area county court structure, there was frustration with the statute. They felt the marijuana offenders they saw simply did not belong in the criminal justice setting at all.

As a point of interest, the interviewer asked if there was any possible way that someone could wind up incarcerated for simply possessing marijuana in the metro area. The director of the department paused and then gave two examples under which an individual could conceivably find himself incarcerated for possession of a small amount of marijuana:

1. If the defendant had an extensive prior record, and if during his hearing he was extremely hostile, rude and threatening to the court;
2. If, as a result of the pre-sentence investigation, it was determined that the individual was dependent on some other drug, a disposition involving incarceration may be used as a lever or threat to force the individual into treatment.

In assessing this probe into the three court structures, it seems clear that quite often the marijuana disposition allows an information gap in terms of plea bargaining between the court, law officers and presentence investigators. There is a general pattern of quickly issuing probation for possession of marijuana on all court levels unless there are things behind the conviction which would influence the court. For instance,

if an individual was arrested burglarizing a home while in possession of marijuana, his plea negotiation may involve his burglary charge being dropped and the defendant being punitively sentenced simply on the marijuana possession charge.

It was also observed that there is some use or potential use of the marijuana statute to force those who need help with chemical dependency or other problems into treatment. Again it would appear that the arresting officer sometimes try to arrest those who appear to be in need of treatment or care.

It becomes clear that those who really are simply in possession of marijuana either are not arrested or if they are arrested, they receive a non-punitive disposition through the court structure. It must be remembered that there is a cultural and social cost in going through the criminal justice process.

After reviewing these several court systems and finding some similarities, there still was an impression that somehow we really did not understand the characteristics of the person being punished by the marijuana possession statutes. To gain an overall understanding of the process we compiled information listed in the first appendix to supplement the initial probe into the three court structures. We received permission to review approximately 100 pre-sentence investigations of individuals who appeared before an undisclosed district court between 1970 and 1971.

Because of the careful restrictions on who can actually see a pre-sentence investigation we were restricted to that period as the most recent period for review and care has been taken not to reveal the location of the court structure or any identifying characteristics of the defendants listed. Obviously, there is a weakness in this reporting in that it goes back to the early 1970s, but nevertheless, the metropolitan component of the study gives a flavor of exactly how the marijuana violations interface with other problems in the district court setting involving chemicals. Generally it can be observed that in this metropolitan area people were simply not arrested for the action of possessing marijuana. They were arrested for other matters and actually the dispositions rested on dynamics separate and apart from actual marijuana possession. At the time this information was gathered, marijuana possession was a gross misdemeanor and a matter for the district courts. The cases that the court worked with that related to drug use were many and included a substantial amount of truly morbid and threatening behavior. The marijuana possession cases virtually always involved some other form of marginal conduct that probably inspired the arrest. It seemed clear that in judging the kinds of people and cases for which the court organization was geared to work, the person in possession of recreational marijuana would have been tragically mismatched if processed by this system. In point of fact, either through the process of arrest or prosecution, such cases were filtered out before ever reaching the formal court setting.

In the review of the rural court system, we were unable to obtain pre-sentence investigations, but were fortunate in being able to review a document prepared by the Center for the Study of Local Government on behalf of the various kinds of arrests and dispositions regarding all drug offenses in a selection of rural Minnesota counties.

The study included all illegal drug arrests in a 1972-1973 period. Regarding marijuana cases, out of 135 individuals arrested in these counties, only one individual actually found his way into a prison setting, while five individuals were incarcerated in workhouse or county jail settings. The vast majority of the cases involved a stay of sentence and probation (44%); another 22% received stayed sentences and a fine.

Regarding the one individual who was sentenced to a prison setting, it simply cannot be ferreted out whether or not he was actually involved in sales or some other criminal conduct.

It also appears from this survey of rural court structures, that a large number of all cases relating to nonalcoholic drugs involved probationary dispositions and were not frequently related to incarceration or fines. Heavy use was made of a stay of imposition of sentence in conjunction with probation, but especially in the case of marijuana possession a truly punitive disposition in terms of incarceration or a fine was exceptional.

In a final review of the official institutions in Minnesota that are trying to address marijuana problems, we reviewed the system that is directed toward eradicating the growth of marijuana within the state. When the state first passed its India Hemp laws in 1939, the state's Commissioner of Agriculture was charged with developing a system to eradicate the plant within the state. Although a sizable amount of marijuana was grown in Minnesota (48,000 tons during World War II) the Department of Agriculture had taken its task seriously. Presently, there is a rather comprehensive statewide structure for weed inspectors who direct a serious effort toward eradicating marijuana plants. The problem however, is that the marijuana plant grows quickly and because of the tons of marijuana grown in Minnesota during the war and the natural spread of a plant as prolific as marijuana, has created a state where marijuana grows nearly everywhere. The marijuana eradication effort has been a frustrating and fruitless task.

Marijuana can be grown indoors rather effectively. We determined that from a \$25 investment in special equipment one could grow enough marijuana for a number of people in a normal 3 X 4 foot closet. Similarly, methods for eradication are usually ineffective. Sometimes county or township weed inspectors convince land owners they should pull or spray the weed, but in even the most intensive of efforts, nothing beyond a 90% kill can reasonably be obtained. There have been special federal grants in Minnesota to eradicate marijuana on county levels, and although they have been judged effective, the plants continue to flourish. Because marijuana grows rapidly in uncultivated areas, it is

quite easy for someone to clandestinely grow a sizable quantity of marijuana and it is difficult for law enforcement to cope with this. If they do find marijuana growing, it is futile to "stake out" an isolated patch of weeds over a several months' period waiting for criminal harvesters. It can be speculated that quite often, illegally grown marijuana patches go undetected. Marijuana is not a plant that actively competes with other commercial crops in this state, and efforts toward eradication to limit recreational use are generally not productive.

From an agrarian point of view, it is a simple matter to produce a large quantity of marijuana indoors or outdoors. A whole technology of sophistication is being developed centering around producing high yield marijuana in effectively clandestine locations. There are a number of publications on the market explaining different ways to grow, treat, and generally produce a sizable quantity of marijuana with the least possible risk from criminal justice intervention.

The Economics of Illegal Marijuana

There are some rather consistent things that occur when a popular activity is criminalized and prohibited by force of law. One of the things that develops is an underground system for production/distribution. Usually this system has several characteristics. First, it is highly profitable for those who dare the risk of potential punitive response. Secondly, these substantial profits often find their way into the development of a syndicate or large protection-oriented organizational structure that can grow to threaten the community in other areas. Historically, these prohibitions of popular activities have resulted in an undermining of effective and honest law enforcement systems. Only a year after the inception of federal alcohol prohibition, nearly 100 federal officers were arrested for taking protection money, and in April 1968, more than 50 federal agents were discharged and over a dozen were actually indicted for selling narcotics and accepting bribes. It is a hazardous business to restrict popular recreational activities, and it usually grinds hard against efficient law enforcement.

In the case of marijuana, because of the prioritizing of arrests against those who are involved in an organized level of distribution of the substance, there appears to be no syndicate forming around its distribution. BCA and DEA agents indicate that marijuana distribution is simply a conglomerate patchwork of unorganized systems. Once some sort of large organization, with a good deal of capital evolves, the law enforcement structures in this state move against it. It is also obvious that a number of people are making a substantial profit relative to the amount of risk and especially to the intensity of the demand.

Before reviewing some of the specifics regarding the marijuana distribution system in Minnesota, it is important to understand some of the characteristics of the demand for marijuana. It is unwise and wrong to simply look at the potential hazards involved in the human use of marijuana. Obviously there is more than a legal risk or a health problem that drives people to recreational use of this substance. Remembering that the action a drug has on an individual is relative to the person, the situation and the kind or amount of the drug; generally, marijuana seems to be capable of creating an enjoyable mood among most users of the substance. Colors seem brighter, senses in general seem somehow altered in an exciting and rather comfortable way.

A good deal of literature has been written and is being popularly distributed regarding different kinds of games that people can play while they are "loaded" and a whole methodology involving marijuana relating to levels of honesty or humanity has developed among certain subculture groups. In a special anthropological study of counter culture, it was found that marijuana became sort of a symbol or a "sacrament" that seemed to have a morally cleansing quality.

In a study conducted under the auspices of a federally financed investigation, Dr. Charles Tart asked 150 individuals who enjoyed smoking marijuana what happened to them when they used it. The responses were that they enjoyed the kind of changes in the external environment they were able to perceive, they felt they could have closer and better inter-personal relationships with people, and they felt they could think in clearer or at least more interesting ways. Many of them stated they enjoyed sexual activity more while intoxicated on marijuana and finally, a number stated they felt they had quasi-religious or extra-sensory experience while intoxicated on marijuana.

It is obvious that there is a pleasure payoff with marijuana use, and clearly a part of it is culturally defined. Regardless of the formal stance the various institutions that make policy in our community might take, the demand for the drug is a constant.

As the study progressed, it became clear that the use of marijuana in this state is an institutionalized process. Businesses have formed around distributing marijuana paraphernalia, systems have formed around addressing marijuana cases on a criminal justice basis, and a popular literature has formed around directing people how to use and enjoy the substance.

Obviously, there is an institution that provides and supplies the Minnesota community with the drug. In an attempt to understand some of the characteristics of this institution, an unidentified interviewer actually went into the marijuana distribution system, identified himself as being involved with the study and interviewed a number of people involved in the growing, smuggling, importing, and general dealing on a pound-lid basis. The attempt was made to assess the general characteristics of those who produced marijuana, and to determine the profit margins involved in the sale of the drug.

From this investigation a profile of the marijuana distribution system emerged which outlined a highly profitable but fragmented and scattered distribution structure. It found conventional farmers, professionals in other areas, and part-time people who simply dabbled in marijuana, as being part of the state's distribution system. In terms of profit, the two individuals who obtained the greatest percent of profit were those who actually imported the drug from Mexico and those who dealt on the lid basis. The importer was perceived to have a terribly high risk involved in his activities as he was concerned with law enforcement agencies not only in the United States to include the federal, state government and local officers, but also the Mexican authorities. The lid dealer on the other hand, seemed to have little in the way of risk, and over a long period of time would realize a considerable profit.

We attempted to validate the results of this study by interviewing individuals in prison who had been involved with and understood the characteristics of Minnesota's marijuana distribution system. These individuals knew nothing of the first study.

Generally, they validated the research, with the exception they were much more fervant in explaining precisely how they considered the real professionals in the marijuana distribution system to be the lid dealers, primarily because lid dealers ran very little risk of apprehension. They pointed out that most very careful dealers possessed only small quantities of highly potent marijuana and sold to only a few friends, thus limiting their chances of arrest. They also pointed out that among these professional dealers on a lid level, there were rules that prevented them from such things as selling marijuana near school systems or distributing it to individuals who are quite young. They are aware that if they are involved in these kinds of activities, they run the risk of infuriating law officers or the community, which would increase their risk of apprehension.

The Dominant Factor

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How public policy should respond to marijuana use is becoming an area of such variable and yet intense conviction that it ranks with religion and politics as a prime topic for breaking up friendships.

The remarkable characteristic of the marijuana controversy is that like issues of morality as opposed to issues of science, people of similar professional disciplines disagree as intensely and fervently as laymen. If public policy is to be based on clear, objective grounds with the public's well being as the primary goal, some understanding is needed for interpreting the powerful emotions which skew and intensify opinion regarding recreational marijuana use.

Usually attitudes are fed by images, which are less definite but often more powerfully picturesque than attitudes. It usually requires several imagery patterns to imbed a solid attitude. An example of how images and attitudes interface with a recreational drug use pattern can be found in looking at how beer is portrayed by the beer industry. This example will be helpful in understanding how predispositions influence reactions to marijuana.

There are firm and deep Western beliefs that alcohol intake denotes strength and male virility. These can be traced back to Greco-Roman societies where it was assumed that only strong, hardy men could handle strong wine. Women were advised to drink only wine mixed with water, children and old or sick people were advised not to drink alcohol at all. The minds of the ancient Westerners had rugged masculinity pedastaled as an almost Godlike quality, and partially denoted by a person's level of alcoholic intake.^{1,2,3}

These ancient theories were folded into European and general Western philosophy intact and alcohol intake became a sign of one's level of masculinity within the typical Western world view. Playing on this cultural maxim, those attempting to market beer have begun tying images of masculinity and virility into beer marketing. Rugged, Teutonic, foresters in control of fierce bears wander across the television screen with their beer; hardy, tough men conquer a mountain and are given what they most desire, a case of beer; motorcycle racers are served beer by suggestive women; a large black man opens a can of beer and unleashes a fearsome, powerful bull.

Images are established that entwine rugged foresters, fierce masculine animals, and masculine activities in general, with beer intake. Gradually, an attitude evolves from the imagery that, "beer is what real men drink."

¹Celus, Loeb Classical Series (Fragments included within) translated into English by W. G. Spencer. New York: Harvard Press, 1921.

²Ludwig Edelstein, "The Relationship of Ancient Philosophy to Medicine," Bulletin of the History of Medicine. Vol. XXVI: July-August, No. 4, 1952, pp. 299-316.

³Pline, The History of the World (Translated into English by Philemon Holland). Chicago: Southern Illinois University Press, 1962, p. 149.

If the person who developed this attitude were asked what his opinion of beer was, the response would be more intellectualized than his true attitude and might be more on the order of, "Beer is a healthy drink."

The following figure illustrates the progression from imagery to attitude, to expressed opinion:



Beer use is denoted by rugged men who do masculine things.

Beer use is entwined with fierce, rugged, masculinely aggressive animals.

"Beer is what real men drink."

Beer is a healthy drink.

Beer use is entwined with men who "conquer."

If the attitude is strong enough, new information will either be accepted, modified, or rejected until it can easily be folded into the existing belief pattern which is consistent with the prevailing attitude.⁴

The following figure illustrates how various information is internally "handled" to force it into line with a strong prevailing attitude:

<u>PREVAILING ATTITUDE</u> : "Beer is what real men drink."		
<u>FACTUAL DATA</u>	<u>PROCESS</u>	<u>RESULT</u>
1. The bigger a person physically; the more beer he can "handle."	- Reinforces and supports prevailing attitude.	- Accepted
2. Alcoholism prevents a man from meeting normal responsibilities as the "head of a household."	- Beer has so little alcohol it does not really apply.	- Modified
3. Beer is fattening.	- Simply not taken seriously or noted consciously.	- Rejected

⁴Brembeck, op cit., p. 117.

In the case above the image system was so strong and the prevailing attitude so secure, that additional information was accepted, modified, and even rejected, until it would comfortably fit the preferred world view. As Walter Lippmann once stated, to present a picture at deviance from one's set of beliefs is "...like an attack upon the foundations of the universe."⁵

Picture a medical researcher who grew up in a "universe" where recreational nonalcoholic drugs were used by only "drug addicts;"⁶ where in the 1950's Communists in China were blamed for marijuana being smuggled into the U.S.⁷ and where the theory of Oliver Wendell Holmes regarding drugs was dominant; that all drugs should be thrown "into the sea where it would be better for mankind and the worse for the fishes."⁸ That medical researcher, from that universe, is asked if he believes that an observed 3.4 chromosome breaks per 100 cells in blood lymphocyte cultures among marijuana users (normal is 1.2) is threatening enough to justify a criminal justice prohibition.

Picture another medical researcher, somewhat younger, who graduated from a medical school where a number of his contemporaries used marijuana recreationally⁹ where he had used the substance and was rewarded with a pleasurable experience from its use, and where he observed another potentially productive medical student find himself unable to practice medicine after years of training because he was convicted for possessing marijuana. That medical researcher, within his universe, is given the same data and asked to respond to the same question.

It is an error to assume that on an issue with as high an emotional factor as criminal justice and marijuana use, logical, dispassionate guidance can easily be found among professionals or anyone else. The dominant factor in assessing marijuana prohibitions is not an issue of medicine, law, public health or morality, but the prevailing Western attitudes that label, skew and color every aspect of lay or professional opinion. They must be understood and compensated for in working toward a publicly responsible approach to marijuana use.

⁵Walter Lippmann, Public Opinion. New York: MacMillan Co., 1922, p. 95.

⁶Henry L. Lennard and Associates, Mystification and Drug Misuse. New York: Jossey-Bass, Inc., 1972, p. 1.

⁷Richard J. Bonnie and Charles H. Whitebread II, The Marijuana Conviction. Charlottesville: University Press of Virginia, 1974, p. 209.

⁸Oliver Wendell Holmes, Medical Essays 1842-1882. Cambridge: Riverside Press, 1891.

⁹In California 73% of medical students had used marijuana. A southeastern college showed 36% of graduate students had used it (male) only 28% of the female students. (Marijuana & Health - 4th Report to U.S. Congress from HEW. DHEW Pub. No. (ADM) '75 - 181)

The prevailing attitude that the majority of the community holds toward marijuana is one of deep and dimly understood fear. Like the beer phenomena in Western antiquity, some clear codes regarding non-alcoholic drug use evolved and were firmly stamped on emerging Western civilization. Unlike alcohol, Western systems labeled nonalcoholic drugs as "evil" and foreign. (See Appendix 5)

It would have been exceptional if the introduction of the use of marijuana into the Western community as recreation did not give rise to severe prohibitions. The dominant imagery surrounding its use relates marijuana use to bizarre and unwholesome elements. In the United States, waves of emotion and rhetoric condemning its use ran highest in the 1930s and 1950s. The image of foreignness was always a prevailing dynamic in damning the substance and, in the 30s, Chinese war lords were blamed for inspiring the drug traffic (Boris Karloff had just filmed The Mask of Fu Manchu) and in the 1950s, the Chinese Communists were blamed.

Reaching Over



Atlanta Georgian, 17 March 1934

¹⁰Bonnie, op cit., p. 209.

ASSAULT WITH INTENT TO KILL



Arlington County, Virginia, Daily Sun, 19 March 1955

A macabre behavior was attached to the drug's use; not so much sloth or laziness as sexual excess, perversions and potential bludgeonings. The result was a punitive criminal justice response. In 1939, Minnesota followed a number of other states in instituting statutes prohibiting the possession or sale of "India Hemp" (the use of an Asian name is probably significant) and soon Federal guidelines paved the way for a firm and uniformly punitive response to possession and sale of marijuana.

From a review of the "anti-marijuana" literature, some of the following images seem tied to marijuana in a negative sense and are certainly components in building the community's prevalent negative attitudes relating to marijuana:

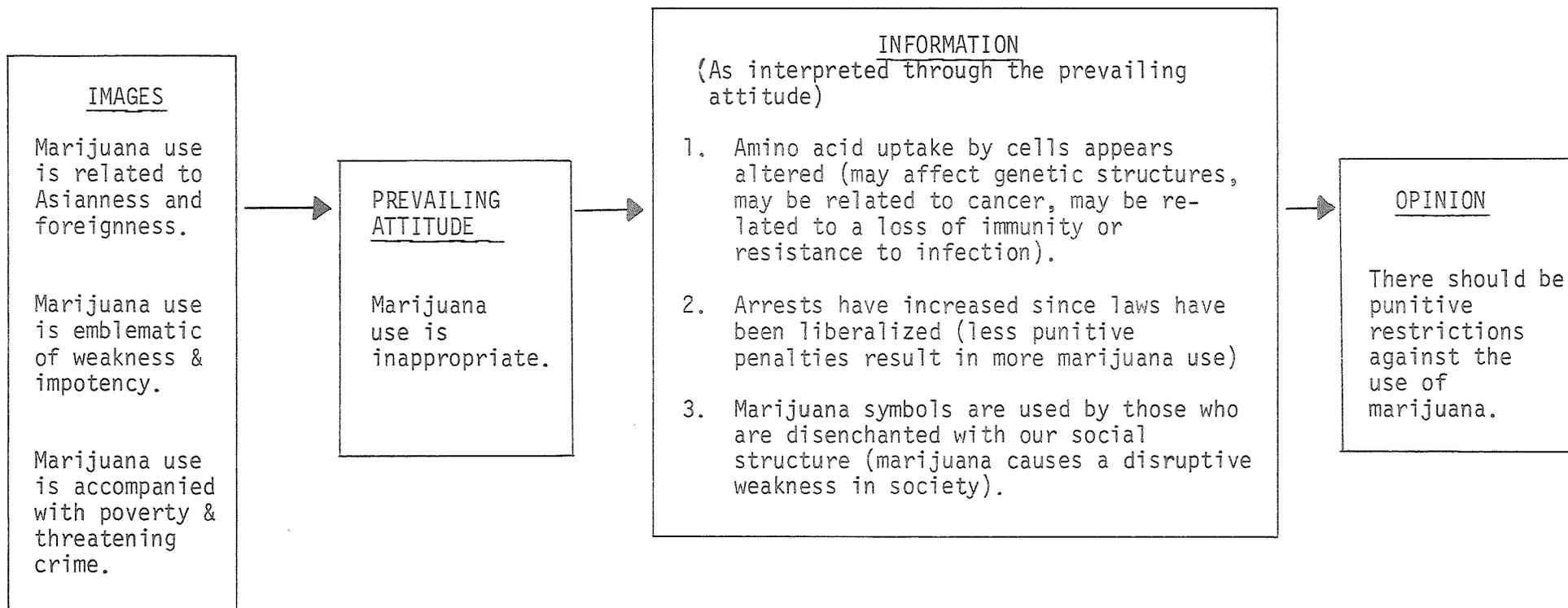
1. Marijuana use is entwined with undesirable foreignness or primitiveness.
2. Marijuana use relates to impotency or weakness.
3. Marijuana use is identified with personal degeneracy, laziness, addiction, mental problems and poverty.
4. Marijuana use is entwined with a social disorder (disrespect for established Western institutions and codes of conduct).
5. Marijuana use causes physical disorders and health problems.

The history of the Western acceptance of marijuana use evolving to the point where it is institutionalized in many Western communities, certainly including much of Minnesota, is too new to be fully understood. Its rise to popularity is almost certainly related to many American soldiers being stationed in Southeast Asia, to a general disenchantment and a questioning of Western morals and institutions and, finally, because of the use of the drug is often a pleasant experience. Although somewhat more difficult to isolate the "pro-marijuana" imagery seems to relate to the following:

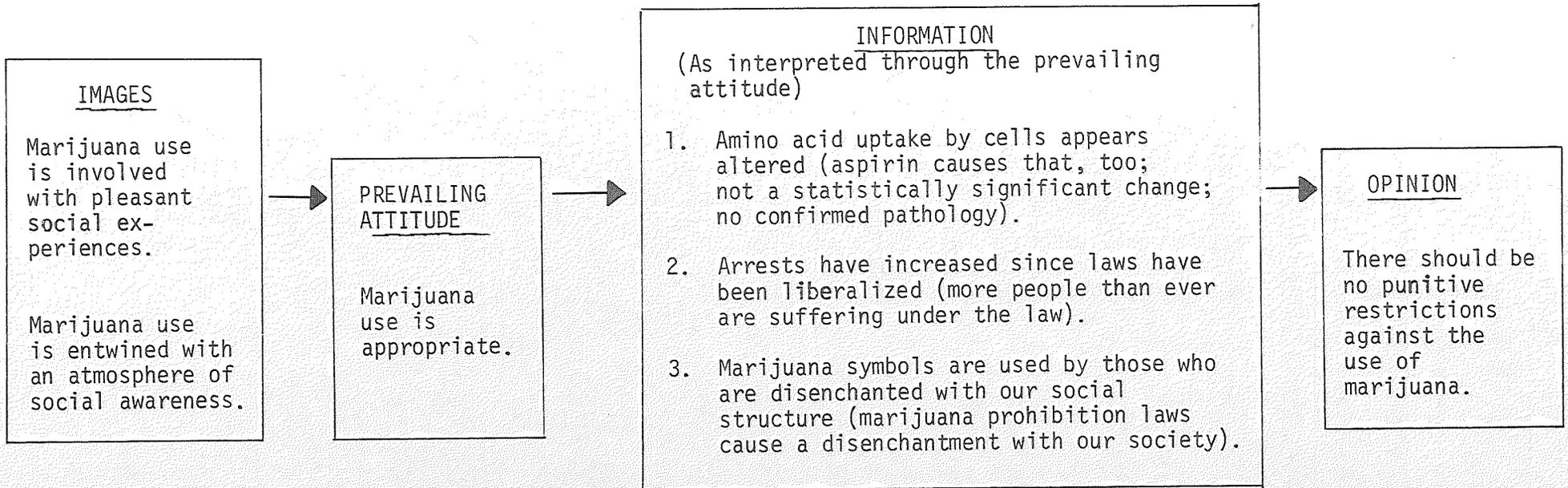
1. Marijuana use is a mark of modern "sophistication."
2. Marijuana use is related to a number of exciting, entertaining activities.
3. Marijuana use is entwined with a humanistic (possibly religious) spirit that is more responsive to the human condition than often insensitive Western institutions.
4. Marijuana use is a symbol of resistance or personal independence in the face of the intimidating and often oppressive "system."
5. Marijuana is emblematic of a non-aggressive, peaceful lifestyle.

The illustrations on the following pages demonstrate how different human attitude systems might work at variance with similar information input regarding marijuana use.

THE INTER-RELATIONSHIP BETWEEN IMAGES, ATTITUDES, INFORMATION AND OPINIONS REGARDING MARIJUANA



THE INTER-RELATIONSHIP BETWEEN IMAGES, ATTITUDES, INFORMATION AND OPINIONS REGARDING MARIJUANA (Cont'd)



The marijuana issue is so deeply emotive in the Western mind that dynamics beyond objective evaluation can be expected to color or even dominate the marijuana issue on all levels. Not only must the most professional interpretations be cautiously evaluated but internal discipline toward objectivity must be maintained.

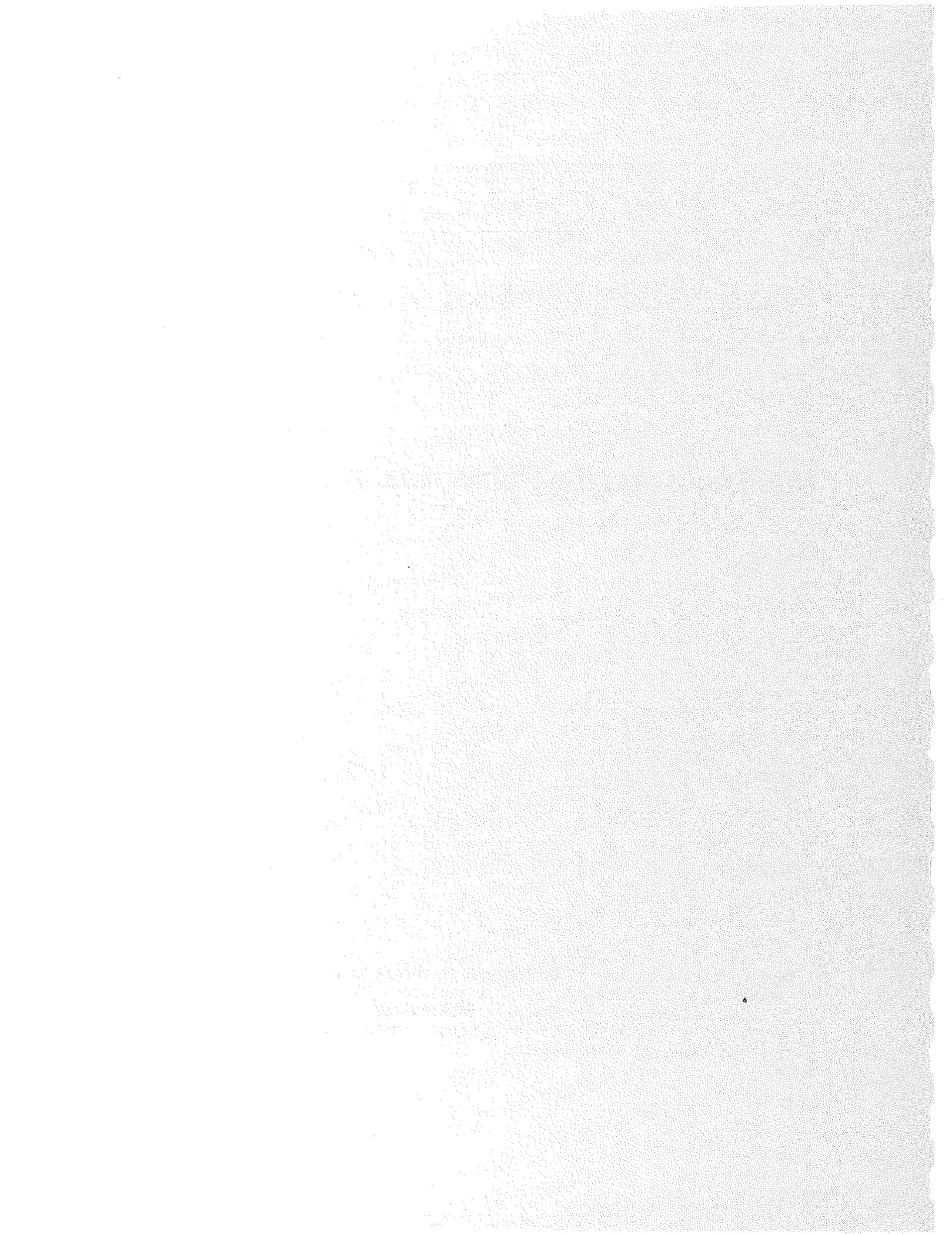
It would be unjust not to point out that many professionals have mastered the discipline of developing work that seems uniquely free from intervening attitudes. Consciously, we have tried to be aware of the power of predisposition and attitudes in this document and we have established review systems to try and produce objectivity. In the end, this too is a document regarding an emotional issue for human, by humans.



Although pharmacologically unique marijuana is often portrayed as a substance firmly tied to other drugs. The above display was arranged by federal narcotics agents for the benefit of newsmen. It shows marijuana surrounded by amphetamines, barbiturates and heroin.

Marijuana and the Public Health in Minnesota

This section will assess the potential threat that marijuana use presents to the community by first isolating the health problems as perceived by various community institutions, and secondly, reviewing the pertinent medical/clinical research relating to marijuana use and human health.



PROFESSIONALLY OBSERVED HEALTH PROBLEMS IN MINNESOTA
RELATING TO MARIJUANA USE

There are substantial obstacles in the way of understanding how marijuana effects human health. Animal experiments never truly relate to humans, and humans are reluctant to discuss their own criminal activity. One of the best ways to ascertain knowledge of marijuana's potential hazards is to review the health problems observed by Minnesota's helping organizations, especially those for counseling and treatment.

The community has many institutions in which professionals, with their own codes of ethics and standards of sensitivity toward human problems, almost certainly become aware of individuals who develop problems from drug use. If some significant public health damage was occurring in the community, one or more of these institutions would become sensitive to the problem and be able to identify its characteristics. The obvious weakness in gaining an assessment of the public health threat of recreational marijuana use is that first, because the use of the drug is illegal, a number of individuals who have problems may be reluctant to confide them even to those individuals who staff institutions that promise confidentiality. Trust levels in the government's confidentiality have not been overly high in the last few years. Similarly, the institutions may confront problems that are simply not related to marijuana. For instance, if a number of people smoke marijuana and fall down breaking bones, the physicians in the community who set those bones may not readily realize that marijuana is related.

In a sense, the credence with which this type of review is given is relative to the amount of confidence the reader has regarding the sensitivity of the individuals who staff these local helping institutions toward what is really occurring in their community.

The principal issue centering around the various investigations is: what type of problems have the local professionals observed in their community that they feel relate to marijuana use? In some cases where it seemed appropriate, the interviewer was asked to obtain other information that may be helpful. For instance, the perception of Minnesota's religious leaders regarding the morality of marijuana use was pursued. However, the heart of the interview related to determining exactly what these professionals who worked in, lived with, and were professionally responsible for their community, had observed regarding the problems relating to marijuana use.

In one case involving school age children, out of a sensitivity to the age barrier, we developed a survey of students themselves before performing person-to-person interviews with educators.

Admissions to Minnesota Hospital Emergency Rooms from Episodes Relating to Marijuana Use

In the spring of 1973 the Minnesota Drug Abuse Section of the State Planning Agency in cooperation with the Minnesota Hospital Association, conducted a special ten-day census of all drug related incidents brought into emergency rooms of hospitals in Minnesota. Information was collected and brought to the local area mental health center which serviced the hospital's geographic area. The staffs of emergency rooms were asked to report any incident occurring in the emergency room that related to the use of chemicals, including alcohol and other nonalcoholic mood-altering drugs. Characteristics of age, sex and a brief description of the incident were also requested.

Only 25% of the hospitals in the state did not respond with usable data, and the expectation is that proportionately, the morbidity relating to emergency room exposure to mood-altering chemical emergencies was obtained.

The obvious limitations in developing inferences from such a survey include the possibility that an individual who had used an illegal substance would be reluctant to admit the use of the substance in a formal hospital setting, especially if it became known that his answer would somehow be recorded in a central pool collected by a government agency. Similarly, it is possible that emergency room personnel were reluctant to furnish information especially regarding the use of illegal substances.

Regardless of the potential failings of the ten-day survey, these results presently serve as the best evidence of at least the emergency morbidity related to marijuana use in the Minnesota community.

The report found that with three-quarters of the hospitals reporting, exactly 500 drug related cases were noted in hospital emergency rooms. Extrapolating to the total number of hospitals, it would appear that within the ten-day period, including two weekends, between six and seven hundred cases occurred involving chemical mood-altering problems justifying hospital emergency self admission. It should be noted that in one category, the 0 to 9 age group, it is likely that the drugs were not taken for some sort of recreational mood-altering experience, but were taken out of a child-like curiosity such as identification with candy or over-dispensing by parents of potentially medicinal drugs, etc.

One of the clearest points in the review showed that over three-quarters (76.6%) of all incidents reported involved depressant chemicals legal or prescription. Alcohol was clearly the drug that created the most problems (60.4%) and these could be broken down into categories of individuals who had been involved in vehicle accidents while intoxicated (32% of all alcohol incidents) or those that had been involved in a fall, injury, laceration, or other form of external pain presumably related to the state of intoxication (32% of all alcohol incidents). Finally, 23% of the alcohol-related incidents

involved individuals who simply came to the emergency room setting for a blood alcohol check, probably at the insistence of a law enforcement officer.

The dominance of alcohol-related emergency room observed casualties was clear, although over-ingestion of amphetamines, barbiturates, minor tranquilizers, Sominex, Darvon, Emperin (a codeine compound) hallucinogens, and others was observed in the emergency room intake with some consistency.

The 500 cases observed included 5 cases in which marijuana was mentioned. They were as follows:

1. A girl between the ages of 14 and 17 who, while using marijuana, performed what was termed by emergency room personnel a "suicide gesture."
2. A girl again between the ages of 14 and 17 who had ingested amphetamines, barbiturates, hallucinogens, No-Doz (a commercial "stay-awake" drug containing only concentrated caffeine) and marijuana. The emergency room staff labeled the girl's problem as "ingestion."
3. A third case involved a male between the ages of 18 and 24 who was brought into a hospital emergency room for a blood alcohol check, and who was observed to have been using both alcohol and marijuana.
4. The fourth case involved a female between the ages of 18 and 24 who was brought in for abdominal pains after using marijuana and apparently no other drug.
5. The fifth case involved chest pains in a male between the ages of 18 and 24 who had been using both amphetamines and marijuana.

Considering the obvious difficulties in the reporting and survey mechanism, one of the more valid ways to assess what this means is to compare marijuana admissions and psychedelic drug admissions. As both are illegal, similar reporting prohibitions would exist. While five reported cases came into Minnesota emergency rooms relating to marijuana, seven cases came in relating to the use of psychedelics, or hallucinogens. While 12.5% of the 2,735,728 Minnesotans over 14 years of age have used marijuana, and 153,208 (6%) use marijuana with some consistency, only 76,599 Minnesotans have tried psychedelics (2.9%), and only 8,207 (0.3%) have used psychedelics with some consistency. In both the case of illegal psychedelics and illegal marijuana the same inhibitions exist for reporting the use of an illegal substance either to the hospital emergency room personnel or by the hospital emergency room personnel. Over four times as many Minnesotans have used

marijuana as psychedelics, and over twenty times as many Minnesotans use marijuana as opposed to psychedelics with some consistency. Still there were nearly one and a half times as many cases in emergency rooms relating to psychedelic drug use as marijuana.

It appears that only 1% of all chemically involved admissions to emergency rooms in Minnesota relate to marijuana. This would indicate that out of the extrapolated 23,513.6 chemically related emergency room admissions in Minnesota within a year's period of time, approximately 235 would be expected to relate to the use of marijuana.

To review the figures from a different perspective, it would seem that out of the 341,966 Minnesotans who admit to having tried marijuana, within a year's time those finding themselves in an emergency room setting relating to marijuana use would be one out of approximately 1500.

Alcohol is not an illegal substance, and hence might be reported more frequently by both the patient and the emergency room staff so comparisons are difficult. However, a predominant 65.5% of all incidents related to alcohol. Extrapolating to cover all the hospitals in the state as opposed to the three-quarters who answered the questionnaire and expanding to cover the period of one year, there would be 15,382 projected admissions for alcohol related incidents in emergency rooms. According to recent Alcohol and Drug Authority calculations, there are presently 2,051,804 adult Minnesotans who admit using alcohol. In a year's time, the chance of a member of this group finding their way into an emergency room because of an alcohol related problems is one in 133.

In a year's time, it can be projected that roughly between 200 and 300 will find their way into the hospital emergency room in Minnesota for some major or minor incident relating to the use of marijuana. This is in contrast to over 15,000 Minnesotans who will find their way into emergency room settings because of alcohol related problems. Obviously there was a reluctance to admit the use of illegal substances to official institutions; but when comparing the cases involving marijuana and those involving psychedelics or hallucinogens, considering the number of Minnesotans who use each drug, exposure to an emergency room setting for the use of hallucinogens is much greater than relating to the use of marijuana.

Since the number of marijuana users who eventually are exposed to an emergency room setting because of the drug's use is decidedly marginal, no public health threat relating to marijuana can be observed from this assessment of emergency room admissions.

Morbidity Relating to Marijuana Use in Minnesota as Perceived by
Minnesota's General Practitioners

Appendix #3 contains the full review process of the assessment of the physicians who were general practitioners in various communities in Minnesota. The survey was conducted by a senior medical student, and a selected random sample was obtained in determining which physicians to contact. Two of the general practitioners were from the Twin Cities area, two from the rural or outstate area, and one from a community of 50,000. The selected random sample was drawn from the membership listing of the Minnesota Academy of Family Physicians.

The physicians were asked what kind of casualties they had observed in their medical practice resulting from marijuana.

The first physician stated emphatically that he had seen no casualties in his practice, and he had identified no problems, physical or psychological, associated with the use of marijuana.

The second physician at first also stated he had never observed any problem. Although when asked again whether or not his patients had ever expressed any concern about marijuana, the physician answered that three patients had contacted him, and one had been hospitalized once as a possible marijuana overdose. The other two were having problems with LSD.

The third physician, when asked whether or not he had ever seen any casualties replied, "None. If there are any problems, and it is being used, I don't see them."

A fourth physician stated the drug is readily available in his community, especially to school students. His community is a town of just over 1500 individuals, approximately 100 miles south of the Twin Cities area. The physician stated he had identified no medical problems involved with the use of marijuana, and that the only professional contact he had experienced with the drug was when concerned parents had asked him to lecture their children regarding the dangers of its use. Personally, he had never seen excessive use of the drug, and had never seen problems involving marijuana and anti-social behavior.

The fifth physician also stated that there was use of marijuana in his community; however, it basically appeared to be poly-drug use that was creating a problem. In his practice he had seen no abnormally enlarged breasts in males in his community. (Some local newspapers had recently carried a story indicating that such problems had been observed in Boston.) He had heard that during the Vietnam war years, when individuals were returning from Vietnam having used a good deal of Asian marijuana, there were reports of a lack of sex drive. He had apparently observed no problems.

If marijuana use does create some sort of serious morbidity within our community, it does not seem to be detected by general practitioners.

It is interesting to observe that generally the physicians could find no health hazard from the drug's use in their own practice, yet they were supportive of legal prohibitions.

This sample is extremely small, and no true reading of what Minnesota physicians are observing should be inferred. However, in conjunction with the 500 emergency room observations, it does appear that even this small number of general practitioners have observed substantially nothing.

Our formal practicing medical system is not the place to seek out the characteristics of marijuana problems.

Morbidity Relating to Marijuana Use in Minnesota as Perceived by Minnesota's Religious Leaders.

The process used to interview various religious leaders was not as formally conducted as the physician review, although the depth and subjectiveness was increased. The interviewer was an individual trained as a chemical dependency program coordinator, who had also been trained as a seminarian.

The rationale behind interviewing religious leaders was that if someone was having a problem with abusive use of marijuana, they may carry the problem to a community counselor as opposed to a physician. If the problem was deeply psychological, creating a psychological state that inhibited or endangered family relationships, if it was somehow inhibiting normal adolescent growth, or creating any deep personal problem, and if there were enough people having the problem, it would eventually be discussed with a religious leaders. We enjoined upon the interviewer to seek out religious leaders of various denominations who were actively involved in counseling and interacted with their own church membership on a day-to-day basis in terms of ongoing advice, counseling and support.

The three tasks assigned the interviewer were:

1. Determine if the religious leaders had perceived problems of inter-relationships arising from the use of marijuana within family settings.
2. Determine what the religious leaders would advise various policy makers in the state to do regarding the present prohibitions against marijuana.
3. Ask the religious leaders if, in fact, there was an issue of morality involved in the use of marijuana.

The interviewer went through the debriefing process, and this section consists of the consensus of those reports.

The first interview session involved a Roman Catholic priest in his late fifties, in a small suburban community on the outskirts of the metropolitan area. The community was growing, and is still partially rural, while becoming suburban. The priest has a reputation in the community for being a conservative and credible community leader. He has held several civic positions and was involved in a number of civic activities. He was also chiefly responsible for ministering to a sizable congregation.

The priest indicated he had never observed a child-to-parent family problem relating to marijuana use. He stated that he feels close to most of his congregation, and that if such a problem existed it would have been shared with him. He felt the use of marijuana in the community is something that did not show up, or perhaps is not extensive. The only marijuana problems he had been exposed to occurred some years before and were among young married couples where one individual, usually the husband, smoked marijuana and the wife did not. He felt it was usually an issue that could be resolved if the relationship was strong enough. He did say that on occasion, emotions ran quite high, and that on at least one occasion a woman had threatened to leave her husband and the home unless he stopped using marijuana. He believed that marijuana had been a focal point of inter-family disagreement on one occasion.

In general, his perception of marijuana's impact on the community in terms of personality problems or family problems was an introspective assessment that the drug played a small but negative role in the community.

