MINUTES OF THE SENATE COMMITTEE ON JUDICIARY

Held in Room 313 S, at the Statehouse at 10:00 a. m./p.m., on March 15, 1979.

All members were present except:

The next meeting of the Committee will be held at 10:00 a. m./p.m., on March 16, 1979.

These minutes of the meeting held on XXXXXXXXXXXXXXXXXX, 19XXX were considered, corrected and approved.

Elwaine F. Pomeroy
Chairman

The conferees appearing before the Committee were:

Mike Malone - Douglas County District Attorney
Dr. Dean T. Collins - Menninger Foundation
Bill Lucero - Kansas Coordinator of the Unitarian Universalist Service Committee
Benjamin M. Farney - Representative of Drug Counselors
Kate Hofstetter - Associated Students of Kansas
Representative Michael Glover
Charles Schwep - Action Priorities, Inc.
Eric A. Voth - University of Kansas Medical Student
Thomas J. Gleaton - Georgia State University
Gabriel G. Nahas - Columbia University, New York
Chief Fred Howard - Topeka Police Department

Staff present:
Art Griggs - Revisor of Statutes
Jerry Stephens - Legislative Research Department
Wayne Morris - Legislative Research Department

Senate Bill No. 357 - Uniform controlled substances act amendments and other provisions relating to marihuana. A joint session of the Senate Judiciary Committee and the Senate Federal and State Affairs Committee was held to hear testimony with regard to the bill, which has been referred to the two committees separately. The meeting was chaired by Senator Reilly, the chairman of the Federal and State Affairs Committee.

Mike Malone, the Douglas County District Attorney, spoke in support of the bill. He stated that he does not condone the use of any drug. He stated he supported the bill because the present situation causes dilution of respect of the law; the present situation does not result in the best use of law enforcement personnel; and the present situation provides great discrepancies in sentencing throughout the state.

Dr. Dean T. Collins, a Menninger Foundation Psychologist, testified in support of the bill. A copy of his statement is attached.

continued -

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He testified proposed changes in the Kansas law would be reasonable, equitable, supportable and enforceable, whereas our present laws are not. Committee discussion with him followed.

Bill Lucero, the Kansas Coordinator of the Unitarian Universalist Service Committee, testified in support of the bill; a copy of his statement is attached. He stated the Unitarian Universalist Committee has endorsed reductions in penalties for victimless crimes.

Benjamin M. Farney, who is a former Johnson County Probate Judge and former law school professor, speaking as legislative counsel for drug counselors, testified in support of the bill. He stated the drug counselors are concerned that the state funds presently provided for treatment of drug addiction are drying up. Counselors feel that reducing penalties for small amounts of marihuana is a far more realistic approach than the present law. This bill would be a step toward a more rational approach to this social problem.

Kate Hofstetter, Administrative Assistant for Associated Students of Kansas, testified in support of the bill. A copy of her statement is attached. She stated that in 1977, three out of every four drug arrests were marihuana possession.

Representative Glover testified in support of the bill. A copy of his statement is attached, and also attached is a copy of an article from Psychology Today which he distributed to committee members. He pointed out that the bill would not apply to minors, but only to adults.

Charles Schwep testified in opposition to the bill; a copy of his statement is attached. He stated a recent California study showed that 16% of automobile fatalities are caused not by alcohol but by marihuana.

Eric A. Voth, a medical student at the K.U. Med Center, testified in opposition to the bill. A copy of his statement is attached. He testified he is concerned about this grave medical problem, and that it is up to the legislature to take responsibility for this problem. We have a poorly informed society about the effects of marihuana. Committee discussion with him followed.

Thomas J. Gleaton, from Georgia State University in Atlanta, testified in opposition to the bill. He feels marihuana is a dangerous substance and stated he has researched to back that statement up. He stated he has figures from juvenile justice programs; he encouraged them to do their own surveys, ask the children. He stated we must educate and inform the parents. He stated he is in favor of locking them up and telling children it is a harmful substance. During committee discussion, he stated that he had not read the bill.

Continued -

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Gabriel G. Nahas, director of research from Columbia University in New York, testified in opposition to the bill. A copy of his statement is attached. He testified as to the efects of drugs on body cells. During committee discussion, he stated that he viewed himself as appearing in the role of an expert witness. He stated that he had not read the bill.

Fred Howard, Topeka Police Chief, testified that there is indeed a problem in the Topeka school system with drugs. He stated that there has been more of a problem with over doses in Topeka this year than ever before. He testified that the law should adjust its priorities. He stated a majority of those who have burglarized homes and cars are doing so in order to finance buying of marihuana. He does not want young people or adults in cars after using this drug.

A statement from the Kansas Sheriffs' Association was presented in opposition to the bill. A copy of that statement is attached.

The meeting adjourned.

These minutes were read and approved by the committee on 4-25-79.

3-15-79

JOINT COMMITTEE HEARING

of

SENATE JUDICIARY AND FEDERAL AND STATE AFFAIRS COMMITTEES

on

SENATE BILL 357

Statement by Dean T. Collins, M.D.

March 15, 1979

Mr. Chairmen, members of the Committees:

My name is Dean T. Collins. I am a licensed practicing physician in Kansas, a psychiatrist on the staff of the Menninger Foundation. I am President-Elect of the Kansas District Branch of the American Psychiatric Association and serve on committees of the Kansas Medical Society.

My testimony today relies heavily on the opinions of Dr. Herbert C. Modlin, psychiatrist, a colleague of mine on the staff of the Menninger Foundation and immediate past Chairman of the American Medical Association's Council on Mental Health, one of the components of which is the Committee on Drug Abuse.

A recent, thorough, objective review of the literature has concluded that adverse effects of cannabis (the active ingredient of the marihuana plant) on, for example, endocrine glands, body immune responses and genetic changes are just hypotheses; there is no clinical evidence that they occur.[1] One of the most authoritative investigators, Dr. Lester Grinspoon of Harvard University, has stated that the psysiological effects of the drug are remarkable in that they are so limited and so mild. Only two effects have been observed: a reddening of the tiny blood vessels in the eye and an increase in the pulse rate. Both effects disappear when the smoking is discontinued and neither is medically harmful to the user.

To date death from marihuana ingestion has not been reported; it just does not happen. In fact, several authorities say it cannot happen. To be

lethal, it would take a far greater quantity of marihuana than is humanly possible to ingest. This is a remarkable finding considering that most drugs -- for example aspirin -- produce a number of deaths annually. The last word regarding the effects of cannabis on the human body has yet to be written. If some adverse consequences are eventually verifiable, marihuana will still be a public health problem, not a criminal justice problem. At some time in the future, the Surgeon General may issue a statement that smoking marihuana is injurious to health. Present knowledge, however, does not support such a statement.[1,2]

The primary psychological effects of marihuana are a feeling of well-being and optimism, an increased perception and enjoyment of sensory experiences such as sights and sounds, and some impairment of immediate memory recall. There is no effect on remote or recent memory but if a smoker has ingested enough cannabis, his memory of events in the preceding five minutes may be faulty.

A widely publicized belief is that the psychological effect of consistent marihuana ingestion is the development of a state called anhedonia, an insensitivity to pleasure with lethargy, listlessness, and a loss of interest in activity or achievement. Recent studies have largely disproved that notion. Two excellent studies on students at New York State University and the University of California at Los Angeles[3] have demonstrated no deterioration in study habits, grades achieved or social behavior from four years of regular social use of marihuana. In retrospect, it appears now that emphasis in early reports on anhedonic or amotivational effects would have been more accurately placed instead on the likelihood that the subjects studied were smoking marihuana because they were anhedonic to begin with.

There is little to report concerning the effects of marihuana on social behavior. Presumably the two most important questions are whether marihuana

use causes the smoker to graduate to more harmful hard drugs and whether marihuana smoking is directly or indirectly related to criminal behavior. The best evidence we have answers "no" to both questions. Although it is true that most hard drug users at one time smoked marihuana, a cause and effect relationship has not been shown. Multiple drug experimentation is a common practice among drug users; and most persons now on cocaine or heroin previously used marihuana, amphetamines, LSD, and barbiturates, some of which do alter mental processes significantly and are more likely stepping stones to hard drugs than is cannabis. But marihuana is not a narcotic and is not addictive; there are no withdrawal symptoms and a physiological craving is not experienced.[2] The best estimate is that about two percent of marihuana experimenters graduate to hard drugs.[4]

It is generally agreed in the medical literature that marihuana ingestion reduces aggressiveness, increases a sense of well-being, and promotes sociability; thus it might be considered an anti-criminal drug. Of course, similar statements can be made about hard drugs such as cocaine and heroin. Criminal behavior associated with those drugs occurs between injections from the addicts' need to procure money meeting the high cost of the addiction. Since marihuana is cheap and is not addictive, a similar link with criminal behavior cannot be drawn.

Regarding long-term effects of marihuana smoking, the Jamaica study,[5] sponsored and financed by HEW, is the best field survey to date. Two groups, matched for sex, age, height and occupation, were compared. The research subjects had smoked marihuana daily for an average of 17 years; the controls had not smoked. Complete physical, physiological, biochemical, x-ray, psychological, psychiatric and sociological studies were done and no statistically significant differences between the two groups could be found on even one test item. There were a few trends. The non-smokers had a slightly higher incidence of cell chromosome abnormality, were seven pounds heavier in weight, showed a greater tendency toward

neurosis, and had a higher arrest record. This study has been replicated by a similar study in Costa Rica with almost identical results.[6]

In 1972 the National Commission on Marihuana and Drug Abuse[7] recommended the elimination of criminal penalties against the marihuana user -- a policy since endorsed by a list of organizations which includes the American Bar Association, the American Public Health Association, the National Education Association, the National Council of Churches, and the National Association for Mental Health.

The 1969 Position Statement of the American Psychiatric Association[8] called for "the cessation of disproportionate penalties for marihuana possession and use." At the June, 1978, meeting of the Executive Committee of that organization's Board of Trustees, the recommendation by the Council on Research and Development for a new position statement was approved in principle and sent to the Assembly of District Branches.[9] This new position states, "Any criminal penalties for the possession of small amounts of marihuana for personal use can now be properly described as disproportionate." The new statement acknowledges the large body of research establishing that marihuana is less harmful than alcohol or tobacco for most users and notes the lack of convincing evidence of "serious lasting physical or psychological damage caused by moderate or intermittent use in healthy adults.... For the vast majority of users, the main danger to well-being in smoking marihuana is not any property of the drug but the possibility of being convicted of a crime."

Even more definitive is the position taken by the House of Delegates of the American Medical Association. In 1972 it adopted a Position on Marihuana[10] which states in the section on the Legal Status:

> "The AMA House of Delegates does not condone the production, sale or use of marihuana. It does, however, recommend that

the personal possession of insignificant amounts of that substance be considered at most a misdemeanor with commensurate penalties applied. It also recommends its prohibition for public use; and that a plea of marihuana intoxication should not be a defense in any criminal proceedings.

"In view of the need for further research, and the possibility of some deleterious effects on the user and on society at large which could constitute a major public health problem, a policy of discouragement is strongly advocated."

At its meeting in June, 1978, an even more explicit stand of the AMA House of Delegates was adopted:

"The sale and possession of marihuana are criminal offenses under federal law. Sale is a crime under all state laws, and possession is a crime under most. A few states have eliminated prison sentences as punishment for first offense possession of small amounts for personal use, substituting a fine that does not give the offender a criminal record. Other states appear to be moving in that direction, and the President has called for a similar revision in federal penalties.

"Modification of state laws to reduce the severity of penalties for possession has been too recent to make an accurate assessment of its impact on marihuana use. Oregon was the first state to reduce penalties in late 1973. There was no apparent increase in the use the following two years, but there was a rise in 1976. What effect, if any, the statutory change had on this increase is not known.

"A criminal record is a handicap that an individual must bear for the rest of his life; stringent laws have stigmatized a considerable number of young people for their use of marihuana, many of them on the occasion of their first offense. The stress that can result from such stigmatization, as well as the anxiety that can develop from anticipation of punitive action, are of genuine medical concern.

"The trend toward modifications of marihuana possession laws to reduce the severity of the penalties, therefore, should be encouraged in the interests of both the individual and society. Penalties in the form of fines should be applied to possession of small amounts, with criminal sanctions imposed for trafficking.

"This more realistic and humane legal approach, once taken, should be enforced vigorously and equitably so as to discourage use wherever possible and to reflect the continuing conviction that marihuana is not a harmless drug."

You will no doubt hear accusations that such views represent permissiveness condone the use of marihuana and lead to the destruction of youth in our society. Quite the contrary -- the considered opinion of these professional groups remains opposed to marihuana use but advocates rational statutes governing it. The proposed changes in the Kansas law would be reasonable, equitable, supportable and enforceable. Our present laws are not.

Dean T. Collins, M.D.

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3. Brill, Norman and Christie, Richard. Marijuana use and psychosocial adaptation. Archives of General Psychiatry, 31:713-719, 1974.

4. Cohen, Sidney. In Drugs: For and Against, ed. by Hart, Harold. Hart Publishing Co., New York, 1970.

5. Medical Tribune, Oct. 17, 1973.

6. Coggins, Wilmer, American Medical News, May 17, 1976.

7. Farnsworth, Dana. Second Report of the National Commission on Marijuana and Drug Abuse; Background and Recommendations. Psychiatric Annals, 3:14-47, 1973.

8. Position Statement of Marihuana Laws, American Journal of Psychiatry, 126:10, April, 1970, p. 197.

9. APA OKs Referendum, Marijuana Position. Psychiatric News, Vol. XIII No. 14, July 21, 1978, p.1.

10. House of Delegates Proceedings, American Medical Association, 1972

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Testimony to the Senate Federal & State Affairs Commeittee
In favor of S-357

William J. Lucero
March 15, 1979

Mr. Chairman and members of the Committee:

I am Bill Lucero, Kansas Coordinator of the Unitarian Universalist Service Committee. Two years ago when a bill was introduced to the Senate containing provisions to lessen criminal penalties for possession of marijuana, Senator Crofoot informed me there was no need for such a bill since Judges were not sending offenders to jail but only imposing fines less than $100. Today, I have brought with me a statement, which I hope, Senator Crofoot, will convince you there is a need for a change in the law which S-357 provides.

The statement is from a good friend who has included a truthful and accurate account of her experiences two years ago. No names or locations are mentioned because I have promised to insure her anonymity in a public hearing. However, I will be most happy to have her meet any of you and answer any questions you might have.

"I wish to remain anonymous if possible, since my family and employers are not aware of the events which I will be describing.

"I am a 27 year old special education teacher with a Master's degree in Special Education. Two years ago I was teaching in the Kansas school system and was completing work on my Master's thesis. On Saturday, March 12, 1977 my boyfriend and I were en route to attend his sister's wedding. We took my car for the trip. Upon entering a town in central Kansas at approximately 3:00p.m. we were pulled over to the side of the road by a Deputy Sheriff. My boyfriend was driving at the time. The Deputy Sheriff informed us that we were exceeding the 30 mph speed limit. He asked us to get out of the car and informed us that he would have to search the car. After searching the inside of the car, the Deputy Sheriff stated that he was placing us both under arrest and proceded to read us our rights. Having recieved only one ticket in my life for a traffic

violation, I was flabergasted to say the least and said there must be some mistake. My friend asked why we were being arrested and the Deputy Sheriff showed us some seeds he found in the car and said he was arresting us for possession of marijuana. He radioed in for a female officer. While waiting for her to arrive, my companion was frisked, handcuffed and placed in the Deputy Sheriff's car. When the female officer arrived, I was frisked, handcuffed, and placed in the other police car. I couldn't believe what was happening!

"We were taken to the County jail and placed in separate rooms. I was questioned repeatedly by the Deputy Sheriff about the nature of my relationship to my companion, my destination, my car, the seeds he found in the car, and details surrounding the events of the day prior to the arrest. I filled out form after form. I was extremely upset and didn't think to ask to make a phone call.

"After this questioning the lady officer took me to a room where I undressed and she checked the contents of my purse. I was given a pair of coveralls to wear and of my personal possessions was allowed to keep only my socks.

"It was at the point that I was being led to a cell that I started to grasp the magnitude of the situation and realized I'd better do something. I asked if I could use the phone and was taken to an office. I called my best friend and by this time was in hysterics. She was able to calm me down by assuring me she'd get in touch with a lawyer and get me out.

"After my call I was taken to a cell. It measured approximately 6 x 8 ft., had one bunk attached to the wall, one blanket, a table & stool, a shower, and a toilet. I was totally encolsed in this cell. However, in the wall there was a hole about 4 x 8 inches where the food tray was slipped in. This opening was directly in front of the toilet. Since the coveralls I wore had to be undone and dropped to the floor when it was necessary to eliminate and I was not allowed underwear, I was completely exposed during this function. Needless to say, this state created considerable anxiety when using the toilet.

"That first evening I received my first call from my lawyer assuring me that I'd be out soon. That night sleep did not come easily. The bunk was hard. I was given one blanket which looked so filthy that I refused to have it near me even though it was quite chilly. I also started worrying about infestation of parasites and germs. The only consolation of that night was a Bible I found in the cell which I read til lights went out.