Regarding public policy, the priest simply stated he could offer no meaningful advice except that he hoped the legislature and other policy makers would make law with compassion in dealing with those who use marijuana, and he specifically hoped that "no permanent record would impair the career development of those that use the drug." Finally, he indicated he did not feel the community was ready to see the drug legalized.

He felt there was no moral issue involved in using the drug for recreation. When the interviewer expressed some of the theological dogma he felt might put the use of marijuana within a moral perspective, the priest simply said "no" and indicated it was really stretching a point to bring marijuana use into the moral dogmatic arena.

The second individual interviewed was also a Roman Catholic priest, but this time a younger priest in his mid-thirties, from a rural Minnesota area. This particular priest has a reputation among the mental health professionals in that community as being a true resource in working with younger people. This individual had been deeply involved

in community problems and ministered to a small congregation of his own. The interviewer noted a deep interest on the part of the priest, and encountered a barrage of questions regarding how the interviewer and the organization he represented felt about the use of the drug. There was an obvious desire for information regarding the characteristics of marijuana, and he appeared enthusiastic when he was assured he would be sent some information involving marijuana.

The interviewee indicated he had observed no family problems from the use of marijuana in his community. He stated he had observed no problems involving marijuana use among married couples, young or old, or between children and their parents. There were a number of problems within his congregation, but they simply did not relate to marijuana use.

Regarding public policy, the priest felt he was not qualified to comment on it, except that he felt the community was not ready for legalization.

In terms of marijuana as a moral issue, the priest said there was no strictly religious or moral issue involved in the recreational use of marijuana. He indicated that obviously excessive use of anything was unwise, but that unwise behavior did not make something immoral.

The third individual interviewed was a Methodist minister in a northern Minnesota community of approximately 20,000. He was 50 years old, and has a reputation for being active in community affairs and involvement with a number of community-oriented human service projects.

The minister indicated he had seen problems involving family and marijuana use some years before, but the last case he had been involved with was in 1972. In the past several years no one had contacted him regarding marijuana use. He stated to the best of his perception, the use of marijuana has simply been internalized to some degree, and although people are using it, they simply are not talking about it, at least not to him.

Similarly, in terms of the community that he is part of, he did not see it as a threatening or a serious problem. In discussing the problem he had observed several years before, he stated parents were angry, younger people were angry, and the country was generally angry. He felt parents were trying to control behavior of younger people who simply would not accept it, and marijuana more often than not was a visible point of conflict as opposed to an instrument that caused division.

He has never been asked to counsel young married people where one party was using the drug, and the other party was not.

Regarding public policy, he stated that as a religious leader he was reluctant to comment on another profession, but felt that legalization seemed like a big step to him, and he felt the community would be more accepting of a prohibition within humane limitations.

The fourth individual interviewed was the senior minister of a Protestant church located in a metropolitan area suburb. He was a middle-aged, former military chaplain who had successfully run for several public offices, but now has returned to work in the church and is primarily involved in administration and counseling.

He stated he had never once observed a family problem with the use of marijuana. He was supportive of decriminalization but not legalization, and felt the state should do everything possible to discourage marijuana's use while eliminating punitive punishment which in itself had a "pathology."

When asked about marijuana as a moral issue, he was ambivalent, but stated that unless the drug is proven to be harmful, there is no level of theological morality buried in its use.

The fifth interview involved a 30-year-old metropolitan area Episcopalian priest. He had a reputation in the community of being an individual responsive to community needs, and was active in youth work both within and without his religious organization.

He stated that he had observed family problems between children and their parents who disagreed regarding marijuana use, but the intensity of these arguments had been minimal, especially in recent years. Beyond these he had observed no particular problems surrounding marijuana use but he was certain the drug was being extensively used.

When asked what he felt would be appropriate in terms of public policy, he stated he was against legalization, but not supportive of harsh penalties.

The final interview was with a middle-aged rabbi, who was the principal religious leader of a metropolitan area temple.

When asked if he had been aware of problems among the temple's congregation relating to marijuana use, he stated that from interaction with the youth of the temple, he was certain they used marijuana, but he had never been approached by a parent upset about its use by their children. He suspected that the family unit had either coped with marijuana use to the point where it was condoned by the parents, or the young people had successfully hidden their use of the drug. Whatever the reason, he was certain it was being used and yet he had seen no problem manifesting a social, familial or physical nature.

Regarding public policy, he stated that he had changed his position three times within a few years. Until the 1970's he had been supportive of punitive criminal justice prohibitions toward use and distribution of marijuana, but in the early 1970's he started to believe that the users should not be punished, but that "dealers" should be punished. (He defined dealers as those who had at least one pound and were distributing it.) Now he believes that while the use of marijuana should be discouraged, criminal justice punishment may not be appropriate in dealing with marijuana at all.

As with the other religious leaders, he did not feel that marijuana constituted any more of a truly "moral" issue than the use of alcohol or tobacco.

In summary, it appears that among the selected Minnesota religious leaders, there is a low level of perceived problems involving marijuana use. Similar to the assessment of some of the general practitioners there were allusions to 1972 and before as the period of time when there was a good deal of stress surrounding the marijuana issue, but presently it was not seen as a debilitating factor in the lives of their congregations or in the community for which they were responsible.

As one religious leader suggested, the family is beginning to cope with marijuana use.

Although generally unsure of commenting on proposed policy changes, the religious leaders seemed to be supportive of less punitive penalties but not supportive of legalization. They seemed to observe the use of marijuana as separate and apart from true issues of morality.

Impressions of 118 Urban, Suburban, and Rural High School Students from Throughout Minnesota Regarding Marijuana Use.

The purpose of this investigation was to ascertain the extent of marijuana exposure in various Minnesota schools as well as to determine whether there is a significant variance between marijuana exposure in Minnesota's rural, suburban or urban areas. It was also an attempt to assess the attitudes of the various school students regarding marijuana, including whether or not the students felt there was an "organized" system of marijuana distribution within their particular school, and their impression as to whether or not their school was "realistically sensitive" to drug use and abuse within the school structure. An attempt to get some indication of the respondents' degree of sophistication regarding drugs was also attempted by asking the students whether or not they believed alcohol was a drug.

The information was obtained from male senior and junior high school students who belong to a religious/fraternal organization. A one-page questionnaire was submitted to them at one of their meetings, asking how they perceived the use of marijuana among other students within their school structure. The sample was not representative in that it constituted only males belonging to a particular fraternal organization. It was representative in that it drew upon young Minnesota students from rural, urban and suburban Minnesota and was probably especially reflective in that the form was administered by elected leaders of that fraternal organization. We also hoped for extra levels of openness in responses because within that organization there is a code of honesty and social concern which may have been especially prevalent in terms of conduct during a conclave of that organization. It was generally our assessment that the answers were more likely to reflect the true attitudes of the students, in that the information was gathered within an organizational setting based on fraternity and honesty. The conference was held at the Mankato State College Campus in the late summer of 1974.

Of the 118 students, not one student indicated there was no marijuana use in their school setting. Only 14% of them actually felt it was as low as 10%, and 22% felt that at least 25% of the students used the drug. The largest assessment of use was 44% of the students who felt that approximately one-half of the student body had used marijuana. A little less than one-quarter of the students felt that use of the substance was up to 90%. By weighing the percentages in terms of the response number, it appears that the general belief of the urban students questioned was that in the urban school systems approximately 43% of the students have been exposed to the use of marijuana, while in the suburban setting, the number was slightly higher, at 44%. In the rural setting the students registered 48%. The variance between the three structures is not significant, but it probably is significant that all three had relatively similar perceptions as to extent of use.

The general consensus would be that in roughly the eighth through twelfth grades in Minnesota, slightly less than half of the students have used marijuana at least once.

A little less than half (41%) of the students questioned felt that lawful use of marijuana should be allowed, while a little over half (56%) felt that lawful marijuana use should not be allowed. Three percent were undecided.

When the 118 students were asked if there appeared to be some sort of organized system of marijuana distribution in their school, 55% agreed there was. The word "organization" was never defined and, in retrospect, it may have been better to simply speak of some sort of consistent structure for marijuana delivery. Regardless, it does seem that over half the students felt there was some consistent delivery system for marijuana within the school structure. A little less than half of the students felt there was no "organized" system, and 3% were undecided.

When asked whether they felt alcohol was a drug, 90% or 106 of the 118 students indicated they felt alcohol was, in fact, a drug and 10% stated they felt it was not.

When asked whether or not they believe their school structure to be "realistically sensitive" to issues of drug use and abuse, 52% agreed the school system seemed to be responsive, and 42% felt the school system was not responsive, with 6% not responding.

Judging from the responses in this survey of 118 male urban, suburban, and rural junior and senior high school students, exposure to marijuana within the Minnesota public school system is extensive and a little less than half the students have at least experimented with it themselves. A little over one-half the students feel that their school systems are adequately responsive to drug issues and meet them realistically, and slightly over 50% of the students believe there is some sort of "organized system" of marijuana distribution within their school structure. A little less than one-half the students feel that marijuana use should be lawfully allowed.

It is interesting to note that out of the state's approximate population of 15 to 19 year olds, 415,021,¹ this study estimated exposure to marijuana use of at least one time use to be 46%, or 190,910 (at least of those in school settings). Naturally, this is only an extrapolated estimate, but in comparing it with the 1973 data ² which showed only 64,439 "regular" users in that age group, it would seem that out of those who try marijuana in that age group, only about one-third go on to use the drug with some degree of regularity.

Considering both the Incidence and Prevalence Study data and the results of this survey, a profile emerges of a state-wide school structure where marijuana is an institutionalized factor, with consistent exposure to marijuana.

Morbidity Relating to Marijuana Use as Perceived by Public and Private Minnesota High School Level Educators.

Through both the 1973 Incidence and Prevalence Study and from our review of 118 students, it seems apparent that marijuana is a part of the Minnesota school structure. In an attempt to assess exactly what was occurring in the state's school structure, we trained an interviewer who had previously interacted with a number of educators and who had a clear understanding of chemical use problems in the school system. He was to conduct interviews with individuals in selected school systems who appeared to have a good deal of information regarding how marijuana use is impacting the school structure. The face-to-face indepth interview system was based on the assumption that Minnesota's high school educators would become sensitive to any serious problem that was affecting a large number of students.

The most significant issues pursued involved the kind of casualties observed in the school system which seemed to relate or be related to the use of the drug. We also requested from the teachers their impressions of the best possible public policy regarding community use of recreational marijuana.

The selection of the school was within pre-designated geographic areas. Once in the school setting, the interviewer was directed to seek out those educators with the best understanding of what was occurring in the school structure regarding the drug in the school. We were sensitive to a natural, organizational defensiveness and a possible structural attempt on the part of the schools to be seen in the most favorable light. During three separate debriefing sessions, an attempt was made to analyze and label self-servicing organizational responses both in terms of who was selected to be interviewed by the school structure and responses to questions. Two of the debriefers with experience in organizational effectiveness consulting felt comfortable in determining which responses were truly reflective of marijuana's impact on the state's school structure.

¹1970 Census for 10 to 14 year olds, State Planning Agency.

²The 1973 Minnesota Incidence and Prevalence Study, adjusted to age category.

For the selection process, the interviewer was given seven geographical areas; then public and private school listings for selecting the schools to be interviewed. Once in the school, the interviewer simply asked the administrative authorities to speak to an educator who was sensitive to drug-using problems within the school structure.

The interviewer first met with a teacher who was reputed to be the "drug sage" of a southern Minnesota community of approximately 20,000. This teacher was employed in the public school system and had a reputation, among other teachers and the principal of the school, as being open to the problems of students and responsive to the issues of concern in the school structure. She also had a reputation for understanding the characteristics of much of the drug use in the school structure.

The teacher indicated that approximately one-quarter of the high school students used marijuana with some degree of regularity (two to four times a week) and about half the students had at least tried the drug.

She attributed the use of the drug primarily to the influence from nearby urban areas that were developing, and the influence of a local college system near the community. She felt that the use of nonalcoholic drugs in the school's community was simply a factor of "error variance." (The term "error variance" is ours, not hers, and refers to a concept in organizational and institutional management involving the assumption that a changing environment is not so much responsible for something happening as an erratic influence or something that is foreign and alien and not really related to the organization or institution.) She felt that in themselves the students did not have drug problems, but because of influence from other systems and cultures, they were more or less being infected from the outside. In her opinion the real casualty involving the use of marijuana was that students would go to the drug when they had problems as opposed to dealing with the problems. She felt that when the students were observed using marijuana, the use pattern usually denoted the student must have problems.

She drew a dichotomy between alcohol use by students which she said was simply "social" and marijuana which seemed to be a device to withdraw from facing problems. She went on to point out that, in terms of casualties, she had observed a number of students who had used quite a quantity of marijuana, and she felt there were "no dangerous physical or medical effects" but again, it was a crutch for dealing with problems and denoted people who had problems in other areas.

In terms of public policy, she felt legalization was unwise and felt the present law was appropriate. When the interview was about to terminate she reflected for a moment and pointed out to the interviewer that she had observed no disability regarding "marginal use" of the drug; by this she meant experimentation or infrequent use.

The second school contacted was a private parochial school for boys located in the metropolitan area. The administrator of the school felt that one of their staff members had particular sensitivity to drug problems. This individual had recently completed a doctoral thesis on the use of drugs by high school age students and had done much of his work surveying that particular school structure. This individual felt that he could document from his surveys that approximately one-half of the senior students used marijuana occasionally. By "occasionally" he was referring to ten times within a six month period. He also felt that 85% of the seniors in the school use alcohol with some degree of consistency. He made his assessment of alcohol use without solicitation from the interviewer, but seemed to feel that it was significant in putting the issue of marijuana in perspective. Unlike the first interviewee, this individual did not feel that the use of marijuana was simply a factor of error variance or a sporadic windfall created by a few personalities. Rather, he felt that the use of marijuana was part of the general American culture which endorsed the use of chemicals to alter moods.

When specifically asked about the casualties he had observed resulting from marijuana, the only major disability he felt might relate to marijuana use would be bronchial problems. The interviewer observed that this individual seemed to have recently reviewed much of the literature relating to marijuana's potential medical problems.

He apparently felt there was a difference between purely medical problems such as bronchial problems and the kinds of social-emotional problems that may occur because of the use of the drug. He pointed out that it was his impression (from observations more than literature that he had reviewed on the topic) that there may be some personality developmental problems when adolescents are exposed to rather consistent intoxication by the use of virtually any drug, certainly including marijuana. Although he had been around many young students whom he felt were using marijuana with some consistency, he was unable to more clearly define this "personality developmental problem."

In terms of public policy, his opinion was that legalization would be inappropriate simply because the drug would become institutionalized in the community on a larger basis. Once "Madison Avenue" capitalized on the pleasures surrounding marijuana and began marketing them, a situation as frightening as the alcohol problem in the community might arise.

The third school was a smaller high school in a north central Minnesota location. The interviewer was told by the principal that there was no real drug "sage" in this school system. The individual interviewed was selected by the principal. In debriefing the interviewer, it was felt that this situation was one in which the principal had likely selected a staff member who would be reluctant to criticize the school or the administration.

The debriefers agreed that this may have been the case. However, we felt we should regard the interviewee as being a credible and representative example of school administration policy since the administration itself had selected the teacher for the interview.

When asked about the number of students in the school structure who had used marijuana, the instructor indicated there were "very few" and that students didn't use marijuana in the school because the school administration followed the "military model" which she defined as a battery of thorough, firm, and fixed administrative policies enforced to the letter.

When asked about casualties she had observed among those few students that did use marijuana, she felt marijuana constituted a problem of morality as well as a problem of health, and that it is used by people who have "weaker moral characters" than others. She seemed to indicate that marijuana was something sought out by individuals who had problems and in turn, it gave those individuals problems especially in terms of poor health. Several times the interviewer requested specific instances regarding issues of morality that the instructor felt marijuana portended. The instructor was unable to define specific moral problems, simply that from her observations, marijuana both created and denoted problems of morality.

Her impression of the marijuana use occurring in the school was that it was one of simple error variance, or an erratic happening that is not an inherent part of the school system or the young people enrolled in the school.

She explained that many people from the "east" or from the "city" (metropolitan area) are moving into the abandoned farms and around the lakes in the area for the summers and are bringing with them three things or concepts that she feels are dangerous and carry over onto some of the local young people:

1. New ideas about education that are radical.
2. Political ideas that are alien to the community.
3. Desires for immoral pleasure such as marijuana use.

When asked about specific physical disabilities she felt could relate to marijuana use, she said that she knew of some individuals who had been arrested and incarcerated and suffered at the hands of the criminal justice system for the use of the drug. She also knew some individuals who had used marijuana and had gone onto the use of other drugs. She pointed out that this kind of activity was not frequent in the school structure and that as long as the school system kept its firm and "decent administrative posture," she doubted if there ever would be an extensive problem.

Specifically, the interviewer asked this instructor if marijuana actually seemed to cause problems, or if people who have problems start to use the drug. The interviewee explained that among young people whom she had observed, both occurred. She felt that people used the drug when they had problems and developed problems of a physical and moral nature when they used the drug. She did not point to specific health issues, but stated her impression that a person who used the drug simply had physical health problems.

The last point she made during the interview was that she felt marijuana should still be illegal although she was aware that quite often young people use the drug to flaunt the law and to flaunt social policy established by those who had the right to make social policy.

The fourth interview was conducted in a suburban school system in which again, the principal indicated there was no real expert in the area of drug use within the school structure. The suburb was near the metropolitan area and considered a middle-class suburban setting. The interviewer felt the teacher was selected basically on her availability as opposed to any special sort of selection. She estimated with reservations that 20% of the student body experimented with marijuana and indicated that because of the community and the administrative school structure, there was little marijuana use on a consistent basis. She attributed this to what she termed a "strong moral value system" entwined in the school structure.

One of the debriefers pointed out that the interview situation may have been one in which the interviewee was concerned with the image of the school structure. Another felt that regardless of the sincerity or sensitivity of the interview situation, it was still an example of the way in which problems are perceived and dealt with by the institution, and may be reflective of how the organization really deals with issues.

In discussing the threatening characteristics of the drug, the instructor indicated the drug probably has both negative and positive characteristics and can be abused. For instance, in terms of use patterns in the school, younger individuals (perhaps sophomores) tend to use marijuana more than seniors who seem to have matured beyond needing a "crutch." When asked to expand on this, she mentioned a relationship between the need to use marijuana and one's ability to interact on a mature level. She said that one of the threatening characteristics of marijuana was that, as a social drug, the community had no rules or norms established regarding its use.

She stated that because performance is diminished when the drug is used, marijuana may have some relationship to a lowered motivation.

In her opinion, people who have problems quite often go to use of the drug in terms of escape. As she had watched the less intelligent students progress in the school system, they seemed more likely to go on to the use of the drug. On this specific issue, the point was made during a post-debriefing meeting that the present school structure in the western world is one which places a good deal of pressure upon poor achievers. He indicated that this kind of pressure traditionally nourishes more frequent escape through chemicals.

When asked about specific casualties, the interviewee simply referred to motivational problems and the drug being denotive of immaturity.

She was aware of the health hazards and through the popular press had heard of potential and inherent hazards in marijuana use.

Regarding public policy, she stated that laws are appropriate. To the best of her understanding they were geared toward "coming down hard" on those who produced and distributed marijuana illegally and made a business out of dealing with illegal drugs.

The fifth interview was with a teacher in an urban area school setting in the metropolitan area. This educator was regarded as having a good degree of sophistication and sensitivity to use of drugs and other social problems among the student body. The teacher himself denied his role as a "sage" and lamented the poor level of understanding many educators have regarding the characteristics of drug use.

It was his opinion that approximately 10% of the students may be experimenting with the drug, but he doubted if more than 5% of the students actually use the drug with some consistency. He pointed out, however, that generally teachers have a poor understanding of these activities among the student body and he simply was not certain of his figures.

In terms of casualties, this educator felt that poorer students use the drug but that it also seems to "reinforce marginal scholastic achievement."

In terms of casualties, beyond problems and motivation, he felt that there were medical complications with the excessive recreational use of any drug. However, he also pointed out that on occasion, some social drugs do provide value and recreational benefit.

When asked about public policy, he was reluctant to comment on other institutions, but pointed out that the greatest concern of the school structure was to prevent the drug from entering into the formal school system. Because the formal school structure had a community contract to provide education, intoxication in any form during the school session is unacceptable. He did point out that to the best of his knowledge, the present marijuana law was appropriate since it seemed to prevent a great many people from using the drug.

The sixth interview involved an inter-city urban school setting. The teacher was one of the younger teachers and was generally considered to be quite popular with the students. She did not regard herself as a "drug sage" but had a reputation, according to the principal, for being responsive to student needs and student problems. This teacher felt that 20% of the students used marijuana regularly and about 50% had tried it.

She believed that marijuana affected school work negatively; because her perceived role in the inter-city school setting was one of simply trying to get as many of her students as possible through the high school process, she viewed marijuana as an "enemy" to that process. She had observed that "when kids use the drug, they don't work hard."

This teacher felt that moderate "responsible" use of marijuana can be potentially positive because it seemed to be a symbol of change; and in the inter-city school setting, striving for change is usually positive. However, she also felt that its use can cause motivational problems among students. She was uncomfortable in commenting on changes or alterations in the law itself.

The seventh interviewee was an educator from rural central Minnesota who was reputed by the principal as responsive and sensitive to the problems of the students. This teacher also indicated that she was not a drug expert, but she was comfortable in commenting on how young people responded to drugs in her school system.

She felt 75% of the students had experimented with marijuana and that 50% use it on a regular basis. She pointed out that there seemed to be no particular pattern regarding the use of the drug. Students who use it were not particularly weak or strong, competent or incompetent.

She commented that if she was pushed on making some sort of assessment, she would say that among those students who use it there seemed to be more of a curious or questioning nature which she viewed as a sign of maturity.

Regarding casualties, she stated that she had observed some individuals who used the drug in a reckless way, and this seemed to create some problems in communication or mature interaction with other students. She stated that the use of marijuana in the community was natural and simply part of what is happening all over the country among high school students. She did not see it as an erratic variance that occurred in her school system because of several personalities, but rather as part of a national trend among young people.

Regarding public policy, she stated that, unfortunately, the law and the severe prohibitions serve to keep discussion of the appropriate use of marijuana underground so people cannot honestly judge how to use it in a non-threatening way without potentially abusing it.

She stated that she was against legalization simply because it would allow increased use. She felt that regular exposure to marijuana may create unfavorable personality changes in some people. She pointed out that personality changes relating to marijuana use are "artificial" and in that sense somehow unnatural.

In the end, and after some reflection, she humorously stated that she was totally supportive of severe penalties against the use and distribution of marijuana but was not in favor of anyone receiving penalties for using and distributing marijuana.

In the debriefing sessions that followed the interviews, two inferences evolved.

First, the major perception at variance among the educators was the organizational concept of the school being "invaded" by some outside erratic variables causing it to have to deal with marijuana problems. Some educators believed that these erratic variables were coming from outside the school structure, while others believed that the school institutions and drug use were both part of the community, and so the two factors simply had to interface. Both factions perceived that the school institution has to deal with drug problems on an ongoing basis.

Secondly, it seemed clear that although there were allusions to potential medical problems, many of the educators believed that marijuana somehow inspired or related to a lack of motivation or ability to produce among the students. Some educators clearly stated that marijuana use denoted poorer students and that the poorer students are more likely to become involved with marijuana. As previously mentioned, one debriefer pointed out that if a teacher defines a student as poor, it is likely that student will be under a certain amount of pressure, typically considered a casual factor for recreational drug use. It is also obvious that some teachers actually believe marijuana creates a state of decreased motivation. One of the more interesting interviews involved an inter-city educator who viewed marijuana as an "enemy" because it interfered with her effort to get "her kids through school." It is clear that a substantial portion of those teachers interviewed clearly believed that marijuana is somehow related to a lack of motivation among students. It was perceived by many as a real threat to scholastic achievement.

On some occasions, other issues of health or morality were tied into marijuana use or the educators' perception of marijuana use but these were sporadic and there was little consistency involved with these perceptions. One of the debriefers indicated that in his opinion, assessments on this level were not drawn from experience but from generalized professional or public belief concepts.

In terms of assessing public policy regarding marijuana, again there was quite a bit of variance, with the preponderance of the educators being supportive of criminal penalties addressing the use of the drug but with many of them simply stating that they were not sure or did not feel qualified in making a recommendation. One teacher humorously remarked that the only fair thing for policy makers to do would be to both legalize and criminalize marijuana simultaneously.

One observation regarding the perceived public health threat of the drug is prominent by its omission throughout interview responses. Namely, if deleterious behavioral effects from extensive marijuana use among high school students are prominent, then the disabilities would soon surface under the scrutiny of educators. The interviewees did not, however, supply substantial evidence that the students appeared endangered by marijuana use. However, reduced motivation and lower scholastic performance was noted by many of those interviewed to correlate with marijuana use.

The Opinions of 197 Minnesotans Professionally Involved or Voluntarily Working with Chemical Dependency Problems in Minnesota.

The assumption is made here that those individuals in Minnesota who professionally or voluntarily work with drug abuse problems on a local level are able to provide valuable input in terms of the characteristics of marijuana use in Minnesota. Therefore, questionnaires were administered to 197 individuals, professionals working primarily in the area of drug and alcohol problems in Minnesota, in an attempt to ascertain the answer to basically one question:

How does recreational marijuana use in Minnesota influence the community's health?

In 1974 a convention was held in Duluth, Minnesota. This convention is an annual affair attended by those individuals in the State of Minnesota who are involved with or deeply interested in recreational drug problems. Staff members who interface with local level chemical dependency problems from both private and public institutions attend, as well as a few interested citizens who are sensitive to and voluntarily work with drug and alcohol problems in their Minnesota community.

Taking advantage of the assembled professionals working in the area of drug and alcohol problems in Minnesota on a local level, we developed a testing instrument, a two page survey, which was distributed to those in attendance by individuals administering the convention. A copy of the survey and the responses is included in the first appendix of this report.

In interpreting the survey, those responding were divided into three categories. Those individuals who considered themselves to be professionally involved in chemical problems on the level of counseling or care were placed in the first category. There were 125 individuals who considered themselves in this sector of chemical dependency activity. Another 21 individuals attending the conference considered themselves professionally involved in either the training of professionals or training the public about the dynamics of chemical problems. Thirdly, 51 of the individuals were involved in other professions, but on a volunteer level, and were involved or interested in problems of chemical abuse in Minnesota. Many were members of private groups such as Alcoholics Anonymous, or volunteer counseling groups.

A more specific review of the various types of the activities the respondents were involved in is included in the tabulation of the answers in this report in the first appendix.

One of the first questions asked was whether or not the type of drug an individual uses is related to community damage inspired by reckless or recreational drug use. A number of individuals working in the area of chemical abuse believed that regardless of drug type, an individual bent toward recreational drug problems will have problems. Obviously, it was important to determine if these people actually felt that specific drugs related to specific problem patterns in attempting to determine their impression of marijuana's threat or danger to the Minnesota community.

Among those involved in educating or training, 67% felt there was, in fact, a difference between the type of drug and the degree of reckless or community-threatening behavior. 75% of the counselors also felt that the type of drug was related to the degree of threat, and 47% of the "other" group (generally lay counselors) also felt there was no difference.

It would appear that among those professionally involved in chemical dependency problems, there is a strong feeling that the type of recreational drug used does relate to the level of community threat.

Those who had answered that certain drugs were inherently more dangerous than other drugs in terms of the community, were then asked to rank-order the drugs in terms of the problems they observed the drugs creating. The question pointed out that we were looking for "internal" characteristics such as arrest or pressure from others who simply disagree with a drug-taking pattern. We were also asking not to label the drugs as to which drug in itself was more dangerous, but which of the drugs being used seemed to be causing the most problems.

To appropriately rank-order the drugs in a cumulative fashion we weighed all those listed as most dangerous with the numerical sum of 5, those next listed as 4, those third listed as 3, those fourth listed as 2, and those listed fifth as a 1. We then attached the numerical "weighing figure" to the number who responded in that particular category.

The rank-ordering was as follows:

<u>Trainers</u>	<u>Counselors</u>	<u>Others</u>
Alcohol	Alcohol	Alcohol
Barbiturates	Barbiturates	Barbiturates
Amphetamines	Amphetamines	Amphetamines
Marijuana	Marijuana	Opiates
Opiates	Opiates	Marijuana

After a good deal of introspection in the formulation of the question, we did not list hallucinogens such as LSD, because a number of individuals believed marijuana to be a hallucinogen, and we felt it would simply skew the responses in an unmanageable fashion.

There was a good deal of similarity in terms of how the three groups rank-ordered the amount of problem each drug seems to be causing. Remembering that about one-third of those responding actually felt there was no relationship between drug type and community threatening problems, it appears that clearly alcohol is the front runner in terms of creating problems.

Drug use patterns involving barbiturates and amphetamines ranked second and third. Marijuana ranked fourth among the professionals, including those involved in training and counseling, and ranked last among those not professionally working with chemical problems in Minnesota.

In the 1973 Incidence and Prevalence Study of drug use commissioned by the State Planning Agency, it appeared that there are approximately 2800 individuals in the State of Minnesota who use heroin with some consistency. It is likely that the simple lack of frequency with which individuals working in treatment encounter those who use opiates allows for the low ranking of opiates as a Minnesota public health problem.

Once having placed some sort of rank-ordering for marijuana as a drug problem, we tried to isolate an actual figure for percent of encountered cases which relate to marijuana use alone, and secondly, in which marijuana appears to be some sort of factor, along with other drugs.

The process for determining these figures involved asking the respondents to explain what percent of their observed problems related to marijuana, then expressing that percentage in terms of one of six categories. After accumulating the responses, the response number was multiplied by the midpoint of the categories, and the resulting figures were summed and divided by the number of responses.

Using that process, those professionally involved in training believe that approximately 5.8% of the observed chemical problems related to marijuana alone. Among the counselors, the figure was 7.6%, and among those in the "other" category it was 5.6%.

The same process was used in assessing the number of cases where marijuana seemed to be involved with, or was at least some sort of factor, in the chemical problems. Among the trainers, the figure jumped from 5.8% to 10.8%; among the counselors from 7.6% to 10.7%; and in the "other" category it fell from 5.6% to 5.5%. Obviously, the figures in the "other" category are interpreted with caution. It should be noted that 24% of the "others" simply did not feel able to respond to this question, and indicated it was impossible for them to determine any relationship.

Working only with the figures of those professionally involved in chemical problems on a training and counseling basis, it appears that marijuana somehow figures into approximately 10% of drug and alcohol observed problems while as a sole entity creating a problem, it subsumes a little less than 7% of the total chemical problems observed or addressed by the professionals.

After determining exactly what percent of an observed problem marijuana seemed to constitute, we attempted to validate if, in fact, marijuana was a "public health threat" in the opinions of those responding. We did not define the term "public health" other than pointing out that we were excluding criminal justice response or negative attitudes of other community members.

Seventy-one percent of those involved in training felt that marijuana was a public health threat as did 58% of those involved in counseling and 48% of those in the "other" category. We then asked those who felt it was a public health threat, exactly how it constituted a threat. In other words, what dangers did it portend for the community. The two most common responses involved the perception that marijuana led to other drug use, and that there was some sort of potential for psychological damage or impairment.

Specifically, among the trainers who thought marijuana did constitute a public health threat, 58% felt the threat involved predisposition to use other drugs, while 32% felt there might be some sort of potential for psychological problems. Among the counselors 51% felt it related to other drug use, while 26% felt there might be some sort of psychological problem. Fourteen percent believed there would be a physical problem, and 9% some sort of other problem.

In the "other" group, 37% felt marijuana use led to other drugs, and 39% thought it created a psychological problem. Thirteen percent believed it lead to physical problems, and 11% felt it lead to other problems.

Clearly, most of those who felt there was a public health threat did not consider physical damage to be nearly as significant as some sort of psychological damage or impairment. Among the professionals over 50% felt marijuana's greatest threat related to inspiring other drug use.

To make certain these figures are not misinterpreted, it should be remembered that we are referring to only the percent of those who feel there is a public health threat. Therefore, when we speak of 58% of the trainers and educators stating that marijuana's danger is that it leads to other drugs, we are speaking of 58% of 71%, or only about 41% of the total group questioned. The important point here is not to determine whether a vast number of the respondents believe marijuana leads to other drugs or psychological problems, (in point of fact in all cases, the clear majority does not believe this is the case) but

an attempt to determine the most often perceived negative characteristics relating to marijuana use. Clearly, the most salient characteristic involves the perception that marijuana may lead to other drugs followed by the perception that there is some sort of psychological impairment or damage.

The final question involved the respondent's perception of the present criminal justice response to marijuana possession. The present law was defined as a misdemeanor which accrues to a "small amount" of marijuana, and it was explained that there is judicial discretion allowing for less severe penalties on a case-by-case basis. In other words, the most lenient characteristics of the present statute were encompassed in the question asking the value of the present criminal justice response. A few felt the laws were not punitive enough; 19% of those involved in training, 13% of those involved in counseling, and 4% of those in the "other" category. Some approved of the present laws; 24% involved in training, 34% of those involved in counseling, and 27% of those in the "other" category. A slim majority, consisting of 57% of those involved in training, 53% involved in counseling, and 69% of those in the "other" category feel the present criminal justice response is too punitive.

Morbidity Relating to Marijuana Use in Minnesota as Perceived by Minnesota's Area Mental Health Center Chemical Dependency Coordinators

In Minnesota, the principal coordinator of care and intervention in the area of drug and alcohol problems is the area mental health center. These 26 corporate bodies are charged with the delivery of care in the area of chemical dependency, ranging from administration and being responsible for detoxification centers in providing counselors and drug and alcohol education programs for the community. We selected an individual involved in chemical dependency coordinating for an area mental health center in Minnesota to serve as interviewer. The interview of the chemical dependency coordinators was seen as an integral part of this review process.

While the other professionals interviewed and surveyed would, we felt, observe problems that occasionally arise within their particular sector of work, the mental health centers are the primary institutions responsible for detecting and ferreting out community problems in the area of chemical abuse. As opposed to detecting problems incident to, but peripheral to their work, chemical problems in Minnesota are the work of the coordinators.

Because we performed seven interviews, and there are only 26 mental health centers in Minnesota, the confidentiality of the interviews was an issue in the information gathering process. Hopefully, we can maintain anonymity by not describing the community characteristics of the mental health center coordinator interviewed. In other words, if the individual was a mental health center chemical dependency coordinator in an urban metropolitan area, there are really only four individuals who could be responding. Therefore, the information that would indicate the geographic area or community size of the area for which the chemical dependency coordinator was responsible has been deleted.

The interviews were structured to assess the types of casualties from marijuana the coordinators had observed, and specifically to isolate characteristics of those casualties. This was not principally an attempt to assess the impressions of the mental health center coordinators regarding marijuana as a substance, but to record their professional opinion regarding what had happened to their community because of marijuana.

Specifically, the three major interview topics were as follows:

1. What is the nature of casualties from marijuana that have been observed; how many, what kinds, what frequency, etc?
2. What trends have been observed regarding marijuana use over the past few years in the community?
3. What marijuana problems in the community are not observed or responded to by the mental health centers or other helping institutions that serve the community?

The first individual interviewed stated that the basic type of casualty he had observed involved scholastic problems among students. He frequently observed young people in high school or junior high school settings who used marijuana that had problems getting through school. There seemed to be some sort of drop in scholastic ability which was positively related to marijuana use.

Secondly, a set of observed problems revolved around cleavages developing in families, not around marijuana, but with marijuana often as a symbol. By this he seemed to mean that family members would observe children using marijuana and take that as a sign that they had somehow failed and, realizing this symbol of hostility, he perceived young people often used the drug as a symbol of defying parents. He also stated that quite often young married couples had problems involving marijuana. Usually the wife came to the mental health center and indicated that marijuana was creating a family problem, or in some cases, both husband and wife used marijuana and the mental health center coordinator saw this as negatively affecting the marriage.

In terms of trends, the interviewee stated that people using the drug did so at increasingly younger ages. At least those he came into contact with using the drug were of younger ages. Those individuals he saw who were in their mid-teens or younger, using marijuana, often seemed to be having problems in other phases of their life. Those young adults he observed who were in their late teens or mid-twenties using marijuana seemed to have considerably fewer problems fitting into and working with their environment. The coordinator stated that individuals in the community were simply learning how to use the drug in a way that did not negatively affect their life.

He stated that in the last two years there definitely were younger people using the drug in the community who were being seen by the mental health center staff. He hypothesized that possibly this was because the mental health center was hiring younger staff and these people were attracting younger people who had problems.

The interviewee summed up his perception of the problem by stating that the people his office saw who used marijuana often had problems but he also pointed out that virtually every person they see has some sort of problem. He was reluctant to state that marijuana actually seemed to cause problems. He wanted to make the point clear that in mentioning scholastic and family problems he was only pointing out the characteristics which he felt typified those individuals who came to the center needing help, who also happened to use marijuana.

Regarding problems in the community, he believed law enforcement structures in the community were having difficulty enforcing the laws simply because so many people are violating them, and that the real problem was within the school institutions where school staffs were simply frustrated in dealing with marijuana and did not in actuality know how to cope with its use.

Finally, in terms of the extent of use, he stated that a recent survey in his area had shown that 43% of the students had used marijuana at least once. He was not certain about the adult population. He felt he was sensitive to virtually all institutions in his area where people came for help in the area of chemical dependency and if the data regarding the number of students who used the drug was valid, then it seemed to him that only a few people who use marijuana have problems, those people who "tried to build a life style around its use."

He indicated that while he perceived problems with individuals who he knew to use marijuana, he was not certain of a cause and effect relationship.

The second interviewee was in an organizational situation where the mental health center only interfaced with those individuals who were brought in by recommendations from the court. He stated there were few self referrals for nonalcoholic drug problems in his area. This individual pointed out that recently in his community, law enforcement officers had simply stopped making arrests for marijuana so he observed few marijuana cases anymore. He indicated that back in the early seventies there was more of a controversy surrounding marijuana use.

Of the individuals he did see who seemed to be using a lot of marijuana, there was often a "motivational problem," also financial problems, sometimes family problems, and almost always scholastic problems.

When asked if he felt that marijuana use actually inspired the other problems, he stated he did not know if marijuana caused the problems or was incidental to them.

When asked about the extent of community use he said there was widespread use among younger people in spite of the fact there had been a revelation in terms of younger people turning to alcohol recently. He is seeing younger and younger people because of marijuana problems but indicated this may be because the police force is simply motivated to apprehend only younger people using the drug. It should be pointed out that in this particular mental health center's structure, young individuals apprehended with drug problems are not usually taken through a court setting, but turned directly into various types of treatment or counseling programs.

The interviewee stated his impression of community use trends was that the general community was using marijuana to a greater extent, but that the greatest increase was among the junior high school population.

The third individual interviewed responded to the question involving marijuana casualties by stating that in the mental health center whose drug and alcohol program he coordinated, they were simply too busy with alcohol problems to have much time to work with marijuana users. He went on to point out that the only time they encountered marijuana users was when they were arrested by the police department and brought through the local detoxification service. He admitted a degree of uncertainty in assessing the marijuana use in his community, but he stated that it would seem to him that younger people were leaving marijuana and turning to the use of alcohol. He pointed out that in his community the use of alcohol was especially institutionalized and now with a younger drinking age, it was more available to younger people.

It seemed to him that recently the law enforcement in his community had made great strides in eradicating illegal drug use with the help of the State Bureau of Criminal Apprehension. There had been several large scale arrests in that community within the past year and the use of illegal drugs seemed to have subsided considerably. The interviewer asked if, in fact, it was possible that they were simply seeing less because people using marijuana were being more careful. Upon reflection, the coordinator agreed that may be the case and he went on to say that it is possible that someone who is using an illegal drug in a community that is aggressive in trying to alleviate illegal drug use through law enforcement would be reluctant to go into a formal government mental health center setting and admit to illegal activity. He did make the point that to the best of his knowledge, they had never observed any clients dealing in marijuana or in any other illegal drug.

When asked what was occurring in other institutions in the community he pointed out that the school structure in his community had poor communications with the mental health center system and he was unable to comment about how marijuana use might or might not affect school room settings or the scholastic ability of those who use the drug.

Regarding trends, he indicated that marijuana use might be decreasing but alcohol use, especially among younger people is increasing at a much more rapid rate and because of the active efforts of the police force he feels marijuana use has either gone underground or to some degree been lessened.

This coordinator felt that because of some dynamic personalities within the law enforcement office and support from BCA in his particular community, marijuana use was either being driven underground, or simply stopped.

An interesting point regarding this particular interview, was that the detoxification service in the community, initially established to coincide with the repeal of public drunkenness for individuals inebriated with the use of alcohol, is serving as a point where police actually take individuals they find intoxicated on marijuana.

The fifth individual interviewed made it clear that his mental health center dealt with many young people who had problems and it was his impression that when one deals with a number of young people between the ages of 14 and 22 who have deviated from the norm to some extent, you are simply going to encounter a number of marijuana users. In explaining the problems these younger people seem to have he gave the following listing:

1. Scholastic ability.
2. Dropping out of many activities normally associated with "healthy" juvenile involvement in the community (band, sports, etc.).
3. Parental problems--in that parents were fearful of the drug's use and reacted in hostile ways toward their children when they discovered them to be using marijuana.
4. Those using the drug did not take an active part in a normal social life and seemed to have problems with inter-personal relationships.
5. A tendency toward general lethargy, or laziness which he had not observed himself, but which had been reported to him by many teachers whom he had found reliable in accurately diagnosing the characteristics of individuals who have problems.

In summary, his office was actively involved in working with young people who apparently were readily admitting their use of marijuana. Their problems seemed to center around a lack of motivation and hostile reaction to the use of the drug by other close members of their family.

He made it clear that there is another category of people using marijuana whom he saw in the mental health center and could be easily termed casualties. This group was smaller, and their "casualty" involved the fact they had been labeled by other institutions because of their involvement with marijuana and were more likely to be observed and reprimanded than other young people by law enforcement officers, welfare agencies, teachers, etc. His point was that because of the use of marijuana in ways or places where it becomes known to the public, the official institutions often provide a sort of "self fulfilling prophecy" by more or less prophesying that the young person will develop negative or misanthropic behavior.

Finally, the coordinator pointed out that in terms of casualties he becomes involved with a number of what he termed "professional upper class families" who observe their children using marijuana and bring them into the mental health center for observation, treatment or reprimand. Rarely is some sort of pathology or negative characteristic observed other than the fact that there seems to be an inter-family communication problem. The parents are simply observing the young person using the drug and assuming that there must be some sort of physical or mental problem.