"At 6:00 the next morning (Sunday) a cheerful lady (the first and only smiling face I saw throughout my stay) brought breakfast and reading material. Sunday's activities consisted of eating two meals at 6:00 a.m. and 6:00 p.m. and reading western, romance, and science fiction books. I was allowed out of my cell once to talk to my lawyer on the phone. He told me he was trying to get me out without having to post bond. Sunday night was again cold and difficult for sleep.

"After eating breakfast Monday morning I was given a chance to take a shower but refused(I didn't want my bare feet touching the floor). Then I was taken to the room where I left my clothes and was allowed to get dressed. My companion, also in street clothes, and I were escorted to a building nearby which was the courthouse.

"I was taken before a judge, read the charges and asked for my plea. I plead not guilty as per my lawyer's instructions. My bond was set at $400 as I recall. The trial date for both my friend and myself was set for March 29, 1977. I was then escorted back to the jail, where I undressed and put on my familiar prison coveralls once again.

"Not knowing much about the legal process, I asked the woman officer as I was undressing what the bond meant and couldn't I get out now. She informed me that I needed to pay the bond, or if I didn't have that much, I could call a bondsman and pay him a portion of the bond and he'd pay the rest. I told her I'd like to call a bondsman, so she took me to the Deputy Sheriff's office.

The Deputy Sheriff said the closest bondsman was about 90 miles away and gave me the phone number. I called the bonding company and talked to a secretary to whom I explained the details of my case. She said someone would call me back as soon as possible.

"For the remainder of this Monday I read, tried to stay warm, and anxiously awaited the bondsman's call. He finally called that evening and informed me he would post the bond for both my friend and me and would be there as soon as possible.

"Sleep was difficult that night due to the anticipation of the bondsman's arrival. He finally arrived after breakfast Tuesday morning. After relaying my life story to this man and signing all the necessary forms and giving him a check for $60, the bond was paid.

"I was then taken to a room where I was photographed front and side views and fingerprinted three times. After checking all my belongings I was allowed to get dressed in my own clothes.

"At 3:00 p.m. Tuesday March 15, 1977, 72 hours after being stopped, my companion and I were free. The feeling I had that day is one that I will remember for the rest of my life and still gives me chills when I think about it.

"Due to obvious reasons, it has been very painful recounting this experience. Even though I have tried to remember and present only the facts, the emotions are all too vivid. There is no way I could adequately describe to make you understand how I felt during the entire ordeal or the scars I still carry with me as a result of it.

"In closing, I'm not trying to say I was an innocent victim - after all there <u>were</u> seeds, and they <u>were</u> in my car, and my ignorance of the law is no excuse, however I don't think that what I went through as a result of my mistake was entirely just and fair."

Senator Crofoot, although the charges against her were eventually dropped due to lack of evidence (the seeds having little marijuana content was the reason given) this person paid a price of 3 days in jail, $60 bail cost, $75 in lawyer's fees, and who knows how much emotional cost was involved.

The Unitarian Universalist Service Committee has endorsed reductions in penalties for victimless crimes. This case certainly illustrates the need to do so in Kansas. Hopefully S-357 will rectify this situation. Thank you for your attention.

William J. Lucero
Kansas Coordinator
Unitarian Universalist Service Committee

ASSOCIATED STUDENTS OF KANSAS
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To: Members of the Senate Judiciary and Federal and State Affairs Committees

Fr: Kate Hofstetter, Administrative Assistant, Associated Students of Kansas

Re: SB 357

Statistics in Kansas and nation-wide show that the usage of marijuana is on the rise. Estimates are that 40 million Americans are now smoking 12 tons of marijuana a day. An agent for the Justice Department's Drug Enforcement Agency (DEA), Ray Magno says "If you look throughout the country, marijuana is pervasive. It's all over. It's at every social level throughout the country....The flow is just so enormous that we are inundated."

In Kansas, in 1976, 70% or 2,769 of all drug violation arrests were for marijuana possession. In 1977, the number rose to 3,320 or 74%. 3 out of every 4 drug arrests were for marijuana possession in 1977. In each of these years, the number of persons arrested for marijuana possession was greater that the total number of persons arrested for the violent crimes of murder/nonnegligable manslaughter, forcible rape, and robbery in the same year. (In fact, more people were arrested in 1976 for drug violations than all of the violent crimes committed that year.)

In a legal sense, we have a generation of outlaws. Although our society has gradually accepted the personal use of marijuana. An editorial published by the Washington Post on Nov. 18, 1974, stated that "It is unwise for society to permit the creation of so large a class of presumptive criminals when their crime can be of no demonstratable harm to anyone other than themselves. If the theory behind proscribing marijuana was that its use would diminish, the policy has been a failure. Marijuana laws, are ordinarity enforced against those whose "criminality" comes to the attention of authorities by accident, thus making it a "crime" that has no victim."

Obviously, our legal system, by retaining harsh penalties has failed in its attempt to discourage the use of marijuana. There is not a law in the book that compares with marijuana for inconsistency of enforcement. The use of the criminal law is a costly and ineffective instrument for enforcing moral standards or combatting different life styles. Partial, and therefore selective law enforcement breeds contempt for law. The Prohibition era is a good example of attempted legislation on private morality.

Millions of young people resent being defined as criminals for thier use of marijuana. It is very hard for these people to understand why they can get high legally on alcohol but not marijuana. This seems illogical and unfair to them and is an envasion on their private lives and personal preferences.

Another editorial published by the Washington Post on April 19, 1975, stated: "The evidence now is that there may indeed be medically sound reasons for avoiding the use of marijuana, but none of those reasons justify the severe criminal sanctions that exist in the federal criminal code and in those of most states. The use of marijuana is so pervasive, and the arrest pattern so capricious, that fair and impartial enforcement and prosecution are impossible. Legislation to decriminalize marijuana is legislation that would create a new category of offender and a new remedy for society i.e. the 'civil offender' and the 'civil fine' as punishment. Considering the use and availability of the drug, this is the only practical political approach to the problem."

It is impossible to bust everyone who uses marijuana, the same as it is impossible to stop the supply from coming into our country. But it is a definite problem that is not going to vanish overnight and one that needs and deserves a fair and workable solution.

Just the amount of drug arrests in 1976 and 1977 alone, cost our state several millions of dollars to process. Not to mention the vast amount of time and resources that were used by the police and prosecutors to procesute these cases. This diverts our law enforcement resources away from the control of serious crimes.

So, it seems that is we continue with the present laws, we will continue to see the usage of marijuana grow and continue to spent vast amounts of state money to process these arrests. Since the present

method has proven to be ineffective, it is time to try a more realistic approach to the problem.

The National Institute of Drug Abuse (NIDA), the government's leading marijuana-research organization, concluded in its latest congressionally mandated report called "Marijuana and Health" that one of the major factors which appear to be determinative of the likelihood of smoking marijuana is age. The bracket of 18 to 25 year olds is higher that the use by either younger or older age groups. Since most young adults are generally less financially secure than their older counterparts and considering the inflation rate and the huge increases in the cost of living, a $100.00 fine is no mere slap on the hands. Also, and more important is that when a person uses a drug of any kind, he/she should be informed as to the effects that it may have on one's physical well being.

If we truly wish to teach young people about drugs, we must stop telling them lies about marijuana, and we must get rid of laws which support those lies.

The Reefer Madness proproganda of the 30's and 40's lead people to believe that marijuana was the certain cause of murder, insanity, and sexual promiscuity. This kind of exaggerated, distorted information has caused many people to be skeptical. More often they assume attitudes like: 'we can't believe anything that they tell us', 'it's just scare tactics' and therefore draw their own conclusion that marijuana is totally harmless.

Keith Stroup, former director of NORML, states that "I think our obligation is to convince people that even if marijuana is dangerour to use, it is not a criminal justice problem and those who use it should be provided with good information. We should try to convince them that it is not in their best interest to endanger their own health. But we should not confuse them with criminals.

ASK would rather see the criminal record for persons possessing marijuana abolished, but we are appreciative and pleased that this legislature has at least the chance to lower the penalties.

Under SB 357, it is still a crime to possess marijuana, in fact the only reduction in penalties are for persons possessing one ounce or less. One thing we want for sure is to stop incarcerating these individuals by arresting them, throwing them in jail, having to post

bond, and having them suffer through the agony and anxiety of waiting trail to determine their punishment. We feel that by simply collecting a fine, the state as well as the individuals who do smoke marijuana will both benefit. By collecting a fine, society levies a penalty that does discourage the use of marijuana. More important is that the money from these fines will help to provide services so that we can honestly educate people about the affects of drugs. By providing information of the effects of drugs, we are providing an effective deterrent.