Regarding community problems, this coordinator felt the most severe problem was the untenable position in which law enforcement was placed in terms of having to live within a "double standard" of enforcement. Specifically, the law officers virtually could not pursue an arrest of everyone whom they felt may have involvement with marijuana and having a law that is rather openly violated and which physically cannot be enforced, provides a morale drain on law enforcement organizations. It simply makes them less effective in protecting the community.

Secondly, he felt the family was being threatened because parents could not relate to the use of nonalcoholic drugs by their children, and the result was the weakening of the family institution.

In ranked order of community threat, he felt the third problem involved the use of marijuana on a daily basis by a small percentage of the high school students. He felt this clearly did negatively affect their scholastic ability. He also estimated that approximately 60% of the high school students had experimented with marijuana but only a small percentage went on to use the drug on a consistent basis.

The interviewee made it clear that the mental health center was not responsive to many individuals who needed help because of the use of illegal drugs and if marijuana was creating a problem among a number of users many would not come into a government setting for help.

Regarding trends, this chemical dependency coordinator felt that more young people were now being observed by sensitive mental health institutions because a profession had evolved in the science of chemical dependency and the institution was now better able to deal with problems, so they were seeing more. He felt there is a need to demystify the falsely-lauded positive effects of marijuana use.

Many people actually believed they could drive better while they were using marijuana or that it helped to produce more meaningful relationships. He stated that there is a whole underground litany of the values supposedly relating to marijuana use which should be dispelled.

The sixth individual interviewed stated most of the younger people involved with marijuana who came to the mental health center setting were referred to them by police officers, or had been observed by other formal institutions, (welfare, schools, etc.) to have problems that seemed to revolve around drug use. Quite often these cases did involve marijuana. He explained that some individuals actually came to the mental health center complaining they had observed problems in their life which they felt related to marijuana use. These problems were usually in three categories:

1. Performance problems in school, (scholastic)
2. Inability to function appropriately during a work setting.
3. Marriage problems, or problems of inter-personal relationships.

Another grouping observed by the mental health center staff regarding marijuana were people who had been seen by police officials, and the court had asked some assessment as to the defendant's potential threat to the community.

The coordinator pointed out that in virtually all cases he observed, individuals who are using the drug also used alcohol or other drugs in addition to marijuana.

In terms of community trends, the coordinator felt that there still are a few heavy users, although their numbers seemed to be dwindling. (He defined heavy use as someone who uses the drug four times a week or more.) Among heavy users, he observed a high incidence of "non-productivity" and family problems. Beyond these dwindling numbers of heavy users, the coordinator had a rather positive perception of what was happening in the community. He commented that they were observing marijuana being used exclusive of other psychedelic drugs. He pointed out that at one time in the history of marijuana use in his community, people who used the drug felt they had to dress in bizarre ways, stare at bizarre posters, and use other psychedelic drugs, such as LSD. He stated this began to phase out in the 70s, and the psychedelic drug world no longer typifies the use of marijuana; or marijuana use no longer culturally forced one to reject the rest of society. He did believe that those in official institutions whether it be law enforcement, the school system or the welfare structure, are learning to understand and pick out those that they feel have problems revolving around drug use. Sophisticated discrimination of what causes a drug problem beyond simple possession of an illegal substance is allowing the "system" better treatment resources.

In terms of actual use, he stated that many of the younger people still use marijuana but the drug is being used in modest quantities and not toward an obliterated state of intoxication. To illustrate this point the interviewer offered the analogy of someone using beer to highlight or complement his enjoyment of watching a football game as opposed to simply being "hung up" on enjoying the intoxicated feeling of being "drunk" on beer. Generally, he was perceiving an optimistic community trend involving a sophistication of both marijuana users and the responding community institutions.

During the seventh and last interview, the chemical dependency coordinator pointed out that he had never once observed a problem solely related to marijuana in his many years as a mental health center coordinator and counselor.

He had seen people who had problems who used marijuana, but never a problem where marijuana use was the only problem. Usually, marijuana was used in conjunction with pills or alcohol and they produced some sort of dependency, but he was skeptical of marijuana alone being able to create a problem.

He indicated that people can quite honestly become dependent on any pleasant feeling, including the feeling marijuana gives them. However, he again pointed out that marijuana has never been observed by him to alone create a pleasant feeling upon which someone has become dependent.

Most of the people whom he did see had a "communications problem" and among those who used marijuana there was almost always a dislike or distrust of authority. He observed that quite often people are in their 30s but still see themselves members of the "fighting and frivolous younger generation." To them marijuana symbolized youth and a sort of anti-establishment liberty. To this extent marijuana denoted immaturity.

In discussing the kinds of individuals he had seen who had problems involving marijuana, he stated that quite often there are family problems causing the breakup of a marriage and that one of the individuals use drugs in a different way creating a serious point of frustration. Sometimes the drug is marijuana, but it seemed that the drug was simply an issue of argument, something solid that could be pointed to, amid a general unwholesome atmosphere or feeling surrounding a family's inter-relationships.

In his experience he saw this developing more among highly disciplined families where the father often had an unyielding and authoritarian stance within the family. It appeared to him that somehow the use of marijuana by the children became a subtle statement of independence.

He also observed that "under achievers" seemed to be using marijuana; or possibly marijuana creates "under-achievement." Somehow they seem to be related.

In terms of trends, he had seen an increasing number of younger people who were involved with marijuana over the past few years, but he feels this is because the local drop-in center which formerly counseled younger people has been closed.

In his opinion, marijuana should be legalized, "if for no other reason than simply because it can be easily equated with alcohol and should be more rationally dealt with by the community."

Before summarizing the findings, it is important to understand the variations in roles assumed by different Minnesota mental health centers.

Like all public institutions, some tend to be more responsive to meet the changing demands of the community than others. When the mental health system was initiated in Minnesota it was generally accepted that to be effective, the organization had to be closely responsive to the community. In most cases, for instance, county commissioners play a much more significant role in regulating the specifics of a mental health center's program than federal grant contract administrators or state mandates. On a day-to-day basis, the mental health center is designed to be sensitive to the needs of the community. As evidenced throughout the interviewing process, some of these institutions view their role in a different way from others. This seems to account for the fact that within one state different individuals holding basically the same jobs in different mental health centers, observe different problems, trends, and crises.

The mental health center structure operates on the community's personalized needs. The fact that some mental health centers only see clients who are brought to the detoxification centers by the police for using nonalcoholic drugs and that others are seen in a community light that allows nonalcoholic drug users to come to them for voluntary counseling, should not be used to judge the value or sophistication of the mental health center. Both are responding to the problem in the terms most acceptable to their community structure.

If it is understandable that in taking different organizational roles, differences in perception would be observed for any community phenomena. In such a situation variation of perceived problems and solutions is understandable and similarities take on added significance.

Summary

Because the interviewer himself had been involved in a mental health center setting for some years and had been actively involved in the evolution of Minnesota's programs to address chemical problems, he was given a good deal of leeway in performing the interviewing. Similarly, we asked him for an assessment of what significance he felt arose from the interviews. The following is his assessment.

Do people with problems go to the drug; do people who use the drug have problems; or do only those people who have problems come to the attention of our mental health centers and thereby have marijuana use identified with problems?

1. The mental health centers do see people who have problems and many of those people who have problems also use marijuana; but there is no demonstrated, casual link between the use of marijuana and the observed problems.
2. Generally, the chemical dependency coordinators and counselors in the mental health centers have observed two repeated problems among those who they came into contact with who were using marijuana:
 - a. Work output was deteriorating. (In some cases this was defined as scholastic ability or simply the ability to produce in an employment setting.)
 - b. A lack of a general interest or involvement, "the dropout syndrome."
3. There were some generalized problems observed with the family as an institution involving a decreased ability to have sound healthy relationships. Whether marijuana created this problem or helped to create it, or was simply a rallying point around which an argument or general frustration could be vented was and is still a question.
4. Law enforcement agencies are generally working with the mental health centers in a combined system and the mental health center drug coordinators generally had a good deal of empathy for the frustrating situation placed upon law officers.

While a general atmosphere of concern and suspicion hangs over the opinions of the interviewed professionals regarding marijuana use, there is little in the way of documentation that marijuana use is disrupting the Minnesota community in terms of social or health problems. In several of the interview blocks, it was mentioned that problems, both social and physical, had been reputed to have occurred in the late 60's or early 70's, but they were no longer evident in the community.

The physicians had observed no real problems from the drug's use. A few religious leaders had observed family problems centered around whether or not the drug's use was acceptable, but they did not seem numerous and it appeared to most religious leaders that the family unit had somehow coped with the drug's use. The educators had mixed feelings, but did generally indicate that its use seemed somehow related to a lack of motivation.

The principal institution that dealt with the state's drug and alcohol problems on a local level, the area mental health center, as could logically be expected had been exposed to more problems and had some definite ideas regarding what marijuana use seemed to be doing within

the community. They too generally felt that heavy marijuana use was somehow related to a lack of motivation, but were unsure if marijuana caused it, if poorly motivated people gravitated toward its use, or if the only people who came to their attention had problems, were less motivated than others, and used marijuana, allowing them only to see clients with problems who also use marijuana. Whatever the interacting dynamic, marijuana use and lack of motivation seem somehow positively related. From surveying 200 drug problem professionals in Minnesota, the extent of the problem in terms of numbers seems quite small.

A profile emerges of a community where a new recreational drug has been institutionalized among a substantial minority of the population. At first, in the late 60's and early 70's, the use of the drug created social and acceptance problems that threatened families. Then the use pattern became more accepted although a general suspicion prevailed.

The only problem specifically mentioned with significant frequency seems to relate to the less than normal motivation of some observed heavy users. There was some sporadic mention of personality problems developing from excessive marijuana use, and some limited concern that those who use marijuana may someday start using other drugs. Predictions for the future regarding marijuana were often positive, both in terms of marijuana use patterns and the sophistication of community institutions addressing those who do use marijuana and have problems.

CLINICAL INFERENCES REGARDING RECREATIONAL MARIJUANA USE

This review of clinical research inferences regarding marijuana is not expressly for the purpose of building an academically pure defensible "case." Rather it anticipates a document that first presents an honest assessment of the present state of the art in terms of clinical observations and health regarding marijuana use; and, secondly, is able to communicate effectively with those who are charged with making and carrying out public policy. The most recent and credible reviews of the various health aspects of the drug marijuana were themselves reviewed and assessed for this report. Naturally, someday there will be more and better information but presently this report constitutes an understandable review of the health dangers of marijuana.

One of the problems in evaluating the medical literature on marijuana is that an astonishing percentage of the content is anecdotal rather than experimental. Another problem is simply that there is too much information for any 20th century system to interpret and integrate all relevant publications. If one considers the review of a phenomena conducted by a single scientist (or a small team of researchers), then reasonable policy decisions based on their conclusions sometimes seem obvious, clear and correct beyond question. However, when the reports number in the thousands and represent extensive work by tens of thousands of usually but not always competent people and, considering that conclusions from interdisciplinary sciences must be synthesized in making decisions, the process of analysis involves a great deal more than looking up and answering a few clear, crisp questions.

The assessment that follows could not pretend to evoke immediate and obvious conclusions. Various readers approaching this emotion-laden and powerfully image-ridden issue with different psychological anticipation or "mind sets" will assess the content quite differently. However it might be interpreted, in the following pages there is a reasonable and useful overview of the available significant information in the medical and pharmacological literature regarding the health risks of marijuana use. A person truly interested in a basic but honest comprehension of public health danger of marijuana will find guidance here, as will the person simply seeking information to support an already firmly solidified position, either "pro" or "con." The latter use of this review is unfortunate.

Proof is the most difficult problem in the field of the logical foundations of mathematics. Proof in the field of medical research is generally based on the repetition of observations under rigorously controlled conditions in various laboratories or hospital settings. It is quite commonly true (and has been especially so in connection with marijuana) that an experiment reported by one group of researchers comes out quite differently when another group attempts to duplicate the experiment. This does not necessarily mean that the "duplication" was an "approximation" and the differences in method were reflected in the results. These kinds of unresolved issues go on for many years before the experimental work becomes so refined and definite that the results are sufficiently similar to be widely accepted as proof. The impact of recreational marijuana use on health is such an issue.

When results must be interpreted in terms of effects on the human organism, all sorts of complications are involved. Often the reported results of observations are so confusing and conflicting that accumulating enough clear evidence to feel reasonably sure of the answers takes decades. Even where experiments have been replicated many times with entirely similar results, it has not been uncommon for a new discovery, a factor unaccounted for in all the previous experimental work, to turn the evidence entirely around, and the old "proof" is discarded in favor of a new belief. Consequently, uncomfortable as it may seem, medical convictions are largely based on "probable inference," "faith," "inductive reasoning," and so on, but rarely proof beyond the shadow of a doubt.

Understanding these concepts and learning to adapt to the acceptance of qualified decisions based on inclusive evidence is valuable in understanding this issue. In matters of public health this is awesome but nevertheless a tolerance for ambiguity must be developed in understanding marijuana use and health.

Some Important Medical and Pharmacological Bases

1. There are a great many factors having to do with the internal and external environment as well as the past history of the organisms that modify the effect of a given drug.
 - (a) The extent to which a drug is distributed over the areas upon which it acts is related to the dimensions of the areas. Consequently, drug dosage is often defined in terms of body weights, i.e., so many units of the drug per pound of body weight. It is often true when the dosage is to be adjusted over a wide range of body dimensions that the surface area of the body is a more closely correlated denominator than body weight.

(b) Age is another factor that is not widely understood. The difference in dosage between children and adults is not merely a weight or surface area relationship but has to do with the differences in metabolic rates (speed of chemical changes) of a developing organism in contrast to that of a mature organism. Unfortunately, the ideal dose in terms of childhood, per se, particularly with regard to young children (under five years) has been established for only a small percentage of the drugs available.

Older patients also may require different dosages because of various metabolic changes that occur with aging.

(c) There is little difference in the dose-related considerations involved with males versus females. A notable exception is during pregnancy when there are differences in body weight and surface area for the woman and a period of critical susceptibility for the developing fetus. A general rule relating to pregnancy and the use of drugs is that, especially in the initial periods of gestation (first trimester), it is wise to minimize the use of any drugs but particularly drugs that are fat soluble, such as marijuana.

(d) The route of administration is of greater significance than might be expected. Marijuana, for example, is generally taken orally or via inhalation of smoke. It is sometimes stated that its fat solubility makes it undesirable to administer intravenously, and indeed this route is not used generally. However, in an experimental setting tracer amounts of THC (with radioactive tag) have been injected intravenously. Information derived from such experimental work requires some qualification as it relates to drug intake by the more common routes. As an extreme classic example of the problem, the injection of caffeine intravenously in rats is known to result in tumors of the liver. This in itself is clearly a poor argument against human beings drinking coffee for breakfast.

(e) Time of administration is also a factor, especially with respect to meals. Also, time of day and seasonal variations generally influence drug response in animals and may extend to human use of marijuana.

(f) Hypothetically, there are undoubtedly other influencing factors but even when all known variables are taken into account, the effects of any drug can be determined only with respect to a specific patient under controlled conditions.

2. There is no drug so singular in its action that one and only one effect results from its administration. Morphine is most often referenced in terms of analgesia but it has many other effects, e.g., cough suppression, sedation, constipation, nausea, histamine release, etc. The effects of marijuana should be considered at least as diverse and variable.
3. Some drugs are available in highly purified form (morphine is an example) but many are complex mixtures of organic and inorganic molecules. Marijuana is in the latter category. Even today, it is likely that some constituents have not been identified.
4. The chemical structure of a drug is not necessarily an adequate clue to its effect on the organism. Drugs that are very similar chemically might have entirely different pharmaceutical properties, and drugs with entirely different chemical structures may produce essentially similar results in the organism. We know precious little about the fundamental mechanisms by which most drugs affect the organism and it is quite possible that many outwardly similar effects may be the consequence of entirely unsuspected mechanisms.

Actual Pharmacological Mechanisms

Although work in the field of pharmacological research has expanded rapidly and is currently intensively pursued in many countries, the results to date have tended to complicate the picture rather than generate a better understanding. We simply don't have much in-depth understanding about pharmacology in general, and the biochemical actions of marijuana in particular.

Substantial portions of the principal components of marijuana and synthesized versions of these chemicals are metabolized in the organism relatively soon after their introduction by whatever route, and there is some evidence that these metabolites are the actual psycho-active chemicals. In one study, delta-9 and delta-8-THC metabolites were introduced via intracerebral injection in mice, the 11-hydroxylated THC metabolites were 15 times more active, and

even injected intravenously were twice as potent as the original chemical structures. There is considerable additional information indicating that these metabolites are the agents of direct pharmacological action in the organism.

The complex spectrum of factors relating to dosage versus response has been mentioned. In practically all animal experiments, including rodents, dogs and even the primates that seem mostly closely to approach human drug responses (Rhesus monkeys), small dosages are essentially depressant but there are often sporadic episodes of hyperactivity. Even with doses large enough to produce catatonia (the unresponsive state of schizophrenia), there may be excessive reactions to audio and tactile (touching) stimulation. There are also some curious reports that delta-9-THC has synergistic effects when combined with such drugs as barbiturates and amphetamines, in the one instance emphasizing depression and in the other producing increased stimulation, respectively.

At least comparable complexity is evident in electroencephalographic (brain wave) observations on the effects of THC, especially with respect to the development of tolerance. In studies of electrocorticograms concurrent with continued administration of marijuana extracts as well as synthesized THC, some of the initial changes in electrically observable phenomena continued while some seemed to develop tolerance and return to the premedication observations. Various overt and unusual behaviors observed in such diverse species as dogs, pigeons, rats, monkeys and mice slowly reverted to standard pre-drug behavior after continued exposure to the drug.

Solubility

Summary: Because THC (tetrahydrocannabinol) and similar chemicals are highly fat soluble, they diffuse through cell membranes, enter rapidly into brain cells and are retained in the organism for longer periods than chemicals that are principally soluble in water. This is believed to result in cumulative effects when doses of THC are repeated and is generally regarded as undesirable.

An outstanding biochemical characteristic of marijuana is the fat solubility of its most biologically active ingredients. One of these, THC, is thought to be the principal active agent. It is highly soluble in fat and thus may be a vital factor in its long term effects on the organism. It is often intuitive for the layman to think that water solubility facilitates a chemical in diffusion throughout the organism. In some respects, this is true, but water solubility also facilitates much more rapid excretion via the kidneys. Fat soluble compounds, on the other hand, are excreted or metabolized

much more slowly. This tendency to be retained in the lipid (fatty) membranes may result in gradual build-up of concentrations when doses are repeated faster than the body can "clear" the fat soluble compound. In the brain exists what is commonly termed a "blood brain barrier" which prevents certain substances from diffusing into the brain and cerebrospinal fluid, yet facilitates others. The details of this phenomenon are quite complex and not fully understood but the important point regarding marijuana is that lipid (fat) solubility is a crucial factor in diffusion of any chemical from the blood into the cells of the brain and/or into the cerebrospinal fluid (the water cushion protecting the brain and spinal cord from shock). The significance of the latter is that any substance found in the cerebrospinal fluid, as THC is, apparently was not excluded by the blood-brain barrier.

Another significant factor is the long term retention in the organism of molecules that are fat soluble and thus penetrate the cell membrane. Chemicals that are essentially water soluble are generally dissipated out of the system much more rapidly.

Scientists, writing or lecturing on this subject, have mentioned DDT as a typical example of chemicals that are highly fat soluble and thus are retained in the system. One writer, for example, indicates that marijuana's fat solubility is greater than "industrial solvents" and is exceeded only by substances "like DDT". The critical comparison, however, is not the extent of the solubility, but the effect or action of the compound on the cells, tissue and total organism.

The subjective effects of smoking marijuana by human beings reaches a peak in about fifteen minutes, begins to decline approximately forty-five minutes later, and in three to four hours is gone. A number of interesting hypotheses can be developed with varying degrees of risk potential to the individual.

When THC is injected intravenously the concentration in the blood has a half-life of only 30 minutes (half is gone in 30 minutes, three-fourths by one hour, seven-eighths in 90 minutes, etc.). During that period, some portion is undoubtedly diffused into the cell structures of various organs or metabolized (transformed in the energy transfer process) resulting in a variety of break-down products. The second half life period of THC in plasma is fifty-six hours and doubtless results from retention in lipid (fatty) areas and slow release into the circulatory system. The report of experimental work appears to indicate that a great deal of the THC is diffused during the first half hour into cell structures of the brain, lungs and other organs, then slowly released and changed into water soluble (polar) derivatives over a period of more than a week after initial ingestion. Finally, the water soluble derivatives are excreted in the urine and feces. Thus the cumulative effect appears substantial but not limitless.

Toxicity

Natural derivatives of marijuana require various types of suspension media in order to administer them by different routes, and in view of their essential insolubility in water, this is an important consideration. The choice of solvent or emulsifying agent has a definite effect on the toxic qualities of the chemical combinations. It is notable that the ratio between pharmacologically effective dosages and dosages lethal to rats and mice allows a considerable margin of safety.

No drug can be said to be entirely non-poisonous, and the toxicity of every drug is an important aspect of pharmacological studies. Dr. Julius Axelrod, Nobel prize winner for his work on drug effects on the brain, has pointed out that one of the fundamental principles in pharmacology is the amount of a compound or drug that enters the body. "You could take the most poisonous compound, and if you take too little, there is no effect. One may take a supposedly safe compound and if you use enough of it, it will cause toxic effects." Thousands of deaths from accidental overdosage of very common drugs occur each year. Intuitively, one expects the lethal dose of any drug placed in illegal categories to be a serious danger. With marijuana this may not necessarily be valid. Although a lethal dose for human beings probably exists, its quantity has not been determined. Extrapolation from LD₅₀ dosages (one that kills half the treated population) for animals indicates a lethal dose for human beings that is almost beyond the practical limits of deliberate drug intake.

Metabolites

It appears from analyzing the inter-related aspects of many different studies that the major behavioral effects ultimately result from cannabis metabolites rather than from the original inhaled or ingested compound. The specific structure of these break-down products of metabolic action on delta-9 and delta-8-THC varies with different animal species and undoubtedly accounts for some of the variations in results both in behavioral effects and physiological changes. The routes of excretion of the drugs also show considerable variation not only as a consequence of routes of introduction but also the variety of metabolites and their respective water solubilities.

Metabolic alteration of many drugs results in greatly lowered effective action, partly because the new compounds are less fat soluble and thus are less strongly bound to plasma and tissue proteins and hence less likely to penetrate cellular membranes. The principal

marijuana constituents may be transformed into as many as twenty or more metabolites (although they have been observed only in vitro), and a remarkable number of these remain active until further biochemical changes take place or until they are excreted in some form.

Studies in vitro indicate that prominent metabolism does not take place within the human brain structures. There is some evidence that delta-9-THC may first enter the brain directly and then, upon relatively slow release back into the bloodstream, is metabolized and reenters the brain in what may be the more chemically psychoactive metabolites. The relative psychological and pharmacological effects of delta-8, delta-9 and 11-hydroxy-delta-9 are not entirely clear but some observations indicate that their properties are slightly different and finally integrate toward a cumulative net result.

Experiments in this area on human beings are limited in many ways, including cost, appropriate physiological and psychological controls and, most importantly, moral and ethical reservations.

Dosage

A large percentage of the in vivo (in living organisms) laboratory investigations of all drugs are performed on laboratory animals such as rats, mice, hamsters, dogs and monkeys, and a great deal of useful knowledge is obtained in this way. But the importance of caution in the interpretation of such results in terms of human beings is absolutely essential. Unfortunately, the uninformed lay person is likely to interpret such results in terms of anticipating similar, if not identical, results in man. Marijuana produces bradycardia (slowed heart beat) in dogs and other animals, hence many assume that marijuana will slow the heartbeat of human beings. However, it is well known that in human beings, marijuana causes tachycardia (fast heart beat). No one really knows why either phenomenon takes place but the fact is readily demonstrable.

Another important reservation involves the magnitude of the dose. In essence, there is no simple rule of thumb for establishing drug dosage. Trial studies based upon laboratory animal results may not necessarily extrapolate to human results. Not only does the ratio of weight to surface area differ between small and large animals but the metabolic effects of biologically active substances may differ among species.

Finally, the dose given an animal in pharmacological experiments must be evaluated in terms of its application to human experience. Some (not all) investigations of dose-response in laboratory animals are

at relative dosages several magnitudes above those usually experienced in Western human consumption. In a sense, when we knew conclusively that tobacco smoke produced cancer in white mice we knew only that white mice shouldn't smoke tobacco and we could only infer other problems that might relate to humans and tobacco and conduct appropriate experiments from that point.

Trends in Human Dosage

It is important to differentiate between trends and occasional rapid changes in individual consumption of marijuana. In this connection, the rarely recognized but extremely important factor of "contrast" in human perception becomes apparent as a control mechanism.

Experience in other cultures throughout the world cannot be directly interpreted in any simple predictive way for the American culture. In most nations where some form of cannabis consumption has become an important factor, its significance has been related to the needs of a lower working class rather than the comparatively comfortable middle and upper middle classes that recently seem to have embraced its use in America. The expectations and interests of these cultural groups are different and consequently they desire, anticipate and achieve quite different responses to the drug. It is probable that the slow trend in all cultures is in the direction not only toward more widespread use but also a gradual increase in the customary dose. Thus, to some degree as a consequence of much longer exposure, the general average dose in most other countries is substantially higher than in America. On that basis, one might anticipate that the American users will gradually move toward a comparable higher customary dose.

Understanding and evaluating this probability involves several important considerations. First the experiential reaction is not a simple proportional factor but rather one in which a given incremental change in subjective reaction requires a proportionately larger incremental increase in the dose. As the dose increases, there may be a threshold above which the change is no longer quantitative but qualitative, where the experience becomes hallucinatory. Many users report some kind of forewarning, an almost intuitive sense that they are approaching an experience that they don't really seek. In some non-Western cultures, marijuana use may plateau at a dosage level substantially below the point where the experience commonly shifts from the level of a socially pleasant experience to something that rapidly becomes hallucinatory. However, this plateau level might stabilize at a dosage substantially higher than the current "average" in the Western world.

It is widely believed that tolerance for marijuana, in the sense of requiring increasing quantities for a satisfactory result, does not occur. The evidence is curiously confusing but a survey of much of the literature and supported by sample interviews with doctors and their patients in various drug clinics eventually clarifies the picture. The important point is that marijuana alters how one perceives and this alteration is interpreted by many as pleasure. The generalized phenomena seem to be as follows:

Marijuana use involves different and, at first, subtle subjective experience. Quite commonly the neophyte believes he is, quite simply, immune to the effects. Then, suddenly, within some special context, he recognizes a subjective reaction that is curious and new. It might be, for example, a typical distortion of the sense of time that is one of the peculiar marijuana phenomena, e.g., the hands of a clock move faster (for his subjective evaluation) than his experience predicts. Suddenly, he begins to sense other interesting and often pleasurable sensations that are outside his ordinary experience. In effect, he learns to understand and recognize the set of subjective experiences that are peculiar to his use of this drug.

As a consequence of this phenomenon there has grown up a widespread belief in "reverse" tolerance, i.e., that the experienced user is believed to require less rather than more marijuana to achieve a given desired result. From this, one might deduce that tolerance in the usual sense does not occur with marijuana; however, there is adequate evidence that this deduction is incorrect. Animal experiments clearly demonstrate that the dose required to replicate various physiological and psychological effects must be increased with continued use. This has also been true of a number of rigorous experiments with human beings. Thus, tolerance does develop with marijuana so that over a period of time an increased dosage is required to generate a specific end result. It may be that only during the early experiences encountered by the new and inexperienced user does apparent "reverse" tolerance occur.

On the other hand, the tolerance is not a regular dose-related response such as occurs with the morphine derivatives and the amphetamines. These may be exceptions but it appears clear that for the vast majority of users, a satisfactory dose level is achieved and remains quite stabilized for long periods of time. This may be related to the recovery periods that are available for the "weekend user" or even the daily user.

This question of tolerance becomes quite complicated in terms of the pharmacological knowledge pertaining to half-life retention periods;

that is, the span of time required for one-half of the active portion of the drug to be excreted or inactivated. It is known, for example, that under certain circumstances some of the marijuana constituents and/or their metabolites may not be excreted for a week or even longer. Thus, some medical writers have hypothesized that the user is under the influence of the drug for long periods after initial use, and the psychotropic effects may be cumulative and additive. At this time, almost all of these theories are interlaced with undocumented observations. It has been quite clearly demonstrated that the psychoactive ingredients are principally in the THC group but it is also clear that these chemicals are rapidly metabolized, and it is quite possible that the actual active principal(s) may be one or several metabolites. The THC group in original form is principally fat (lipid) soluble, which is the reason for its long term retention in the lipid structures of the organism. It is also possible that the lipid stores are slowly released and then metabolized into their psychoactive substances. Thus, the initial flow of metabolites (within minutes of ingestion or inhalation) may produce the first intoxication, yet subsequent slow release of the original chemicals may not generate sufficient quantities of the metabolites to produce observable intoxication. However, if the user retakes the drug the new metabolites might be additive with those appearing from slow release of the basic lipid soluble form retained from the previous use of the drug. It should be noted that the excretion via urine and feces is largely in the form of metabolites that are highly water soluble rather than fat soluble. At any rate, this cumulative characteristic, below the level of observable intoxication but fully capable of adding to the effect of successive ingestions of the drug, might also contribute to the phenomenon giving rise to some confusion about possible "reverse tolerance."

It should be noted that most of the reliable reports about the metabolites and especially their conversion rates to inactive (and excreted water soluble) products in human beings have been based on intravenous injection. These active principles that are essentially lipid soluble consequently do not readily lend themselves to intravenous introduction. For injection, special techniques and infusion methods are required. Consequently, users rarely, if ever, inject marijuana derivatives intravenously. Thus, although the experimental intravenous techniques have certain advantages of temporal reliability and repeatability, they do inevitably introduce questions regarding the applicability of results from specially prepared intravenous solutions with those of marijuana as conventionally administered (inhalation or ingestion).

Addiction

The word "addiction" and associated terms are widely misunderstood and misused, which leads to a great many semantic confusions among

the general public. In the sense that it may be associated with "habituation," then certainly it can be used in connection with marijuana or more precisely the intoxicated feeling that comes from marijuana use. Many people assume that the use of the term "addictive" in connection with any drug automatically categories it with opium, morphine and heroin. Because of the widely varying usages that have developed, these words do not have the strict kind of scientific definition that many people assume. Physical dependence and physical withdrawal symptoms are often descriptive of the term "addictive." Many people consider the word to refer only to drugs in which tolerance develops; that is, a dependence on increasing doses in order to acquire similar desired effects.

Most of the pharmacological criteria used to define "addictive" do not apply to marijuana. There are no presently documented physical withdrawal symptoms. If tolerance leading to escalated dosage develops, it is a small increment and there are suggestions reported in experimental human groups to reject escalation beyond a moderate level. The marijuana user seeks the sense of special elation, an essentially deonistic escape technique. While that characteristic may be true also of heroin use, there is no reasonable analogy between heroin dependence and marijuana preference.

Most physicians and counselors intimately familiar with the problems of dependency will agree that a large number of the difficulties arise in the personal, psychological characteristics of the drug user. A high percentage of people passing through the various clinics as patients fall into the "polydrug-using" nomenclature. These seem to be people who are used to "artificial" chemical mood alteration and abuse the chemicals (any chemical) because of a dependence on the mood.

One of the phenomena now appearing in mid-western juvenile morbidity statistics is a return from marijuana to alcohol, especially to cheap, widely marketed wine. In the 1973 Minnesota Drug and Alcohol Incidence and Prevalence Study, many Minnesota housewives were shown to be "addicted" to alcohol, valium, seconal, amphetamines and the like. The point is, for many adults the scientific drug is important. The only significant factor is escape from the real world. Among some, the most important factors involve experimenting with anything that promises a new experience.

There is no experimental evidence that marijuana use leads to the use of narcotic drugs as a consequence of either the physiological or psychological experience as such. It is certainly true that the use of any drug that must be obtained through criminal channels involves potential exposure to a drug sub-culture in which heroin and other illegal drugs are readily available.

It is not appropriate to discuss the ramifications of exposure to the drug sub-culture in this medical review. The only points to underline are that the marijuana experience is not simply a milder form of the narcotic experience and there is no physiological compulsion from marijuana to heroin use.

The most common confusion arises from articles in scientific journals, later quoted in the media, in which the positive relationship is pointed out between marijuana and heroin use. Certainly, the relationship between heroin and alcohol is higher, and milk higher yet. Whether or not the relationship is causal is unknown.

Effects on the Brain

The scientific literature cannot produce unequivocal experimental evidence that brain damage in human beings occurs as a consequence of using marijuana.

Two studies are cited as examples. The first determine that air encephalograms (brain X-rays after injecting air into the ventricular spaces) of ten chronic marijuana smokers showed enlarged ventricular spaces (normally small cavities along the center of the brain). To account for the enlarged spaces implies a complementary decrease in amount of brain tissue. The second experiment, by an independent research team, implanted electrodes into the brains of six living monkeys and recorded brain wave patterns before, during and after heavy exposure to marijuana smoke. Brain wave alterations continued for five days after exposure was discontinued. Furthermore, autopsy of two monkeys revealed minimal microscopic changes in cells from one part of the brain.

The ten chronic marijuana users in the first study may have experienced other factors contributing to the inferred slight brain tissue atrophy. All ten men had used LSD, some extensively; many were multiple drug users. Four had significant head injuries in the past; one had a previous history of convulsions.

The design of the monkey study also casts doubts on its extrapolation to humans. "Heavy exposure" of the monkeys to marijuana was equivalent to human consumption of thirty marijuana cigarettes three times a day for six months. Furthermore, as the monkey lung is 1/15 the size of that in the human, the concentration of smoke may have been 15 times larger than in human consumption.

Without proper control for these significant variables, conclusions relating brain damage to marijuana smoking remain highly suspect.

If it is eventually demonstrated that marijuana causes some brain cells to be destroyed, one might reasonably ask, how many--and where? No one knows. There are some twelve to fifteen billion brain cells in the average human brain. Some authorities estimate that after middle age most of us normally lose as many as 100,000 cells every day, and such a figure sounds frightening. A little calculation, however, demonstrates that this means a loss of less than ten percent in thirty-five years, say at the age of 85. This is not to suggest that even that percentage of loss is good, but it becomes clear that the problem of evaluation isn't simple.

In the pharmacological literature there is a great deal of material relating to effects on brain chemistry, and it was hoped that the early contradictory results that were obtained with marijuana extracts consisting of unknown mixtures and amounts of active compounds would be clarified when the synthetically pure analogs appeared. Unfortunately, more recent work with synthetic pure delta-9-THC has not clarified the picture substantially. The biochemical response to THC in the brains of different animal species is even more variable than might have been anticipated in theory. It has also been difficult to correlate behavioral modifications with biochemical responses. It is only fair to emphasize again that actual electro-chemical phenomena in the function of the brain are many steps removed from current understanding so any interpretation of effects associated with the introduction of foreign substances of any kind is almost entirely hypothetical.

It has been observed in experiments with radioactive tracers coupled to injected THC that substantial portions of THC and associated metabolites show up in subcortical areas of the so-called "old brain" (the areas associated with earlier evolutionary development). The amygdala ("old brain") is often associated with "pleasure" responses under conditions of self-administered stimulation. Electrical amygdaloid stimulation via electrode implants into laboratory animal brains has been used successfully as a reinforcement mechanism in conditioned reflex development. The correlation of THC collecting in the "old brain" and the observation that the "pleasure center" resides there also may be the basis for pleasurable responses to the recreational use of marijuana.

Electroencephalography

It was observed by electroencephalography that the introduction of THC by any route often produced observable changes in the wave forms recorded from the old brain areas. Specifically, there were brain waves from the hippocampus region that had much the same character as may be observed in the diagnosis of epilepsy. Brain wave analysis, of course, is still in the inaccessible-black-box analysis

stage and only the largely integrated results can be observed. Nonetheless, it is possible now and then to arrive at astonishingly accurate intuitive judgments when various parts of the puzzles come together. Curiously, no evidence of overtly observable seizures or convulsive-like outward behavior has been observed in connection with marijuana. The "meaning" of these so-called epileptoid and spike wave forms may be quite different from time to time. What is observed by even the most carefully placed microelectrodes is essentially an integrated field effect, the algebraic-sum-result of myriads of wave forms each of which, by Fourier analysis, may be shown as the flow of instantaneous rate of change from multiple sine waves. It is an extremely complex source from which to seek information. Paradoxically, it was observed in one set of experiments with baboons that cannabinoids can reduce seizures!

There have been a number of interesting observations via brain wave measurements regarding the effect of THC on sleep patterns. It has been indicated by a number of investigations that periodic episodes of rapid eye movements (REM) are associated with dreaming. Dream-like states are characteristic of reported marijuana experiences and the question of marijuana affecting so-called REM or dreaming sleep aroused interest. One of the problems with barbiturates and most other sleep-inducing drugs (Dalmane is a possible exception) is that they interfere with REM periods of sleep. The specific sleep pattern and periodic dreaming have been demonstrated to be important to psychic health. The results are interesting and lead to at least one unexpected deduction.

Marijuana was introduced orally for ingestion and EEG recordings were made throughout the night. Initial results showed that THC decreases the REM stages of sleeping. In contrast to other soporifics (sleeping pills), THC did not produce a REM rebound upon withdrawal, indicating much less interference with sleep patterns. Also, tolerance to THC effects occurred after several days use for both the REM and deep sleep stages.

As has been typical of many marijuana studies, especially with human subjects, a subsequent series of similar EEG monitorings of sleep patterns did not replicate the results. The THC was administered orally which, of course, delays absorption through ingestion processes and introduces unpredictable time lags related to digestive absorption. Also, in all dreaming conditions, the psychological set of the subject is a related influencing factor.

An unusual opportunity was presented by one patient in whose brain there had been implanted (for other reasons) deep-seated electrodes, especially in the septal region. This patient had a long history of

using various drugs. In other studies the septal region has been correlated with pleasure responses including some observations of penile erections in primates as a consequence of stimulation in associated areas. The use of alcohol, amphetamines, and tobacco did not produce similar changes in the EEG as recorded from septal-implanted electrodes. One can only speculate on the value of relating EEG monitoring to drug use.

Cardiac Effects

In human beings, the ingestion of marijuana causes the heart to beat faster (tachycardia). This condition, by itself, has no pathological clinical significance. However, it can be argued that patients with hearts that are diseased or otherwise overloaded should be warned that marijuana might add the increment producing cardiac problems. Thus, in the same sense that heart patients, without appropriate precautions, probably should not shovel snow or run to catch buses, they probably should not smoke marijuana.

Carcinogenic (Cancer-Producing) Effects

Test tube cultures of human lung cells exposed to marijuana smoke were shown to alter lung cell chromosomes and change DNA (chromosome "building block") synthesis. This was interpreted by one researcher as suggesting "pre cancerous" changes. The Jamaica Study did not present empirical (clinical or X-ray) evidence that exposure to marijuana smoke was any more contributory to lung cancer than exposure to tobacco smoke.

There is evidence that carcinogenic elements with similar dangers reported in tobacco exist in marijuana. The moderate marijuana user inhales the smoke from only an occasional marijuana cigarette. An extremely heavy user may smoke up to ten marijuana cigarettes a day. The tobacco smoker, however, commonly consumes two or three times as many tobacco cigarettes and thus may be at greater risk solely on the basis of inhaled tars and combustion products.

A contrary opinion holds that the marijuana smoker inhales more deeply and retains the smoke longer, putting that person at greater pulmonary risk than the tobacco smoker. The net effect perhaps balances out so that the pulmonary carcinogenic risks from habitually smoking marijuana are probably in the same order of magnitude as smoking tobacco cigarettes.

There have been arguments relating marijuana use to an increased incidence of emphysema, especially in younger age groups during years in which marijuana became popular. A possible correlation cannot be

ruled out but there is no evidence by which statistical significance can be based and there are numerous other coincidental conditions that seem at least equally reasonable, e.g., the general increase in atmospheric pollution.

Lethal Possibilities

Reasoning from available solid evidence, the danger of death appears negligible, qualified by certain special conditions described below.

There are no existing clear-cut techniques for making a diagnosis of cannabis intoxication as the cause of death. Of the few reported cases, most involving injection or attempted injection, the reasoning upon which the diagnosis was based is circumstantial and confounded by other possibilities. The conventional method for certifying death internationally has many limitations. In one case, a man died from a subdural hematoma (a massive blood clot on the brain) as a consequence of hitting himself on the head with a hammer, allegedly because of intoxication from marijuana. This certainly could be accurate but naturally the casual relationship is tenuous. In most cases, the diagnosis of causation is similarly open to question.

It is generally believed in the medical and pharmacological communities that there is no significant danger of death directly from an overdose of marijuana. In any case the ratio between the conventional large dose and the massive dose that might conceivably cause death is vast. Expressed in pharmacological terms, the dose sufficient to produce effects in 50% of individuals (ED₅₀) is many times lower than the dose predicted to be lethal in 50% of individuals (LD₅₀).

As with other elements of the study of marijuana, this issue is one that some credible scientists are at variance with, yet most credible research would indicate that death is not a danger with normal recreational marijuana use among normal healthy people.

There are possibilities that should not be overlooked regarding the potential danger to patients with impaired performance of the heart. It has been clearly demonstrated that marijuana causes tachycardia in man and evidently the extent of tachycardia from marijuana use is dose-related. It is reasonable to infer that an already overloaded heart might fail under the additional load imposed by marijuana. It should, however, be borne in mind that as tachycardia has no clearly demonstrated clinical significance in healthy human beings, the potential mortality hazard must be hypothetically coupled to a poorly functioning cardiovascular system.

While it is not impossible that a sufficiently large dose of THC might be lethal (it would almost have to be ingested orally or injected), it is a certainty that marijuana is an exceedingly poor choice for anyone who is attempting suicide.

Potential for Birth Defects

There has been a great deal of controversial reporting of experimental evidence regarding the effects of marijuana during pregnancy, on the embryo, the fetus and the newborn, or laboratory animals such as rats, mice, hamsters and monkeys. In view of the extensive contradictory reporting with regard to animal experiments, it becomes difficult to deduce reasonable inferences regarding effects on humans.

In the third annual marijuana report from HEW to Congress covering 1973, the following was reported:

One of the most important findings this year has been to confirm in animal studies that synthetic or natural marijuana appears to have no serious deleterious effects on pregnancy, the fetus or the newborn. While such evidence cannot categorically rule out such effects on humans it is nevertheless reassuring.

On the other hand, there have been reports such as Dr. Kolodny's statement before the Internal Security Subcommittee (1974) in which he describes observations by other researchers involving various severe birth abnormalities in rats and other animals who have been subjected to marijuana or synthetic THC by various routes. Dr. Kolodny himself qualified his feelings because of the lack of truly well-controlled studies in connection with fertility and associated problems.

It is true that marijuana derivatives, natural and synthetic, as well as their metabolites, have been shown to cross the placental barrier during pregnancy and hence have direct access to the fetus, but at least in humans there is no reliable evidence that damage has been caused by marijuana use.

Dr. Craig Whitehead, who has been actively involved in drug addiction problems for almost a decade and is currently directing his full time activity to nonalcoholic drug detoxication and associated problems in the Haight-Asbury Free Medical Clinic in San Francisco, stated in a personal communication that although a large number of his patients use marijuana, many of them women during pregnancy, he has never encountered a congenital abnormality of any kind.

It is also important to bear in mind, in considering much of the experimental work with animals conducted by pharmacologists, that the researchers are generally seeking to produce teratogenic (developmental embryonic abnormality) effects with maximum dosage. Again, complications are involved in relating any animal dosage (especially lethal or near lethal dosages) to human dosage.

Sexuality

There is subjective information indicating that using marijuana reduces sexual drive. However, with experienced marijuana users, desire for sexual intercourse is increased as the level of intoxication rises, until above a threshold of being "very stoned" when sex drive diminishes. In a survey of sex enjoyment among 85 students from both Haight-Asbury detoxification units, it was found that "marijuana was used deliberately to enhance sexual pleasure." 75% of the marijuana users indicated that marijuana has enhanced the quality of their sex immensely. There is some indication that the effect is central, that is, acting on central nervous system structures, rather than acting on the peripheral sex structures, and reversible upon terminating use of the drug.

Testosterone is the most significant of the hormones that control the sex characteristics of males. In the well-publicized studies of Dr. Kolodny, it was demonstrated that in chronic marijuana smokers the testosterone measured substantially lower than in non-users, proportional to the amount of marijuana smoked.

The production of testosterone takes place in the testes and is monitored by signals from glands in the central control system. There is a standard test by means of which the ability of the testes to produce testosterone can be measured with great reliability and accuracy. Dr. Kolodny observed that in test subjects where the levels of testosterone had dropped substantially, coinciding with the ingestion of marijuana, the ability of the testes to generate the hormone was not reduced. It was also observed that several of the men participating in the test exhibited sperm counts below normal, and the sperm counts for some of them were so low as to indicate sterility. The probability of impregnation is, of course, primarily a function of the numbers and motility of spermatazoa in a single male ejaculation which normally numbers in millions.

These observations were made on subjects that were not hospitalized, nor was the quality or quantity of marijuana used regulated by the experimenters. Consequently the results were reported with caution. A more recent report from Mendelsohn and Meyer of the Drug Abuse Research Center in the Harvard Medical School found that no depression of serum testosterone concentrations occurs in heavy users of marijuana when controlled conditions (in research wards) are observed. In view of Dr. Kolodny's cautious reporting of his results indicating a lack of adequate controls, the Harvard findings might be considered significant.

It should be noted that the entire area of testosterone production and its ultimate effects is complex and not fully understood. It is

known that this hormonal activity does largely control the movement toward masculinity at the onset of puberty. It is testosterone that controls the growth and ultimate size of secondary organs as well as the overall height and musculature, the appearance of pubic hair and similar evidence on masculine significance.

It is important to differentiate between sterility, or lowered sperm production and viability, and the ability to participate in sexual intercourse. A few of Dr. Kolodny's patients experienced "impaired sexual functioning," but returned to normal when the use of marijuana was terminated.

Theorizing from such results leads to a wide variety of unexplored possibilities. If indeed marijuana use lowers the number of viable sperm, one positive direction might be toward the development of a useful birth control technique for males. On the negative side, the results suggest various potential risks. For example, since THC is fat soluble and capable of crossing the placenta (as many drugs are), one might hypothesize a risk to the progress of sexual differentiation in the fetus. During the period through the third to fourth months of pregnancy, it is important that normal testosterone production and its effect on proper development of sexual characteristics is not altered artificially. It is possible that the presence of THC might inhibit this sexual development. Similarly, in the young male just prior to puberty, the effect of marijuana on the endocrine (glandular) system might adversely affect the complex change and growth taking place, especially in connection with sex organs and functions. In response to this theorizing, further research is necessary and important, and the works of Drs. Kolodny, Mendelsohn and Meyer represent an unusually high level of scientific competence in this distinctly controversial area. However, it is vital to differentiate between lucid results from careful experiments and hypothesizing in terms of theoretical reasoning. In this area, we simply have one more enigma, revolving around a potential but undocumented threat.

Psychiatric Implications

The reactions of a human being to changes in the internal or external environment are complex and intimately interlocked. The effects of any drug that operates to modify the user's subjective observations of the world around him, as well as his internal subjective manipulations of the information delivered by his senses will be profoundly affected by the environmental conditions as well as the anticipation, the so-called "psychological set," of the individual. This is certainly the case with marijuana. The most difficult problem in establishing valid relationships between psychotic conditions and the use of marijuana is related to cause between psychotic conditions and the use of marijuana is related to cause and effect or

disease versus symptom. As an example of this, Dr. D. Harvey Powelson, who has considerable experience as a psychiatrist in the student health services at the University of California on the Berkeley campus has written a widely-read account of problems he felt were identified with marijuana. He states that a high percentage of his patients used marijuana and were indeed psychotic. He goes on to say that the condition of these patients deteriorated. There is no comparative information from Dr. Powelson about how many of the total student population who also used marijuana were not psychotic and did not deteriorate.

Several have postulated that a person under severe emotional strain might be triggered into a psychotic episode by the consumption of marijuana. A field situation where one might expect an inordinate number of psychiatric problems was among combat troops in Vietnam. However, the combined situational stress and the ready availability of marijuana did not appreciably raise the incidence of clinically treated psychiatric cases, relative to cases in previous wars. There are so many intervening variables including dynamics of history and bureaucracy that these observations may not be significant. It is important to qualify these specialized impressions by indicating their application to the average moderate user of marijuana. There are many varieties of mental confusion and illusion that can be caused by marijuana. Generally speaking, such results are most common among novice users from relatively large doses. Such problems are also more common from the ingestion of marijuana in food rather than smoking but they can occur independently of the route of administration. Marijuana use sometimes leads to states of panic, paranoia, and even a sense of hallucination. A genuine hallucination where the individual is convinced of the reality of a non-existent subject rarely occurs strictly from marijuana. The marijuana user is curiously decoupled from many of his subjective experiences and is capable of recognizing the unreal observations as hallucinatory, i.e., subjectively induced rather than objectively sensed. The syndrome is partly a function of environment and psychological set as well as the dosage of ingested drug. The author observed men encounter true hallucinatory experiences seemingly inspired by the use of marijuana among army front line troops during the Vietnam War. Obviously, there was a select set of special environmental pressures in play.

Conditions of this kind are generally of short duration but they can be unpleasant, frightening and sometimes approach conditions of catastrophe. There are a wide variety of reports describing experiences that sound unattractive. For example, individuals who have had previous experiences with hallucinogenic drugs such as LSD have reported what they term "flashback" experiences in which, under the marijuana influence, they re-experience the hallucinatory episode

that previously occurred under the influence of LSD. There have been some reports of "flashbacks" to prior marijuana experiences. The nature of "flashbacks" or even the definition of them is controversial. Some experts doubt if they even exist, but feel that they are simply vivid memories of what once happened with a culturally inspired drama that gives them significance.

It is important to emphasize that conditions which are psychotic and are a consequence of the sole use of marijuana are probably quite rare and might never be clearly a result of marijuana use without other severe and unusual incipient factors. No one understands the mechanisms of psychotic disorders or what truly causes or corrects them. We do know that some personalities are more likely to be disturbed by such factors as the experience of living in a complex world or the introduction of various mood-altering drugs. It must be restated that chemically tampering with one's mood is always a serious and potentially threatening practice. No drug is entirely safe and all should be used with caution and restraint for whatever purposes; medicinal or recreational.

Intoxication, Memory, Time and Space Distortion

The use of a word in a certain way over a period of time tends to obscure its derivation and give it specialized meaning. To be "intoxicated" is associated commonly with the effects of alcohol and conventionally translates "to be drunk." The key, of course, is in the root word "toxic" which means "poisonous." To be intoxicated is to be poisoned, and in a real sense that is the condition of the individual influenced by alcohol, marijuana and other mood-altering drugs. Such substances operate in various ways to inhibit normal functions, especially neurons, synaptic junctions and sense receptors.

It is noted elsewhere in this review that the mechanisms of the brain--structural, electrical and chemical--are only faintly understood. Descriptions of the processes involved in memory are elusive. Short term memory appears to deteriorate with age, and memories of early life often seem to surface with senility. Whether there is any related significance is difficult to assess but to some degree the same phenomena appear in the short term use of marijuana.

John Stuart Mill, a prominent economist, logician and philosopher of the nineteenth century, explored the use of marijuana and commented specifically on its power to evoke long forgotten memories.

Many observers have commented on the problem of poor short term memory and descriptions of the experience vary. Some feel that it is a result of some curious speech aphasia where the memory is retrievable

in the brain but not translatable into speech. One might conjecture that the short term memory function residing in the subdominant hemisphere is inhibited from communication with the speech center of the dominant hemisphere. At any rate, this effect is definite and occurs commonly.

Obviously, this condition, from whatever kind of impairment, would create poor cognitive functioning and a corresponding poor performance in school classrooms.

Others have commented that the failure of short term memory may contribute to the well known illusion of time passing very slowly. In contrast, fewer users have reported extreme time lapse confusions where they have watched the hour hand of a clock move past several digits in what seemed to them only ten minutes or so.

Whenever there is a problem of perception, it is difficult to determine the level of dysfunction in the chain linking reception and perception. The distortion may occur in the sense organ, e.g., the eyes, ears, tongue, or touch, perhaps in the neuron linkage to the brain, or somehow within the brain itself. It can happen anywhere in the chain of communication or in the billions of interrelated receptors in the brain. However, when all, or almost all, of the sensual responses and observations of the world are distorted, the effect is probably central.

It is important to remember that the human organism builds a symbolic model of the world within the brain in response to sensory impressions gained in the first few years of post-natal life. Yet the remarkable ability of adapting to the environment can allow adjustment to severe subsequent distortions. For example, if a subject is fitted with glasses with a built-in mirror that would literally invert the world, turning everything upside down, the initial experience would be extremely disturbing. However, within a remarkably short time such complete acclimation takes place that the individual behaves normally and manipulates himself within the external world successfully.

The significant point to be made here is that the ability of the human brain to adjust its output signals directing the behavior of the physical organism in terms of new inputs is remarkable. Thus, even with the relatively brief distorted marijuana experience it is possible to develop adaptive skills. If the experience is repeated, then the subjective brain can make its adaptations more readily. The effect is similar to the immediate automatic adaptation that even a multilingual small child makes when a language shift is associated with the visual observation of a specific individual.

This may be one of the principal explanations of how an experienced user of any psychotropic drug apparently can conceal a moderate state of intoxication as is reportedly true of marijuana intoxication.

Similarly, it is also conceivable that someone could use enough marijuana to become singularly comfortable with the daily interaction only when intoxicated on marijuana.

Subjective and Physiological Effects on Performance

Questions continuously raised regarding the effects of marijuana on automobile driving prompted a number of studies. A comparison with the effects of alcohol is quite common in these investigations. The generalized results make it clear that driving skills, visual observations, reflect response time and the like are all adversely affected by marijuana. Alcohol appears to have a more serious effect on driving performance, especially with respect to judgments regarding optimum conditions for passing other vehicles. Also there is a significant difference in mood and attitude. The influence of alcohol appears to introduce more aggressive driving techniques and a greater tendency to take risks. The marijuana intoxicated subject seems more aware of the limitations associated with his condition and tends to drive especially slowly and carefully in an effort to compensate. This may be related to the cultural newness creating a hesitant caution surrounding marijuana intoxication.

Simple tasks are relatively unaffected by THC, but complex muscular control, such as juggling activity, is more seriously impaired. It is interesting that with marijuana-induced intoxication, as with alcohol, the habitual user seems to develop adaptive skills so that his performance improves and the relationship of performance to dosage becomes stabilized.

Some significant observations have been made of the relative effects of alcohol and marijuana with regard to the effects on equilibrium via the vestibular portion of the inner ear. Alcohol, of course, has a considerable effect as measured by its production of spontaneous nystagmus.*

A carefully controlled study of more than seventy subjects, half of whom were occasional users and half chronic users, showed no malfunction to the vestibular area in response to two separate doses of marijuana interlaced at random with placebo cigarettes.

In many persons, the ability to balance on one foot with both eyes open is usually substantially better than the same performance with eyes closed. In the same test, subjects under the influence of

* Rapid involuntary eyeball movements indicating irritation of the labyrinthine (balance) structures of the inner ear or of the cerebellum portion of the brain.

marijuana demonstrated no evident impairment in the test made with visual clues available via open eyes. However, the eyes closed test substantially decreased the ability to maintain equilibrium. Evidently the lack of high speed muscular reflexes in response to imbalance can be compensated by visual feedback signals via the eyes, i.e., the kinesthetic feedback information appears to be more severely affected than visual content.

Certain effects of alcohol may be synergistic with those of THC, e.g., tachycardia and balance, but most subjective THC effects are not modified by alcohol. The exception is visual phenomena that sometimes seems inhibited when alcohol is used in combination with marijuana.

Recent reports on driving infer that one's ability to drive while intoxicated is impaired. This seems to relate to time and space distortion, or possibly a tendency to more or less drift off.

Behavior in Various Animals

In order to evaluate the effects of marijuana on learning behavior in animals, perhaps the most common experiments compare control on an unintoxicated versus intoxicated performance of tasks that were learned by conditioning (correct response-reward learning) or other means prior to drug experience. There have also been many studies of behavior in relation to aggressive drives, competitive social situations and the like, which will be emphasized here. Animals used in such experiments range from Siamese fighting fish to primates. In spite of the limitations of human extrapolations from animal studies, there have been some interesting findings. For example, one set of experiments conducted on the effect of marijuana on Siamese fighting fish showed a clear reduction in the number of battles between fish that had been treated with marijuana. After a little more than a week of treatment the fish developed a sufficient tolerance so that their previously reduced aggressive tendencies then rose to levels comparable with those of a control group of undrugged fish.

Numerous experiments have been conducted with mice and rats to determine the effect of marijuana on aggressive behavior. These investigations included fighting behavior among their own species and inter-species aggression of rats toward frogs and turtles. In all of these cases the drug reduced the impetus to attack and kill, but when the drug effects dissipated (in four to six hours) the usual behavior was resumed. Thus, the effect of the drug on reducing aggression in these animals was reversible.

Another set of tests involved giving electric shocks to rats in order to induce fighting. They discovered that small dosages of marijuana increased the tendency to fight in response to electric shock, but larger doses decreased the fighting response to shock. Subsequent studies failed to verify these results and it was assumed that the problems were a function of differences in preconditioning.

Other studies determined whether hungry rats were more likely to fight if given marijuana by injections. Two separate studies generated contradictory results. A number of other studies were conducted to determine whether marijuana extracts had a synergistic effect on the administration of p-chlorophenylalanine or dihydrophenylalanine (adrenalin precursors) given separately to hungry rats. The results indicated that fighting behavior was greater in hungry rats given either drug if and only if the rats were also treated with marijuana.

In several tests to determine possible positive effects in competitive situations involving food, it was demonstrated that rats treated with delta-9-THC were more successful than untreated control rats. However, when the competitive problem was made more complex, involving a situation that required more than simple aggression, the untreated rats were more successful.

There have been many other more or less complex experiments involving conditioned reflexes and special conditions of behavioral response using rats, monkeys and chimpanzees which resulted in similarly equivocal findings.

Applications in Medicine

The Marijuana Tax Act of 1937 virtually eliminated the drug from legitimate medical use. When the act was under consideration members of the American Medical Association meeting in a committee on legislative activities authorized a letter of protest to the Congress indicating that there is no evidence relating addiction or abuse potential for cannabis regarding its use as a medicinal agent. At that time (1937) there were more than 25 medicinal products on the market containing marijuana. Generally, the liquid form was considered an almost magic elixir and prescribed for many complaints. Queen Victoria, notably, used the drug to relieve menstrual cramps. After the 30's, the view of the "cure-all" changed and Davison's handbook Synopsis of Materia Medica, Toxicology and Pharmacology, third edition, 1944, lists marijuana's therapeutic uses as "Except for its use as a coloring agent in corn cures, cannabis is of little use in therapy."

In 1930, under "Queries and Minor Notes" the Journal of the AMA published the following inquiry from a physician in Pennsylvania:

"If cannabis is taken to a point of intoxication during labor, what effect will it have on labor and on the newborn child?"

The AMA's consultants replied:

"...Its chief effects are on the central nervous system. There is a mixture of depression and stimulation similar to that occasionally seen under morphine. Soon after its administration the patient passes into a semiconscious state in which judgment is lost and vivid dreams occur. The sensation of pain is distinctly lessened or entirely absent and the sense of touch is less acute than normally. Hence a woman in labor may have a more or less painless labor. If a sufficient amount of the drug is taken, the degree of tolerance for this drug is rapidly acquired and death from acute poisoning is rare. As far as is known, a baby born of a mother intoxicated with cannabis will not be abnormal in any way."

In 1898, Sir William Osler, Professor of Medicine at John Hopkins and at Oxford, wrote with reference to migraine headaches that marijuana "...is probably the most satisfactory remedy." There are other published references to marijuana as a preferred drug in treating migraine.

Around the turn of the century many pharmaceutical houses such as Squibb, Lily and Parke Davis bottled and sold fluid marijuana extracts through convention drug stores, and one firm sold marijuana "joints" as a remedy for asthma.¹ With the advent of newer medicinal drugs and community labeling of marijuana as a dangerous, misanthropic substance, the use of marijuana for medical reasons declined until finally in 1941, marijuana was eliminated from the U. S. Pharmacopeia and National Formulary.

Marijuana is one of the substances that have allegedly provided human beings with some relief from aches and pains and from psychological discomfort for at least a thousand, perhaps several thousand, years and its therapeutic value should not be dismissed lightly. It is difficult to assess the extent to which various possibly important applications for marijuana have been pursued. In studying the literature, one cannot help but conclude that a great deal more time

¹ Anonymous, "Cannabis India in Pharmaceuticals," Journal of Medical Sociology, Vol. 35: pp. 51, 52.

and money has been used to explore potential negative factors than to investigate position directions of research. A few examples of therapeutic aspects which deserve further study include:

1. Migraine is truly a debilitating disease for many people and no totally adequate treatment exists. Half a century or so ago there were many references to the value of marijuana in migraine treatment.
2. Convulsive seizures are among the least understood of medical problems. In 1949, an article appeared in the literature indicating remarkably successful results with marijuana-like substances in treating a small sample of epileptic children suffering from grand mal (typical epileptic attack with or without coma) seizures.²
3. Marijuana does reduce the pressures of glaucoma (increased pressure within the eye, eventually resulting in blindness if not treated), perhaps not as successfully as some other drugs, but the possible application in special cases should not be simply buried in forgotten literature.
4. Marijuana is well known as a mood elevator and also as a drug to stimulate the appetite for food. Possible therapeutic applications are apparent.
5. The majority of marijuana users consider marijuana an enhancer of sexual pleasure. A recent Haight-Asbury study found that among poly-drug users, marijuana was consistently the drug of choice for intensifying sexual pleasure. For people who have problems with sexual fulfillment, marijuana may provide a potential aid.
6. Since marijuana is considered by many to create a sense of well-being, the potential use of THC among the chronically depressed might be explored. Drs. Joseph Butler and William Regelson (Medical College of Virginia) have used delta-9-THC among terminal cancer patients and report qualified success.
7. Finally, since marijuana use seems somehow related to a lessening of motivation, possibly marijuana compounds could be helpful in assisting people who have a legitimate need to cut down on activity. The culturally induced strenuous striving toward

² J. P. Davis and H. H. Ramsey, "Anti-Epileptic Action of Marijuana-Like Substances," Federal Practice (1949) XIII: pp. 284-285.

accomplishment is not a consistently health activity, as evidenced by high post-retirement morbidity and mortality in the United States.

It would be unfortunate if a cultural predisposition regarding marijuana stood in the path of locating genuine medicinal uses for marijuana and its constituents. Over thirty years ago, terminal cancer patients were given marijuana products to help reduce depression; with the community's anti-marijuana fever of the 30's and 50's, the practice was terminated. It seems that it would take an alteration in community outlook before the practice could be begun again experimentally.

Motivation

"Amotivational syndrome is perhaps the one effect of chronic marijuana use that will ultimately determine the drug's legal status."

--Dr. William Pollin, Research Chief
National Institute of Drug Abuse

The most prevalent concerns among Minnesota's health community leaders regarding marijuana as a recreational drug pertain to its alleged effect on the general motivational attitudes of habitual users. Anyone who works in an area where they relate with habitual users of marijuana is more than likely to become convinced that motivational drives lessen in conjunction with marijuana use. The real question is buried in the ancient logos of cause and effect. Does the smoking of marijuana cause some change in the chemistry of the transmission of signals in the central nervous system so that the motivational drives of the organism are inhibited or destroyed? Or, does the individual, whose normal motivational drives are for some reason diverted from conventional channels, seek escape and satisfaction in the delusional world inspired by marijuana? Is the use of marijuana the disease or the symptom? This is truly a difficult question and, considering the community's concern, the correct answer is of significant consequence.

It is important to remember that in the area of empirical observations, as in other areas regarding this issue, the pendulum swings both ways. The professionals who most strongly regard marijuana as a causal agent are generally those involved with the difficult and frustrating problems of dealing with the heavily habituated user. The term "habituated" is not to be confused here with the term "addicted." Human beings develop all sorts of habits that are not true addictions. Smoking marijuana at certain times on certain days may become a sufficiently stable kind of behavior to warrant the term "habituated," but it need not imply physical craving, urgent psychological pressure or side effects upon withdrawal, which are usually inherent in the term "addiction." Those professionals whose convictions swing toward marijuana being used incidentally by individuals previously imbued with low motivation are likely to have studied a cross-sectional population of users who are less heavily involved. The occurrence of poor academic performance in students who use the drug habitually, the reports of changed motivational attitudes in students who become deeply involved with the marijuana subculture, and similar observations that are widely reported cannot and should not be ignored.

Neither should we reject the reports from equally competent and presumably sincere researchers that indicate a completely opposite, and in some cases, more statistically convincing set of observations.

Will Rogers once said that one's political beliefs depend on which paper you read. It is often equally true with regard to medical journals. A comparison of material pertaining to the effects of marijuana on motivation published in the AMA Journal in 1971, and the content of a paper on the same subject published in the American Journal of Psychiatry in 1973 establishes the point quite clearly.

The AMA paper is titled "Effects of Marijuana on Adolescents and Young Adults" by Harold Kolansky, M.D., and William T. Moore, M.D. In the "Editorial Summary" the article states that the majority of the patients included in the study usually smoked marijuana at least twice weekly and used a minimum of two cigarettes of marijuana each time. This article reports that these patients exhibited poor concentration, poor social judgment, reduced attention span, apathy, anxiety, confusion, depression, passivity, indifference and, quite commonly, a slowing and slurring of speech quality. The authors further state that among the female patients there was considerable sexual promiscuity, many undesired pregnancies, substantial venereal disease and the like. Most of the patients showed "...an alteration of consciousness which included a split between an observing and an experiencing portion of the ego" as well as paranoia, a strong regression to infantile conditions and an inability to integrate their thought process. Only a relatively few of the patients who developed this combination of symptoms had these characteristics prior to beginning to smoke marijuana. Drs. Kolansky and Moore were convinced that, among their patients, the use of marijuana clearly leads to the interruption of normal psychological processes. They felt that this resulted in the adolescent individual progressing in chronological age to adulthood without having experienced the psychological growth that should be achieved in order to attain emotional responses and mental functioning at an adult level.

Another credible scientific article which clearly contradicts the AMA article is one by Joel Simon Hochman, M.D. and Norman Q. Brill, M.D. entitled "Chronic Marijuana Use and Psychosocial Adaptation," published by the American Journal of Psychiatry. This article describes the author's studies in connection with the life history and social adaptations of marijuana smokers and nonusers in a random sample of ten percent of the UCLA undergraduate student body. The cross-sectional statistical quality of the sample allowed factoring out variations in personal and family history, work performance and success in educational courses, sexual adjustments and family relationships, political religious and associated value attitudes and, of course, the use of other drugs. The authors concluded that the chronic use of marijuana among these students definitely was accompanied by an increasing acculturation within the structure of

stimulus-seeking value systems and was definitely not accompanied by significant lowering of function within social frameworks or evidence of poor skills in social adaptation.

Drs. Hochman and Brill point out that marijuana has been dealt with in terms of alleged dangerous characteristics for approximately four decades. They felt that the prevalence of purely anecdotal reports derived, to a large degree, from populations in India and Middle Eastern countries seemed to build the speculation that marijuana use inspired a sort of foreign cultural degeneracy. Such reports, they feel, have often included descriptions of pathological conditions that coincidentally appeared with the chronic use of marijuana. The extent of similarly chronic use of the drug in other sectors of these populations where the lack of motivation is not evidenced is rarely, if ever reported.

Two examples of the problems involved in deriving valid conclusions in the professionally emotive drug area from the observation of specific and (intentionally or randomly) selected population groups are as follows:

1. There have been numerous studies where the owners of large plantations or other agrarian operations have encouraged the habitual use of marijuana by their workers. Reports from operations of this kind indicate that the workers are substantially more productive in direct response to the moderate but regular availability of marijuana "breaks," analogous somewhat to American coffee breaks, or German factory beer breaks. Observations to marijuana-using field laborers, as part of the Jamaica Study, detected the increased energy expenditure but reduced work efficiency, increased social cohesiveness while working and an improved willingness to work. One could say that the marijuana motivates the workers to increase their efforts or that marijuana provides a diversion from the tedious quality of the labor so that it becomes more tolerable. The latter seems the more likely answer but this point, per se, is not significant. Neither argument directly relates to a discussion of the effect of marijuana on motivation in the student or working population of America except that the comparison points up the kind of anthropological observation that are interpreted to support whatever side of a professional position toward which one is predisposed.
2. Another related kind of conclusion appears in studies of heroin users. It is widely believed and reported that heroin addicts are characteristically gaunt and poorly nourished. The deduction is made that heroin leads to a

reduced appetite and, hence, emaciation. In actuality, these characteristics do not appear among heroin users who are in the upper socio-economic levels and can afford to purchase adequate heroin to sustain their dependency while being able to purchase adequate amounts of nourishing food.

When a chemical usage is associated with a cultural behavior, a presumption that the chemical causes the behavior is unwarranted.

Drs. Hochman and Brill began their investigation by direct mail to a random computer selection of typical UCLA undergraduates representing ten percent of the entire student body. Their list of more than six-hundred questions, addressed to each individual in the mailing, covered fourteen clearly identified areas of personal history. No identification was required in the response but from those who did identify themselves, about a hundred were selected for extensive psychiatric interviews. Obviously, the filter of personal identification weakens the study's applicability to the entire population. Those who agreed to be identified may not have been reflective of the community it was assumed they would represent.

The principal focus of this study was on the basic questions of social adaption, changes in motivational characteristics, personality modifications and any definable shift in psychological structures. It is impossible not to point out that the methodological contrast between this rather extensive investigation and the AMA Journal report relating to a total of thirty-eight psychiatric patients. The word "patient" immediately raises the flag of identification with a highly selected, as opposed to a generalized cross-sectional, population. In the AMA article by Kolansky and Moore they mention that in their thirty-eight patients there was "marked interference with personal cleanliness, grooming, dressing and study habits or work, or both." They go on to report in all honesty that these "latter characteristics" were at times present in some patients prior to smoking marijuana but were "always markedly accentuated following the onset of smoking." They also point out two male and two female adolescents among their thirty-eight patients "showed psychotic reactions directly attributable to cannabis derivatives, and each attempted suicide."

Their article continues with a description of truly terrifying personality changes in each of these four individuals. If this article is read and the inferences are accepted as representative of typical or even occasional events truly resulting from the use of marijuana there would be grounds for the soundest possible condemnation of the drug's use.

However, a careful scrutiny of this material and the study methods used can hardly lead to any reasonable conclusion other than the marijuana

use is one of many elements surrounding a population with a high incidence of morbidity.

The Hochman and Brill study covered a population similar in age span but with many more subjects and hence possibly was more typical of marijuana users than the AMA study. Yet this study, too, had its methodological problems. Specifically, a careful study of their investigation process infers that marijuana use is one of many elements involved in a population with a low incidence of morbidity.

Studies on what marijuana does to humans relative to motivation are varied, like other aspects of marijuana research. Yet, in a sense, the issue of motivation is more significant because the concerns relative to motivation come from people who interact with those who use marijuana, not from purely clinical observations. If marijuana does cause a lack of motivation, it would not be hard to understand. Marijuana causes pleasure, and hence blocks out pain, and pain is a basic motivator. This is speculation and although how marijuana interfaces with human motivation is critical in the minds of many, there is no answer. If marijuana does cause some motivational problems, it has been observed generally by only a few professionals who work with problem cases, and the characteristics of the problem are so nebulous that they cannot be agreed upon or isolated. If the problem is there, it does not seem to be seriously threatening to the community.

CONCLUSION

Is Marijuana Dangerous to Minnesota's Public Health?

Understanding the perceptions of those in key community helping institutions regarding marijuana use, reviewing both the reassuring and threatening clinical inferences is helpful, but provides no clear direction for public policy. In matters of public health, this ambition is awesome, but a tolerance for ambiguity must be developed in addressing marijuana use and health.

Is marijuana use dangerous to the public health? Realizing that policy decisions have to be made in spite of limited information, the best answer for 1975 is:

Moderate marijuana use presents a probable danger to a small minority of the public (those with heart problems, near-psychotic conditions) a possible danger to others (adolescent males, developing fetuses) and a conceivable danger to yet others (future research). However, there is presently nothing to substantiate that marijuana use presents a danger to the public health of our, or any human, community.

**Marijuana and
Minnesota's Criminal Justice System**

THE EVOLUTION OF THE MARIJUANA CRIMINAL JUSTICE PROHIBITION
IN MINNESOTA

Picking Them Up



Minneapolis Star, 11 December 1934

History of Marijuana Prohibitions

The late twenties and early thirties witnessed a spirited rise in community concern relating to a new culturally feared entity termed, "dope." Appeals to "fight" the never completely defined substance were emotional and widespread. The Federation of Women's Clubs, the National PTA, the National Catholic Welfare Council, and many other credible civic action groups became involved in seeking punitive legislation for those involved with "dope."

Marijuana had probably been with Minnesotans in the form of cloth or rope since the first white settlers traveled up the Mississippi, and in later years as a medicinal "cure-all" or elixir. However, because of identification with unwholesome recreational use, an effort was made in the mid-thirties to criminalize marijuana distribution and possession in our state along with the rest of the nation. No one is certain exactly how much real recreational marijuana smoking was occurring in Minnesota but consensus is that the use of the drug in this state for recreation was infrequent.

The anti-marijuana public interest group campaign reached its zenith in 1935. It was strongly endorsed by the press and by 1939, Minnesota, along with New Hampshire and Missouri enacted special legislation outlawing the recreational use of marijuana. By that time ten other states in the nation had already adopted a uniform act endorsed by the Federal Bureau of Narcotics criminalizing marijuana. In Minnesota the act criminalizing the drug was conventionally termed the "India Hemp Act." It carried misdemeanor penalties for possession or sale of the substance and directed the State Department of Agriculture to eradicate its growth in Minnesota.

For some years the Federal Bureau of Narcotics had been attempting to inspire national criminalization for the possession of marijuana and in 1936 efforts were made by agents of both the Treasury and State Departments to require domestic control over marijuana by having marijuana restrictions folded into a foreign treaty (the highest law of the land). If the United States entered into a treaty outlawing certain kinds of activity it was reasoned that Federal jurisdiction over marijuana would be assured even if the drug was possessed within a state's borders. One attempt to provide an international agreement regarding marijuana occurred in 1936 at the Geneva Convention and again during a Western Hemisphere convention involving the United States, Canada and Mexico. Both of these attempts failed and on April 14, 1937, the Treasury Department released a proposed statute which approached the matter from a different perspective.

The proposed statute which was an administrative proposal (H.R. 6385) was actually a tax measure giving the federal government power to tax and thereby control marijuana use nationally. There were some constitutional and jurisdictional issues involving federal intervention in in-state activities. It was obvious that the tax act provided intensive control over domestic activities within a state and also there was no pretense of the tax act being an attempt to produce revenue through legitimate enterprise. Both conditions jeopardized the Act on constitutional grounds. Nevertheless, in the midst of emotional "anti-dope" fervor, the act was passed.

There were three components to this initial federal control. First, a requirement that all manufacturers, importers, dealers and practitioners, register and pay a special operational tax; secondly, a requirement that all transactions be conducted on written forms; and

thirdly, a tax on all transfer in the amount of \$1.00 an ounce for transfer to people who were, in fact, registered and a prohibitive \$100 an ounce for transfer to unregistered persons. Clearly, this was not a revenue gathering effort, but an attempt to gain federal jurisdiction.

It would be unfair not to point out that the Federal Narcotics Agency had every reason to believe at that time that the use of marijuana was dangerous and, in fact, they were probably responding more to public pressure than embarking on a vendetta. There was credible scientific assessment condemning the use of the drug.

Among other professional input, Assistant Secretary Gibbons of the Treasury Department received a publicized admonition from the Dean of the University of Texas Medical School, regarding federal inactivity in dealing with marijuana. The Dean stated that he "could absolutely prove that marijuana is a habit forming narcotic."¹ Thereupon, Gibbons reportedly fired memos to bureaucrats throughout his department, demanding they find a way to gain jurisdiction over and control this frighteningly devastating substance.

Many allegations have been made recently indicating that the initial marijuana laws were rooted in prejudicial ethnicity directed against Asians or Mexicans, calculated and developed by civil servants seeking to expand their own bureaucratic domain or used by elected officials to frighten and enrage their constituents.

Without making judgments on these allegations the clear fact remains that for years prior to 1936 and for years later, the community in general was certain beyond any doubt that marijuana use was highly dangerous and presented a savage threat to the public.

Shortly after the passage of the Federal Act, a prosecuting attorney in Philadelphia became angered by what he felt was a lenient disposition of two years probation given by a judge to someone he felt was a "marijuana addict." He alleged that the judge was simply not informed about the dangers of the use of the drug, and proposed some effort be made to sensitize the judiciary to the dangers of marijuana. Shortly after this the Federal Bureau of Narcotics directed an effort toward presenting the negative characteristics of marijuana to the nation's judiciary and during these nationwide blocks of instruction they emphasized the need for harsh and unrelenting sentences against people who violated the marijuana statute.²

¹97th Congressional Record (1951), p. 8196

²Richard J. Bonnie and Charles H. Whitebread II, The Marijuana Conviction. Charlottesville: University Press of Virginia, 1974, p. 124.

One judge in Colorado made his position quite clear during a statement shortly before a disposition of sentence. It is reasonable to assume that this reflected the thinking of many criminal justice principals during the 1930's.

"I consider marijuana the worst of all narcotics--far worse than the use of morphine or cocaine. Under its influence, men become beasts, just as was the case with (the defendant). Marijuana destroys life itself. I have no sympathy with those who sell this weed. In the future, I will impose the heaviest penalties. The government is going to enforce this new law to the letter."³

At the same time that the effort to sensitize the judiciary was being conducted, there is evidence that many Federal Bureau of Narcotics agents were being sent throughout the community to make presentations to civic groups, Women's Clubs, etc., to encourage public support for the law, or perhaps to simply warn the community of the danger of the drug. The following is an advertisement from a civic group, presumably a women's garden club of that era:

MARIJUANA PLANT EXHIBIT
AT FLOWER SHOW OF
KATRINA TRASK GARDEN CLUB
Tomorrow -- 3:00 P.M.
on The Casino

This Plant is the Center of a Dread Menace
Being Fought by the State Department of Health

Public Invited to the Show ... 25¢⁴

Two FBN agents appeared at this garden club meeting and brought two marijuana plants for the women to inspect (at twenty-five cents a peek).

There was an intense law enforcement effort for a brief period of time following the passage of the federal law, and from October 1 to December 31, 1937 federal agents made a record 369 marijuana seizures. It was during the legislative session in Minnesota of 1937, that the Uniform Narcotic Drug Act was passed. However, Section 23 of that Act

³Ibid., p. 211.

⁴Ibid., p. 111.

which related to marijuana was not passed. In fact, that Section was not incorporated into Minnesota's version of the Narcotic Drug Act until 1953. Instead, during the next session in 1939, the State of Minnesota passed the "India Hemp Control Act" (Minnesota Laws, 1939 C. 405). This particular Act charged the Commissioner of Agriculture in Minnesota with eradicating marijuana as a nuisance, but also indicated he could license the growing of the product for commercial non-recreational use. Someone convicted of possessing marijuana, under this Act, had committed a misdemeanor by State Statute.

As the United States entered World War II, the State Legislature had prohibited marijuana through its India Hemp Control measures, and possession of the drug was a misdemeanor. Federally, the Marijuana Tax Act had been law since July, 1937, and there was presumed federal jurisdiction.

More significant in practice than the actual federal claim to jurisdiction, there was an administrative policy of federal agents giving careful priorities for arrests. Shortly after the passage of the Marijuana Tax Act in 1937, the Commissioner of the Federal Bureau of Narcotics sent a memo to all FBN offices directing them to arrest only those who seemed involved in large scale marijuana activities and to leave the simple user to local jurisdiction or fate:

"The Bureau has noted that a great many marijuana cases of comparative minor nature are being reported.

Thus far, the courts have shown a very good attitude with regard to the disposition of marijuana cases and we do not wish to bring about a reaction by congesting court calendars with cases of a petty type. It is believed that in a great number of cases if more strenuous efforts were made to ascertain sources of supply, cases which could command more respect in the courts would be developed."⁵

There is speculation that of the arrests that had been made from October to December, 1937, the bludgeonings, sexual perversions, and misanthropic activity expected had not been observed and there was a bureaucratic move to subtly lessen the full impact of the law they had endorsed. Whatever the motives the federal policy of not interfering with any marijuana use or distribution except in extremely large quantities has been with us from 1937 until the present.

⁵Ibid., p. 180.

In terms of illegal use, there was little publicity or concern regarding marijuana in the 40's. During World War II, after the Japanese captured Manilla and hemp for rope was no longer available, the United States Department of Agriculture was determined to produce a marijuana crop to replace the lost supply from the Philippines. Use of the plant for hemp was not prohibited by law in Minnesota, but fear of the drug's perceived characteristics ran high:

A Jeckyll-and-Hyde plant, hemp provides twine and rope urgently needed for military purposes. But it also yields marijuana, a drug that makes depraved creatures of its addicts. What can be done to keep these enormous new supplies, from which there almost inevitably will be "leaks," out of their twitching hands?⁶

Southern Minnesota was deemed by agricultural experts to be a good place to grow marijuana and of the 75,000 tons produced nationally in 1944, 48,000 tons were produced in Minnesota. Under the India Hemp Act, the State Commissioner of Agriculture allowed this activity, but received assurances from the Department of Agriculture that they would attempt to produce a "drugless hemp." The result was that the Department of Agriculture contracted with Dr. H. E. Warmke, formerly of the Carnegie Institute, to attempt to "breed a strain of hemp of good fiber quality, but containing a negligible amount of the baneful marijuana drug."⁷

Although the press termed Dr. Warmke "the plant wizard" of the day, the project was unsuccessful. In our discussions with individuals who actually worked in the legal Minnesota marijuana fields in 1944 and 1945, there appeared to be no observable recreational use of marijuana among the workers and at least in the case of one field worker, it was not until years later that he really learned that marijuana could also be used for intoxication.

The heritage of the war years on marijuana in Minnesota was that the domesticated marijuana plants went wild throughout Southern Minnesota which, through birds and the natural spread of a prolific plant, soon caused marijuana to be found virtually throughout the state.

⁶Arden P. Armagnac, "Plant Wizards Fight Wartime Drug Peril," Popular Science Monthly. September, 1943.

⁷Ibid.

The next public upsurge of reaction to marijuana occurred in the 50s and for some reason, voluminous legislative "cracking down" on "dope" again became popular. In the popular press, and on the floor of various legislative bodies, many related the spreading of the "dope" problem to the intentional introduction of marijuana and other drugs into the "free world" by the Chinese and Soviet Communist governments.⁸ In the era of the McCarthy hearings and the "red herring," this argument probably had solid impact and a rash of punitive federal legislation was proposed.

Among others, the late Senator Everett Dirksen from Illinois, introduced measures that would have provided the death penalty for an adult passing marijuana to a minor, and Congressman Edwin Arthur Hall of New York, lobbied for minimum mandatory sentences of 100 years. (In neither case was any mandatory sentence recommended for a second offense.)

During this period, federal legislation came to set the tone for the State's reaction to marijuana. In 1951, Congress passed the "Boggs Act"; Act of 2 Nov., 1951, Chap. 666, 65 Stat. 767.

The Boggs Act united narcotics violations and marijuana violations by proposing mandatory minimum penalties for possession of any and all of the drugs. It is interesting to note that in the subcommittee chaired by Representative Boggs, debating the mandatory minimum penalties, it was agreed upon that harsher penalties were, in fact, the only way to deal effectively with the increased numbers of violations. It was mentioned in the subcommittee that perhaps educational programs on how dangerous drugs were would be helpful. This was rejected by the committee for fear of exciting curiosity among young people. The avowed purpose of Representative Boggs when he introduced the bill in the House, was to "remove the power of suspension of sentence and probation in the cases of second and subsequent offenses against the narcotics and marijuana laws, and to provide minimum sentences..."⁹

The Boggs Act constituted the first combination of drug offenses involving those drugs listed in the Uniform Narcotics Drug Act and the Marijuana Tax Act. For the first time marijuana was thrown in the hopper with heroin, cocaine and other illegal drugs. The Boggs Act probably had impact on the next State Legislative Session in Minnesota. The State Legislature went beyond its India Hemp Act and included marijuana as a felony within the Uniform Narcotics Drug Act it had passed in 1937. It should be noted that in spite of what was probably popular acceptance of the bill by members of the community, there were a number of officials who felt the bill was simply unwise.

⁸Bonnie, op. cit., p. 209; p. 216.