Most people assume that if we lower the penalties for possession of marijuana, the usage of it will increase. To date, most statistics do not find this to be true. Col. William Albott, former director of the K.B.I. states that: "When we get penalties that are too high, we end up with people not being arrested, not being charged and not being convicted." Since this is true, if we lower the penalties and more people are arrested for the offense, it dosen't necessarily mean that more people are using marijuana, it could mean that more people are being sought after and caught.

In states that have decriminalized, there has been no substantial increase in the usage of marijuana. After Oregon had been decriminalized for one year the NIDA conducted a survey and found that less than one-half of one percent of adults in Oregon began smoking in that year. After their second year of decriminalization, there was a 1% decrease in smoking marijuana. Further, 58% of Oregonians approved of the new law and only 40% favored a return to criminal penalties. After their third year of decriminalization, 61% of the people of that state approved of the law while only 32% disapproved. So lowering penalties will not necessarily mean an increase in the usage of marijuana.

*(End of presentation.)

Nor does the use of marijuana lead to other hard drugs. There is nothing inherent (at all) in marijuana that makes its users "graduate" to dangerous drugs and herion. The National Commission on Marijuana and Drug Abuse concluded in its book titled: 'Marijuana: A Signal of Misunderstanding' that "marijuana use per se does not dictate whether other drugs will be used; nor does it determine the rate of progression, if and when it occurs, or which drug might be used." Also that report

stated that "the fact should be emphasized that the over whelming majority of users do not progress to other drugs." While it may be true that a very small portion of marijuana users do go on to other drugs, it is simply unfair and untrue to assume that all marijuana smokers will. Sb 357 is meant to deal with adult occasional users, who should not be confused with drug abusers, who also will benefit from this bill.

As to the health affects of marijuana. It is probably not healthy to bring smoke or any foreign substance into ones' lungs, and anyone who does enough of this over a long enough period of time should probably expect some adverse affects. No drug is totally harmless. Even if marijuana is harmful to ones' health, it is still inconsistent with the belief that every citizen should be free of coercion by the state unless his conduct is harmful to other individuals or society. When marijuana is bought, sold or even smoked on the streets, no one calls the police because there is no victim that has been hurt or aggrieved. The penalties for marijuana are far too severe and personally damaging tham the actual crime of smoking it. Leavenworth county District Judge, John L. White stated in response to an ASK questioneer that "I strongly favor the removing of penalties for possession. The law, by making criminals of these individuals, is committing a far worse offense than is possession. The present state of the law allows almost complete discretion to the street officer - a sad situation."

Our government does not outlaw everything that can be harmful to ones health. Alcohol, saccharine, and sodium nitrite are good examples of health risks that are legal. Whether of not marijuana is harmful to health is not the question or the answer to the current severe criminal penalties it carries.

The general public is still way too confused about marijuana. You legislators are in the best position to make an informed decision on this issue, as you are privy to information that your constituents are not. All of you have marijuana smokers in your districts and all of you probably have people who are against decriminalization in your districts. It's up to you to make a decision that is truly in their best interests. Possessing marijuana is a crime and will remain one

under SB 357, with the exception that the victims of this crime will be treated much more fairly. No one in this room is responsible for the creation of the law that put such heavy criminal penalties on marijuana users. But times, people, and laws change as evidenced by this quote from Thomas Jefferson. "I am not an advocate for frequent changes in laws and constitutions. But laws and institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with the change of circumstances, institutions must advance also to keep pace with the times. We might as well require a man to wear still the coat which fitted him when a boy as civilized society to remain ever under the regimen of their barbarous ancestors."

ask
ASSOCIATED STUDENTS OF KANSAS
1700 College
Topeka, Kansas 66621
(913) 354-1394

MEMO

To: Members of the Senate Federal and State Affairs and Judiciary Committees

Fr: Kate Hofstetter, Administrative Assistnat, ASK

Re: Unfinished testimony on Sb 357

Enclosed is a copy of the testimony that I could only partially present to your committee. As with many good things in life, the best is saved for last. This is the case with my testimony. There were two more important subjects that I wanted to cover, one is the marijuana and hard drugs controversy and the other is marijuana and health. I sincerely hope that you will read the last pages from the bottom of page four through page 6, as my report is the result of months of research on the subject.

There was really not much new information that was uncovered by today's testimony. This issue has been around for quite some time now and will remain with us. I strongly urge you to not let this bill sit in committee all year. The majority of the students in Kansas have chosen this issue as a priority for three years now. We do want this issue to be resolved, therefore I urge you to take action.

TESTIMONY on S.B. 357

From State Representative Michael G. Glover

March 15, 1979

First let me thank you Senators for attending the hearing today. I hope that you all have found the time spent listening worthwhile and the different viewpoints shared today informative.

To summarize the information presented, I would first like to review the four standard purposes for establishing or maintaining laws in the State's Criminal Code: They are:

(1.) To protect society from the actions of others which could endanger their lives or personal property;

(2.) To protect an individual from actions which could endanger his or her own life;

(3.) To deter certain actions through the fear of resulting punishment; and

(4.) To provide punishment or retribution on behalf of society against offenders.

Let us take these four purposes now and examine their relationship to our present law regarding simple possession of marijuana, which is classified as a Class A misdemeanor ($2500 fine & one year in jail) for the first conviction, and a Class D felony ($5000 fine & 10 years in prison) for the second conviction.

The first (1.) and second (2.) purposes can be reviewed together. Can the use of marijuana endanger to any extent either a user's life or the lives of non-users?

Testimonies from medical doctors and psychiatrists across the country almost unanimously conclude that NO...marijuana use has NOT been proven physically or psychologically addictive or dangerous for its users. (See "Psychology Today" research chart.) On a comparative basis, most research indicates that the use of other "legal" substances such as alcohol or ciarettes is far more harmful to one's health. Five hundred deaths per year occur from a substance found in virtually every household...aspirin...and yet, not one person has ever died from using marijuana!

The American Medical Association has endorsed for several years the removal of criminal penalties for marijuana possession. Even if future scietific research discovers some harmful effects resulting from prolonged or regular use of marijuana, we re-iterate, the criminal justice system cannot effectively deal with what would be a "medical" problem.

The other aspect to be considered with the first and second purposes regards the legal protection of property. Can the use of marijuana endanger either the user's or others' propertY? In other words, does marijuana use incite any criminal behavior? Again, all testimony from the experts indicates that marijuana use reduces aggressive behavior and infact, can encourage sociability and anti-crime actions.

The only argument which can be made on this point involves drivers of vehicles whose reflexes may be slower while smoking marijuana as with drivers intoxicated by alcohol. S.B.357 retains the criminal penalties of our present law for possession of any marijuana in a car not locked up either in the glove compartment or trunk. We want to lower the penalties for possession only on private property, not in public areas or within cars.

We can conclude then that really the first and second purposes do not apply as valid considerations for retaining our present criminal sanctions for possession of less than an ounce of marijuana.

Next then, the third (3.) purpose asks the question, "can we justify the present law as an effective deterent for those desiring to use or try marijuana?" Again, all statistics in the United States, and Kansas as well, indicate that the present law serves no such purpose. The use of marijuana has increased during the past decade, but more notably, its use has permeated all cross-sections and age groups of our society, especially among otherwise respected and law-abiding citizens. Obviously, this purpose is not relevent.

	% of U.S. Tryers	% of U.S. Users	% of KS Tryers	% of KS Users
1970				
1974				
1978				

What may be a more valid concern is how our youth, our teenagers, will perceive a change in the law for simple possession of marijuana. Many people fear that our lessening of these penalties will be read by young people as a "stamp of approval" for use of this drug. Let me remind you that this bill deals only with possession by adults, not minors. The present juvenile code calling for more severe penalties will remain intact. Just as we recognize that alcohol and cigarettes can be handled only by adults, so too should we emphasize the use of marijuana by minors remains totally prohibited. Alcoholism among teenagers is recognized as a much greater problem today than marijuana useage, yet we do not react sensationally to this by tightening our adult liquor laws. We recognize there, just as we should with this issue, that such problems, however unfortunate, cannot best be handled by our courts. These kids need help from parents, guardians, counselors and other professionals. S.B. 357 will channel all fines collected into drug abuse and education programs...the kind of real help these troubled teenagers need.

I would like to raise another point in questionning the effects this bill might have with our juveniles. Most of an individual's ideas and philosophies are formulated during these growing years and remain with them throughout their lives. The present law is seen by many as being "hypocritical" and many young people as a result develop a general disrespect for laws. They cannot be expected to distinguish the gray-areas between rationale, intent and enforcement of every law.