⁹97th Congressional Record (1951), p. 8198.

In their assessment of the evolution of the marijuana laws, Professors Bonnie and Whitebread report that when Director of the U.S. Bureau of Prisons, James V. Bennett, spoke to the assembled Fifth Circuit Federal Judges in 1954, he indicated "the Boggs Bill was passed due to hysteria"¹⁰ (Chap. XI, No. 30). After this statement, Federal Commissioner Anslinger ordered FBN agents to follow Bennett and make reports on "what he said to whom."¹¹

After the Boggs Act cleared Congress, seventeen states and the Territory of Alaska quickly passed acts similar to Boggs'. Minnesota quickly incorporated laws against marijuana along with the Uniform Narcotics Drug Act.

It appeared that the initial memo that Anslinger had sent out in the 30's indicating the federal government should not bother with small arrests, was becoming a postulate in terms of criminal justice and marijuana. The federal laws in themselves seemed to have little impact in terms of numbers beyond simply becoming a powerful device to influence the states who picked up the burden of conducting the criminal justice proceedings against marijuana users. The exception, of course, is the large distributor who usually crosses state lines anyway. Later it will be interesting to observe how this criminal justice system affects the distribution system in Minnesota.

Possession of marijuana in Minnesota remained a felony until the 1972 Legislative Session when possession was reduced to a gross misdemeanor. Again in 1973, the state reduced the penalties for possession of under 1.5 ounces of marijuana to simply a misdemeanor and attempts were made in 1974 to reduce the penalty for possession of marijuana still further to that of a "petty misdemeanor" or an offense outside of the traditional definition of criminal activity.

Present Law in Minnesota

Chapter 152 deals with "Prohibited Drugs."

Sec. 152.09 relates to "Prohibited Acts," and Subd. 1 reads:

Subd. 1. "Except as otherwise provided in this chapter, it shall be unlawful for any person, firm or corporation to:

(1) Manufacture, sell, give away, barter, deliver, exchange, or distribute a controlled substance.

(2) Possess a controlled substance, except when such possession is for his own use and is authorized by law."

¹⁰Bonnie, op. cit., p. 211.

¹¹Ibid.

Minnesota Statute, Sec. 152.01, Subd. 9, provides:

Subd. 9. "Marijuana. 'Marijuana' means all parts of the plant *cannabis sativa* L, including all agronomical varieties, whether growing or not; the seeds thereof; the resin extract from any part of the plant; and every compound, manufacture, salt, derivative, mixture or preparation of such plant, its seeds or resin, but shall not include the mature stalks of such plant, fiber from such stalks,¹ oil or cake manufacture, sale derivative, mixture or preparation of such mature stalks, except the resin extracted therefrom, fiber, oil or cake, or the sterilized seed of such plant which is incapable of germination." (emphasis added)

Minnesota Statute, Sec. 152.09, Subd. 16, provides:

Subd. 16. "Small Amount. 'Small amount' as applied to marijuana means 1.5 ounces avoirdupois or less. This provision shall not apply to the resinous form of marijuana." (emphasis added)

Minnesota Statute, Sec. 152.15, as amended² in 1973, relates to violations and penalties. Violations of Sec. 152.09 to 152.12 are gross misdemeanors, except as provided in Subd. 2(5), which reads as follows:

(5) (One who possesses) a small amount of marijuana is guilty of a misdemeanor. A subsequent violation of this clause within one year is a misdemeanor; and a person so convicted may be required to participate in a medical evaluation. A person who is the owner of a private motor vehicle, or the driver of the motor vehicle if the owner is not present, and who possesses on his person or knowingly keeps or allows to be kept in a motor vehicle within the area of the vehicle normally occupied by the driver or passenger more than .05 ounce of marijuana is guilty of a misdemeanor. This area of the vehicle shall not include the trunk of the motor vehicle when such vehicle is equipped with a trunk. A utility or glove compartment shall be deemed to be within the area occupied by the driver and passengers.

Section 152.15, Subd. 1 (5) reads:

(5) The distribution of a small amount of marijuana for no remuneration shall be treated as provided in Subdivision 2, clause (5).

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1. The marijuana plant is a hemp plant. The stalk fiber is used for sailcloth, cordage, oakum, and other commercial products. The mature stalks and their fiber are not the intoxicant sources.
 2. Session Laws 1973, Chapter 693, effective August 1, 1973.

Limitations Upon State Alternatives Created by the 1961 Singel Convention and the Federal Controlled Substances Act

The State of Minnesota has taken the principal role in enforcing marijuana laws within the state for the past 35 years, but how the state proceeds regarding marijuana is limited by federal law, principally the controlled Substances Act of 1970 which endorsed the 1961 Singel Convention on Narcotic Drugs.

The 1961 Singel Convention on Narcotic Drugs, to which the United States was a signator, embodies declarations of basic principles for international drug control. The nations agreed to establish controls and limits upon the use and sale of certain controlled substances within their borders, and to share and compile certain statistical information.

An international agreement signed by the United States does not, by itself, create enforceable sanctions or restrict legislative activities of the various states. Implementing legislation must be enacted to give effect to the terms of the agreement and such legislation establishes the guidelines, sanctions and provisions upon which enforcement is based. The legislation is primary and the treaty represents nothing more than an agreement by the federal government to enact such legislation if possible.

The Comprehensive Drug Abuse Prevention Control Act, Public Law 91-513, 84 Stat. 1236 (1970), and in particular, Title II of the Act, the Controlled Substances Act, 21 U.S.C. 801 et seq. were enacted in 1970 and implemented the 1961 Singel Convention on Narcotic Drugs provisions. This act gave force to the precepts outlined in the treaty.

The Controlled Substances Act provides for registration and control of the manufacture, distribution and dispensing of controlled substances. The United States Attorney General is charged with establishing the registration procedures and with determining who may properly be registered. A number of factors are set out in the act to guide the Attorney General's decision as to who may, in the public interest, be registered.

One of these factors is "compliance with state and local law." While this might be taken to imply that state legislation permitting the sale, use, distribution, etc. of marijuana would be considered as a factor allowing the indiscriminate registration of persons in that state, it is clear from the context that that is not the intent of the act. State law is relevant in this context only for determining who is a licensed medical practitioner or pharmacist--the persons for whom registration is intended.

The act makes it unlawful to possess, distribute, manufacture or dispense marijuana except pursuant to registration under the act and then only in the conduct of "lawful business in such substances." This

phrase does not mean that legalization by a state legislature of the use, possession, sale, etc. of marijuana will place such activities outside the limitation of the Controlled Substances Act. "Lawful business" must be taken in the context of the act to include only those activities not prohibited by the act. The act makes it unlawful for any person, registered or not, knowingly or intentionally to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance except as otherwise authorized by the act.

The act also makes it unlawful for any person, registered or not, knowingly or intentionally to possess a controlled substance unless the drug was obtained directly, or pursuant to a valid prescription or order, from a practitioner while acting in the course of his professional practice.

As stated in a 1971 California Attorney General's Opinion exploring the relationship between state and federal marijuana law, the authorization the state has to allow marijuana use is limited to the following:

"The only such activities authorized by the act are in connection with legitimate medical, scientific, research, or industrial purposes. Thus, use for any other purpose would not be a 'lawful business' in such substances."

State law cannot make legal those activities which are described by the act to be unlawful. As the California Attorney General's Opinion concludes, the federal legislation would not prohibit a state legislature from removing all criminal sanctions and penalties regarding marijuana under state law, but states do not have the power to expressly legalize the use, possession, sale, etc. of marijuana. Under the supremacy clause of the United States Constitution the states are prohibited from enacting any legislation which is in direct conflict with federal legislation and any state legislation must be capable of standing side by side with the federal. It cannot in any way alter, limit or prohibit the enforcement of the federal provisions.

If a state were to remove all criminal sanctions for the sale, use, manufacture, or possession of marijuana, the citizens of that state would still remain subject to the federal prohibitions contained in the Controlled Substances Act. Such decriminalization by a state would, however, have an effect upon the enforcement and prosecution of drug offenses. Violations of federal statutes are prosecuted by the federal government in federal courts. Of course, state and local law enforcement agencies have authority to enforce federal criminal statutes even where the activity is not proscribed by state statute, but prosecution is taken out of the hands of state and local governments. Enforcement of federal laws by state or local law enforcement agencies with prosecution in the hands of federal prosecutors creates an unusual and bureaucratically trying situation. In general, the

working relationship between federal prosecutors and state and local enforcement agencies is not as close as the relationship between those enforcement agencies and state and local prosecutors. Faced with state legislation declaring that it is not in the state's public interest to punish or prohibit certain activities involving marijuana, state and local enforcement agencies might, in practice, be reluctant to enforce federal legislation to the contrary. Whether this situation would compel the federal government enforcement agencies to increase their activities within the state would be a matter of speculation. They have not done so in Oregon, where possession of limited amounts of marijuana is now a civil offense.

The questions of state and local enforcement of federal criminal statutes and the issue of prosecution and police discretion in enforcing those laws are an essential aspect of the whole issue of state and federal drug laws. In discussions with the Minnesota branch of the Federal Drug Enforcement Agency, they indicated that if the state embarked upon any attempt to establish a system to facilitate marijuana distribution or use, there is no question but that the federal government would intervene. This would fit into the forty-five year old prioritizing scheme of federally acting against any organized distribution structure while not bothering with "small" offenses.

It is clear that any program of state administered control over marijuana, will have to be compatible with the federal procedures for registration of authorized dealers and producers and would presumably be subject to the quota systems established at the federal level. The state cannot authorize the control or distribution of marijuana by anyone or for any purpose not authorized by the Controlled Substances Act. However, there might be some areas of permissible state activity in the control and administration of activities involving marijuana which would be compatible with federal legislation.

In cases similar to the marijuana grown during the war years when both the State India Hemp Act and the Federal Marijuana Tax Act were operable, it is likely marijuana could be grown. However, no affirmative action toward establishing a controlled system for recreational distribution would be allowed. Our state legislature cannot create for our residents, an immunity from provisions of the federal law.

This review of law enforcement in the state regarding marijuana was not conducted by data or surveys but rather by an extensive battery of interviews, debriefing and assessment periods with those individuals involved in preparing the document. This was primarily done because of the dominant factor of emotion and suspicion which we were concerned would affect the easily-administratable and easily implemented survey forms. What we gained appears to be a profile

of reality in terms of what is happening in this state in terms of law enforcement. Obviously, there are exceptions to the things we found but we did see some things that seemed to be rather consistent in terms of bureaucratic process and conduct among the law enforcement officers in Minnesota.

First, we observed a rather consistent feeling of support for prohibitions against the liberalization of marijuana laws. In some cases, officers locally on-the-line or others in administrative positions within federal and state enforcement agencies indicated that they realized that they were seeing only those people who had morbidly used drugs and could not be objective. In discussing this with one debriefer, he stated that this feeling was understandable in that the occupation of law enforcement requires a special kind of commitment to the community and to the code of law. This is a code that an individual must, in all reality, be willing to lay down his life for. To internalize the enforcement of laws that are not agreed with is a difficult and draining process. Not believing in the code of laws leads to undermining the personality structure that must often sacrifice for the law; so in almost coping sense, law officers do come to believe quite sincerely that codified law is right and ought not be changed. This general concept of law enforcement is probably reinforced by the obvious fact that law officers often observe nonalcoholic and alcoholic drugs being used in ways that are abusive. The individual who smokes marijuana and is happy watching television in his own home would rarely come into contact with law officers; however, the individual who uses the drug and shatters a window or is involved in a driving violation or a spectacular bludgeoning will come into contact with law officers.

In spite of both these characteristics, at least on the local level of law enforcement, it is obvious that many officers are making choices not only about when to pursue an arrest but with whom to pursue arrest. Often law enforcement accidentally comes into contact with people in possession of the drug illegally. It is interesting that from the highly sophisticated federal level to the small town law officer, all seem to give priority to whom they choose to invest time and risk in trying to institute an arrest. These priorities vary; some seemed to be more likely to arrest those who were rich, but the point is that there is an assessment of values which directly impact who they arrested and these values rest with assessing human characteristics more than with assessing the circumstances. In small towns, there tended to be more of a reliance on previous knowledge of the individual whereas in large communities, the characteristics surrounding the individual's on-the-spot attitude seemed to have more importance.

With the BCA on a state level, their role is also one of established priorities. They attempt to assist local law officers by helping when more sophisticated drug operations come into play and invest time and money in pursuing arrests if it is warranted. This agency

apparently sees no difference between marijuana and the use of other drugs while on the local level, many law officers did tend to distinguish. Federally, the same process is accepted and again there is a screening of whom they should arrest. In both the case of the BCA and the DEA, they choose to arrest those who appear to have capital, are sophisticated and are organized. To a lesser degree, this also seems true in the prioritizing on the local level.

The singular consistent factor among all three types of institutions is that there is considerable emphasis given to the level of capital, sophistication and drug amount in terms of investing time and resources in deciding when to pursue an arrest. For this reason and because of the fragmented nature of marijuana distribution, it appears unlikely in the eyes of state and federal law enforcement agencies that a truly organized syndicate will ever be able to dominate marijuana distribution in Minnesota.

Law Enforcement

For the purposes of this review county sheriffs and their deputies will be considered "local" police, as opposed to law officers working for the state's Bureau of Criminal Apprehension or the Federal Drug Enforcement Agency.

In terms of dividing the tasks of various law enforcement agencies regarding the marijuana issue, as previously mentioned, since the mid-thirties, there has been a postulate for the federal authorities that they are to only become involved with large scale drug cases and leave smaller activities to local officers.

While the Federal DEA in Minnesota is basically involved with large-scale, highly organized, sophisticated drug cases which are not typically marijuana cases, the state Bureau of Criminal Apprehension is involved with more or less the second level of sophistication in terms of drug distribution. They too are involved in trying to seek out the most sophisticated and organized structures that are operating within Minnesota. When the BCA comes into contact with a system that crosses state lines that is exceptionally sophisticated, they will go to the federal authorities and ask for assistance.

Finally, on the local level, the local police are actually involved with the day-to-day drug-using activity that they perceive in their community. They, too, seek out the more sophisticated individuals. If a problem is developing in a community that the local police feel they cannot handle well, they call in the BCA. If the BCA finds the problem exceptionally complex or if it will require large amounts of capital, they then go to the Federal Drug Enforcement Agency. The tiers of priorities are basically geared toward stopping sophisticated organizations of drug distribution in the state from evolving.

There has been legitimate concern that the marijuana prohibition would create a new sort of underworld, such as was financed during the prohibition of alcohol in the United States during the 1920's. Whether or not the policy of the federal and state agency has developed because of this fear, we were unable to determine, but the point is, when an illegal system becomes organized, sophisticated, or simply big, both the federal and state agencies apprehend the system.

The Local Police

In discussing the best pattern for obtaining an understanding of how various professionals on the public payroll can be assessed as to their attitude and impression or conduct regarding marijuana, we learned that because of the emotional salience surrounding marijuana use, a traditional paper survey was not the best implement for gaining information. To go to a law officer who has a special image to uphold in the community, and ask him to reveal his impressions on a piece of paper, or form, regarding an issue as deep and as controversial as marijuana, is simply not feasible.

After a good deal of discussion among various professionals in the area of communications and data collection, we decided the best pattern for obtaining information would be to take a special law officer, train him in communication and interviewing techniques, and ask him to go into the Minnesota community and personally sit down and discuss with various on-the-line officers, their feelings and reactions about marijuana, but more specifically, to determine exactly how the marijuana law is being enforced.

With 153,000 individuals smoking marijuana with regularity in Minnesota and with only 3,600 arrests, it is obvious that there are only a select few in the community who are being arrested for possessing marijuana.

After carefully preparing a law officer of twelve years' experience in a suburban police force in the skills of interviewing, we asked him to go into the community and interview a number of law officers throughout Minnesota and determine two things:

1. Who was getting arrested and why were they getting arrested; or what characteristics caused a person to become one of the few individuals arrested for using marijuana?
2. What are the opinions of the law officers who are actually on-the-line and enforcing the law regarding the best possible public response toward the community's use of marijuana?

During a debriefing session, the interviewer discussed five interviews with law officers whom he felt typified the various kinds of law officers who actually make arrests.

We are aware of the inherent weaknesses in this kind of approach, however, because of the depth of feeling regarding the marijuana issue, we felt this pattern of information gathering would be best for gaining the insight in terms of what is actually happening to the law officer on-the-line and the people involved with marijuana with whom he interfaces.

One of the first individuals was a young "rookie" law officer, 21 years old, who had been a law officer for eight months in a suburban setting. When asked who gets arrested, this officer indicated that, although he frequently drove by high schools or other places where he heard that marijuana was being used, he had never intentionally apprehended an individual smoking marijuana. In other words, he had never gone out looking for someone smoking marijuana and apprehended them. The arrests he had made (eight in number) were people whom he had accidentally encountered, and who happened to be using marijuana. Some of these cases involved such cases as shoplifting, a flat tire, juveniles who were out after curfew, or individuals apprehended for driving violations. Although he had come face-to-face with individuals who had marijuana eight times, only in three of the eight instances he actually made an arrest. He arrested those who were involved with motor vehicles and using marijuana because he considered that activity a threat to the community and he also arrested juveniles whom he felt would be benefitted by being reprimanded by some sort of formal system.

In the other cases, he simply took the marijuana away from the individuals and threw it into wooded areas where it would not be found.

When asked how he went about trying to find people who used marijuana, which he stated he did do, he indicated he simply stopped people "who looked like crooks." He indicated that his greatest concern in making an arrest was that when making an arrest for a victimless crime, it is difficult to prove that anything happened that would have warranted his intervention. He stated that because he was new, he was reluctant to gamble in terms of venturing an arrest but that he would make the gamble if it was a person that he simply felt "should be arrested." As previously mentioned, he attempted to intervene in cases where he felt the individual was doing something dangerous to the community or needed help of some sort.

In terms of recommendation for alterations in the law, he stated he felt marijuana should not be legalized because it would simply increase intoxication in the community. He felt that some sort of program to eradicate cultivation of marijuana should be undertaken. Although he was not certain about the medical dangers of marijuana and was confused as to whether or not the drug presented a threat, he did state he felt that simply being intoxicated represented a threat to the public.

One assessment of this individual was that he simply seemed to take little interest in marijuana as a problem, and doubted if the individual was involved in much deliberate effort to try and stop or curtail marijuana, other than accosting suspected users.

Another assessment of the individual indicated that little credence should be given to the law officer's reaction toward alteration of the law. This debriefer has been involved in training law officers for a number of years in Minnesota, and stated that to ask a rookie of eight months to assess appropriate statute is simply not valid. However, he did indicate that the rookie's honesty about simply bumping into people and not being sophisticated to the point where he was able to detect marijuana use was probably sound. The debriefer felt that although it was not stated in the case of this officer, individuals who were poor were more likely to be arrested for marijuana offenses simply because they would not present a threat in terms of hiring an attorney who might challenge the process of arrest. He felt that a law officer would be reluctant to admit this, possibly even to himself, but this is often a dominant factor regarding victimless crimes and arrests.

The second individual interviewed by the officer, was a police officer in southern Minnesota. He was 26 years old and had been a police officer for five years in a community of 2500 individuals. The community was basically rural and in the center of a farming area.

This officer had made no marijuana arrests. In fact, he stated he had never seen marijuana but, through rumor, he had heard that it is being used by a few people, and had been told by a number of young people whom he found reliable on other matters, that it does exist in the school setting. He indicated that if anyone ever does get arrested in his community, it will be because they are grossly careless and it will probably not be people who sell it. The officer indicated if he was to make an arrest, he would probably arrest adults before he would arrest juveniles. He stated he would be afraid to give juveniles a record. Our interviewer noted that the law officer reflected for a moment, and then stated he would also not arrest adults unless the adult had an extremely "bad attitude."

In terms of law changes, the officer stated he did not believe marijuana should be legalized because it might lead to addiction, but he was not sure, and simply deferred offering any advice as to changes in statutory response to marijuana use. He did point out that he had heard the drug does not seem to affect anyone physically, but beyond that he had no comment.

This interview has demonstrated the rather rigid concepts law officers often develop regarding law. He indicated that quite often law officers support the status quo, simply because one of their greatest

enemies in terms of enforcing the law is lack of consistency. If marijuana was legal, they would not want to see it criminalized. As it is a criminal act, they would not want to see it legalized or decriminalized.

Another impression of this interview was that there probably was marijuana use going on in the community, but it was conceivable that the law officer did not want to admit it to the interviewer, even though he was a fellow law officer. The debriefer doubted if the law officer would ever make an arrest of someone who was local in the community because the comraderie in smaller towns is rather strong and the label of abusing a drug is strong and threatening to someone's career development. Both debriefers agreed that this interviewee may have been intimidated by someone from outside his relatively small community and may not have given honest answers. Regardless, the important point seems to be that this officer would arrest only those whom he personally judged to be exceptionally threatening or abusive.

The third interview involved a suburban law officer, 27 years of age, who had been on the police force for approximately five and one-half years. This officer was a Vietnam veteran, who had been exposed to marijuana in Vietnam. After admitting to the interviewer that he had been exposed to the drug he spent a good deal of time explaining how he felt the drug was bad, wrong, and harmed the efficiency of individuals whom he had seen using it. This individual had a reputation in the community for making more marijuana arrests than anyone else in either his suburb, or any of the adjoining suburbs. He readily admitted that he, personally, was hostile to the use of marijuana and intended to enforce the law to the letter. He indicated he had arrested approximately 200 people for possession of marijuana. Of these 200, he felt approximately three-quarters of them had been juveniles. Approximately ten percent of all individuals arrested had large quantities of marijuana around them, or were probably involved in sales.

When asked if he arrested all individuals he came into contact with who possessed marijuana, this officer first stated "yes" and then qualified his statement. He indicated he would arrest all adults he found using the drug, but only arrest juveniles who were not poor. He indicated he felt that poor, young people simply had a harder time in life and should not be burdened with an arrest. If he judged the juveniles he found to be from a relatively stable home, in an upper or middle class area, he would institute the arrest. The officer also indicated he would go out of his way to apprehend and arrest juveniles who he felt could be modified, treated, or "cured."

He stated that among other officers, the attitudes of those whom they confronted with marijuana defined whether or not they would be arrested. He indicated that if they were polite or apologetic, or appeared fearful, they likely would not be arrested, but if they appeared belligerent, sophisticated, or intimidating to the law officer, they would be arrested.

When asked what kind of alterations to the law he would see as appropriate within the state, he indicated that a device should be instituted in the law that would "give kids a break," but beyond that, he had no input.

In assessing this interview, both debriefers felt this law officer was being candid in explaining how he handled marijuana offenders. It was after some prodding by the interviewer that the interviewee actually admitted he made subjective judgments and used personal interpretation in deciding who to arrest. Once he confided that he did not follow the criminal justice code to the letter; he clearly expressed his personal code for making an arrest. The fact that age and socio-economic status are important variables in terms of who is arrested was clear as well as the attitude of the suspect.

The debriefer indicated that this is a clear case of a law officer who is conceivably being torn in his perceived duty and what he confronts. This officer seems to believe in following the code of law, yet when confronted with the possibility of truly harming an individual for whom he has compassion for and whom he probably does not see as constituting a threat to the community, he probably does not institute the arrest. Quite likely, he has some trouble with internalizing the disparity between his formal code and his actions regarding marijuana arrests. This was pointed out by observing this officer's message to policy makers regarding alterations in laws as simply that "kids should be given a break."

While this officer had a reputation with the law enforcement organization with which he worked of taking his work seriously and of being dedicated toward upholding the code of law, he also had a reputation of making more marijuana arrests than any other officer. Nevertheless, in certain situations he took it upon himself to select and choose who should and who should not be punished.

The fourth officer was a 35 year old policeman from one of the state's largest suburbs, and was part of a 100 man police department. He had been a law officer for eight years and made approximately 200 marijuana arrests within the last five years. Seventy-five of these arrests had been in 1974. This officer indicated that 75% of his arrests had been adults, and 95% of the arrests had been for possession. He had a reputation of being extremely "street wise" and was perceived to hold substantial status within the police force by the interviewer.

In discussing his reaction to marijuana, the individual explained the subtle signs he used to make arrests, and indicated he was able to pick out individuals who possessed marijuana. Some of the signs he observed were things such as a dirty car, an individual who dressed slovenly or who appeared to be transient. The officer would stop individuals who looked suspect and was able to recognize the odor and characteristics of marijuana use. Similarly, he felt that he could observe individuals who were intoxicated on marijuana from quite a distance, and he especially could pick out driving

styles of those intoxicated on marijuana. The officer indicated he had studied drugs through a number of classes at the University and was convinced that marijuana presented a threat to the community. When asked whom he arrested, he again responded with the fact that he had carefully studied the characteristics of marijuana and was certain it was a threatening drug, the use of which should be stopped. It took the interviewee some time to define exactly whom he arrested and whom he did not arrest, and the interviewer seemed to sense some defensiveness. The officer stated he would arrest anyone he saw with marijuana, and he would not let people go or give people "breaks." Again, beyond stating what he did, he explained why and went on to say that he felt enforcing a law on a consistent, firm basis, is a sound deterrent to dangerous involvement with marijuana or other drugs.

The officer went on to say that he hoped the arrests may constitute an inroad into treatment or counseling which would actually help the person. He stated that if this was not the case he felt it should be, and that first arrests for possession should allow exposure to some sort of treatment or confrontation of drug problems. When asked about policy change, he simply stated he felt the present law was appropriate, especially the part regarding "a small amount" (the misdemeanor). He also stated that he hoped once the individual was arrested, probation would be the disposition of the first offense, but basically, he reaffirmed that he felt the law is appropriate.

In assessing this officer's conduct, one debriefer observed a certain amount of frustration arising from the way the officer perceived his role. The officer was committed to enforce the code of law, but also seemed to have a good deal of confidence in himself and his judgment. When the two ran counter, even though he differed from the state code, there must have been some internal stress.

Another debriefer agreed, and stated that in this officer's case, there appeared to be the desire to serve the community coupled with a hope that it can be done by following the code of law. There was obvious defensiveness in the law officer's reaction to a number of the questions and it was suggested during the debriefing that he may be subconsciously or subtly aware of the fact that by following the code of law he might not be serving the best interests of the community. This seemed to frustrate and bother the officer when the discussion closed in on his personal judgments regarding how the law interfaced with the community in terms of arrest. It was the debriefer's perception that this law officer probably does enforce the code of law to the letter and probably internally his position is justified by his belief that the use of marijuana is a potential danger to the individual and the community.

One debriefer also pointed out, that by being "street wise" the officer may actually not be arresting or simply locating people who

have marijuana, but is able to locate individuals who have the appearance of being undesirable and also happen to have marijuana.

The fifth individual interviewed was a 29-year-old law officer in central Minnesota who had been on the police force for six years. This individual was also a Vietnam veteran and had also been exposed to and had used marijuana, although he was quick to point out he no longer uses the substance. He has made eight to ten arrests in the last five years, and readily stated that he is very cautious about actually performing an arrest even though he encounters many individuals who are involved with and use marijuana. When asked specifically why he is reluctant to make arrests when he encounters people who are violating the marijuana law, he rapidly listed the reasons. It was obvious that he had conscientiously thought out these points prior to the interview. His reasons for hesitating in potential arrest situation were:

1. Due process...he is simply concerned that if he prosecutes the arrest, the difficulty of proving a victimless crime will cause him embarrassment and frustration in terms of trying to actually get a conviction and see a conviction through.
2. The officer indicated he is simply supportive of giving breaks to individuals, especially individuals who often have enough problems, and simply do not need the added burden of an arrest or probation.
3. He states that the amount of drug is also important, and if he ever found someone that had a large amount of the drug he would make the arrest because it would denote a larger degree of sophistication, capital and wherewithall to do damage to the community.
4. This officer stated that the attitude of the person using marijuana is important. If he is hostile or belligerent he is more likely to make the arrest.

After explaining who he will or will not arrest, or under what circumstances he will make an arrest, the interviewee began to explain his perception of how marijuana effects the community. He felt the drug is simply a fad and from his own experience, does not feel it produces much in the way of pleasure. He stated he felt the drug is harmful in that he feels it creates a lethargic, lazy state of mind and steers people away from their basic goals. He does not think people should use it.

When asked to make recommendations in terms of alterations in the law, he stated he is supportive of the present law that stands on the books and had no further comment. It was the feeling of both the debriefing personnel that this officer was not as dedicated to following the code of law as some of the others interviewed but felt

more comfortable in making personal judgments and felt that making those judgments was justifiable within his role as a law officer. Also, the debriefing team noted that this officer did not see the arrest process as therapeutic in any way but really saw it as something that would simply add to a person's personal problems as opposed to offering some sort of therapy. The perception that some officers have of arrest being an entrance into possible treatment may simply be related to the varying ways in which different criminal justice systems really do relate to treatment.

The sixth interview involved a law officer, 28 years old, who had been a police officer for seven years. He had two years of college and grew up in a community of 20,000 where he was now a police officer on a police force consisting of 26 men.

This individual indicated that he had made ten to twelve arrests over the past seven years and had eight or nine additional "confrontations." By confrontations he meant he simply fell into or bumped into people accidentally who happened to have marijuana. This included checking young couples who were parked alone at night in a car, observing one individual fishing who fell out of his boat into the water because of his intoxication, etc.

This officer could recall only one actual arrest that came from previous information and all the other arrests, to the best of his recollection, he felt were related to simply haphazard circumstances. In terms of who he actually arrests and who he lets go, he stated the biggest factors are:

1. The fear of not actually performing the correct process for constituting a lawful arrest.
2. The attitude of the individual.
3. The amount of the drug.
4. The past history of the individual that he is observing.

He indicated that No. 4 was probably the most important in that he knew most of the individuals in the community and if he observed someone who was threatening or reckless, he stated he would go out of his way to actually make the arrest. This officer stated that in his opinion the duty of police in the small community was to know who is doing what, and try to endorse the moral tone of the community as well as the laws. By this the interviewer interpreted the interviewee to be inferring that he actually is comfortable in passing some sort of judgment on the individuals he chooses or chooses not to arrest.

Regarding his advice for alterations in the present public response, he stated it would be a good idea to have some sort of therapy, or potential therapy to help someone who has a problem with drugs who is arrested. This officer obviously did not feel that arrest constituted an inroad to treatment, but he did feel it should.

The officer was quick to point out that marijuana should not be legalized and the current law is appropriate. He stated he had heard from other individuals on the police force that marijuana creates "mental problems, lazy conduct, driving problems, and blindness."

Two debriefers agreed that this officer was probably adjusting to the expectations of his community and that often in small communities this happens to law enforcement. This officer is probably expected to overlook an individual he finds using marijuana who obviously is not threatening to the community and act differently, than an individual he confronts using marijuana who has consistently been threatening to the community. He seems to have internalized that role and is accepting of it.

His desire for having some sort of therapy or treatment as an alternative for arrest is probably also related to his feeling of community responsibility. One debriefer stated that often law officers in smaller communities find themselves more concerned about probable causes relating to the technicalities of arrest than in larger communities, because of simply being involved with fewer arrests.

The seventh officer interviewed was a 34-year-old man who had spent eight years with a nine man police department in a community of less than 9,000 in northern Minnesota. He was a life-long resident of that particular community. This officer stated he has observed approximately 25 incidents of marijuana use in his eight years, and when asked how many were arrested he stated he did not remember. He was quite blatant in showing his reluctance to share information about "his" community with the interviewer. He did state that most of the people he had seen use the drug were 18 to 22 years old. When asked what characteristics he observed in determining whom he did and did not arrest, the officer simply stated he would not make an arrest when he could not get an adequate case in terms of due process. When asked if he gives breaks to any of the people he confronts with marijuana he stated he absolutely did not give breaks to anyone. Again he pointed out that his arrests simply occurred accidentally, in that he would bump into people, usually young people, who happen to be in possession of marijuana.

When asked about possible improvements in the law, he stated he felt the present law is fine and does not need any changes.

The interviewer observed this individual was reluctant to open up and share information. This disturbed the interviewer who was himself a law officer and was surprised at the unwillingness to communicate.

Both debriefers stated that this individual obviously was interested in protecting his community. One debriefer, although reluctant to interpret too much into the limited information, did state he felt this officer may be concerned or, to some degree, ashamed of the fact

that marijuana is being used by some people in his community. It is likely that this officer is very reluctant to actually prosecute an arrest and is threatened by the fact that on some occasions, he probably had not carried out the code of law. The debriefer points out that this interpretation is drawn from information observed in the other interviews but it seems likely that considering the kinds of problems other law officers have in executing the law if, in a small community the nine men who are enforcing the law had consciously or unconsciously agreed among themselves that they will not enforce the marijuana law to the letter, they would be severely threatened by an outside interviewer. It is also possible, of course, that some extraneous fact in the interview situation caused his reluctance to share information.

Another assessment indicated this individual did not take the law seriously and was actually ignoring the law because he did not understand the characteristics of the drug's use or the fine points of victimless crime arrest procedure well enough to embark upon making a number of arrests.

The eighth interview was a veteran law officer on a ten man police force in a northern community of Minnesota. The community is basically rural and the actual town is small with a number of outlying farms. The officer has been a police officer for sixteen years and was the chief of police of the community.

This officer would or could not give a number in terms of how many arrests he had made, but simply stated that he had participated in "a lot of them." When asked who he arrests he listed in this order:

1. Those who will not cooperate in giving information regarding other people who are using the drug.
2. Those who have a large quantity of the drug. (He indicated he would never arrest someone for less than one marijuana cigarette.)
3. Those whom he cannot talk into going into some sort of treatment program. (Specifically he directs them to mental health center counselors under threat of arrest.)
4. Those who he feels really will be deterred from further marijuana use if they are arrested.

In discussing his arrests, this officer indicated that at least half of the arrests are, in fact, accidental and about half are by design. He indicated that in his community, reputation is important in terms of actually developing the arrest. They simply know who in the community uses marijuana and who doesn't and if someone needs arresting who they know is using it, they usually can develop a system for implementing the arrest. Although unsolicited, the officer indicated quite firmly that they would not arrest someone on the basis of wealth,

race or any other characteristic except the level of community threat the individual presented in terms of their reputation. In other words, if someone in the community were known to be a "hell raiser," that individual would get arrested; whereas if another individual was known to be quiet and productive in the community, even though he was "poor or an Indian," he would not be a likely candidate for arrest.

The officer was quite firm in pointing out that in his town they arrested people whom they felt threatened the general well-being of the public from their previous experience and they were not ashamed of that system of making arrests.

In terms of marijuana, the officer indicated he had never seen the drug used socially and was certain that no one of any credence in the community would use it. He stated that he had heard it created driving problems, bronchial problems and might lead to other drugs.

In terms of responding to what public policy would be best, he felt probation would be important for the first offense and some sort of treatment or counseling for the second or third offense. He did feel that after three offenses, or when someone was involved in sales, more punitive measures are fitting.

In assessing this spot review of some of the characteristics of arrests by the "on-the-line" police officers in the local communities, it appears that there is a good deal of subjective evaluation involved in actually making an arrest. According to the debriefer, who has worked extensively with law officers and police departments, generally the law officers were being forced to make important decisions that could cause some frustrations. The police officers are forced into situations where they are pressured into not enforcing the code of law. To not enforce the code of law causes pressure. While in others, it was basically understood that making subjective evaluations on whether or not to arrest is simply part of the job.

In terms of who got arrested, it appeared obvious that an individual who, by whatever standards the police used, is threatening or "bad" or simply obnoxious to the law officers would be the most likely candidate for arrest. The greatest incidence of exposure to an arrest situation usually involved accidental meetings. Due process and fear of executing an inappropriate arrest, especially in the area of a victimless crime, prevented the law officers from instituting many of the arrests. In a significant number of the cases, the law officers actually saw the arrest as a device that would help the individual or straighten the individual out; in other cases, the officers saw the arrests as a punitive measure that would provide an additional hardship for those they arrested.

Virtually across the board, the law officers stated they felt the law was appropriate. In assessing this rather consistent answer, one debriefer stated that by tradition, law officers are taught

and indoctrinated in the concept that a codified law is appropriate and right, and they are taught not to outwardly judge the wisdom of a law. He felt that it would be highly unlikely to have a law officer issue some sort of recommendation regarding the altering of a formal public policy.

In determining why they felt the drug was dangerous, beyond a few allusions to driving problems, the officers basically regarded marijuana as a danger to health.

State Coordinated Law Enforcement

Like the federal government, the Bureau of Criminal Apprehension (BCA) interfaces with the illegal criminal traffic of drugs in a prioritizing fashion. They do not prioritize in terms of drug type but they do prioritize in terms of level of organization, perceived community threat, and the quantity of drugs involved in the structure they attempt to break.

The key to BCA drug enforcement operations seems to be prioritizing. On a managerial basis, someone in a command position within the BCA simply has to make an assessment in terms of whether or not a particular problem is worth investing time and resources toward pursuing an arrest. As previously mentioned, this decision is not based on drug type. They will go after marijuana just as readily as heroin if it is a large operation.

In addressing drug problems in Minnesota, the BCA feels they actually can get more done if they are able to work in the metropolitan area. To work in outstate Minnesota becomes expensive and it takes a good deal of time to set up inside informants and to set up controlled illegal drug purchases which will eventually lead to arrests. However, they often respond to requests from the outstate area in making arrests of individuals who perhaps sell only small quantities of drugs or perhaps only marijuana. Quite often their level of response relates to the amount of demand or pressure coming from the rural areas.

The BCA perceives a network system of marijuana distribution in the state with the drugs coming first into the metropolitan area and then being dispensed to outlying areas. For instance, drugs will come to Minneapolis, then to Duluth, and then to small towns in the Iron Range area. Similarly, drugs will travel to the metropolitan area and then to Rochester and then to small communities surrounding Rochester.

The Bureau of Criminal Apprehension did not seem to note any observable difference in organization in terms of distributing marijuana or other drugs. They felt that marijuana traveled by the same paths as other drugs, often with the same people. They did indicate there was less of a "bottleneck" in terms of marijuana coming into the community. For instance, when heroin crosses the Mexican border, there are only a few people who are sophisticated enough to actually process and deliver it. Marijuana has more customers and virtually anyone can drive down to the Mexican border, smuggle marijuana across the border, and then set up a distribution system among a network of

friends. No one person or group controls a preponderance of the marijuana traffic.

The structure for dealing with the drug organizational system in outstate Minnesota basically follows along the following lines: first, a local law officer may contact the BCA and ask for help because they are convinced there is a certain amount of drug use and distribution within their community. Often, the local law officers know exactly who is selling and distributing the drug. The officers on a local level are unable to make an arrest simply because they are not able to get inside the small organization within their community. Usually, the BCA offers advice in terms of hiring a "contact" to get inside the small organization and expose the individuals by setting up a drug sale from a BCA agent or from a local agent. Usually in small communities, this is difficult because everyone knows everyone else. If simply rendering advice is not sufficient, the BCA will send up an informant to obtain a job in the community such as a gas station attendant, and become involved with the criminal structure. Once the informant actually knows and has a certain level of trust within the organization that is distributing drugs, the informant will set up a purchase with a BCA agent and at that point the arrest can be made.

Officers in the BCA seem to feel that it is more productive to operate in the metropolitan area where it is easier to get into an organizational system and larger quantities of drugs can be confiscated, thus precluding their distribution to rural areas. However, they attempt to be responsive to urgent calls for assistance from outstate areas.

In terms of costs to the Minnesota taxpayers for this service, BCA officers are quick to point out that as long as they have men in the field, there is no more cost to the community in terms of marking marijuana arrests than any other arrests. An analogy was made between telling a traffic officer not to arrest individuals who did not stop for north-south stop signs but do arrest those who did stop for east-west stop signs. They felt that as long as the officers were out there, they could be working on all drugs at the same time. Possibly this analogy breaks down when one reviews the number of requests for intervention they receive but are unable to comply with, yet within the agency they are convinced that "a dealer is a dealer" and that the community is better off without them.

As with local officers, a number of arrests through BCA are actually made by accidental circumstances. Those which come to the BCA's attention seems to be involved with highly sophisticated

distribution practices. In one case, in the summer of 1973, a trailer truck was stopped by a local law enforcement officer who observed that the individual driving the truck was intoxicated. Largely through circumstance and accident, it was found that there were 1,000 pounds of marijuana bolted into the top of the trailer. The trailer was two years old and had 92,000 miles on it and it would appear that there was some degree of sophistication and consistency behind the delivery pattern of the marijuana. Although the level of organization can only be inferred, it is interesting to note that the individual apprehended driving the trailer simply would not provide information to the law officers when promised more lenient disposition.

When specifically asked about the level of organization of the marijuana distribution structure in Minnesota, BCA officers stated that they felt that there is no possibility of marijuana distribution in Minnesota evolving into a highly sophisticated all-encompassing "syndicate." The officers believe marijuana does not lend itself to this kind of organization because there simply is no control factor in terms of obtaining the drug. Obviously, there are individuals who grow it in Minnesota and many people drive the drug up from Mexico or other areas of the United States. They probably make a good deal of money, but they also have a number of competitors and no one organization could capture the entire market.

One BCA officer made the point that virtually every "high school drop-out" or "motorcycle gang member" has a possibility of obtaining considerable income by simply entering into this process. Naturally, the risks are high and while easy to get into from any reasonable perspective, it's a dangerous business.

In terms of profit, the officers in BCA feel that there is no consistency to how much an individual will make in dealing with marijuana, but feel the drug can be purchased for approximately \$175 per pound in the community quite readily and then be redistributed at \$15 per ounce, \$240 per pound.

In determining the process that frustrates the development of sophisticated organization controlling large quantities of capital, the BCA officers have indicated the following inhibitions for would-be marijuana dealers:

1. Amount of risk: obviously there is more risk in "dealing big" and individuals who become involved in massive distribution structures are opening themselves up for breaks in their system through the government's use of undercover informants;

2. Profit structure: individuals will not become involved in drug sales unless there are substantial profits; if the capital to invest in marijuana distribution system can't be raised, or more specifically frightened off by a possible 100% loss if discovered, the marijuana distribution system will never get off the ground;
3. Amount of work involved: there is a good deal of work involved in processing marijuana, including its cleaning, smuggling, growing, etc. To actually haul pounds and pounds of the drug similarly requires a good deal of effort and coordination and physical material. The distribution of small quantities of concentrated heroin or cocaine is much easier and more difficult to detect by law enforcement officers so it lends itself to more risk-taking individuals, and individuals who are less receptive to physical labor.

In discussing the trends of marijuana use in Minnesota, the officer we spoke with was deeply sensitive to the greater acceptance of the marijuana's use in the community. There were allusions toward blaming the media for glamorizing drug use, the Beatles' marijuana intoxication when they were knighted by the Queen of England, the use of drugs by respected members of academia, the nightly flippancies about marijuana use by Johnny Carson, etc. The officer recounted with deep regret a number of morbid observations he and his counterparts had observed in the state involving the use of marijuana and other drugs, including thoughtless parents giving illegal substances to their children, young girls committing suicide after being involved with LSD, etc. The officer readily admitted that he and his counterparts in law enforcement seem to see the more tragic side of drug use and obviously these experiences leave deep and lasting impressions. He readily admitted that sometimes objectivity is lost.

It is appropriate to point out at this time that being involved in law enforcement against the victimless crime, where a great deal of profit is involved, requires special kinds of efficient and honest law enforcement. Federally, the Bureau of Narcotics and Dangerous Drugs was disbanded after a crackdown in which a number of federal agents were dismissed and others indicted.

No federal operatives in Minnesota were involved. Recently the BCA counterpart in Idaho was given a program audit. The investigation ended with one-third of the 34 member force, including the chief of the agency, being actually fired or pressured into resigning. Some of the activities of the state agency involved officers' fire-bombing automobiles belonging to suspected drug sellers, undercover officers posing as members of Italian syndicates and actually inspiring gun thefts and other kinds of crime, and what was termed by one Idaho judge as "Gestapo tactics." In terms of efficiency, this same agency had spent more than one million dollars in three years and had not turned up a single major drug dealer within the state.

In assessing what happened to that agency, the attorney general of Idaho simply stated that the agency had too much money too fast, and a number of men who did not understand their mission and role in the community.

In spite of the difficulties in coordinating and administering a law enforcement structure for this kind of crime, among local law enforcement officers, among individuals who are presently incarcerated for being involved in illegal drug activities in the state and among a number of individuals who are still involved in the distribution of drugs, the BCA is a credible force in Minnesota that cannot be negotiated. Considering the tragic, pathetic and frightening history of law enforcement and drug prohibitions, including alcohol prohibition, there is room for appreciation of the Minnesota BCA structure which seems to have remained immune to those forces which tend to undermine effective and honest law enforcement.

The Federal Drug Enforcement Agency in Minnesota

The Federal Drug Enforcement Agency (DEA) operates in similar fashion to the Bureau of Criminal Apprehension in that they strictly prioritize who they will direct their efforts toward apprehending. Since the Marijuana Tax Act was passed in 1937 and the directive to prioritize went out from then-Commissioner of the Federal Bureau of Narcotics, Harry J. Anslinger, the federal authorities have felt quite justified in prioritizing their arrests. The point to be made is that this level of prioritizing, although it is no secret, was rarely publicly expressed. Last November, U.S. Attorney, Earl Silbert, publicly indicated that his department would not prosecute cases in the District of Columbia involving possession of five marijuana cigarettes or less. Under a storm of protest, Silbert withdrew this statement and cancelled his order by the first week of December. Although the process is one that clearly goes back to the 30s, apparently the federal government was reluctant to formalize this process through a public statement.

The Drug Enforcement Agency in Minnesota readily admits that they simply do not waste their time with small offenses. They go after those they prioritize as being dangerous.

The priority for pursuing an arrest is as follows:

1. Level of organization and sophistication of the operation distributing the illegal drugs;
2. Amount of capital that seems to be involved in the operation; and
3. Simply the largeness of the drug supply involved.

Again, the federal agents indicated they make absolutely no distinctions between marijuana or any other drugs in terms of pursuing an arrest in that all drugs are illegal and only by the above-mentioned prioritizing do they decide who they will choose to pursue for an arrest.

To gain some perspective on the different levels that the BCA and DEA operate, while the BCA told of a 1,000 pound seizure being the year's highlight, the DEA agent told of helping to break a national network scheme that netted them 42 tons of marijuana in a Mexican border state.

When asked about the level of sophistication of marijuana in Minnesota, the officers quickly stated that there simply is no really sophisticated single distribution system in the state. Like the BCA, they believe that there are simply many individuals and many distribution systems and that it is an easy process to get involved with, although it is a dangerous business.

They also stated that if someone ever did become large or organized, they would be apprehended and stopped quickly. It is important to note that there are excellent communications between the DEA and the BCA. Hypothetically, if someone in a rural Minnesota area became aware of a large distribution system of drugs, they would go to the BCA for help, and if the system was large and sophisticated enough, the BCA would go to the DEA and eventually the matter would wind up in federal court.

Although the agents again and again stated that they feel marijuana is a dangerous drug and simply a "wrong" substance for people to use and should be criminalized, they indicated that since they prioritized on sophistication and capital involved, they quite often are more involved with working against the smuggling of heroin.

In terms of marijuana coming into Minnesota, they felt that most marijuana actually crosses the Mexican border with a large amount also coming from Jamaica and finally some comes from Colombia. During the Vietnamese War, a good deal of marijuana was sent back by soldiers in sleeping bags and other equipment until the postal authorities began using trained dogs for detecting the scent of marijuana. They also felt that certain amounts might cross the Atlantic Ocean from the Middle East but they felt that this amount was minimal. The use of Middle East marijuana in Minnesota will be explored later in interviews with various inmates in a state penitentiary.

In terms of pricing structure and costs, the officers stated that they felt that an individual could buy marijuana for \$25 a pound in Mexico if they bought at a level of 100 pounds or so. Once that drug was brought across the Mexican border, it usually doubled in value. By the time the drug actually gets to Minnesota, the DEA feels that it can be sold for well over \$150 per pound if purchased in many one-pound quantities.

It is interesting to contrast this with the BCA's view of the value of marijuana. It would seem that since the DEA works with larger quantities, they are working with less cost per unit of marijuana. They felt the price of an ounce (1id) of marijuana was rising from \$15 to \$25 in this state.

The DEA indicated that they felt that quite often marijuana distributors will "cut" marijuana and mix it with other substances, some of which may be possibly dangerous.

In discussing how sophisticated an operation can become before it is detected and cut off by authorities in Minnesota, the DEA stated that it seems to be simply a matter of luck and chance as well as levels of caution and sophistication. Nevertheless, they felt that once a large organization evolved, law enforcement would quite easily detect and obtain an arrest and prosecution.

The Court and Marijuana in Minnesota (For supplementary information relative to the courts see Appendix I)

To supplement the information we had relative to how the court responded to marijuana, we contacted an individual who had served in an administrative court position for some years in both metropolitan and rural areas. On our behalf, he physically went to three court systems, and had a series of interviews with the principals in those court structures. He inquired of them what they believed was occurring with the present response to marijuana within the court setting. This battery of interviews was conducted toward the end of 1974 and in early 1975. We granted the interviewer a good deal of leeway in terms of who he spoke to and what questions he asked. His assignment was to gain an impression of what was occurring in the court system both in terms of bureaucratic process and attitude level reaction. Again, as per our debriefing system, when he returned after making the interviews with complete notes, he went through three separate debriefing sessions.

The interviewer was asked to go to three separate court settings. One was a suburban setting, the other a rural setting, and finally a metropolitan area setting.

In the suburban setting, the interviewer found there were strict codes for law enforcement dictating that whenever they observed a violation, they were supposed to arrest. The interviewer was personally acquainted with the suburban area. In a series of indepth conversations with principals of the law enforcement unit, he found that of the six divisions of the law enforcement structure, four simply had decided not to follow the rule, and were often reluctant to apprehend someone involved in a crime such as possession of marijuana. It was his impression that the police in this suburban

community do not always arrest those they see using the drug, even though rules both formal and informal exist enjoining them to do so.

In terms of the actual court process, the formal recommendation for the disposition is generally left with the department of court services, and the director of that department sets the tone for the recommendations of the pre-sentence investigation. The first arrest involving juveniles invariably constitutes a lecture by the probation officer, and they rarely go into a formal courtroom setting. There is technically no record kept. On the second offense, the court will give sixty to ninety day continuances if there is a feeling that the juvenile is in need of counseling assistance or presents some sort of threat to the community. During this time a pre-sentence investigator gathers information, but in reality he provides some on-the-spot counseling. Usually, as a matter of course, there is a one-year probation after the court appearance. On the third juvenile arrest, which are infrequent, another year's probation is instituted; however, the supervision is more intense.

With adults, the first offense involved a sixty to ninety day continuance, during which time a pre-sentence investigation is developed. The usual disposition observed by the director of the court services department is a one-year probation, and the use of various statutory mechanisms to remove any record. If the adult is brought in a second time, the same thing is generally handed down.

The director of court services did indicate a threat of disposition is utilized to force someone who has been apprehended with marijuana and has a chemical dependency problem on another drug into a treatment setting, although it is seldom used. In other words, the individual is told that in lieu of being punished for possession of marijuana, he must become involved with a treatment project. Most commonly, this involves young adults who are in the process of becoming alcoholics, and are apprehended with marijuana.

Shortly after this battery of interviews was completed, a memo was dispatched by the local prosecutor to the police department, indicating at least 50% of the arrests dealing with drugs in general, particularly marijuana, are thrown out of court because of technicalities involved in the arrest process. It was the feeling of the interviewer that readjustments in arresting policy will be made by the two law enforcement units presently involved with arresting everyone they encounter using marijuana.

The second court structure the interviewer contacted was in a rural area, which included several counties, one rural town, and a number of small communities. This was a community in northern Minnesota principally engaged in farming.

The interviewer found that in this court setting, juveniles are consistently brought home and lectured. Upon occasion, they are brought to religious leaders who are asked to counsel them.

Adults are also lectured by the police, and only the individuals who are arrested appear to be dealers whom the police have previously known to be involved in dealing with drugs. These local criminal justice personnel indicated that they rely quite heavily on the BCA for help in determining how to proceed in various drug cases. The principal law enforcement officer in the community indicated that the BCA is proficient at "undercover sleuthing." The chief of police stated that usually dealers are set free by plea bargaining down to simple marijuana possession. When they arrest an individual they feel is involved in dealing with drugs, they frequently are able to arrest him only for possession of a large quantity of the drug.

Usually through the plea negotiation process this is reduced to simple possession of a small amount. There was a general complaint in this area that the pre-sentence investigations were incomplete, and the court simply didn't know what kind of people were coming before them. The law enforcement officers were reluctant to share reliable hearsay outside of the formal pre-sentence investigation structure.

Disposition for marijuana offenses, when they do go to court, are generally probation for the first, second, and third offenses. In all cases, both the law officers and the probation officers in the area indicate that a conviction for possession of marijuana usually relates to an action of sale or distribution. A two-year probation is usually given, and often there are not enough facilities for the judge to obtain an adequate pre-sentence investigation. Both law enforcement officers and pre-sentence investigation officers agree that without resources for a complete pre-sentence investigation, they feel the judge is often sentencing without adequate information.

There was a general frustration in the criminal justice structure in this area resting with the lack of coordination of information.

During the debriefing session with the interviewer regarding this community, a piece of information arose which one debriefer seriously felt belonged in the report. Although reluctant to degenerate to backyard gossip, this personal dynamic may lend insight. It is generally agreed that in this particular community, one of the more dynamic personalities in the criminal justice system uses marijuana with some degree of consistency, and has created a certain level of acceptance of its use within the criminal justice community. This was seen as an important dynamic in molding the criminal justice system into the structure it now holds regarding marijuana offenses in the community. The debriefer pointed out that even if this is not true, but believed by a large number of people in the criminal justice structure, it would have the effect of truly de-mysticizing the image that marijuana holds in many other criminal justice institutions. The ideal would be that if, in fact, the particular individual did not use marijuana or did not have this reputation, the community might be taking a much firmer stance in terms of prosecuting marijuana users.

The metropolitan court structure that the interviewer became involved with handles a number of marijuana cases through two different court systems. The first system is the district court, which handles gross misdemeanor cases or felonies. The second system is the county court, which handles the small amount possession cases. In the district court, the interviewer spoke to a probation supervisor who had previously spent a good deal of time interviewing his staff in preparing for the meeting with our interviewer. He had asked his staff to assess what is happening regarding marijuana cases. Generally, the staff agreed that probation can be expected when someone is arrested for marijuana and brought to district court. It should be remembered that an individual who has only a small amount of marijuana (1.5 ounces) is not brought to district court. Individuals who are arrested and being prosecuted for possessing more than one conventional lid of marijuana are receiving probation. Many cases seemed to be what the district court staff termed "accidental arrests." These cases were defined as situations where someone with a flat tire was joined by the police to assist, and would be found smoking a marijuana cigarette with a quantity of marijuana in the car. Or someone would be smoking marijuana in an elevator carrying a large quantity of the substance, only to open the door and find himself at a sheriff's convention. There were a number of rather humorous stories relating how people were arrested, and generally the staff felt that a full 50% of these arrests were, in fact, termed accidental. These cases usually involve probation and an expunction of the record. The probation supervisor stated that in an assessment of his probation officers, they felt that marijuana arrests constituted a "miscarriage of justice that these people are even being brought into the degrading court setting."

The other 50% of marijuana arrests that are seen in the district court involve individuals who are basically involved in some other kind of criminal activity; however, through the plea bargaining process are able to plea down to possession of marijuana. Many times they are dealers in large quantities of other drugs or in marijuana; however, unlike the situation in the rural court setting, extensive and indepth pre-sentence investigations are conducted prior to the disposition. The probation officer has relatively sound ideas of the extent of the case and the character of the individual, and shares it with the court prior to the disposition.

Because the county attorney, who actually negotiates the plea, often does not have all the information at the time he accepts the plea negotiation, the probation officers have been formally instructed to make the extent of the defendant's activities clear to the court. Frequently the probation officers indicate they simply will not support the negotiated plea. This process appears to be well accepted by the county attorney, who readily admits that he is plea negotiating many times out of an understandable ignorance, pertaining to the kind of person who is involved in the plea negotiation. In determining who is sentenced to

what for marijuana, the practice is subjective, with a trend toward probation and generally non-punitive dispositions. The system is instrumental in frustrating, abusive use of the marijuana possession charge as a device for plea bargaining among those who have committed other crimes.

One judge in this metropolitan setting has a reputation for looking behind every marijuana plea at the actual conduct of the individual, and frequently the record will show individuals receiving harsh dispositions or being incarcerated in workhouse settings for simple possession of marijuana. In some cases, these individuals have been involved in personal or property crimes.

In the municipal court setting, the court services staff indicated the preponderance of their marijuana cases are "incidental arrests." By this, they mean individuals were accidentally found to have marijuana. Many of these involved people who are in the process of being stopped or arrested for something else, and in the process of going through the arrest procedure they are found to have marijuana. This may involve an eviction from an apartment where marijuana is found, stopping somebody for a speeding ticket or careless driving. Usually if the matter is insignificant enough, the individuals will be prosecuted for only the marijuana. In many cases, because of the nature of difficulty in proving the other offenses under municipal ordinances, marijuana convictions are easier to use. In this case, too, the general sentence is probation with expunction of the record.

Two interesting asides occurred during the interviewing process which both debriefers believed should be incorporated in this report. The interviewer asked some of the probation officers if it was possible for someone in the metropolitan area to be arrested, and actually wind up incarcerated for possessing marijuana. Both municipal and district probation officers indicated there were only two possible ways in which they could conceive of such a disposition:

1. If the defendant had an extensive prior record; and if the defendant, during his hearing, was extremely hostile, rude and threatening to the court, certain judges may conceivably require incarceration;
2. If it was determined that the individual was in fact dependent on some other drug as a result of the pre-sentence investigation, a disposition involving incarceration may be used as a lever or threat to get the individual to seek treatment.

A second aside involved the rather colorful review of the municipal court administrator on how marijuana offenders interfaced with other offenders of municipal ordinances. He stated that, as individuals are waiting to be interviewed by probation officers, he and others

play a game of picking out which individuals are there for marijuana possession. He indicated there was a certain collegiate stability about the marijuana users which marked a contrast with the other individuals who were appearing for other matters. Apparently some court officers are quite good at picking out who is and is not in court for a marijuana violation by simply looking at the person. In terms of the pre-sentence investigations, the marijuana small-amount violators generally were people the county court staff considered to be non-threatening to the community, and not particularly in need of special treatment or counseling.

Efforts in Minnesota Toward Controlling the Recreational Use of Marijuana Through Eradication of the Growth of the Plant within the State

Formal efforts toward eradicating the growth of marijuana plants in Minnesota were first begun in 1939 when the State Commissioner of Agriculture was charged with developing a system to stop the growth of the plant. These efforts have been basically unsuccessful. Both through natural factors and conscious, illegal growing of the plant, marijuana continues to thrive in Minnesota.

Regarding the conscious growing of marijuana, one must remember that the seeds of marijuana are available in most illegally marketed recreational marijuana. Usually the flowering tops or stems of the plant are ground into dried matter, and sold in that form. Because the female plant is usually larger, and because traditionally it is believed that the plant is higher in psychoactive ingredients when it is bearing seeds, the seed bearing portions of marijuana are often sold. It becomes a simple matter for someone to extract the seeds from the leafy substance.

Once the seeds are possessed, the growing potential for marijuana is a relatively simple process both indoors and outdoors.

Growing marijuana indoors presents no special problem. One needs viable seeds, some generally sterilized soil (unsterilized soil often contains fungus which threatens the development of marijuana), a source of light which usually comes from special lighting developed for growing plants indoors, a warm atmosphere, possibly special fertilizers, insect controls, etc.

For a \$25.00 investment in special lighting equipment, fertilizer, special soil, etc., in a 3' x 4' normal clothes closet, one could quite easily produce 15 to 20 "lids" (1.5 to 2 ounces avoirdupois) on an annual basis. This would constitute approximately 350 marijuana cigarettes annually. Allowing for the proper equipment, this is a rather conservative figure. Special methods for curing marijuana, propagation, etc., would further expand the production capability. The perceived risk for growing marijuana in an indoor setting is relative to the individual situation, but it would seem relatively unthreatening in terms of criminal justice intervention. Marijuana

frequently grows in an outdoor setting on uncultivated land. Creek bottoms, tree grove edges, and undisturbed roadsides are generally where the plant flourishes. From the large World War II plants of hemp for the war effort, birds, water and to some degree wind have spread the growth of marijuana throughout Minnesota. Because the plant is so widespread, the eradication of marijuana growing within the state is difficult to the point of being impractical. Considering that an ungerminated marijuana seed can remain dormant in the soil for approximately two to four years awaiting appropriate germination conditions, any serious program directed toward eradication would, by necessity, be extensive and of long duration. At least a decade of intensive search and destroy would be required, along with exhaustive manpower.

Since 1939 the Department of Agriculture has been charged with trying to eradicate marijuana. Although coordinated from a state level, most actual "noxious weed control" is conducted on a township or county level. Various government systems have evolved within various areas of the state, and from time to time federal grants have come sporadically to various counties to cut, burn, or spray marijuana. Presently, those who own property are encouraged by the township board in rural Minnesota to destroy marijuana on their property. The methods used involved spraying with special chemicals, pulling out, and mowing. In terms of effectiveness, the chemical varies with the stage of the plant's development. At different points in time in the development of the plant, it is more susceptible to differences in kinds of chemicals. It should be remembered that the plant itself is not particularly strong, and its durability comes from its prolific capacity to bear a number of seeds and effectively reproduce itself. Pulling out and mowing are also used. Mowing as opposed to pulling is preferred, because it simply requires less effort. In the month of July the marijuana plant is at a stage where a thorough mowing would produce an approximate 90% kill. Similarly, if cut down in July, the ability to reseed is limited, and only a few plants would return the next year. In some cases marijuana is cut down by hand or pulled out.

As previously mentioned from time to time, federal resources have been imported into various county or township structures to help destroy marijuana plant growth. For example, in 1965 county agents in Meeker County implemented an extensive well-publicized eradication effort that focused on the systematic use of pulling, mowing, and chemical spraying through the community. Eventually, federal authorities heard of the program, and financed the continuation of the demonstration program.

There were comprehensive mappings of the community followed by communications to residents regarding destruction of the plant, and finally an organized and extensive eradication effort. Although no one is really certain what the result of the extended effort has been, the Meeker County Agriculture Extension Agent judges the program successful, and believes there has been approximately 80% destruction of marijuana in the county.

The outdoor marijuana plant is not so much a strong organism that is hard to kill as it is a prolific plant that spreads quickly by natural causes, let alone conscious human effort. The conscious sowing of marijuana is not difficult, and yield is variable, but potentially quite high. One healthy female marijuana plant (female plants are generally larger by one-third) could produce around three lids. Because it can grow well in uncultivated remote areas, it can be consciously grown in areas that escape detection. One University of Minnesota Professor of Agronomy reported that on a somewhat consistent basis, migratory workers in certain rural Minnesota areas have been able to successfully seed and harvest many small, sporadic patches of marijuana. In our rural communities, federal agents along with local and state police search the forests and marshes looking for clandestine patches of illegally grown marijuana. When these patches are found, usually the crops are destroyed, as the manhours involved in "staking out" an isolated patch of weeds over a several month period is prohibitive. One can speculate that quite often patches of illegally grown marijuana go undetected.

There are widely-circulated publications listing methods for artificially germinating marijuana, selecting seeds, fertilizing marijuana plants, or for treating processed marijuana which are directed toward making marijuana more potent, making marijuana plants healthier and larger, etc. One publication even mentions the use of a highly toxic compound, colchicine, to stimulate the development of poly-pod cannabis strains. Considering that marijuana is occasionally ingested, this is an unreasonably dangerous activity.

From an agrarian point of view it is a simple matter to clandestinely produce marijuana in amounts sufficient for reasonable recreational purposes, and a whole technology is developing and being shared in readily available literature that would make the process even simpler.

The likelihood of marijuana cultivation competing with commercial crops is minimal considering the tendency of the marijuana plant to naturally reseed primarily in uncultivated areas. Eradication with the present means available is, by any standard, a relatively futile process for stopping recreational marijuana use in Minnesota.

THE ECONOMICS OF MARIJUANA USE AS AN ILLEGAL RECREATION

The economics of illegal activities have special characteristics that can influence other parts of the community. Before looking at some of the characteristics of the marijuana demand and supply system in Minnesota, basic economic conditions that might be expected to occur when an institutionalized form of recreation is prohibited by law will be reviewed.

Generally, the production and purchase of any illegal activity rests with more than the two dimensions of supply and demand. A third factor of risk is interjected into the economic equation and it becomes a factor allowing excessively high and sporadic profit as well as catastrophe. This high profit structure often frustrates the system of enforcement the government poses against the illegal activity. It is interesting to note that in December of 1921, only a year after federal alcohol prohibition, nearly one hundred federal officers were arrested or dismissed for issuing what were termed "abusive permits for use of intoxicants." This meant, quite simply, the taking of "protection money." At least one New York speakeasy proprietor estimated that thirty percent of all operating costs went for protection money to law enforcement agencies.¹

Similarly, in April of 1968, the federal government began an extensive program to make it extremely difficult to produce or distribute illegal drugs. As part of this effort, the Bureau of Narcotics and Dangerous Drugs was formed. Within months, what former Attorney General Ramsey Clark termed "record corruption" had evolved. More than fifty federal agents were discharged and over a dozen were actually indicted for selling narcotics or accepting bribes.²

It seems that the risk factor creates sporadic financial windfalls for criminals and has the capacity to frustrate honest and efficient law enforcement.

Another economic factor in the development of illegal but desired products is that of capital investment. It is no longer functional to purchase lawful insurance for protection against theft, vandalism, etc. Therefore, institutions that develop capital from illegal activities are at the mercy of suffering one-hundred percent losses from theft or other forms of destruction. Therefore, quite often protection organizations initiate their own systems of protection and illegal

¹Roger Leroy Miller, Economics Today--The Macro View. San Francisco, Calif.: Canfield Press, 1974, pp. 3-14.

²Ramsey Clark, Crime in America, New York, N.Y.: Simon and Schuster, 1970, pp. 97-98.

systems are purchased or built. Economics Professor Roger Miller, University of Washington, points out that it was in this role of protection that the American Mafia made its historic place within the community as a highly profitable, economically powerful institution as it worked with illegal alcohol.

The fact that a good deal of capital is being kept "underground" also gives rise to potential violence. During the years of alcohol prohibition, there was substantial fighting between groups and, in the process, seventy-one federal prohibition agents were killed in the performance of their duties.

Because of what was termed "inappropriate conduct" on the part of the Idaho Bureau of Narcotic and Drug Enforcement, Newsweek magazine reported in January 27, 1975 that many of the officers who staffed the state office were being dismissed. The magazine intimated that the mismanagement and disregard for law by the drug enforcement agency had caused many of the state-elected officials to lose their offices.

The issue of quality and health is also significant in the economics of distributing an illegal product. Bourbon distilleries prior to the 1920's made use of carefully measured and relatively clean blending and bottling plants where each plant was equipped with stainless steel tanks, cypress wood fermenting vats, freshly charred white oak barrels, etc. During alcohol prohibition years, the underground dynamics soon found a good deal of American bourbon being produced with a copper pot, a section of garden hose and some fruit jars. Police departments found it necessary to purchase loud speakers allowing them to drive through town from time to time warning of poisonous alcohol that had been sold to the public. Numbers of individuals were blinded or disabled from the ingestion of adulterated alcohol.

Similarly, from best estimates, a good proportion of marijuana sold in Minnesota is not really marijuana. Eighteen percent of the 116 samples of marijuana turned in for chemical analysis to the Minneapolis Health Department laboratories between 1972 and November 1974 were substances other than marijuana. Of this, seven percent contained a mixture of animal tranquilizer which is generally considered dangerous for human consumption. The balance of the marijuana samples contained no controlled substance and in all likelihood would be unable to produce any chemically induced intoxication. The point is that the check of government quality control is missing with illegal substances and the result is an often corrupted product released on the community.

It might appear that as long as there are laws against both supplying and possessing marijuana, both the supply and demand would be repressed by the element of risk. Not all people, however, suffer to the same degree. For instance, the potential risk to any individual user increases as one's income or social standing increases. This rests on the assumption that a professional, such as plumber or physician, would risk losing his authorization to practice should he

be found in possession of marijuana. Beyond that, simple community attitude regarding someone violating the law might hurt the community standing of people who hold favorable positions. To a degree, of course, the attitudinal issue is one that might exist whether or not possession of marijuana was a crime, a civil offense, or simply a legal activity that many members of the community believe to be unwholesome. In any case, one might threaten his social standing. Similarly, in our review of the marijuana distribution system and through our interviews with various law enforcement agencies in Minnesota, it appears clear that the individuals who are most likely to run the risk of being arrested and more likely to receive punitive dispositions after arrest are those individuals who are deeply involved in an organized system for distributing marijuana. The demand of the individuals who use the drug is generally one that exists without commensurate levels of risk. The result is a substantial profit for those who successfully run the risk of distribution. Many of the Minnesota law officers who were interviewed stated that they were reluctant to pursue an arrest of an individual who simply seemed to be using the drug in a domestic setting and did not seem to be threatening the community. In all cases they would arrest a supplier. Economically, it would appear that the risk weighs heavily upon the supplier and only minimally upon the user.

In summary, the prohibition of marijuana is creating a system likely to produce substantial profits for those who meet the demand for the substance and successfully run the risk of coming into contact with the criminal justice system. Profits may, and historically have, undermined law enforcement systems. A disparity in criminal justice efforts and punitive response focusing more severely on the distributor as opposed to the user serves to raise prices and profits, just as a disparity in social reprisals would generally make it more prohibitive for those who are an active and accepted part of society to be involved with marijuana as opposed to those who have less to lose.

Before reviewing the characteristics of the Minnesota marijuana distribution system that has evolved under the present criminal justice pressure, a review of the nature of the demand and those elements that cause marijuana to be attractive to a substantial minority of Minnesota will be presented.

Characteristics of the Demand for Marijuana

Obviously there is more to marijuana use than clinical inferences of potential public health hazards. Over 300,000 Minnesotans have tried it and over 153,000 Minnesotans demand it for personal use with some consistency. There is clearly some dynamic involved with marijuana use that leads people to the drug for recreation. It would be inappropriate to focus solely on the unpleasant potentials of marijuana use and not to review the pleasure aspects. The effect of any drug on a human mood is always a question of interacting variables. One simply cannot predict that every time one uses a certain kind of drug, be it alcohol, coffee, or marijuana, that a certain mood will result.

The resulting mood of any drug depends on the individual who takes the drug, his personal chemical makeup, his cultural outlook toward various kinds of mood experiences, and his expectations of the drug's effect.

Secondly, the environment of the individual using the drug is an important factor in determining the outcome of the mood. A first rule for hospital emergency rooms in dealing with individuals highly intoxicated on various drugs is to remove them from the often threatening emergency room environment into a comfortably quiet lobby setting where the environment is more calming. A soldier using marijuana in a combat setting, a freshman using marijuana at a university party, and a middle-aged housewife using marijuana in the familiar setting of her own home can all be expected to react differently. The environment is an important factor regarding a drug's experience.

Thirdly, the drug's quantity and quality (purity) and its route of administration is important. The drug may be orally ingested, injected, or smoked. Each has a different impact on the organism receiving the drug.

Considering all these variables, it appears that approximately one-half of the individuals in Minnesota who are exposed to the use of marijuana choose to terminate the use of the drug. It is unknown whether this relates to the criminal justice prohibitions or to simply a lack of preference for the drug as a form of recreation. A substantial number of people who use the drug simply do not find it an experience worth repeating or worth risking possible criminal justice prohibitions or social stigmas.

In spite of the intervening factors that relate to the experience of the drug, there are some generalized assessments of what happens when someone uses marijuana for recreation.

The impact of culture is a critical, important variable. Different cultures use the drug for different reasons and belief patterns involving the resulting mood. The present use of marijuana in Egypt is tied to a feeling of masculinity, not unlike the American image surrounding beer use. In the Caribbean, the use of marijuana is often related to health, a pragmatic device that helps individuals work harder at boring tasks such as mending fishing nets. In Jamaica the drug is used in medicine, is believed to evoke a healthy state, and is reportedly used in rituals of a religious nature.

For the purpose of this study, the effects of the drug on Americans who use it is important. In his 1973 anthropological review of "the hippie ghetto," William Partridge, University of Florida, found marijuana to be a "sacramental substance" that serves to reinforce the

morals and mores of the Florida counter-culture community.¹ It must be remembered that Partridge reviewed the use of marijuana among a group that had other important characteristics that separated them from the general community; nevertheless the expectations that this group linked with the use of marijuana may be helpful in understanding the American perception of marijuana use. The group of people he termed "hippies" believed that marijuana is a substance that provided a "...journey toward maturation and spiritual growth..." It was believed that individuals became more honest, more open, and actually more themselves while in the state of marijuana intoxication. One of them stated:

"You know when you are really grooving together. You know what each other is thinking. Sometimes you can just look in the eyes and just break into a grin. No words...words aren't needed when you are getting good vibes...it's where it's at, getting close to people."²

In summary, Partridge reports that the use of marijuana is seen as a device which is able "to lubricate the social machinery." It is enjoyable and recreative, but beyond this it is seen as a stabilizing and binding activity bringing forth pure and superior human conduct.

It is unlikely that these almost theological aspects of marijuana are carried over into the general marijuana-using community with such force. However, the inference in the American subculture that marijuana is a "good and improving" substance probably has some impact on the American culture.

One of the documents on marijuana which is widely read in the United States is a paperback book, sold at many conventional bookstores, entitled The Official Handbook for Marijuana Users, A Child's Garden of Grass.

Among other things, this book explains to people which kinds of activities are most fun to engage in while "loaded" or intoxicated with marijuana.

The following are some examples of what the handbook indicates might occur if one uses marijuana while engaging in certain activities:

Let's look at Monopoly for a moment. You're spending a quiet evening at home with your wife and another couple. You've all gotten stoned, and someone suggests that you play Monopoly. You bring the Monopoly set down from the closet

¹William L. Partridge, The Hippie Ghetto. New York, N.Y.: Holt, Reinhart and Winston, Inc., 1973, pp. 45-52.

²Ibid., p. 51.

shelf. It's nostalgia mixed with challenge. You think for a moment of the kid next door who used to win all the time, and who told you filthy and impossible things about girls. You weep openly upon seeing the mustachioed face of the man on the Chance cards, and you revisit the childhood hours you spent on Marvin Gardens and Illinois Avenue. You look with contempt at Baltic Avenue and with wonder at Boardwalk. And then the game begins, you screen the world out, replacing it with a world Arnold Rothstein knew and loved. The gold \$500 bills are more real than anything the U.S. Treasury could ever print.³

You'll find that you'll probably turn to the talking games when you're stoned at a party, because they're the easiest and most fun, and they need no gimmicky aids. Talking games range from the simplest and most unstructured, such as Trivia, to the very demanding, such as Botticelli.⁴

But the most interesting children's games, and the ones which sustain interest for the longest periods of time, are those which allow you to create something. Finger-painting, Tinker Toys and building blocks are excellent examples.⁵

To understand exactly what was happening to Americans who used marijuana recreationally, Charles Tart, PhD, Associate Professor of Psychology, University of California, directed a federally financed investigation of the perception of recreational experience observed by 150 individuals who had used marijuana more than a dozen times and who were willing to volunteer to share their various experiences relating to marijuana use.⁶

Obviously, he had a somewhat select group. Considering that about one-half the individuals exposed to marijuana in Minnesota terminate its regular use, he was interviewing only individuals who had been motivated to use the drug at least twelve times. The individuals interviewed were also those who were willing to come forward and share a good deal of information about their intoxication with marijuana, which in itself also constitutes a select group. Regardless of the sampling-representation problems, Dr. Tart made a good case that possibly the best way to understand what marijuana does to people in America is to simply ask people who have used it, as opposed to observing brain wave patterns in Rhesus monkeys.

³Jack S. Margolis, The Official Handbook for Marijuana Users, A Child's Garden of Grass. New York, N.Y.: Pocket Books, 1970, p. 72.

⁴Ibid., p. 75.

⁵Ibid., p. 75.

⁶Charles T. Tart, PhD, On Being Stoned. Palo Alto, Calif.: Science and Behavior Books, 1971.

The following is a summary of the findings of his investigation, which in a more objective way may help to explore the demand for marijuana.

Perception of the External Environment

The preponderance of those individuals who used marijuana found they were able to pick out specific visual material in patterns generally nebulous or ambiguous. The pattern on a couch or the random swirling of colors in a kaleidoscope took on new meaning. Generally, users agreed that colors seemed sharper and often they were able to imagine third dimensions in pictures they observed. In terms of hearing, most indicated they could pick out more subtle qualities. Some stated that they could actually see or visualize various sounds in their mind's eye. It was generally agreed that senses such as touch, taste and smell took on new and what Dr. Tart termed "sensual" characteristics. He found taste markedly enhanced and there seemed to be a general consensus that things having a "sweet taste" were preferred by the user when intoxicated. Additionally, the sense of smell became enhanced for several of those interviewed. In terms of space and time, distances generally seemed to be perceived as either longer or shorter, especially when the user was walking; generally, time seemed to pass more slowly. Also, there was a reported high incidence of *deja vu* (the feeling that one has done something once before).

There was an increased incidence of perceived paranormal perception or what has been termed, telepathy, clairvoyance or extra-sensory perception. Only 30% of the marijuana users indicated they had never experienced this while intoxicated.

Finally, many of the users felt that marijuana intoxication was a "social drug par excellent." Again, the notion of a "social lubricant" seemed to be inherent.

Interpersonal Relationships

There were general feelings that marijuana use in a social situation caused people to be less noisy and less boisterous and that ordinary "social games" became hard to play; also one could have more insight into another, things became more humorous, and there was a good deal of social laughter. Feelings of solidarity with a group and playing childish games seemed to be generally accepted as a normal consequence of marijuana use in a group setting.

Regarding the 150 individuals' reaction to sex, the majority of the users indicated that marijuana greatly enhanced sexual pleasure. Particularly they indicated a new pleasurable quality to orgasm. It was common for users to indicate that they were better sexual partners while intoxicated and some even indicated a sort of spiritual togetherness evolving out of sexual activity while intoxicated with marijuana.

It should be noted, however, that a solid one-fourth of the users felt marijuana inhibited their sex or made them less sexually active. This seemed to relate to a psychological state of preoccupation with other things.

Internal Mental Processes

It was generally agreed that the memory span was shortened and became a problem. Many indicated they even had trouble completing sentences, forgetting how the sentences were initiated. Also a number of the individuals stated that long-forgotten events commonly pop into the memory and things that had occurred years ago, especially of a pleasurable nature, were often vividly remembered.

Regarding thought itself, many recorded a spontaneous insight into their own personal functioning or feelings, and the ability to appreciate subtler forms of communication, especially regarding humor. Generally, a new confidence in someone's thought process seemed to evolve, and there was an appearance, especially at low levels of intoxication, that the mind was working more efficiently on problem solving. At higher levels, however, the group generally agreed that their mind began to work less efficiently.

In terms of emotion there was almost an invariable agreement that people simply felt good when they were using marijuana. Most of the users had never had what was termed a "severe negative emotional crisis" while intoxicated; however, some had experienced such a crisis and most of those indicated it had subsided by itself, or that they had been "talked down" by friends with only one of the 150 needing professional assistance.

In terms of mental control, most felt they had the ability to come down at will, and felt less need to be in control of things. It appears they did not feel a need to control others, but were confident they could function appropriately and "shake off" their intoxication.

General Experiences

A number of individuals felt they had a rather unique sensitivity to parts or organs of their body. Others felt that by paying attention to one particular part of their body, the rest of the body would seem to fade away. In terms of pain, some felt that if they concentrated on the pain, it would become more intense, but if they concentrated on something else, they would not feel pain as readily. Others observed that their sense of identity changed, making them more child-like or more open to new experiences. Common effects involved feelings of being particularly powerful, capable, intelligent or feeling a lack of separation between oneself and the world.

Twenty-two percent of the 150 users felt that using marijuana had been meaningful to them in a religious sense. Only a few had undergone some sort of significant religious experience and expressed a feeling of once having been directly in touch with a "higher power."

In summary, it appears that the pleasure aspects of marijuana use are often culturally defined. Within what Mr. Partridge has termed the anthropological "hippie ghetto" subculture, marijuana use has taken on a sacramental significance. There is a generalized form of literature that defines marijuana use as being simply "fun" and a pure recreational activity. In a psychological assessment of marijuana users in the American culture who had used the drug a dozen or more times and who were willing to share their experiences, Dr. Tart found that of the Americans who used the drug, there seemed to be a change in perception of the external environment involving vision, hearing, taste, time and space, and even extra-sensorial experiences. He also observed changes in inter-personal relationships (generally pleasant) and perceived changes in internal mental processes (also generally pleasant).

A minority of the group had experienced unpleasant changes in feeling and a little less than one-quarter had experienced feelings that had bordered on religious experience.

There can be no question that a substantial number of Minnesotans have chosen to use marijuana for recreation. The reason for use varies but relates to some of the previously mentioned pleasant and psychological experiences. The attempt to formalize games, and inferences toward supernormal states of awareness or group communion may be taken as indications that the community is solidifying and structuring standards and expectations for marijuana use. Hopefully myths and patterns of use will not evolve so that they inspire habituation.

Whatever the future holds, as long as pleasurable effects continue with marijuana use, the demand for the drug must be considered constant in the community, almost oblivious to criminal justice or civil prohibitions. Within the foreseeable future there will continue to be an intense and widespread market for those who supply marijuana.

Interviews with Individuals Personally Involved in Minnesota's Marijuana Distribution System

The purpose of this section is to investigate and evaluate aspects of the present structure for marijuana distribution in Minnesota, particularly in metropolitan areas. Several of the major dynamics examined were:

1. The phases of processing and handling from grower to consumer.
2. General characteristics and attitudes of marijuana dealers, as well as their awareness of the total structure that supplies marijuana in Minnesota.
3. The profit margins involved in the sale of marijuana.

This data was analyzed and a theoretical model for the marijuana distribution structure was developed from the limited data.

Several problems exist when trying to study marijuana distribution and use. Traditional questionnaire techniques are ineffective, simply because people are reluctant to admit criminal involvement or involvement with a substance considered by many to be unwholesome. Naturally the reliability of subject responses must also be seriously questioned in a face-to-face interview. This investigation attempted to obtain accurate and reliable information through "confidentiality" or trust. If subjects are assured of confidentiality, they will, we assumed, be less likely to fear repercussions from honest responses. This study was undertaken to provide reliable and up-to-date information about marijuana distribution; and to best accomplish this, confidential interviews were the basic communications vehicle for gathering information. To preserve the confidentiality of the subjects, no names are used in this report and the principal researcher will remain anonymous. He is a young religious leader who has communication skills and levels of integrity upon which this unorthodox but significant investigation rested.

The scientific method of confidential interviews has inherent limitations, and it should be understood that:

1. Misinterpretation of the subjects' responses by the interviewer can introduce error. In order to minimize this possibility, subjects were quoted verbatim when practical.
2. It must be kept in mind that each subject has a unique personality, including trust levels, especially in this area of questioning.
3. The interviewees themselves may have constituted a somewhat select group in that they were willing to discuss their illegal activity.

Understanding these problems, interviews were conducted with twenty-two individuals involved with the distribution of marijuana. Particular attention was given to capital investments required, profits

realized, cost of marijuana per pound, perceived risks and time invested. Subjects were also urged to make any comments they considered relevant.

In an attempt to validate the findings after the initial study was completed, interviews were established with two individuals who had intimate knowledge of and had actually participated in various distribution systems of marijuana within Minnesota. The two individuals were located at a Minnesota state prison and had no knowledge of the other components of the study. They came to our attention by the direction of various prison officials who had an acquaintance with the inmates and knew them to be knowledgeable in the area of marijuana distribution and felt they would be honest.

The individual who performed the twenty-two interviews was not present during the validation interview. During the prison interview session, two prison staff were present with the two validation interviewers. Their presence hopefully lent a degree of confidence to the interviewees. Because of one interviewer's unique experience with "street research" and his prison reform advocacy, and because of the prison official's intimate knowledge of both interviewees and general prison behavior patterns, we felt we had a sound opportunity to honestly assess the value of the major portion of the study. The input from this validating component will be reviewed later in the report.

Results

The study indicated that there are at least six separate phases in an underground continuum through which marijuana passes from grower to consumer in Minnesota. These will be labeled by the function of the persons involved with each phase:

1. Growers.
2. Smugglers (those who take marijuana across the United States border, generally from Mexico).
3. Importers (those who transport marijuana from Mexican border towns to other areas and sell in large quantities).
4. Small quantity pounds dealers (those who sell one to ten pounds per transaction).
5. "Lid" dealers (those who sell marijuana by the ounce).
6. Average consumer.