In most cases, they see the present law seldom enforced, and draw the simple conclusion that maybe many or all of our laws are equally irrational or unenforceable.

We as lawmakers and their parents must be responsible for providing the proper perspective and respect for laws. It is time for us to say, ..."Yes, that although we do not condone or encourage the use of marijuana, we recognize that it is not as dangerous as we once believed. We therefore are changing the law to reflect the attitude of the public and our courts on this

issue. This type of honoesty helps teenagers develop respect for not only our laws, but also the lawmakers and law enforcers as well.

In any event, the present severity of the law has not deterred any use and more often makes a mockery of the judicial system. In Oregon and Maine where the penalties were changed from criminal to civil several years ago, statistics show only a negligible increase in marijuana use, further proving the severity of punishment does not prevent use of this drug. (See Maine/Oregon studies.)

The final purpose for maintaining our present law, (4.) calls for punishment or retribution on society's behalf. The young lady whose testimony was presented by Mr. Lucero earlier today certainly indicates that our present law IS infact cruelly enforced and does provide punishment and/or retribution. Should this same lady have had a half ounce of marijuana leaves instead of seeds, her ordeal would have been considerably longer, more painful and scarred by having to retain a criminal record for the rest of her life...something which may have prevented her from attaining her occupation or success in life.

Does our society really want marijuana users to be punished as criminals? If you survey your constituents on whether they support marijuana "legalization" or "decriminalization" a slight majority may say no in Kansas. The national percentage in favor of decriminalization is 53%. But if you ask that same constituent after a son or daughter or even they have been arrested for simple possession and their answer will undoubtedly change. Most of the general public simply just don't understand the difference in those words, legalization and decriminalization. What we have with S.B.357 is not really even a pure decrminalization bill. It simply lowers the penalties for private possession to a Class D misdemeanor with a fine of up to $100. In many counties, our courts are handling simple possession cases in this manner already. In some counties or cases, however, they are enforcing the present law to the full extent or even worse, enforcing it selectively. Does society really have any purpose for retaining the present

law calling for punishment of a year in jail? I hope Senators that your conclusion is NO...there is no valid purpose served by retaining our present law and therefore vote in favor of S.B.357.

In conclusion, I know that while most of you can agree personally with S.B.357, your inherent fear in voting for this bill rests with the media and constituents back home. We have attempted to keep this issue as low-key this year as possible. THe media does not always emphasize the information and facts as much as the emotions and controversies. I will be happy upon request to provide any of you with written statements which explain your vote and can be used by your home town newspapers.

I would also suggest in giving this bill your intelligent consideration that you speak with House members who voted in favor of H.B.2313, a similar bill which passed the House in 1977.

If any of you still have any questions in your mind, I encourage you now to ask them while we are fortunate to have experts in related areas with us today. I thank you for your time.

POSITION STATEMENT ON MARIHUANA LAWS

(This statement is not to be interpreted as support for irresponsible or abusive use of any mind-altering substances.)

Marihuana is now the third most popular recreational drug in the United States, after tobacco and alcohol. A large body of modern research has now established that it is less harmful then either alcohol or tobacco for most users. There is no convincing evidence of serious lasting physical or psychological damage caused by moderate or intermittent use in healthy adults. Yet there have been more than 400,000 marihuana arrests annually for the last four years, at an estimated administrative cost of 600 million dollars a year and an immeasurable cost in damage to the lives of many young people. For the vast majority of users the main danger to well-being in smoking marihuana is not any property of the drug but the possibility of being convicted of a crime. The present situation also promotes disrespect for the law and has a destructive effect on efforts to present the dangers of drugs honestly to the public.

In 1972 the National Marihuana Commission concluded that "neither the marihuana user nor the drug itself can be said to constitute a danger to the public safety." It recommended the elimination of criminal penalties against the user. This policy, known as decriminalization, has been endorsed by a lengthening list of organizations, including the American Bar Association, the American Public Health Association, the National Education Association, the National Council of Churches the National Association for Mental Health, and the governing board of the American Medical Association. President Carter supp decriminalization at the federal level, and ten states have enacted it into law without producing any harmful effects or even any increase in marihuana use. The 1969 Position Statement of the American Psychiatric Association calls for "the cessation of disproportionate penalties for marihuana possession and use." Any criminal penalty for the possession of small amounts of marihuana for personal use can now be properly described as disproportionate, and decriminalization would fulfill the intent of the phrase used in 1969 as it has come to be interpreted by a large section of informed opinion. The Board of Trustees of the American Psychiatric Association therefore goes on record as supporting a policy of decriminaliza

FROM: The Council on Research and Development
Approved by: The Executive Committee of the Board of Trustees and
Referred to: The Assembly of District Branches of the American Psychiatric Associat
October, 1978.

Position Statement on Marihuana Laws

This statement was approved by the Board of Trustees of the American Psychiatric Association on December 12-13, 1969, upon recommendation of the Assembly of District Branches.

Dr. Stanley F. Yolles, Director of the National Institute of Mental Health, and Dr. Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs, Department of Health, Education, and Welfare, have recently called for much-needed changes in marihuana laws—changes that may well prevent a national situation akin to the debacle of the alcohol prohibition era.

The youth of this nation, recognizing blatant inaccuracies in many past official statements on marihuana, consequently disbelieved and ignored valid warnings against the use of clearly dangerous drugs.

The Board of Trustees of the American Psychiatric Association therefore goes on record as commending and supporting the stand of Drs. Yolles and Egeberg calling for, at all government levels: 1) the increased scientific study of marihuana and its effects; 2) the classification of marihuana as a "dangerous" drug rather than a "narcotic"; and 3) the cessation of disproportionate penalties for marihuana possession and use.

STATE OF MAINE
DEPARTMENT OF HUMAN SERVICES
OFFICE OF ALCOHOLISM AND DRUG ABUSE PREVENTION

DAVID E. SMITH
COMMISSIONER

ADDRESS REPLY TO:
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JANUARY 5, 1979

AN EVALUATION OF THE DECRIMINALIZATION OF MARIJUANA IN MAINE — 1978

..."It is especially important that a complete revision of criminal laws..., seek to distinguish conduct that is truly anti-social and the proper subject of criminal penalties from that which may be looked upon as undesirable, but nonetheless not a fit object for the moral condemnation which a criminal conviction should represent...."

With this comment the Criminal Law Revision Commission recommended, and the Maine Legislature enacted, § 1107 of the Maine Criminal Code, thus making Maine the third State in the nation to decriminalize the personal possession of small amounts of marijuana. Although the revised Criminal Code was signed into law in June of 1975, it did not become effective until May 1, 1976. Approximately two years later, in July and August of 1978, the Maine Office of Alcoholism and Drug Abuse Prevention undertook a state-wide study to determine what effect, if any, the decriminalization of marijuana has had on the people of Maine.

The Decriminalization Survey performs three major functions. First, the survey reveals how many Mainers have ever used and are currently using marijuana and whether the change in the law has caused an increase or decrease in marijuana use. Second, for those persons who have never used marijuana, the survey discloses the reasons - such as health dangers, fear of arrest, etc. - why people choose not to use marijuana. Third, the survey reports public opinion on two issues - whether the decriminalization of marijuana has had a beneficial or harmful effect on the people of Maine, and whether the Legislature should keep the law the way it is, reimpose criminal penalties, or legalize possession and/or sale.

The Survey population consisted of 831 adults and 1,036 high school students. The adults were randomly selected from voting lists in 25 towns and cities to accurately represent a geographically balanced sample of Maine's population. High school students were randomly selected from 10 high schools, again with the response sample representative of the general population distribution.

Although ten other states have enacted some form of marijuana decriminalization, only Oregon and California have made public the results of other state-wide evaluations. Portions of the 1977 Oregon Survey, commissioned by the Drug Abuse Council, Inc., are included in this report for comparison purposes.

PART I — MARIJUANA USE

- Almost 240,000 Mainers aged 13 and up have tried marijuana and more than 136,000 persons over 13 years of age use marijuana on a regular basis. (Regular use is defined as once or more per month.)

- Among all adults living in Maine, 26.6% (194,000 persons) have tried marijuana and 14% (102,000 persons) use it regularly. (Adult means all persons aged 18 and up.) *For the United States as a whole, 24.5% of all adults report having tried marijuana and 8.2% use it regularly. Comparative figures for the Northeast (the New England states plus New York, New Jersey, and Pennsylvania) are higher, with 29% having tried marijuana and 11% using it regularly.*[1] Among public high school students in Maine, 61% (45,800 persons) have tried marijuana and 45.5% (34,155 persons) use it regularly.