These levels are illustrated in Table I. Allowing for variations, there seem to be different sizes to these components in terms of how many customers to which people in each phase relate. For example, this study would assess the ratio of average consumers to growers to be 13,464 to 1, (4 x 3 x 6 x 11 x 17). It must again be emphasized that this study had a small number of subjects and any ratio determinations could display considerable variance.

Table 1

Phases of Marijuana Processing and Handling

<u>Marijuana Distribution Function</u>	<u>Number of Customers</u>
Growers	4
Smugglers	3
Importers	6
Small Quantity Pounds Dealers	11
"Lid" dealers	17 (Average Consumer)

Table II summarizes the criteria examined for each of the six phases. It can be seen that the cost of marijuana decreases with increasing quantity. From the information gathered it appears that the average consumer, who usually buys an ounce per transaction, pays the equivalent of approximately \$240 per pound, while the dealer who buys 100 pounds in one transaction pays about \$100 per pound. In simple terms, a dealer buys a quantity and resells it in smaller quantities at higher prices, thereby generating a profit. A positive correlation in terms of amount and cost is apparent in Table II. The dealers' perceptions of the risks involved appear proportional to the amount of money and marijuana involved. In plain language: as the perceived risk increases, the stakes get higher.

It was found that the marijuana dealers interviewed had a primarily stable clientele, occasionally increasing or decreasing in number (examples given further in this section). This finding lends itself to evidence that marijuana distribution has a somewhat well defined and consistent structure. But the massively organized, highly structured profit hierarchy observed by the recent review of Minnesota gambling systems was not detected in our investigation. In Minnesota, marijuana distribution, unlike gambling, is not organized into a statewide sophisticated pyramidal structure. It seems to rest on thousands of fragmented and informal business relationships.

TABLE II
Summary of Criteria for Each of the Distribution Phases
(All Numerical Values are Mean Averages)

Phase of Handling Number of Subjects	Capital Investment Required	Profit Realized (% of the Capital Investment)	Purchase		Perceived Risks Involved	Income	
			Cost Subject pays per pound	Number of pounds per buy		Time Invested per Week	Capital Gain per Week
Grower S = 2	None	Not Available (N.A.)	N.A.	N.A.	Low	40 Hours	Variable
Smuggler S = 2	\$11,000 (\$1,000 Expenses)	127%	\$20	500 Lbs.	High	Full Time	\$3500
Importer S = 2	\$6,000 (\$1,000 Expenses)	125%	\$50	100 Lbs.	High	Full Time	\$1875
Small Quantity Pounds Dealer S = 4	\$1,350	15%	\$135	10 Lbs.	Moderate	11 Hours	\$200
Lids Dealer S = 6	\$155	55%	\$155	1 Lb.	Low	18 Hours	\$85
Average Consumer S = 6	\$15	N.A.	\$240 Extrapolated	1/16 Lb.	Low	1 Hour	None

From our limited investigation it appeared that a good deal of the marijuana in metropolitan Minnesota is smuggled in from Mexico rather than being grown in or around the state. The most probable reason for this is that the Mexican variety of marijuana is believed to be more potent than the Minnesota variety. We interviewed no Mexican marijuana farmers, but did interview one farmer (A) who farms in an adjoining state and one Minnesota farmer (B). Both grew marijuana that was sold in metropolitan and rural Minnesota.

Farmer A (age 29) owns a 100-acre farm in an adjoining state and lives there with his wife and three children. A meeting was arranged by a third party, presumably trusted by both.

Interviewer: "How long have you been growing marijuana?"

Farmer A: "I started growing pot experimentally back in '69 when I got back from Nam (Vietnam) and just expanded a little bit each year. Last summer we harvested about three acres."

Interviewer: "Three acres sounds like a lot ...how much marijuana did you get?"

Farmer A: "Well, after drying and cleaning it, I'd say around 2,000 pounds. You lose a lot in water weight and stems."

Interviewer: "How much time do you spend farming and preparing your crop for sale?"

Farmer A: "Well, that depends a lot on the weather. I'd say you have to watch it as closely as any other crop. You have to fertilize and cultivate the soil, especially in this climate because we've got such a short growing season. Harvesting and cleaning is what really takes up the time. You gotta do it all by hand. I built a machine harvester last winter, but the crop was so poor this summer I couldn't even use it. Cleaning probably takes me the most time, 'bout half hour a pound. People don't want to pay for the stems, so I use a scissors and cut the leaves and flower tops away from the stalk. It's really time consuming."

Interviewer: "How's the quality of your marijuana? Is it as good as the Mexican variety?"

Farmer A: "No, but it's still good enough to get really loaded and it's a lot cheaper than most Mexican pot."

Interviewer: "How much do you usually sell your marijuana for?"

Farmer A: "Oh, I'd say about \$50 per pound, depending on the quantity. My biggest customers live in the city and they usually put in their order for 500 pounds about harvest time."

Interviewer: "It sounds quite profitable, but aren't you worried about somebody noticing three acres of marijuana?"

Farmer A: "No, I'm not very paranoid. The plot I use is completely surrounded by trees. And I never plant in rows, just scatter the seeds. That way, if anybody ever got wise, I could just say it was growing wild."

Farmer B (age 24) lives on a farm in Minnesota with his wife. Prices that he quoted were \$75 per pound, higher than Farmer A by \$25, and his growing technique also differed.

Farmer B: "I usually plant it right between the corn. That way I can cultivate and fertilize it at the same time that I do the corn. Also, the corn camouflages it, makes it impossible to see unless you're standing right on top of it. If anyone ever asked about it, I'd just tell them it grows wild and explain how I've been trying to get rid of it, but it keeps coming back...rugged little devils, those weeds."

Both A and B perceived the risk of apprehension and the possibility of conviction to be minimal. Although this study did not interview anyone who was growing their own marijuana for personal use, it seems likely that they too would consider the risks to be minimal, especially since the quantities involved are also minimal. (A major book store in suburban Edina carries three books that explain how the novice can grow marijuana, indoors or outdoors.) Both growers also considered harvesting and cleaning (separating the leaves and flower tops from the stems) to be the most time consuming, requiring about a half hour to clean each pound. For their work, they realized substantial profits, considering that the initial capital required is nominal. It appeared that an acre has the capability of producing up to one thousand pounds of salable marijuana with a market value of \$50,000 to \$75,000 when sold in large quantities.

It must be emphasized that the above information can only be applied to midwestern marijuana farming. A study conducted in a different geographical and climactic location could yield different results. Also, it should be remembered that domestic marijuana comprises only a portion of Minnesota's marketable marijuana.

Mexican Smuggling

Mexican marijuana demands a higher market price than locally grown marijuana and the Mexican smuggler realizes high profits at the risk of possible apprehension by more than one government. We were able to interview two individuals who smuggle large quantities of marijuana into the United States. One of the men also transports the marijuana to Minnesota. The other is paid by an unknown third party to smuggle marijuana from Nogales, Mexico, to Nogales, Arizona.

C (age 27) has two partners in his smuggling and importing operation. Each partner invests four or five thousand dollars per trip and the profits are divided equally. C explains his techniques:

Smuggler C: "It's a heavy (risky) business, but you make a good living. The last time we came back with almost 300 bricks in the back of a truck. (Approximately 600 pounds.) We just brought it right up to the fence, threw it over, and picked it up on the other side. It's as simple as that. Of course, there's a risk involved, you know, the element of chance, but the way that I figure, the odds are on my side." (parentheses ours)

Interviewer: "How much money do you usually make on a trip?"

Smuggler C: "That varies a lot, but usually after deducting all our expenses, we can triple our money. Our expenses aren't small. We spend a lot on our equipment. When you're in this business you can't afford to have anything but the best equipment available."

Interviewer: "How long does each trip take?"

Smuggler C: "That varies a lot, too. On one of our trips, we didn't get back to Minnesota for three and a half weeks. Most of the time, though, we're only gone for a week or two."

Interviewer: "How long does it take to sell 300 bricks of marijuana?"

Smuggler C: "Depends on the market. During the summer, when pot is pretty scarce, it really goes fast, within a couple of weeks. At other times, I'll go for a couple of weeks without making a single sale. The market is just that way."

Interviewer: "How many customers do you have?"

Smuggler C: "I myself have about four or five regular customers and my partners have about the same, sometimes more, sometimes less, just depends on the market."

C and his partners smuggle marijuana across the border, import it to Minnesota and sell it in large quantities. By handling both phases of distribution, they increase their profits considerably.

D (age 27) on the other hand specializes in smuggling from Mexico to Minnesota only. He was notably more restrained in his responses and less trusting of the interviewer. The interviewer never met D. The following are excerpts from a long distance telephone conversation made in a telephone booth to Tucson, Arizona.

Interviewer: "How did you first get into smuggling marijuana?"

Smuggler D: "I went to Mexico on vacation and a friend of mine, who deals pretty big, asked me to check out prices when I was down there. I met a few contacts and when I got back home my friend and I worked out an agreement. He pays me a substantial amount to cop in Mexico and get it across the border. After that, he takes care of it."

Interviewer: "How much marijuana do you usually bring across the border at one time?"

Smuggler D: "I'm not going to answer that question. It's a dangerous business and I don't think that I'd be wise to make it any more dangerous by telling anything specific about my operation."

Interviewer: "I can understand your concern. I would be interested in finding out some general information though, like what pounds sell for in Mexico and how much they are worth after you get them across the border."

Smuggler D: "In Mexico, you almost always cop by the brick. Each brick is supposed to weigh a kilogram (2.2 pounds), but it hardly ever does. Most bricks weigh about 900 grams (1.98 pounds). Buying in quantity, a brick in Mexico will cost you about \$40, and when it's on this side, it's worth over twice that amount."

Interviewer: "How much time do you spend on each trip?"

Smuggler D: "I've got it down now so I can take care of most orders in four or five days."

Interviewer: "Do you ever worry about getting caught?"

Smuggler D" "Hell, yes."

Although differences of intensity are noted, both C and D perceived the risks involved with smuggling to be considerable. The laws regarding marijuana seemingly created fear; however, the potentially large profits were sufficient to overcome the risk factor.

As seen with C, bringing it across the border and then into Minnesota is sometimes done by the same person or group. However, sometimes the smuggler simply sells the marijuana to someone who transports it to another area of the country and resells the marijuana to someone that transports it to still another area of the country and resells it at a higher price.

Importing to Minnesota Without Making a Border Crossing

Two interviews were conducted with persons who import marijuana from United States border towns to Minnesota. The first was with E and F, a couple living in a metropolitan area in Minnesota who make frequent trips to Arizona to buy marijuana. The second interview was with G, a middle-aged unemployed college graduate professional, who has marijuana shipped from San Diego to Minneapolis on a regular basis.

E and F live in what could be considered an upper middle-class neighborhood. F is employed in a part-time secretarial position and E is currently unemployed. They have been living together for five years.

Interviewer: "How did you first get into the marijuana importation business?"

Importer E: "It kind of developed gradually. At first we just sold lids to our friends, you know? We'd buy a pound and sell it at enough profit to get our own stash free. After awhile, our friends started asking us for pounds instead of lids. We got turned on to a Phoenix connection and started bringing back quantity. I guess we've been going strong ever since."

Interviewer: "How much marijuana do you usually bring back?"

Importer F: "It changes a lot with each trip. I remember once we brought back over 125 bricks. The trunk of our car was so full that we had to carry the spare tire in the back seat."

Interviewer: "Aren't you ever worried about being stopped when you've got that much marijuana in your car?"

Importer E: "Well, let's put it this way...we never speed when we're running pot."

Importer F: "We drive an expensive late model car, too. I think that helps a lot. The pigs are looking for hippie types driving old VW buses. We look like respectable citizens just taking our vacation. Even if we did get pulled over for something, I don't think they would have any reason to want to look in the trunk."

Importer E: "Yeah, they would have to have a search warrant, too."

Interviewer: "How often do you go on these trips?"

Importer F: "About once a month. It just depends on how long it takes to sell the stuff from the previous trip."

Interviewer: "Do you make much profit?"

Importer F: "If we didn't, we wouldn't be risking our necks like this. We can usually score for around \$50 to \$60 a pound and sell it here for \$135 a pound. That's a pretty good profit. Of course, we have expenses, too, but they're usually less than \$1,000."

Interviewer: "Do you think most marijuana is imported to Minnesota by automobile?"

Importer F: "Without a doubt!"

Unlike E and F, G does not travel each time he imports marijuana. Instead, he has a prearranged ordering code with his San Diego supplier. His order is shipped by various methods to Minnesota and G sends payment in the mail. G is an unemployed professional and has a four-year college degree.

Interviewer: "How long have you been importing marijuana?"

Importer G: "I started dealing back in the '60's, but I didn't start the trip that I'm into now until a year or two ago. You can't just start out big, you must work your way up gradually. It takes time to establish reliable contacts."

Interviewer: "How do you think most marijuana gets into Minnesota?"

Importer G: "Probably by car or small plane. My method is much safer, though...fewer hassles and less expenses. There's still a sizable risk involved, but it's much safer shipping it than having to carry it myself."

Interviewer: "How much do you pay for marijuana in San Diego?"

Importer G: "That depends on the quality of the pot. Real good pot can run me as high as \$150 a kilo (\$68 per pound), but average commercial is around \$110 to \$115 (\$50 to \$52 per pound)."

Interviewer: "How much can you sell it for here?"

Importer G: "Again, it just depends. If it's dry (marijuana scarcity), I can get a better price. Right now the September harvest is in and prices are relatively low because there's so much pot around. During the spring and summer I can get much better prices, up to \$325 a kilo (\$148 per pound)." (parentheses ours)

As observed with the smugglers, this study found that the importer of marijuana also perceives the risks involved to be high. The importer takes this risk at the prospect of earning 125% profit on his investment. The importers that were interviewed in this study sell to the small quantity pounds dealers in ten to twenty pound lots, at an average price of \$135 per pound (arithmetic mean).

Selling Marijuana by the Pound in Minnesota

Small quantity pounds dealers resell the marijuana in single pound lots at an average price of \$155 per pound. Four small quantity pounds dealers were interviewed. All were from Minnesota metropolitan areas, all were male and had a mean age of 23. Three held full-time jobs and one was unemployed. It was found that they invested less time and money and made a lower percentage of profit than the other dealers. It was also found that they perceived lower risks with respect to the possibilities of apprehension and penalization. Some of their comments were:

"I only deal with three or four people and we're all real tight. I don't feel like there's much risk involved, for me anyways."

"No, I'm not very paranoid...actually, I'm quite careful. Like I never deal with strangers, or anything like that. If I ever were busted, they'd probably give me probation, being it would be my first offense and I have a good job and family. I even go to church on Sundays."

"I always keep my stash away from the house and pick up a pound or two when I need it. It saves me a lot of head hassles and worries."

The time invested by the small quantity pounds dealers (interviewed in this study) ranged from eight to sixteen hours per week with the mean being eleven hours. Using the mean weekly profit of \$200 a week (see Table II), it can be calculated that the small quantity pounds dealer makes slightly over \$18 an hour for dealing.

The lids dealers who were interviewed for this study usually buy one or two pounds at a time from a small quantity pounds dealer. They pay an average of \$155 per pound and can resell it in lids. A "lid" is approximately one ounce of ground marijuana which usually sells for \$15 to \$20. The profit was found to vary from 45% to 90% with the mean being 55%. The lid dealers, unlike the small quantity pounds dealers, perceived the risks of being apprehended and the chance of actually serving time to be minimal. Six lid dealers were interviewed; the results are displayed in Table III.

TABLE III
 RESPONSES OF MINNESOTA "LID" DEALERS ON FIVE VARIABLES

Dealers:	1	2	3	4	5	6	Averages
Perceived Risk of Apprehension	Low	Low	Moderate	Low	Low	Low	Low
Perceived Risk of Incarceration if Apprehended	Low	Low	Low	Low	Low	Low	Low
% of Return Profit on the Investment	51%	55%	90%	45%	49%	40%	55%
Time Involved Per Week	18 Hrs.	20 Hrs.	24 Hrs.	14 Hrs.	20 Hrs.	12 Hrs.	18 Hrs. Per Week
Weekly Earnings	\$80	\$85	\$150	\$40	\$85	\$70	\$85 Per Week

Selling lids involves more numerous customer contacts than the other phases of handling. An average pound will yield 15 to 16 lids, and since this is the usual unit of sale, an equivalent number of transactions are required. Despite the large number of transactions necessary to sell a pound in one ounce units, the lids dealers perceived minimal risks. Typical comments were:

"The pigs have better things to do than bust a small timer like me."

"All my sales are real casual and I rarely get paranoid about narcs (undercover police) and things like that." (Parentheses ours)

"There's so many lids around that the police would go crazy trying to get everyone. I think they are more interested in the guy who's selling 100 pounds than they are in me."

It should be noted in Table III that there is a positive correlation between time involved and weekly earnings. That is, a lid dealer's earnings increased with increasing volume of sales. It should also be noted that the lid dealer, unlike the previous subjects, did not usually rely on dealing as their sole source of income. Some comments to illustrate this point were:

"I buy a pound so if a friend needs a bag or something, I can help him out. I don't make much money, but that's OK, I make enough so I can get my own stash free plus a little extra money on the side."

"I started out by just picking up occasional lids for a few friends and before I knew what happened I was picking up so many lids for people that I decided to buy a pound just to save me a bunch of trips to my supplier's house. I've been buying pounds ever since."

Some Minnesota Consumers

The ultimate mover of the "system" is the consumer. Because of the importance of this dynamic, a review was made of how some Minnesotans use marijuana.

The six consumers interviewed in this study were involved with the sale of marijuana for personal use only. They had no comprehension of the intricate process by which their marijuana came to them. They perceived the risk involved to be minimal. The six consumers agreed that the average \$15 lid contained enough marijuana for 20 to 25 marijuana cigarettes and would last them from one to three weeks, but this depended on the smoking habits of the individual subject. It was also observed that they generously shared their marijuana with friends. The consciousness of inspiring extensive criminal conduct was latent among the six who simply use the drug.

Review of Findings

Two international smugglers and two importers were interviewed. All four perceived high risks; however, the expectations of profits exceeding 125% encouraged them to continue. Four small quantity pounds dealers were also interviewed. Their responses indicated that they perceived the risks to be moderate and their average weekly income was about \$200. This study found that lid dealers perceived little risk and their weekly profits of \$85 were viewed as a supplementary income. The six consumers interviewed in this study did not buy marijuana with the intent of reselling it for profit, but rather purchased it for

themselves and their friends. It appeared that they did not consciously see themselves as part of an illegal system.

From the grower to the consumer, marijuana was found to have increased in value by approximately 1200%. Furthermore, 775% of this was absorbed by the "middle person" between the grower and consumer.

It was suggested that high profit potentials contribute to the apparent solidarity of the marijuana distribution structure.

Validation through Supplementary Interviews

As previously mentioned, this style used for information gathering has a number of inherent weaknesses. In an attempt to check the information gathered and impressions obtained by the individual who gathered the information, an interview was arranged with individuals who were at a state prison and who had been involved in the marijuana distribution structure in the Minnesota area.

One of the interviewers has a doctorate in Communications and has extensive experience in criminal "street research". Similarly, the prison official had the reputation of being honest and reliable with both the inmates and other staff. Hopefully, their presence assured the interviewees that the gathered information would not be used against them.

During the interview several of the inferences regarding marijuana distribution that evolved from the previously mentioned study were shared with the two interviewees who had involvement with the marijuana distribution system in Minnesota. They basically agreed with the profit structures reported in the preceding study, but indicated that there really are two separate types of systems for "lid" distribution in Minnesota. They indicated that apart from the structure portrayed in the preceding investigation, there are a "handful" of individuals who consistently obtain marijuana from outside the North American continent (principally Asia and the Middle East), and sell it at the lid level. One of the interviewees indicated there were twelve, the other twenty plus individuals in metropolitan Minnesota who actually are involved in distributing this highly intoxicating form of marijuana. They indicated that the customers of this second group are involved in smoking heavily and use the drug for something beyond simple social intoxication.

One of the debriefers interpreted this to mean that while the previous report described basically a social use distribution system, there are those who really smoke to get intoxicated and have a separate supply system. The interviewees also indicated that over a period of time, those individuals who had high profit margins because of the quantity of marijuana they handled sometimes found themselves incarcerated. They indicated that when an individual in the marijuana structure begins making too much money too fast, they are bound to be arrested. This closely matched the "Perceived Risk" inference in the first study.

They indicated that wise, "professional" dealers never deal with more than a handful of closely known associates and slowly develop a stable business with consistent profit and with relatively low risk. They emphasized that the person who had a dozen distributors and connections in Mexico or Wisconsin was a likely candidate for arrest and conviction. They saw the law enforcement system as priority, focusing on disrupting any activity that appeared to be "organized." This makes it wiser for the real professional to purchase high potency marijuana and sell it by the ounce to a group of known and trusted individuals.

The interviewees indicated that the biggest dynamic in terms of profit is risk. They stated that when someone takes a risk they expect to obtain a good deal of money for their effort.

In commenting on the level of sophistication or professionalization of the marijuana distribution system in Minnesota, they emphasized that, to the best of their knowledge, there appears to be no attempt to actually organize and control marijuana distribution from one organized underground point. It would simply be unwise since law enforcement in Minnesota is credible, uncompromising and sophisticated to the point where any such attempted organization would quickly be detected and destroyed.

They felt the largest or most organized and sophisticated part of the Minnesota marijuana structure were those individuals (who were termed "street niggers") who sold marijuana to approximately twenty people per week and generally sold only lids of high potency marijuana. They indicated that if someone was involved in this in a sophisticated fashion, they could make a good deal of money and run a minimal risk. Considering that profits are tax free, a person selling 20 high quality lids per week would earn the equivalent of a job paying \$22,000 per year.

In their estimation, the level of sophistication in this enterprise was not achieved by advancing to the top of a pyramidal structure. The person who actually drove the bricks of marijuana from Mexico to Minnesota would not be considered very professional. Rather the individual who sold the handful of lids to carefully selected individuals on a cautious basis would be considered a more likely candidate for long range success in marijuana distribution in Minnesota.

They defined this sophisticated individual as having the following characteristics: Usually a male who owns his own home and is involved in receiving welfare which serves to explain his financial existence. Sometimes he maintains other "cover" jobs such as door-to-door selling, doing independent car repair, etc. Secondly, this individual deals only with a few people and rarely becomes involved in other kinds of criminal activity which would jeopardize his business and give him unfavorable exposure. Third, the individual usually lives in a lower income area where, if information about his business is detected, such information will not be as likely to make its way to the authorities. Fourth, the individual attempts to maintain information about criminal activity so that if he ever is apprehended he will be able to provide

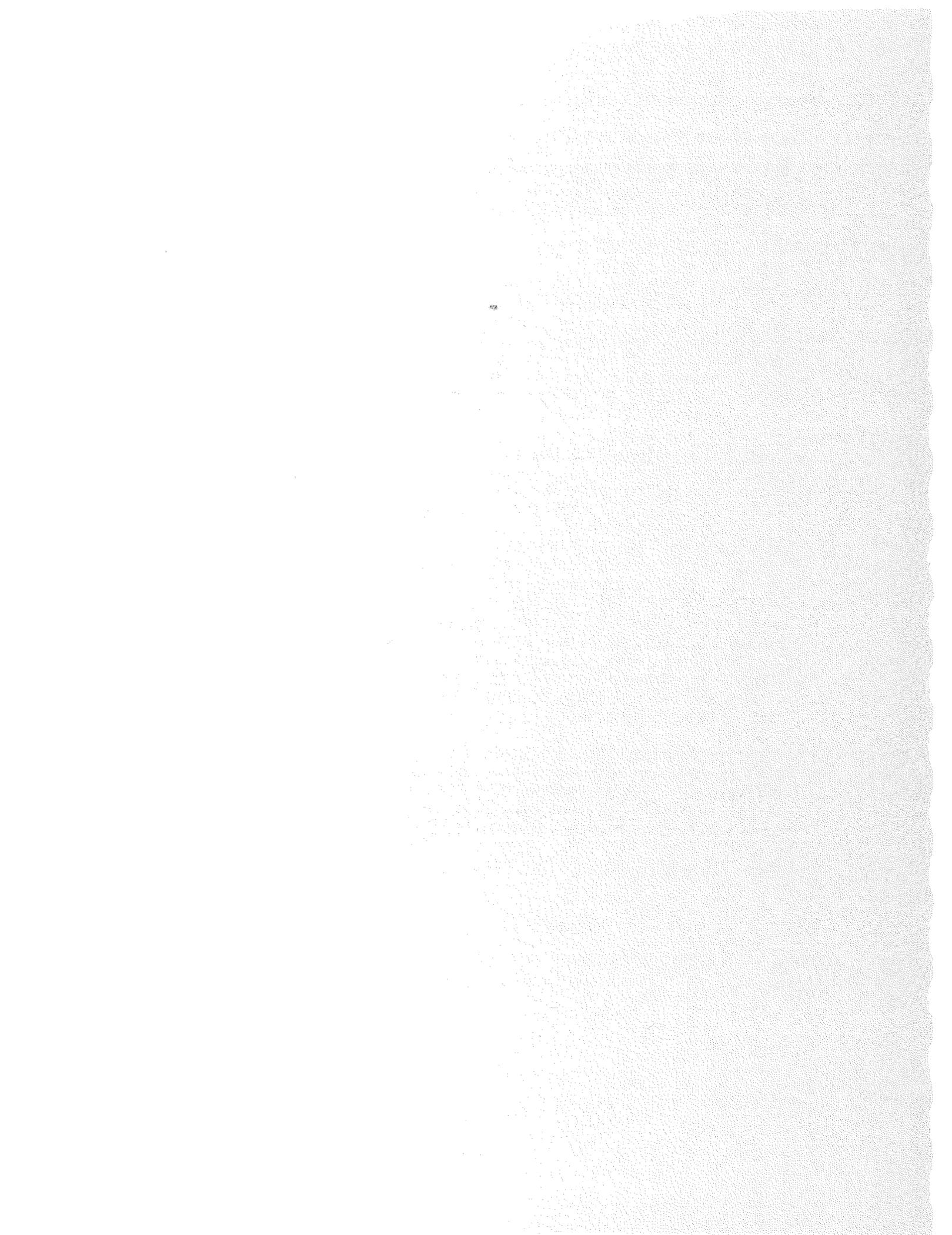
the police with information which may be helpful in terms of negotiating his way out of arrest or prosecution. Among the truly sophisticated, there is an attempt not to infuriate the local community or especially law officers by selling at or around schools, churches, or other community institutions where the use of drugs would simply be considered inappropriate.

When questioned about the future direction of the marijuana distribution system in Minnesota, they indicated that to a large degree the individuals involved in importing marijuana from Mexico, from other nations or other parts of the country were being pushed out by the many enterprising young "middle class, college types" who were learning how to grow marijuana of substantial potency in Minnesota and who were becoming equally cautious in their own distribution systems. To some extent the market was simply getting a little too crowded on the relatively safe and consistently profitable lid distribution level.

The final point made by the interviewees was that as long as law enforcement in Minnesota remained non-negotiable, it is highly unlikely that any organized criminal "syndicate" will evolve and the distribution system will remain fragmented and only haphazardly organized.

In conclusion, the distribution of marijuana in Minnesota is institutionalized as a relatively profitable system that is responsive to criminal justice pressure. Where law enforcement and the court apply pressure to an illegal system, that system becomes highly profitable among the few willing to take the risks. Where the pressure is lessened, that part of the system is abundant with supply and the profit is low. The marijuana supply is institutionalized but appears loosely organized. Considering the profit and immense demand, it is likely that huge systems do develop, but certainly no single organization has cornered the market.

With continued prohibition it is likely that local growers' technology will improve, and smuggling and importing will continue to frustrate enforcement. But as long as Minnesota law enforcement maintains its integrity, the likelihood of a sophisticated singular criminal structure evolving is minimal, even with the huge illegal profits.



Appendix I

A COMPARISON BETWEEN MARIJUANA AND OTHER RECREATIONAL
CHEMICALLY RELATED CONVICTIONS IN
MINNESOTA METROPOLITAN AND RURAL COURT SETTINGS

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A COMPARISON BETWEEN MARIJUANA AND OTHER RECREATIONAL CHEMICAL RELATED CONVICTIONS IN A MINNESOTA METROPOLITAN COURT

- I. Goals: The purpose of this paper is to compare the characteristics between marijuana and other offenders who have abused or used recreational chemicals, and come before a metropolitan district court.
- II. Methods: With a district court's permission, 100 pre-sentence investigations were selected for felons and gross misdemeanants who appeared in the district court between 1970 and 1971. During this time period all marijuana offenses were at least gross misdemeanors, and appeared before a district court. The pre-sentence investigation was the best device for going behind the actual numbers of convictions and arrests to assess the actual lifestyle, emotional problems, and criminal or deviant activity of the defendants. Because of the need for confidentiality, the selected cases are approximately four years old.

Under the reliable hearsay doctrine, the individual performing the pre-sentence investigation has every right to delve into the personal life and characteristics of the individual in question, and usually a sensitive assessment of the individual's place in society and general characteristics are obtained. In other words, if a man is convicted of burglary and is known by police, or neighbors or teachers to be an alcoholic or to use illegal drugs, that information will be turned over to the sentencing judge through the pre-sentence investigation.

The process was to first extract approximately 100 pre-sentence investigations sporadically. The cases were then categorized, reviewed, and compiled by whatever cleavages seemed significant. For instance, if a number of individuals using alcohol had financial problems, this would be noted, as would special characteristics of crime type among multi-drug users.

The principal direction of the study was to gain some perspective in identifying marijuana offenders against the background of how the whole recreational drug issue impacts the court structure. Hence, the characteristics of each marijuana offender is described in detail.

- III. Those Charged with Drug Violations: 23 of the 100 pre-sentence investigations were actually involved in chemical offenses (those formally charged with possession or sale of a drug). Of the remaining 77 cases, 52 were found to be negatively involved with the chemicals to the extent that the court investigator felt the chemicals had a definite impact on criminal activities. According to the court reports 25 did not have chemical problems involving either the offense or their lifestyle. It should be pointed out that court investigators believe individuals facing dispositions try to picture their lifestyles in as

favorable terms as possible. Therefore, it might be to a defendant's advantage to attempt to hide any problem involving inebriety. Breaking down by offense the 23 charged with drug violations, five were charged with possession of a small amount of marijuana, two with the sale of drugs, and sixteen with the possession of a number of other illegal drugs.

- A. Marijuana: The list of five marijuana cases was interesting in that something seemed to be involved in each case, which went beyond the simple activity of possessing marijuana. Because of this report's objective of comparing marijuana cases to other cases, each case is summarized in depth.
1. The first man convicted of possession of marijuana was a 19-year-old who was selling marijuana to juveniles (at least one was under 14 years of age) in a recreational park area. The 19-year-old was hostile to the police, and resisted arrest physically. Although the defendant was never charged with assaulting a police officer, resisting arrest, or sale of drugs, he was charged and prosecuted for his possession of marijuana. He received a probationary disposition.
 2. The second case involved a 20-year-old who admitted selling marijuana, and whose roommate was deeply involved in selling other drugs. The police executed a search warrant, and it would appear were not sure of which of the roommates was selling other drugs. The report does not mention which other drugs were being sold. The disposition was again probationary.
 3. The third case involved another 19-year-old who was arrested as he broke into an exclusive country club with a real looking toy water gun. The 19-year-old was trying to rob the country club, but was arrested by police who found marijuana in his possession. He was charged with that offense as opposed to attempted robbery. The disposition was not recorded in the pre-sentence investigation.
 4. The fourth case involved a man AWOL from the Army, who was well known to police as a "fence," and who was found smoking marijuana in his car near the scene of a robbery. The Army dropped AWOL charges, and automatically gave him a dishonorable discharge. A pending charge of receiving and concealing stolen property was dropped, and the marijuana charge appears to be a last resort of prosecution. A period at the Minneapolis Workhouse of unrecorded length was one of the conditions of probation.
 5. The fifth case involved a man arrested in the home of a friend. This case was different from the other four in that the defendant was apparently simply using marijuana. Although clearly unsubstantiated, the defendant felt that

recent statements he had made regarding inappropriate conduct on the part of the Minneapolis Police Department were involved in his being sought out for arrest.

- B. Sales: Of the two sales charges, the first, a 22-year-old man police referred to as a "hippie," seems to have run a loosely knit counter-culture sales operation. The man was selling amphetamines, marijuana, and LSD. He had a small house in an older part of town in which people freely entered and purchased drugs. The disposition was a year and a day at the St. Cloud Reformatory.

The second case involved a 21-year-old who, by his own admission, had been the "middle man" for a cocaine distribution system. He had two previous narcotics violations, one for possession and one for sale. For the first offense, charges had been dropped, and for the second, he was fined \$300. The man came from an upper middle class suburban family, and although the matter was serious by nature, the defendant, in contrast to the other individual involved in sales, received no incarceration but was granted probation. The author of the pre-sentence investigation indicated the "strong and stable" family would allow for the defendant's rehabilitation, and that they would grant him every consideration in his readjustment to a lawful lifestyle.

- C. Possession of Drugs, Other than Marijuana: The following are results of the 16 individuals who were involved in possession of drugs other than marijuana.
1. An 18-year-old tourist from out of town possessing amphetamines. Involvement in sales was suspected by the police. The defendant received a probationary disposition.
 2. A young computer company executive possessing amphetamines who was almost certainly involved in sales within his own company. This man appeared to be highly entrepreneurial, and probably sold throughout several company complexes located near his home office. This defendant also received probation in lieu of a stay of imposition of sentence. Therefore, although he was required to serve a probationary period, no criminal record was accrued.
 3. This 22-year-old, son of a suburban banker, was apprehended after selling a quantity of LSD to a 19-year-old who resold the drugs to police agents. Paradoxically, the 19-year-old received a year and a day prison term, while the defendant received probation. Again, the defendant's involvement in a stable family seemed to be the critical element.
 4. A 22-year-old carpenter probably involved in selling amphetamines to his peers at work, but convicted of possessing them. A probationary disposition was rendered. His steady employment record was mentioned in the report, as well as his young family. The report labeled him a "productive citizen."

5. A 22-year-old truck driver, possessing a quantity of amphetamines. This man also received probation.
6. A 20-year-old man involved in transporting, and probably selling quantities of methamphetamines. The defendant was originally stopped for drinking beer while driving. He also received a probationary sentence with a notation that the supervision provided be intense.
7. This is the 19-year-old mentioned in #3. After graduating from high school, the defendant, who is from a broken home, stated he could find no employment and began to sell drugs illicitly to maintain his livelihood. He received a year and a day in prison. An informal report from a suburban police officer was included in the pre-sentence investigation, and it was thereby alleged that the defendant had been involved in numerous sales of illegal drugs.
8. A 21-year-old member of an affluent suburban family, who admitted being involved in twelve cocaine sales. He received probation. Again, the family relationship seemed to be the significant element in the report.
9. A 19-year-old male, member of a well-to-do but broken home, sold one pound of marijuana and 24 grams of hashish to an undercover police agent. The report quoted police reports stating that the defendant was receiving 50 pounds of marijuana on a weekly basis, which he resold in large, one pound quantities. The defendant received probation. The young man was a college student with what the pre-sentence investigation author termed "high potential." This report was extremely long and pointed out to the court, in depth, a general confidence that the defendant could make good if given an opportunity.
10. A Vietnam veteran working as a house painter was involved in selling a quantity of LSD. The defendant received probation.
11. A black 43-year-old heroin "pusher" found with 100 bindles of heroin. His arrest involved a shoot-out, and his prior record involved five other narcotics arrests, white slavery, and a number of bad checks. This man received five years in prison.
12. An 18-year-old who was involved in transporting and selling a variety of drugs (including heroin) from Minneapolis to a small northern town. Local police in the small town notified Minneapolis police authorities who seized the defendant in possession of four bindles of heroin, a quantity of seconal, and some barbiturates. The defendant was sentenced to one year and one day in prison, whereupon he created a court room disturbance, and was physically restrained.

13. A 21-year-old son of a rather affluent suburban couple appeared to have been selling cocaine, but nothing beyond possession was made clear in the investigation report. This defendant received probation on the condition that he leave the state, and work in an outstate chemical plant managed by his father.
14. A 22-year-old Vietnam veteran who appeared to be driving under the influence of alcohol. When the police stopped him, he opened his car window and threw a bag of marijuana at the police. They assumed he was intoxicated, and found LSD in searching him. He was later found to be suffering from a mental breakdown involved with his war experiences. The defendant was granted probation on the condition he receive psychiatric care.
15. A 24-year-old airline stewardess who was involved in transporting a suitcase filled with narcotic drugs including cocaine, marijuana and LSD. She was obviously involved in a sales operation, but received probation.
16. A 22-year-old secretary involved in the sale of amphetamines within her office complex. She also received probation.

D. Observations: None of those arrested for drug violation were shown to be chemically dependent; of the 23, only 2 were females. The 21 not charged with sales (33%) were alleged to have been involved in selling drugs through reliable hearsay. Family dynamics seemed to play an important, if not critical, part in the nature of the dispositions, as well as employment or level of higher education.

IV. Those Involved with Criminal Activity but Charged with Other Offenses: The 52 in this category seemed to divide themselves into three groups: Those negatively involved with alcohol, those negatively involved with nonalcoholic drugs, and those who are negatively involved with both.

A. Those Using Alcohol and Nonalcoholic Drugs: The smallest contingency were those involved with alcohol and other drugs. Only 8 members fell into this category. Interestingly, 7 of the 8 cases in this category involved personal violence. The one which did not involve personal violence involved burglary, with an 18-year-old mesomorphic defendant battering his way into a gas station and smashing open a cigarette machine. Three of the other cases involved bludgeoning robberies with injured victims; 2 of the cases involved shot-gun robberies, 1 involved a burglary ending in the raping of a juvenile witness, and the last matter was a reckless driving charge which ended with the defendant knifing the arresting police officer.

In each case, the defendant was intoxicated with both alcohol and drugs at the time of the offense, and each defendant had a long history of multiple drug use. Each of the 8 defendants received prison sentences, and in each case, the defendant was quick to blame his activity on the chemical. Marijuana use played no part in any of these offenses.

- B. Those Using Alcohol: The second category includes those who are negatively involved with alcohol only. 17 individuals fell into this category, and the preponderance of them could be considered alcoholics. In other words, their lifestyles compulsively revolved around use of alcohol to the point of classical chemical dependency.

Only 3 of the 17 could be considered to be victims of a sporadic episode with alcohol. One case involved a black neighborhood argument over ownership of a lawn sprinkler. Most of the individuals involved in the argument were intoxicated and the result was a shot-gun killing. The other 2 incidents involved a drunken gas station robbery and a drunken assault. Beyond these 3 cases, the other 14 dealt with individuals who, by their lifestyles, appeared to be classically alcoholic. These cases generally involved property crimes ranging from an intoxicated native American robbing a bus driver of 15¢ using a wine bottle as a weapon, to a 25 year employee who was a union steward, and used his position for theft attempting to deal with debts inspired by his drinking. Only 3 of these 14 alcoholic types were involved in other than property crimes. All 3 of these were rape cases, one involving a homosexual rape of a juvenile.

- C. Those Using Nonalcoholic Drugs: The last and largest group are those involved with nonalcoholic drugs. 27 cases are in this category. All of these cases involved charges of property crime (robbery, burglary, etc.,).

Two cases were seemingly impulsive car thefts. The remaining 25 cases varied widely in the intensity of desperation of theft, degree of violence, and the degree of professionalism. Eight of the cases involved what could be considered naive, intoxicated theft attempts. Some examples of these cases involved a 21-year-old who tried to hold up a grocery store with a butter knife while high on an hallucinogenic drug; a low I. Q. Marine on leave who, while high on a variety of drugs, held up a pizza restaurant using a pizza plate as a threatening weapon, etc. One case did involve marijuana use. An 18-year-old male, while intoxicated on marijuana, threw a brick through a window in a fumbling attempt to burglarize a home. All the members of this grouping were between the ages of 18 and 24, and only 2 of the 8 were incarcerated. The rest were either returned to the community on probation or given probation in lieu of entrance into some sort of treatment program.

Six of the nonalcoholic drug offenses involved financially inspired criminal activity, and included no violence or weapons. Ten of these cases involved aggravated offenses, 7 of which included guns and one encompassed a knifing and near death. The preponderance of the cases involving property crime and

weapons resulted in imprisonment, which was probably related to the use of the weapons.

The nature of offenses in these cases involves such things as drug store robberies, planned hold ups, and one bizarre but highly organized burglary and robbery of a dinner party.

The degree of organization of the offenses ranged from relatively sophisticated to stumbling ineptitude. In all cases, the illegal activity seemed to be an important element of sustaining a drug-involved lifestyle.

- V. Conclusion: This study reviewed how a metropolitan court system interfaced and worked with people who, through the use of recreational drugs, violated the state's criminal code. Considering the 1973 Incidence and Prevalence Study which indicates that one-eighth of our adult population had violated the marijuana prohibition, it is clear that the state's criminal justice system is not geared to working with the average Minnesota marijuana offender. The non-threatening marijuana user generally was not found in this sample of 100 cases. Even cases labeled marijuana possession were really representative of some other kind of conduct, usually perceived as threatening to the community.

The machinery of this 1970-71 metropolitan area court system was such a mismatch for the typical marijuana user that somehow, probably through a selected process of arrest and prosecution, these cases were filtered out. The potential defendant, who was really only using marijuana recreationally, was not significantly represented either for simply use or for criminal activity resulting from chronic use.

A COMPARISON BETWEEN MARIJUANA AND OTHER RECREATIONAL
CHEMICAL RELATED CONVICTIONS IN TWELVE
RURAL COUNTY COURT AREAS IN MINNESOTA

While able to carefully go into a metropolitan area system where some consistency of pre-sentence investigations existed, and draw some comparisons between the process that surrounded marijuana use and that which surrounded the use of other drugs, this was not possible in out-state courts. The system for developing pre-sentence investigating is highly variable, and attempts to review what investigations existed, were frustrated by a truly legitimate concern on the part of outstate courts for confidentiality.

In 1972 and 1973, a report was completed by the Center for the Study of Local Government, entitled, THE APPREHENDED DRUG USER AND THE OUTSTATE MINNESOTA DISTRICT COURT. We received permission to use data from this report in attempting to complement our review of recreational chemical convictions relating to marijuana in the metropolitan area. In this case, we simply had numbers and data with which to work, as the Center also was unable to review pre-sentence investigations in outstate court settings. However, the data was collected in a careful manner, and probably presents a valid profile of what is happening in terms of disposition in the rural areas.

TABLE I: Counties Studied, County Population, Judicial District, Per Cent Urban, and Number of Nonalcoholic Drug Cases.