- Although persons who live in smaller towns or who haven't been to college are somewhat less likely to have tried marijuana than their larger city and college graduate counterparts, by far the most significant factor influencing marijuana use is a person's age. Only 1% of Mainers over 45 have tried marijuana and less than 1% of this age group uses it regularly. On the other hand, 70% of all persons aged 18 to 30 have tried marijuana and 42% of this age group use it regularly, while almost half (45.5%) of all public high school students in Maine use marijuana at least once a month.

- More adult men than women have tried marijuana (32% versus 28%). There are also more male than female regular users (17% versus 13%). *The Maine findings are in agreement with national survey results that show more males than females having tried marijuana (30% versus 19%) and more male than female regular users (11% versus 6%).*[1]

- The survey revealed that 21,250 adults (3% of all adults in Maine) use marijuana on a daily basis while 73,600 adults (10% of all adults) use it at least once a week.

- Among public high school students, there are four times as many daily users of marijuana than there are daily users of alcohol; 16% of all high school students (12,000 students) reported daily use of marijuana while 4% (3,000 students) indicated that they use alcohol on a daily basis. There are slightly fewer weekly users of marijuana (31% or 23,300 students) than there are weekly student users of alcohol (33% or 24,800 students).

- In Maine, there are more persons under 30 (both adults and high school students) who regularly use marijuana than who regularly use tobacco.

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[1] National Survey on Drug Abuse: 1977, US Dept. of Health, Education & Welfare

TABLE 1

MARIJUANA USE BY ADULTS AND HIGH SCHOOL STUDENTS

	% of population who have ever used	% of population who are regular users
All High School Students	61%	45.5%
All Adults	26.6 [29][1]	14 [11][1]
Age 13-15	56	42
16-17	65	48
18-24	74	46
25-30	63	35
31-44	23	10
45-64	2	1
65+	0	0

- Among all adult users of marijuana, almost half (48%) report that they have decreased their marijuana use since the decriminalization law took effect, while 13% have increased their use, and 39% report little or no change. Many more high school students than adults have increased their use in the last two years - 38% increased, 26% decreased, and 36% reported little or no change.

- Despite claims to the contrary, the change from criminal to civil penalties has not caused a tremendous increase in marijuana use by either high school students or adults. Less than 1% of all adults, and 3.1% of all high school students reported that their marijuana use increased as a result of the decriminalization law. Expressed as a percentage of regular users, 3.5% of adult regular users and 7% of all high school regular users reported an increase in use directly attributable to the change in the law.

- Once again, age is the predominant factor in distinguishing increasers from decreasers. Relatively few persons over 25 indicated an increase in use and virtually no one over 25 reported that their increase in use was attributable to the change in the law.

[1] Figures in brackets are for the Northeast Region of the U.S. (New England, New York, New Jersey, Penn.) from the National Survey on Drug Abuse: 1977, US Department of HEW

TABLE 2

CHANGES IN MARIJUANA USE SINCE JUNE/JULY, 1976
AMONG MARIJUANA USERS

	Increase	Decrease	Little or no change
All High School Students	38%	26%	36%
All Adults	13 (14)[2]	48 (40)[2]	39 (46)[2]
Age 13-15	40	23	37
16-17	38	28	34
18-24	22	51	27
25-30	6	49	45
31-44	7	48	45
45-64	--	40	60
65+	--	--	--

TABLE 3

INCREASE IN MARIJUANA USE
AS A RESULT OF THE DECRIMINALIZATION LAW

	% of Regular Users who have Increased Use as a Result of Decriminalization
All High School Students	7% (2,390 high school students)
All Adults	3.5 (6,900 adults)
Age 13-15	5
16-17	9
18-24	7
25-30	0
31-44	0
45-64	0
65+	-

[2] 1977 Marijuana Survey - State of Oregon, Drug Abuse Council, Inc.

PART II — REASONS FOR NOT USING MARIJUANA

- By a substantial margin, the one most important reason for not using marijuana most frequently given by adults (82% of non-users) and high school students (80% of non-users) was that they were "not interested" and that they "didn't need it."

- Trailing far behind, the second reason most frequently given by adults (9%) and high school students (11%) for not using marijuana was that, "it might be dangerous to my health."

- Despite the belief by many law enforcement officials that the law does discourage marijuana use, only two high school students out of a survey population of 1,036 and 4% of the adults surveyed indicated that "fear of arrest or legal prosecution" was the primary reason why they chose not to use marijuana. Furthermore, most (82%) of the persons who did indicate "fear of arrest" as a deterrent were over 65, while few, if any, of the high use age groups (high school students and adults under 30) were deterred from using marijuana by the "fear of arrest or legal prosecution."

TABLE 4

REASONS FOR NOT USING MARIJUANA

	Not available	Not Interested	Fear of Arrest or Prosecution	Health Dangers	Other
All High School Students	4%	80%	less than 1%	11%	4%
All Adults	1 (-)[2]	82 (68)[2]	4 (6)[2]	9 (9)[2]	3 (17)[2]
Age 13-15	7	77	1	13	2
16-17	1	84	--	9	5
18-24	--	90	--	10	--
25-30	--	83	5	7	5
31-44	--	80	2	14	3
45-64	2	81	--	11	5
65+	--	84	13	2	--

[2] 1977 Marijuana Survey - State of Oregon, Drug Abuse Council, Inc.

PART III — PUBLIC ATTITUDES REGARDING MARIJUANA LAW

- When asked what effect the two year old decriminalization law has had on the people of Maine, most adults stated either that they didn't know (40%) or that the law has had "little or no effect" (30%). An almost equal percentage of adults feel that decriminalization has had a "beneficial effect" (16%) as opposed to a "harmful effect" (14%).

- A greater percentage of high school students feel the law has been beneficial (20%) as opposed to harmful (13%), but the clear majority (68%) stated that decriminalization of marijuana has had "little or no effect" on the people of Maine.

TABLE 5

WHAT EFFECT HAS THE DECRIMINALIZATION OF MARIJUANA HAD ON THE PEOPLE OF MAINE?

	Beneficial	Harmful	Little or No Effect	Don't Know
All High School Students	20%	12%	68%	
All Adults	16 (21)[2]	14 (20)[2]	30 (41)[2]	40 (18)[2]
Age 13-15	19	13	68	--
16-17	20	12	68	--
18-24	37	9	24	30
25-30	31	10	31	28
31-44	12	17	38	33
45-64	8	14	32	46
65+	2	18	23	57

[2] 1977 Marijuana Survey - State of Oregon, Drug Abuse Council, Inc.

- When questioned about alternative methods of controlling marijuana, more than two-thirds of all adults in Maine stated that they would either like to legalize the sale or possession of marijuana (38%), or keep the present law (30%). The remaining one-third of adults (32%) prefer a return to criminal penalties for possession of marijuana. As might be expected, most high school students are in favor of legalizing sale or possession (63%) or keeping the present law (19%). Concurrently, a smaller percentage of high school students (18%) prefer a return to criminal penalties for possession of marijuana.

- The legalization versus return to criminal penalties split in opinion is most pronounced when young adults are compared with older Mainers. Exactly two-thirds (66%) of all adults under 30 would like to legalize either the sale or possession of marijuana while only 22% of all persons over 45 favor legalization. On the other hand, a return to criminal penalties is supported by 40% of all persons over 45 while 16% of adults under 30 support the recriminalization of marijuana.

TABLE 6

ATTITUDES TOWARDS LEGAL ALTERNATIVES

	Legalize Possession and Sale	Legalize Possession	Civil Penalties - as is	Criminal Penalties
All High School Students	31%	32%	19%	18%
All Adults	22 (12)[2]	16 (17)[2]	30 (27)[2]	32 (35)[2]
Age 13-15	28	31	20	20
16-17	32	33	19	16
18-24	41	26	16	17
25-30	42	23	21	14
31-44	18	15	30	37
45-64	14	15	31	40
65+	6	5	50	39

[2] 1977 Marijuana Survey - State of Oregon, Drug Abuse Council, Inc.

1 9 7 6

DRUG VIOLATION ARRESTS

TYPE OF OFFENSE	NUMBER OF ARRESTS	PERCENT O GRAND TOTA
Sale/Manufacturing:		
Opium, Cocaine, Morphine, Heroin, Codeine	88	2.0
Marijuana	619	16.0
Synthetic Narcotics	48	1.0
Other Dangerous Drugs	58	1.0
SUB-TOTAL	813	20.0
Possession:		
Opium, Cocaine, Morphine, Heroin, Codeine	80	2.0
Marijuana	2769	70.0
Synthetic Narcotics	37	1.0
Other Dangerous Drugs	286	7.0
SUB-TOTAL	3172	80.0
GRAND TOTAL	3985	100.0

pium or Cocaine: Opium or Cocaine and their derivatives (morphine, heroine, codeine).