<u>County</u>	<u>Population</u>	<u>Judicial District</u>	<u>% Urban</u>	<u># Of Cases</u>
St. Louis	220,693	6	72.0	48
Blue Earth	52,322	5	59.0	70
Clay	46,585	7	68.7	13
Ottertail	46,097	7	27.0	2
Mower	43,783	3	57.3	6
Itasca	35,530	9	20.4	23
Polk	34,435	9	46.2	8
Kandiyohi	30,548	8	42.1	14
McLeod	27,662	1	44.3	5
Beltrami	26,373	9	43.6	9
Koochiching	17,131	9	37.6	36
Pine	6,821	10	00.0	2

The following table shows the relationship of dispositions by drug category.

FREQUENCY AND PERCENTAGES OF DISPOSITION BY CHARGE DRUG CATEGORY

DISPOSITIONS	Charge Drug Categories														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Possession-Marijuana or Hashish	Possession-Marijuana & Stimulants	Possession-Marijuana & Hallucinogens	Sale-Marijuana	Possession-Stimulants	Possession-Hallucinogens	Possession-Sedatives & Depressants	Sale-Marijuana & Stimulants	Possession-Marijuana & Sedatives	Possession-Marijuana, Stimulants & Sedatives	Possession-Marijuana, Stimulants, Sedatives, Hallucinogens	Possession-Marijuana, Sedatives & Hallucino- gens	Possession-Stimulants & Hallucinogens	Sale-Stimulants	Sale-Hallucinogens
Stayed Sentence, Probation	59 or 43.7%	6 or 31.6%	1 or 6.7%	6 or 46.2%	8 or 66.7%	2 or 33.3%	1 or 20.0%	1 or 33.3%	1 or 50.0%			1 or 50.0%			
Stayed Sentence, Probation, Fine	29 or 21.5%	2 or 10.5%	2 or 13.3%	3 or 23.1%		1 or 16.7%							1 or 100.0%		1 or 100.0%
Dismissed	24 or 17.8%	5 or 26.3%	3 or 20.0%	4 or 30.8%	1 or 8.3%	3 or 50.0%	2 or 40.0%					1 or 50.0%			
Fine	7 or 5.2%	1 or 5.3%	6 or 40.0%												
Probation	6 or 4.4%	3 or 15.8%			1 or 8.3%				1 or 50.0%						
County Jail	5 or 3.7%	1 or 5.3%	1 or 6.7%							1 or 50.0%					
ACC or YCC	1 or .7%	1 or 5.3%					1 or 20.0%	2 or 66.7%							
Suspended Sentence, Fine	1 or .7%														
Acquittal	1 or .7%														
Probation, Fine	2 or 1.5%										2 or 100.0%				
Suspended Sentence			2 or 13.3%				1 or 20.0%							1 or 100.0%	
Suspended Sentence, Probation					2 or 16.7%										
Stayed Sentence										1 or 50.0%					
	#135	#19	#15	#13	#12	#6	#5	#3	#2	#2	#2	#2	#2	#1	#1

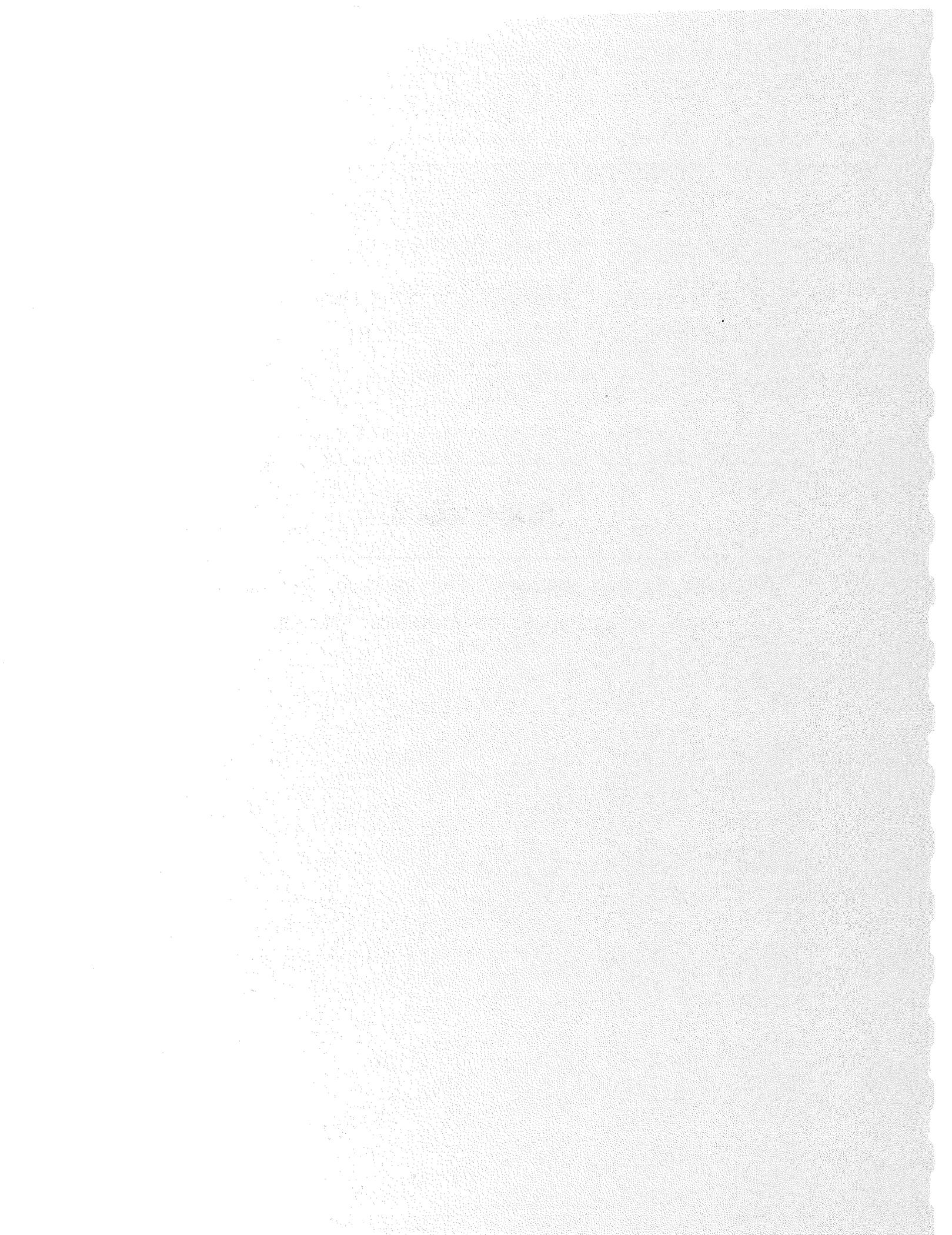
Beyond the marijuana category, one could argue that the numbers are so small they simply are not significant in terms of what is occurring. The fact that one individual who possessed marijuana and sedatives received probation is hardly worthy of 50% label in a column of two individuals. In the marijuana cases, of the 135, only one individual found his way into the present setting, while 5 individuals were actually incarcerated. Whether or not these individuals were actually involved in sales or some other activity not observed in the sample formation sheets that were reviewed for the survey is unknown. Certainly that assumption cannot be made, and it is possible that in rural court settings, at least a small portion of those who really only possessed marijuana or hashish were incarcerated for that possession. It can be observed that a substantial proportion of the individuals had stayed sentences, probation, dismissals, etc.

There are no cases involving alcohol interpreted in this study, and it appears that at least during the time period the study was made, marijuana cases dominated the court calendars as non-alcoholic drug violations. Dispositions were not frequently related to incarceration or fine. Many dispositions involved a stay of imposition of sentence in conjunction with probation, and a substantial number of cases (24 out of the 135) were dismissed.

It is somewhat frustrating not knowing the true facts behind a disposition, but it would seem the courts generally did not find it appropriate to use the punitive measures at their disposal.

Appendix II

IMPRESSIONS REGARDING MARIJUANA USE OF 118 URBAN, SUBURBAN AND
RURAL SCHOOL STUDENTS FROM THROUGHOUT MINNESOTA



Question: I believe that the percent of students in my school (last school attended) who had or have used or at least tried marijuana is:

Area and School	Replies	0%	10%	25%	50%	90%
Urban Area Junior High School	7	0	1	5	1	0
Urban Area High School	21	0	0	3	13	5
Urban Area Post High School	4	0	1	0	2	1
Suburban Area Junior High School	20	0	11	5	2	2
Suburban Area High School	47	0	2	9	27	9
Suburban Area Post High School	2	0	0	1	0	1
Rural Area Junior High School	3	0	1	0	1	1
Rural Area High School	10	0	0	2	5	3
Area Unknown Junior High School	2	0	0	2	0	0
Area Unknown High School	2	0	1	0	1	0
TOTAL	118 (100%)	0 (0%)	17 (14%)	27 (22%)	52 (44%)	22 (20%)

TOTAL CONSENSUS - 46%

Question: I believe that the recreational use of marijuana should be lawfully allowed:

Area and School	Replies	Agree	Disagree	No Answer
Urban Area Junior High School	7	1	6	
Urban Area Senior High School	21	12	9	
Urban Area Post High School	4	4	0	
Suburban Area Junior High School	20	2	17	
Suburban Area Senior High School	47	20	24	3
Suburban Area Post High School	2	1	1	
Rural Area Junior High School	3	1	2	
Rural Area Senior High School	10	7	3	
Area Unknown Junior High School	2	0	2	
Area Unknown Senior High School	2	0	2	
TOTAL	118	48 (41%)	66 (56%)	3 (2.5%)

Question: Alcohol is a drug

Area and School	Replies	Agree	Disagree
Urban Area Junior High School	7	6	1
Urban Area Senior High School	21	18	3
Urban Area Post High School	4	4	0
Suburban Area Junior High School	20	19	1
Suburban Area Senior High School	47	43	4
Suburban Area Post High School	2	0	2
Rural Area Junior High School	3	2	1
Rural Area Senior High School	10	10	0
Area Unknown Junior High School	2	2	0
Area Unknown Senior High School	2	2	0
TOTAL	118 (100%)	106 (90%)	12 (10%)

Question: There is an organized system of marijuana distribution within my school system.

Area and School	Replies	Agree	Disagree	No Answer
Urban Area Junior High School	7	2	5	
Urban Area Senior High School	21	11	8	2
Urban Area Post High School	4	3	1	
Suburban Area Junior High School	20	11	9	
Suburban Area Senior High School	47	28	17	2
Suburban Area Post High School	2	1	1	
Rural Area Junior High School	3	1	2	
Rural Area High School	10	7	3	
Area Unknown Junior High School	2	1	1	
Area Unknown Senior High School	2	0	2	
TOTAL	118	65 (55%)	49 (41%)	4 (3%)

Question: The school officials in my area are realistically sensitive to issues of drug use and abuse.

Area and School	Replies	Agree	Disagree	No Answer
Urban Area Junior High School	7	5	2	
Urban Area Senior High School	21	11	9	1
Urban Area Post High School	4	2	2	
Suburban Area Junior High School	20	13	6	1
Suburban Area Senior High School	47	16	26	5
Suburban Area Post High School	2	1	1	
Rural Area Junior High School	3	3	0	
Rural Area Senior High School	10	7	3	
Area Unknown Junior High School	2	2	0	
Area Unknown Senior High School	2	2	0	
TOTAL	118 (100%)	62 (52%)	49 (42%)	7 (6%)

1. I believe that the percentage of students in my school (last school attended) who had or have used, or at least tried marijuana is:
 - a. 0%
 - b. 10%
 - c. 25%
 - d. 50%
 - e. 90% +

2. I believe that the recreational use of marijuana should be lawfully allowed:
 - a. agree
 - b. disagree

3. There is an organized system of marijuana distribution within my school system:
 - a. agree
 - b. disagree

4. Alcohol is a drug:
 - a. agree
 - b. disagree

5. The school I last attended was a:
 - a. Junior High School
 - b. High School
 - c. Post High School

6. The school I have been referring to is in an area which is primarily:
 - a. A Rural area
 - b. A Suburban area
 - c. An Urban area

7. The school officials in my area are realistically sensitive to issues of drug use and abuse:
 - a. agree
 - b. disagree

Appendix III

THE OPINIONS OF 197 MINNESOTANS PROFESSIONALLY INVOLVED
OR VOLUNTARILY WORKING WITH CHEMICAL DEPENDENCY PROBLEMS
IN MINNESOTA

SURVEY RESULTS: RECREATIONAL DRUG USE

Group I	Chemical problem training of professionals	11
	Chemical problem training of the public	9
	Those who checked both	<u>1</u>
	TOTAL	21

QUESTION:

In terms of my experience, the extent of community damage inspired by reckless recreational drug use is usually related to the type of drugs used recreationally.

RESPONSE: Agree: 14 (67%) Disagree: 7 (33%) No Response: 0 (0%)

If you agree, rank the following recreational drugs in terms of the problems they cause the community: 1 through 5; 1 causing the most problems, 5 for the least. ("Problem" is defined as an internal characteristic that inhibits a person from functioning normally. An arrest or social reaction to drug use is an external characteristic. Personality disorders resulting from drug use or liver malfunctions are internal. We are looking for internal problems.)

<u>RESPONSE*:</u>	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Barbituates	2	11	2	2	0
Alcohol	17	0	0	0	0
Opiates	2	1	1	4	10
Amphetamines	2	3	8	5	0
Marijuana	0	4	4	4	5

QUESTION:

From my experience in the area of chemical problems, the use of marijuana alone (not in conjunction with other drugs) appears to constitute:

Over 50% of observed problems	0	0 to 5% of observed problems	6
25 to 50% of observed problems	0	Never observed problems singularly relating to marijuana use	2
10 to 25% of observed problems	5		
5 to 10% of observed problems	2	Impossible to determine	6

*Some respondents apparently misunderstood the question and used the same number for several categories, as well as proceeded to rank drugs after indicating that "usually" drug type cannot be ranked in order of threat to the community.

QUESTION:

From my experience in the area of chemical problems, the use of marijuana is an important factor relating to a general pattern of chemical abuse, and appears to contribute to:

RESPONSE:

Over 50% of observed problems	1	0 to 5% of observed problems	7
25 to 50% of observed problems	1	Never observed problems which marijuana clearly contributed towards	2
10 to 25% of observed problems	3		
5 to 10% of observed problems	2	Impossible to determine	5

QUESTION:

From your experience, is it your impression that Minnesota communities' exposure to marijuana constitutes a public health threat? (Excluding criminal justice response or negative attitudes of other community members.)

RESPONSE: Yes: 15 (71%) No: 6 (29%)

If so, from what perspective?

Exposure to other drug use	11	(58%)
Physical damage or impairment	1	(5%)
Psychological damage or impairment	6	(32%)
Other (Specify)	1	(5%)

QUESTION:

Under present state law, the possession of marijuana is a misdemeanor allowing penalties up to 90 days incarceration and/or \$300 fine. There is judicial discretion allowing less severe penalties on a case-by-case basis. From your experience, do you believe that, in terms of public and individual well being, the present criminal justice response to marijuana possession is:

RESPONSE:

Not punitive enough	4	(19%)
Appropriate	5	(24%)
Inappropriately punitive	12	(57%)

SURVEY RESULTS: RECREATIONAL DRUG USE

Group II Chemical problem counseling and/or care. Total -- 125

QUESTION:

In terms of my experience, the extent of community damage inspired by reckless recreational drug use is usually related to the type of drugs used recreationally.

RESPONSE: Agree: 92 (74%) Disagree: 28 (22%) No Response: 5 (4%)

If you agree, rank the following recreational drugs in terms of the problems they cause the community: 1 through 5; 1 causing the most problems, 5 for the least. ("Problem" being defined as an internal characteristic that inhibits a person from functioning normally, An arrest or social reaction to drug use is an external characteristic. Personality disorders resulting from drug use or liver malfunctions are internal. We are looking for internal problems.)

<u>RESPONSE:</u>	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Barbiturates	1	34	33	22	3
Alcohol	93	0	0	0	0
Opiates	1	6	9	27	48
Amphetamines	0	24	41	26	0
Marijuana	0	25	8	17	41

QUESTION:

From my experience in the area of chemical problems, the use of marijuana alone (not in conjunction with other drugs) appears to constitute:

RESPONSE:

Over 50% of observed problems	4	0 to 5% of observed problems	37
25 to 50% of observed problems	6	Never observed problems singularly relating to marijuana use	32
10 to 25% of observed problems	8		
5 to 10% of observed problems	13	Impossible to determine	25

QUESTION:

From my experience in the area of chemical problems, the use of marijuana is an important factor relating to a general pattern of chemical abuse, and appears to contribute to:

RESPONSE:

Over 50% of observed problems	6	0 to 5% of observed problems	22
25 to 50% of observed problems	6	Never observed problems which marijuana clearly contributed towards	24
10 to 25% of observed problems	14	Impossible to determine	35
5 to 10% of observed problems	16		

QUESTION:

From your experience, is it your impression that Minnesota communities' exposure to marijuana constitutes a public health threat? (Excluding criminal justice response or negative attitudes of other community members.)

RESPONSE: Yes: 69 (58%) No: 51 (42%)

If so, from what perspective?

Exposure to other drug use	60	(51%)
Physical damage or impairment	16	(14%)
Psychological damage or impairment	31	(26%)
Other (Specify)	11	(9%)

QUESTION:

Under present state law, the possession of marijuana is a misdemeanor allowing penalties up to 90 days incarceration and/or \$300 fine. There is judicial discretion allowing less severe penalties on a case-by-case basis. From your experience, do you believe that, in terms of public and individual well being, the present criminal justice response to marijuana possession is:

RESPONSE:

Not punitive enough	16	(13%)
Appropriate	42	(34%)
Inappropriately punitive	66	(53%)

SURVEY RESULTS: RECREATIONAL DRUG USE

GROUP III Others - Interested Minnesota citizens, many of whom
are volunteer counselors. Total -- 51

QUESTION:

In terms of my experience, the extent of community damage inspired by reckless recreational drug use is usually related to the type of drugs used recreationally.

RESPONSE: Agree: 24 (47%) Disagree: 24 (47%) No Response: 3 (6%)

If you agree, rank the following recreational drugs in terms of the problems they cause the community: 1 through 5; 1 causing the most problems, 5 for the least. ("Problem" being defined as an internal characteristic that inhibits a person from functioning normally. An arrest or social reaction to drug use is an external characteristic. Personality disorders resulting from drug use or liver malfunctions are internal. We are looking for internal problems.)

<u>RESPONSE:*</u>	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Barbiturates	1	11	11	5	1
Alcohol	27	0	1	0	1
Opiates	1	5	2	11	10
Amphetamines	1	7	14	5	2
Marijuana	2	4	1	6	16

*Some who disagreed still provided input in rank ordering of the drugs.

QUESTION:

From my experience in the area of chemical problems, the use of marijuana alone (not in conjunction with other drugs) appears to constitute:

RESPONSE:

Over 50% of observed problems	1	0 to 5% of observed problems	12
25 to 50% of observed problems	0	Never observed problems singularly relating to marijuana use	13
10 to 25% of observed problems	5		
5 to 10% of observed problems	3	Impossible to determine	12

QUESTION:

From my experience in the area of chemical problems, the use of marijuana is an important factor relating to a general pattern of chemical abuse, and appears to contribute to:

RESPONSE:

Over 50% of observed problems	1	0 to 5% of observed problems	7
25 to 50% of observed problems	1	Never observed problems which marijuana clearly contributed towards	18
10 to 25% of observed problems	3		
5 to 10% of observed problems	4	Impossible to determine	11

QUESTION:

From your experience, is it your impression that Minnesota communities' exposure to marijuana constitutes a public health threat? (Excluding criminal justice response or negative attitudes of other community members.)

RESPONSE: Yes: 22 (48%) No: 24 (52%)

If so, from what perspective?

Exposure to other drug use	14	(37%)
Physical damage or impairment	5	(13%)
Psychological damage or impairment	15	(39%)
Other (Specify)	4	(11%)

QUESTION:

Under present state law, the possession of marijuana is a misdemeanor allowing penalties up to 90 days incarceration and/or \$300 fine. There is judicial discretion allowing less severe penalties on a case-by-case basis. From your experience, do you believe that, in terms of public and individual well being, the present criminal justice response to marijuana possession is:

RESPONSE:

Not punitive enough	2	(4%)
Appropriate	12	(27%)
Inappropriately punitive	31	(69%)

REGARDING RECREATIONAL DRUG USE

1. The activity which most nearly describes my professional sphere of action:

_____ Chemical problem counseling and/or care

_____ Chemical problem training of professionals (counselors, educators, etc.)

_____ Chemical problem training of the public

_____ Other (specify) _____

2. In terms of my experience the extent of community damage inspired by reckless recreational drug use is usually related to the type of drugs used recreationally.

_____ Agree

_____ Disagree

If you agree, rank the following recreational drugs in terms of the problems* they cause the community: (1-5; 1 for causing the most problems, 5 for the least.)

(If you are uncomfortable answering this because of extensive poly-drug use, please omit. The ranking should relate not to how dangerous each drug is in itself, but how much damage you perceive it to be presently causing. Obviously, strychnine is more dangerous than tobacco but few people take strychnine recreationally so it causes less problems than tobacco.)

_____ Barbiturates (recreational use)

_____ Amphetamines
(recreational use)

_____ Alcohol

_____ Marijuana

_____ Opiates (heroin, methadone, morphine, etc.)

*"Problem" is defined as an internal characteristic that inhibits a person from functioning normally. An arrest or social reaction to drug use is an external characteristic. Personality disorders resulting from drug use or liver malfunctions are internal. We are looking only for internal problems.

3. From my experience in the area of chemical problems the use of marijuana alone (not in conjunction with other drugs) appears to constitute:

- | | |
|---|---|
| <input type="checkbox"/> Over 50% of observed problems | <input type="checkbox"/> 0 to 5% of observed problems |
| <input type="checkbox"/> 25 to 50% of observed problems | <input type="checkbox"/> Never observed problems singularly relating to marijuana use |
| <input type="checkbox"/> 10 to 25% of observed problems | <input type="checkbox"/> Impossible to determine |
| <input type="checkbox"/> 5 to 10% of observed problems | |

4. From my experience in the area of chemical problems, the use of marijuana is an important factor relating to a general pattern of chemical abuse and appears to contribute to:

- | | |
|---|--|
| <input type="checkbox"/> Over 50% of observed problems | <input type="checkbox"/> 0 to 5% of observed problems |
| <input type="checkbox"/> 25 to 50% of observed problems | <input type="checkbox"/> Never observed problems which marijuana clearly contributed towards |
| <input type="checkbox"/> 10 to 25% of observed problems | <input type="checkbox"/> Impossible to determine |
| <input type="checkbox"/> 5 to 10% of observed problems | |

5. From your experience is it your impression that Minnesota communities' exposure to marijuana constitutes a public health threat? (Excluding criminal justice response or negative attitudes of other community members.)

Yes No

If so, from what perspective?

- Exposure to other drug use
- Physical damage or impairment
- Psychological damage or impairment
- Other (Specify) _____

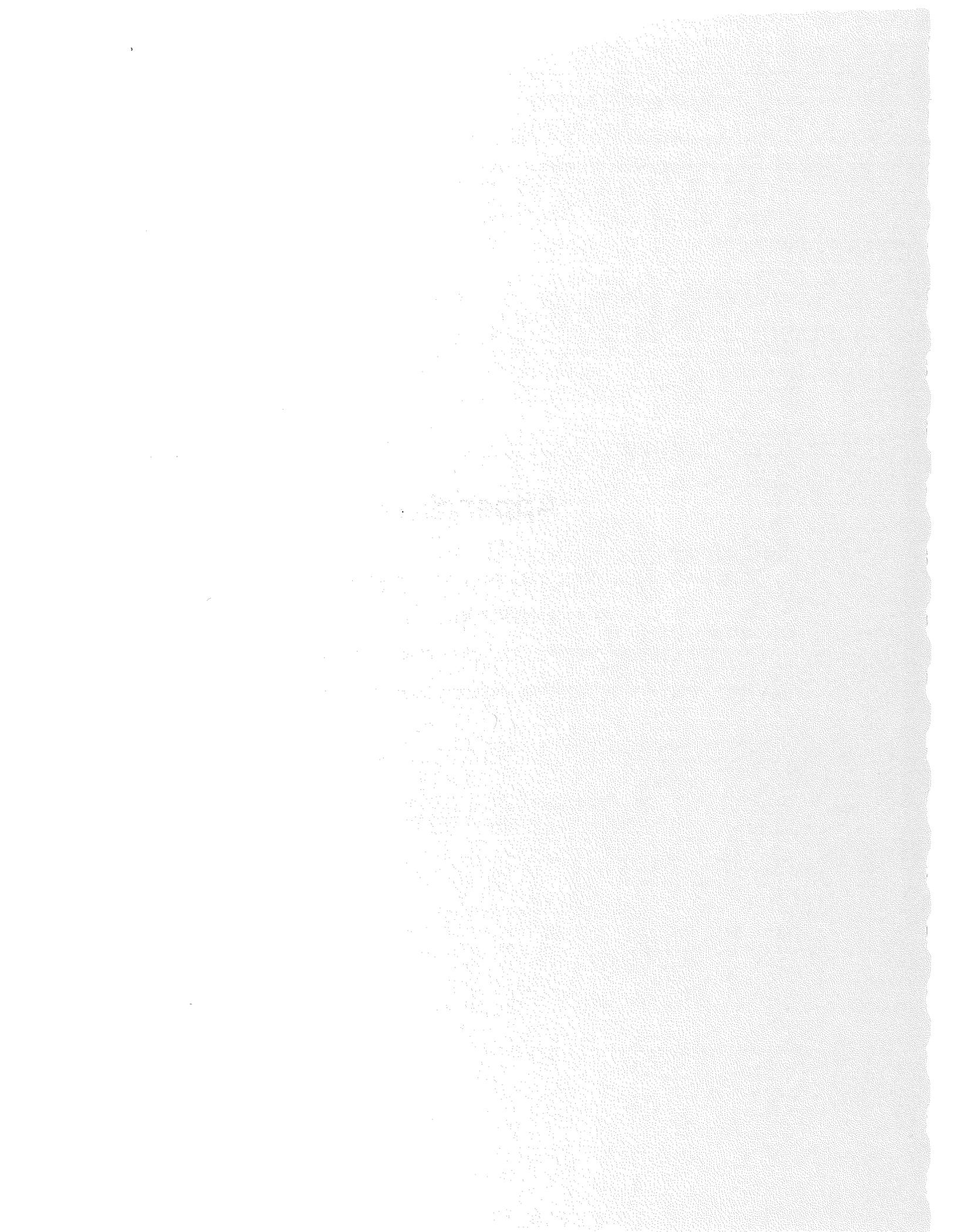
6. Under present state law, the possession of marijuana is a misdemeanor allowing penalties up to 90 days incarceration and/or \$300 fine. There is judicial discretion allowing less severe penalties on a case-by-case basis. From your experience, do you believe that in terms of public and individual well being the present criminal justice response to marijuana possession is:

- Not punitive enough
- Appropriate
- Inappropriately punitive

7. Any comments relating to the present government response to recreational marijuana use would be appreciated.

Appendix IV

A REVIEW OF THE OPINIONS REGARDING MARIJUANA
OF 49 PROFESSIONALS IN THE AREA OF
COUNSELING, THERAPY, LAW ENFORCEMENT AS THEY RELATE TO
CRIMINAL JUSTICE IN MINNESOTA



A REVIEW OF THE OPINIONS REGARDING MARIJUANA OF 49
PROFESSIONALS IN THE AREA OF COUNSELING, THERAPY,
LAW ENFORCEMENT AS THEY RELATE TO CRIMINAL JUSTICE
IN MINNESOTA

Goals

The goals of this investigation were to assess the opinions of 49 professionals in the area of counseling, therapy, and criminal justice in Minnesota relative to the level of danger they perceived marijuana to present within the Minnesota community, and to solicit their recommendations concerning marijuana public policy. All the individuals who participated in the investigation worked with or in the criminal justice structure of Minnesota.

Process

In 1974, the Minnesota Alcohol and Drug Authority and the Federal Drug Enforcement Association, Preventive Programs Division, developed a training conference for various professionals employed in Minnesota and working in the area of illegal recreational drug problems. During that conference, conference coordinators passed out the questionnaire which is attached to this report.

The questionnaire attempted to assess several elements concerning the opinions of those who attended the program regarding marijuana and the present marijuana prohibition.

There were 49 responses to the questionnaire, and for interpretation, they were divided into two groups.

The first group involved mental health and public health workers, all of whom worked with the state's criminal justice systems. The second group consisted of those more specifically involved in the law enforcement portion of criminal justice. The three general areas reviewed involved first, a ranked order of the danger of various drugs; secondly, an assessment of the actual danger of the drug; and finally, the opinions of the professionals relative to the best general policy response to marijuana.

Results

There were a number of problems with the instrument, and to some extent the data received in this process may not be completely representative of the opinions of the 49 professionals. The professionals were divided into two groups to include 26 who were generally in the area of mental health and public health, and 23 who seemed to be involved with more kinds of activities. Many were involved with arrests, some with prosecutions, some with passing judgment or advising on dispositions, others with corrections, probation, parole, etc.

In terms of ranking the danger of drugs to the community, the mental health professionals ranked in the following order:

- | | |
|-----------------|------------------|
| 1. Alcohol | 4. Tranquilizers |
| 2. Marijuana | 5. Heroin |
| 3. Amphetamines | 6. Inhalants |

The criminal justice (law enforcement) personnel listed them in the following order:

- | | |
|-----------------|------------------|
| 1. Alcohol | 4. Tranquilizers |
| 2. Amphetamines | 5. Heroin |
| 3. Marijuana | |

The problem presented in the instrument was that it forced all individuals to rank the drugs, and it is likely that many of the individuals did not feel it was even possible to rank drugs in problem levels in the community. Secondly, in asking and defining what "problem" meant, there was no factoring out of criminal justice or community attitude responses. In other words, when the mental health professional rated marijuana as No. 2, he may have been referring to the fact that individuals using marijuana frequently may be arrested or receive criminal justice "hassles."

There was virtually total agreement (92% from mental health center professionals, and 96% for criminal justice professionals) that there were problems pertaining to prescription drugs and lawful prescriptions. This may not interface with the marijuana issue, but it does indicate, in some instances, legal and authorized recreational drug problems outweigh the illegal problems. When asked what danger marijuana seemed to present to the community, both the criminal justice and mental health personnel answered that exposure to other drugs appeared to be the most significant danger. 46% of those answering in the mental health profession indicated other drug exposure was the major problem, as did 61% of the criminal justice personnel. Again, there is a problem with the instrument insofar as they were forced to answer, and some of the individuals may not have viewed an existing problem related to specific use of recreational marijuana.

Finally, when asked what would be the best alternative of public policy, 48% of both mental health center and criminal justice professionals answered the best public policy would be to increase penalties for sale, and lower or eliminate penalties for use. The other 52% of the responses in both cases were quite evenly divided.

Summary

Although there were serious problems with the instrument in assessing and reviewing opinions of 49 criminal justice professionals, 26 of whom were in the area of mental health and counseling, and 23 of whom were in the area of law enforcement, prosecution, etc., it appears that generally, marijuana is considered a problem; however, a problem that basically revolves around the fact that it exposes individuals to other sorts of drug use which presumably has inherent danger. The general direction for public policy by both groups was to increase penalties for the sale or distribution of marijuana, and to lower or eliminate the penalties for use of the drug.

Participants: 26 Mental Health and Public Health Professionals (2 Unknowns)

Mental Health - Therapy	5
- Administration	8
- Therapy/Administration	7
Public Health - Therapy	4
- Administration	0
Employment Counselor	1
Lay Person (Al-Anon)	1
Unknown	2

Question:

Place the numbers 1 through 5 in the order in which you regard the following drugs as a serious hazard to the general public of your community.

Alcohol Heroin Tranquilizers Marijuana Amphetamines

Response:*

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Alcohol	25	1	0	0	0
Heroin	1	0	1	2	22
Tranquilizers	0	5	12	7	2
Marijuana	1	15	3	5	3
Amphetamines	1	4	10	11	1
Inhalants	0	2	0	0	0

*In arriving at a cumulative ranked-ordering, all responses were weighed. Those receiving a number 1 were given 5, 2 given 4, 3 given 3, 4 given 2, and 5 given 1. The numbers were then summed per drug, and the highest number would then receive the highest weighing. Some participants possibly did not understand the question and did not fill in all the sections.

Question:

Do you believe excessive prescriptions for barbiturates, amphetamines and other drugs are a serious problem?

Response: Yes: 24 (90%) No: 0 (0%) No Answer: 2 (8%)

Question:

In the following general classes of dangers from marijuana, please circle the ones you regard as most serious.

1. Dangers to the health of the individual.
2. Dangers to the community.
3. Dangers to the individual from exposure to the drug sub-culture.
4. Dangers to the community from exposure of the individual to the criminal culture encountered in jail.

Response: Choice 1 Choice 2 Choice 3 Choice 4 No Answer
 4 (17%) 11 (48%) 2 (9%) 5 (22%) 1 (4%)

Participants: 23 Law Enforcement Professionals

- Arrest 8
- Prosecution 2
- Judgment 2
- Sentence Determination 4
- Corrections 3
- Probation & Parole 1
- Criminal Justice Planning 2
- Information to Courts/
 Probation Supervision 1

Question:

Place the numbers 1 through 5 in the order in which you regard the following drugs as a serious hazard to the general public in your community.

Alcohol Heroin Tranquilizers Marijuana Amphetamines

Response:

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>	<u>No. 5</u>
Alcohol	22	1	0	0	0
Heroin	1	2	0	4	16
Tranquilizers	0	2	6	14	1
Marijuana	0	11	5	1	6
Amphetamines	0	7	12	4	0

Question:

Do you believe excessive prescriptions for barbiturates, amphetamines and other drugs are a serious problem:

Response: Yes: 22 (96%) No: 0 (0%) Don't Know: 1 (4%)

Question:

In the following general classes of dangers from marijuana, please circle the one you regard as most serious.

1. Dangers to the health of the individual.
2. Dangers to the community.
3. Dangers to the individual from exposure to the drug sub-culture.
4. Dangers to the community from exposure of the individual to the criminal culture encountered in jail.

<u>Response:</u>	<u>Choice 1</u>	<u>Choice 2</u>	<u>Choice 3</u>	<u>Choice 4</u>
	4 (17%)	2 (9%)	14 (61%)	3 (13%)

Question:

There are many possible ways of dealing with these problems. Please circle which of the three following methods you favor or state an alternative suggestion below.

1. Legalize marijuana, control the sale and institute a saturation education program concerning the potential dangers.
2. Increase penalties for sale and lower or eliminate penalties for use.
3. Increase penalties for sale and use.
4. Alternative suggestion. (Comments)
5. No comment.

<u>Response:</u>	<u>Choice 1</u>	<u>Choice 2</u>	<u>Choice 3</u>	<u>Choice 4</u>	<u>No Answer</u>
	4 (17%)	11 (48%)	2 (9%)	5 (22%)	1 (4%)

MY PRINCIPAL ACTIVITY IS WITH: Law enforcement: Arrest
 Prosecution
 Please check one. Judgment
 Sentence determination
Mental health: Therapy
 Administration
Public health: Therapy
 Administration

Please place the numbers one through five in the order in which you regard the following drugs as a serious hazard to the general public in your community.

Alcohol____ Heroin____ Tranquilizers____ Marijuana____ Amphetamines____

Do you believe excessive prescriptions for barbiturates, amphetamines and other drugs are a serious problem? yes no

In the following general classes of dangers from marijuana please circle the one you regard as most serious.

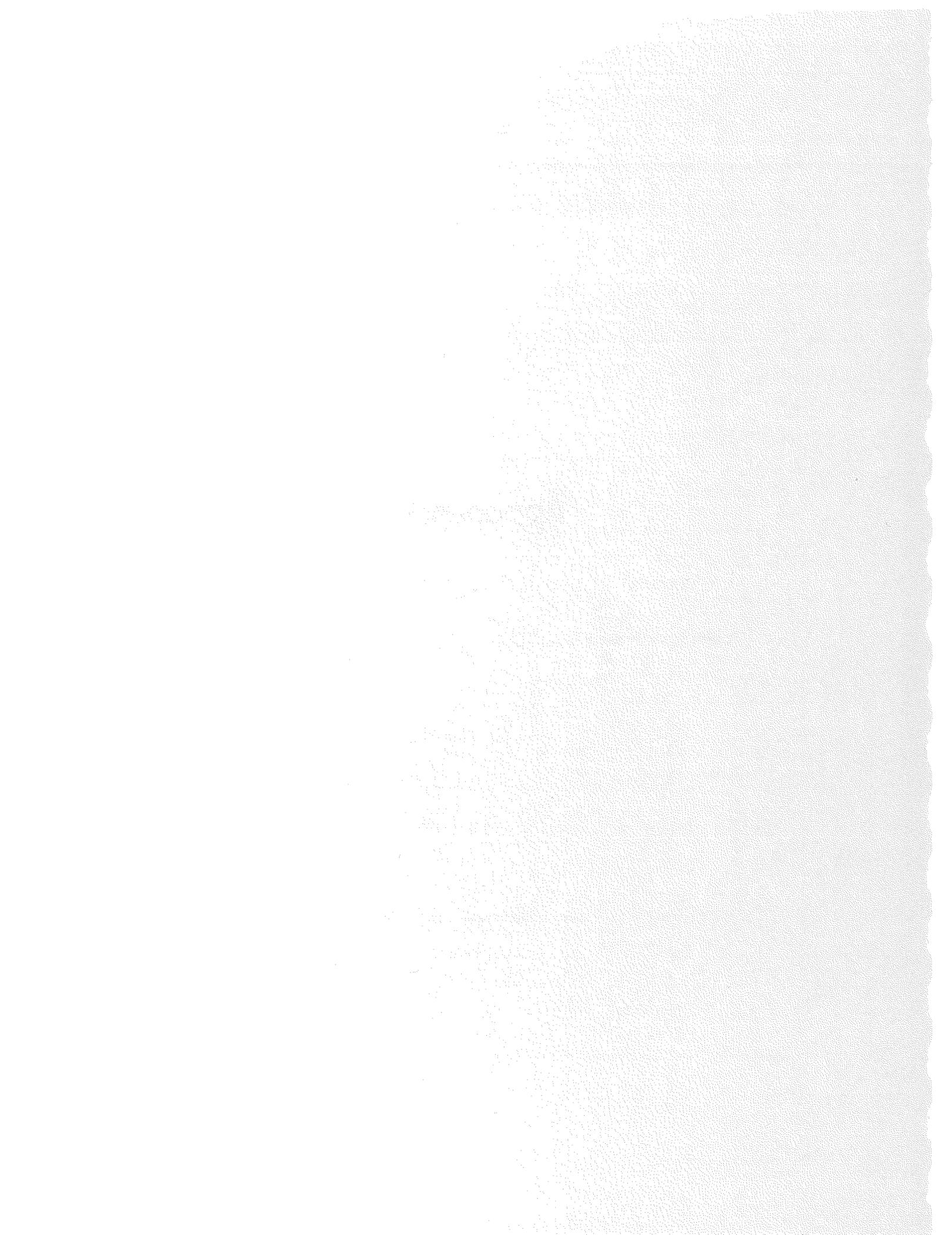
1. Dangers to the health of the individual.
2. Dangers to the community.
3. Dangers to the individual from exposure to the drug sub-culture.
4. Dangers to the community from exposure of the individual to the criminal culture encountered in jail.

There are many possible ways of dealing with these problems. Please circle which of the three following methods you favor - or state an alternative suggestion below.

1. Legalize marijuana, control the sale and institute a saturation educational program concerning the potential dangers.
2. Increase penalties for sale and lower or eliminate penalties for use.
3. Increase penalties for sale and use.

Appendix V

PREVALENT WESTERN ATTITUDE TOWARD NONALCOHOLIC DRUGS



PREVALENT WESTERN ATTITUDE TOWARD NONALCOHOLIC DRUGS

While a continuum of "appropriate" alcohol use was carefully established, the use of nonalcoholic drugs was limited basically to two kinds of individuals: those that were involved in trance-states as priests or priestesses to the pagan pantheon of gods, or to "barbarians" whom Heroditus described as never washing and going wild with the use of cannabis.¹ Further, when Christianity replaced pagan worship in the West, it is likely that nonalcoholic drugs ceased to have a legitimate role at all and only infidels or pagans would be involved in the use of nonalcoholic, recreational mood-altering chemicals. Beyond this, the whole concept of pleasure was looked upon with pervading suspicion.² Within our early Western heritage, the act of obtaining pleasure via nonalcoholic drugs would have been considered both unwise and wrong.

As Europe assimilated the "Western package," the evil power and unwholesomeness of nonalcoholic recreational drugs matured as a concept and when the first major contact with an "infidel" power occurred during the Crusades, again the phobia was reinforced. One characteristic of the infidels observed by the Crusaders was the use of marijuana.³ So to the Western mind, the alcohol-using agents of God encountered the demons of satan who used nonalcoholic drugs. The relationship between nonalcoholic pleasure drugs and evil incarnate was reinforced for Western man. The ancient and medieval Western identification with nonalcoholic pleasure drugs relating to unholy evil powers probably accounted for the hostile reaction to coffee, tea and tobacco, as these nonalcoholic drugs came into the scope of an emerging Europe.

When coffee was introduced to Europe, monarchs enacted severe physical punishment upon those who used the drug.⁴ Fredrick II enjoined his subjects to forsake coffee and drink beer like good Europeans.⁵ The use of tea in Europe was initially considered medicinal and its use was carefully monitored. Among the British, its distribution was actually controlled by the government for 300 years.⁶ When tobacco was carried to Europe as another "foreign" drug, the medical profession attempted

¹John M. Allegro, The Sacred Mushroom and the Cross. New York: Bantam Books, 1971, p. 188.

²J.A.K. Thompson, The Ethics of Aristotle. Baltimore: Penguin Books, 1966, p. 106.

³Richard H. Blume and Associates, Society and Drugs. San Francisco: Jossey-Bass, Inc., 1970, p. 64.

⁴Ibid., p. 101.

⁵Ibid., p. 101.

⁶Ibid., p. 100.

to control and limit its use and monarchs implored their subjects not to take up the characteristics of "unchristian savages."⁷ Heavy taxation and the penalty of death, among other prohibitive measures, were employed to terminate the use of tobacco in the Western community⁸ long before any physical damage from excessive use of tobacco was anticipated.

⁷Ibid., p. 90.

⁸Ibid., p. 90.

**In the best and worst of societies
the pursuit of pleasure for some
is the responsibility of others.**