Synthetic Narcotics: Manufactured narcotics which can cause true drug addiction.

Other Dangerous Non-Narcotic Drugs: Barbituates, benzedrine.

1 9 7 6

VIOLENT CRIME ARRESTS

TYPE OF OFFENSE	NUMBER OF ARRESTS	PERCENT OF GRAND TOTA
Murder/Nonnegligent Manslaughter	86	4.0
Forcible Rape	165	8.0
Robbery	578	27.0
Aggravated Assaults	1288	61.0
GRAND TOTAL	2117	100.0

1977 DRUG VIOLATION ARRESTS

TYPE OF OFFENSE	NUMBER OF ARRESTS	PERCENT OF GRAND TOTAL
SALE/MANUFACTURE:		
Narcotics	110	2.5
Marijuana	491	11.0
Synthetic Narcotics	62	1.4
Other Dangerous Drugs	57	1.3
TOTAL	720	16.2
POSSESSION:		
Narcotics	113	2.5
Marijuana	3,320	74.3
Synthetic Narcotics	75	1.7
Other Dangerous Drugs	241	5.4
TOTAL	3,749	83.9
GRAND TOTAL:	4,469	100.1

1977 VIOLENT CRIME ARRESTS

TYPE OF OFFENSE	NUMBER OF ARRESTS	PERCENT OF GRAND TOTAL
Murder/Nonnegligent manslaughter	152	2.1
Forcible Rape	504	7.1
Robbery	2,330	32.7
Aggravated Assault	4,143	58.1
GRAND TOTAL:	7,129	100.0

House of Delegates Proceedings, American Medical Association, 1972

J. MARIHUANA - 1972
(Reference Committee E, page 322)

HOUSE ACTION: ADOPTED AS FOLLOWS:

Introduction

In view of the dramatic rise in marihuana use in the United States in recent years, the Council on Mental Health and the Committee on Alcoholism and Drug Dependence of the American Medical Association have continued to review evidence obtained from scientific research into the drug. The AMA's policy statement on marihuana was issued in December 1969, with the instructions that study and evaluation be continued.

Because of heightened public interest in marihuana and the amount of research conducted since that time, the Council and Committee are recommending the adoption of this statement as reflective of the most recent scientific findings. Such findings have been reported in three documents: (1) The Use of Cannabis, Report of a WHO Scientific Group, 1971; (2) Marihuana and Health, Second Annual Report to Congress from the Secretary of Health, Education, and Welfare, 1972; and (3) Marihuana: A Signal of Misunderstanding, First Report of the National Commission on Marihuana and Drug Abuse, 1972.

Marihuana, as used in the United States, is derived usually from the leaves and flowering tops of the female cannabis plant. The plant develops a resinous material which incorporates the active pharmacological principles. This resin can be extracted from the dried tops of the plant, leaves and flowers. It may be pulverized and smoked with or without admixture with tobacco. Smoking is the typical method of administration in the United States, although oral ingestion is not uncommon.

The principal active ingredients of cannabis resin are cannabinols, especially tetrahydrocannabinols (THC) which exist in several isomeric forms. The precise mechanism by which these ingredients induce effects of the drug in man is still not known.

Scientific Findings on Marihuana

Cannabis, as a psychotropic substance, acts on the central nervous syste As with all psychoactive drugs, it effects are a function of the complex inter play among the physiological and psychological status of the drug taker, the amount and potency of the drug substance, and the frequency and mode of admin istration. The lower the dose taken, the less intense and significant the phy ical and psychological effects will be. As the dose increases, so will these effects. The effects of smoking hashish, a highly potent form of cannabis, are markedly different from the effects of marihuana as currently used in the United States.

Important too are the setting in which the drug is taken, the influence of others present and the expectation of drug effects by the user. While thes factors play a role in any psychoactive substance use, they are especially pe tinent to the way marihuana is used in the United States at the present time. In comparison with other psychoactive substances, when dose and frequency ar constant, there is an apparent wider variation of effects from individual to individual, or even in the same individual at different times.

Unless otherwise indicated, the term "marihuana" in this report refers the comparatively low-dose content of the active chemical substances taken b the preponderance of users in the United States in 1972.

Marihuana is currently used primarily as a recreational drug. The use marihuana is a pleasurable experience for a majority of users.

Somatic effects include conjunctival injection, increased pulse rate an decreased intraocular pressure. Immediate cognitive-psychomotor effects ar dose-related, familiar tasks being affected less than unfamiliar ones, and

experienced users showing less decrement in performance than "naive" or inexperienced users. There is temporary episodic impairment of short-term memory.

Although use of marihuana is generally pleasurable, exceptions do occur. The most frequent exception is a transient anxiety reaction often related to conflicting attitudes toward marihuana of the inexperienced user. In cases of extremely high dosages, or occasionally with a "novice" at low dosage, an acute psychotoxic reaction may develop which is also transient in nature, usually disappearing when the drug has been eliminated from the body. It is uncertain how much of this phenomenon is caused by the marihuana and how much is the result of preexisting psychopathology. The most severe acute psychological reaction is a toxic psychosis. Evidence favors the theory that when such a psychosis develops, it represents an aggravation of a previously existing mental disturbance.

It is often stated that chronic use results in an "amotivational syndrome." In the United States, there has been some opportunity to observe and study possible long-term changes in mental and social functioning which might result from marihuana use. The major evidence for these observations at this time is derived from clinical reports. Controlled large scale studies have not been done.

An Association has been established between the heavy long-term use of cannabis and social deterioration in certain other countries. Although a causal relationship has not been clearly proved, this association leads to some apprehension concerning a potential hazard of large scale long-term heavy use of marihuana in the United States.

Physical dependence such as seen with the barbiturates, opiate derivatives and alcohol does not exist with marihuana; there are some reports of mild withdrawal symptoms, but they have not been differentiated from possible placebo effects. Psychological dependence does occur and varies with the extent of use. Occasional users are unlikely to manifest psychological dependence, but heavy use reflects strong psychological dependence.

Chronic physical effects are difficult to assess because of the likelihood of multiple drug use and uncontrolled variables in much of the research. Some evidence does indicate that with very heavy use there is increased likelihood of organ damage. Pulmonary function has been shown to be impaired with chronic heavy smoking.

Although not conclusive, there is evidence that impairment of motor vehicle operation can result from marihuana use. The probability and nature of such impairment should be the subject for additional research.

No reliable data exist to date showing chromosomal or genetic damage from marihuana use. The risk to the fetus is still uncertain.

There is no evidence supporting the idea that marihuana leads to violence, aggressive behavior, or crime. Another idea commonly held is that marihuana use causes progression to other dependence-producing drugs. A statistical association between marihuana use and the use of other drugs has been shown. The nature of this relationship remains to be clarified.

(Board of Trustees - J)

The Legal Status of Marihuana

The AMA House of Delegates does not condone the production, sale or us of marihuana. It does, however, recommend that the personal possession of insignificant amounts of that substance be considered at most a misdemeanor with commensurate penalties applied. It also recommends its prohibition fo public use; and that a plea of marihuana intoxication should not be a defen in any criminal proceedings.

In view of the need for further research, and the possibility of some leterious effects on the user and on society at large which could constitut major public health problem, a policy of discouragement is strongly advocat

Research Needs

The Council and Committee strongly urge that there be increased resea on marihuana. In the course of current research, possibilities of its use a therapeutic agent in the treatment of terminal disease, glaucoma, and hype tension have been proposed. Such therapeutic possibilities certainly dese further exploration. In addition, much more research is needed into the pha macology of the drug; its interactions with other drugs; large-scale epider ological studies of long-term effects of chronic heavy usage; marihuana us and personal and public safety; and methods of treatment for the heavy use

Education Needs

The Council and Committee also urge that educational efforts be vastl expanded to all segments of the population, including members of the medic and legal professions, and law-enforcement agencies. Changes recommended the basis of scientific evidence would mandate that the American public sho be better informed on the subject of marihuana.

House of Delegates Proceedings, American Medical Association, 1978

D. HEALTH ASPECTS OF MARIHUANA USE
(Reference Committee E, page 279)

HOUSE ACTION: ADOPTED AS FOLLOWS:

In June 1972, the AMA House of Delegates adopted a statement on marihuana that was consistent with research findings and patterns of usage prevailing at that time. The House found little conclusive evidence of long-term adverse consequences of marihuana use in the United States, but it did advocate "a policy of discouragement" because of "the possibility of some deleterious effects on the user and on society at large which could constitute a major public health problem."

In the intervening years, much new research has been reported in the scientific literature. For the most part the reports leave many of the areas of concern still in doubt. Some of them, however, present convincing evidence of health hazards to certain persons.

The following statement was prepared by the Council on Scientific Affairs. It recommends the discouragement of marihuana use, especially by persons vulnerable to the drug's effects and in high-risk situations; the determination of the consequences of long-term marihuana use through concentrated research; and the modification of state laws to reduce the severity of penalties for possession of marihuana for personal use.

The Council recommends the adoption of this statement by the House of Delegates.

INTRODUCTION

There has been a detectable change in the nature and extent of marihuana usage during the past five years. Whereas in 1972 the typical marihuana available in this country was comparatively weak, with the content of active ingredients about 1 to 2 percent, indications now are that "higher grades" of the drug, with potencies ranging from 3 to 5 percent, and even 10 percent in the case of hashish, are being used more extensively.

And whereas in 1972 use tended to be largely intermittent and centered principally in the late teenage and young adult population, the pattern now appears to be shifting to more regular intake by this age group; moreover, use seems to be expanding among both adolescents and persons over 25.

Finally, the practice of combining the use of marihuana and alcoholic beverages is becoming more common, and as such poses a hazard of more widespread and severe acute reactions resulting from their combined effects.

Nevertheless, neither potency of the drug, regularity of use, or combined use with alcohol or other substances is an absolute factor. As with other psychoactive drugs, size of dose and frequency of ingestion are variables interacting with the route of administration, the setting in which the drug is taken, and, most important of all, the complex physiological and psychological makeup of the user.

For healthy users intermittent ingestion of even relatively potent marihuana rarely constitutes a health or social hazard, while regular ingestion or multiple drug use might well do so.

For certain high risk persons, however, the hazards would be greater in any case. Although such persons do not constitute the majority of users, the personal and societal implications of their involvement, given current usage patterns, are of a magnitude to warrant concern.

IMPLICATIONS FOR THE USER

Any form of drug abuse can have more serious consequences for those individuals who are especially vulnerable.

Children and adolescents are one such group. The effects of drugs on the young, who are in early stages of both physiological and psychological development, can be more pronounced and persistent than effects on more mature persons.

Adverse psychiatric sequelae of drug abuse will be observed more frequently among persons who are emotionally unstable and among those who already have problems of mental illness.

Likewise, persons with physical illnesses or diseases may suffer complications through the non-medical use of certain drugs.

Marihuana is potentially damaging to health in a variety of ways, but it can be especially harmful when used by a person who is immature, unstable, or already ill.

Pulmonary Effects

Recent research has elucidated measurable effects of both acute and chronic marihuana administration on pulmonary functioning.

Although acute administration has been found to increase bronchodilation and reduce bronchospasms induced experimentally in asthma sufferers, chronic administration has been shown to impair lung function in otherwise healthy subjects; one study indicates that regular smoking of marihuana may result in restrictive lung disease, such as interstitial fibrosis.

Cardiac Complications

Marihuana apparently does not produce significant ECG changes in young healthy adults. The fact, however, that tachycardia is a commonly-observed consequence of marihuana smoking, coupled with the finding that smoking just one marihuana cigarette can significantly reduce exercise tolerance in heart patients with the anginal syndrome, would mitigate against marihuana use by persons who have cardiac disorders.

Psychopathology

Psychiatric disturbance of various types and degrees have been observed at times to be associated with marihuana use. Usually symptoms such as hallucinations, disorientation and feelings of depersonalization are dose-related and short-lived. Panic reactions, in addition to being dose-related, appear to occur more often among users who are relatively young and inexperienced. Flashbacks — re-experiencing the drug's intoxicating effects at a later date without further use — also have been reported by both regular and infrequent users. Severe long-term illness, such as the cannabis psychosis that some observers have reported seeing in other countries where intake is heavier, has not been confirmed in the United States, although this possibility should be kept in mind if use and potency continue to increase.

The etiology of any marihuana-related psychopathology, however, is by no means clearcut. Some observers believe that the drug acts to trigger pre-existing or latent mental illness, or that emotional instability leads to marihuana use. Others believe the drug's toxic effects directly cause psychiatric disorders. Each of these explanations probably is applicable to various individuals at certain times and in different settings. Whatever the relationship may be, research and clinical experience have shown that younger users probably are more at risk psychiatrically, and that persons already diagnosed as mentally ill can undergo relapse or exacerbation of their conditions as a consequence of marihuana use.

Brain Damage

Evidence of cerebral atrophy in young males who were heavy users of marihuana, reported by British investigators in 1971, has not been confirmed by subsequent research in this country. One study selected 19 young men with histories of chronic heavy smoking and monitored them during 21 days of additional heavy use. No cerebral abnormalities were detected by tomographic scans either at baseline or subsequently.

Another recent experiment found that acute administration of marihuana produced temporary dose-related EEG changes, with larger doses necessary to elicit such changes in regular users than in occasional users. This would suggest that tolerance develops to effects on brain function. No objective evidence of permanent brain dysfunction, as measured by EEG and other tests, was seen in this study.

These and other negative findings do not rule out the possibility of irreversible cerebral damage. One impediment to research is the insensitivity of existing tests for detecting slight impairment of the brain and central nervous system. Moreover, it is likely that marihuana-induced brain damage, if it exists, is not prevalent enough to be discerned in small numbers of subjects and may require an investigation of a large sample of users. That also may be true in the case of other health hazards, such as interference with the body's immune system and endocrine functioning.

Effects on Immune Response System

The possibility that marihuana might lower resistance to disease was raised in 1974 by a report that cellular-mediated immunity, as measured in white blood cell culture, was inhibited in chronic marihuana smokers. This finding was replicated, to a degree, by a later study of stoned smokers but not by an investigation in a hospital setting using marihuana of a known quality. The reduction in lymphocytes involved in the immune process may be related to certain factors in addition to marihuana use, including the use of other drugs.

The issue, however, is far from being settled. Immuneglobulin G was found to be reduced in marihuana users who were tested in a hospital ward, thus providing further evidence for decreased immunity. At least one animal study also has shown a definite correlation between marihuana smoking and impaired immune response: doses that were equivalent to heavy use in humans suppressed circulating antibodies in rats.

Endocrine Functioning

The chief endocrinological effect of marihuana use appears to be a drop in testosterone levels in the blood. The unresolved questions are again how extensive and how permanent this effect is likely to be, and what importance it has for the individual and society.

Since the effect first was detected and reported in 1974, other investigations have presented both corroborative and contradictory evidence. The contradictory reports stem from studies of relatively short duration or of users of small or moderate amounts of the drug. One corroborative study, involving heavy intake by regular users over a nine-week period, showed marked decreases in plasma luteinizing hormones. Another found a decrease in sperm count in marihuana users. Whether such changes persist, with or without continued use, is still to be determined. Their impact on fertility also needs to be studied. Special attention should be given to evaluating this particular effect on boys who are pre-pubescent or in the early stages of sexual maturation.

IMPLICATIONS FOR SOCIETY

It is difficult to categorize some health problems as personal and others as social. In one sense, any harm sustained by an individual has social importance, if only because of the consequences of such harm to members of his family. Certainly, the social repercussions of any extensive marihuana-induced infertility would be substantial.

The possible effects considered in the previous section of this report, however, would tend to have more impact upon the user than society at large. The present section will be concerned with those effects in which society would have an equal or greater stake. They include behavioral manifestations, such as psychomotor impairment and lethargy, and possible genetic influences.

Genetic Hazards

Changes in chromosomes associated with marihuana smoking could have detrimental effects on the offspring of users. Such alterations have been identified "in vitro" as well as "in vivo" retrospectively. The retrospective studies suffer inherently from an inability to isolate marihuana use as the causal factor. Other drug taking and ways of living are also of possible etiologic significance.

Carefully designed prospective studies, with subjects who have not used marihuana or other drugs previously, are needed to assess the nature and extent of marihuana's involvement in cell alterations and chromosome breakage. Beyond that, the relationship of any such changes to genetic deficiencies must be ascertained.

Psychomotor Impairment

Because marihuana intoxication impairs reaction time, motor coordination and visual perception, driving automobiles, operating machinery and flying airplanes can be dangerous under this condition.

Studies under simulated conditions and in traffic have confirmed that the ability to operate a motor vehicle is adversely affected by marihuana use. Simulated flying tests also show appreciable decrements in performance of experienced pilots under the influence of the drug.

The combined use of alcohol and marihuana is a particular hazard on the highway, given the known effects of intoxication with each substance alone.

Unlike alcohol, no acceptable limits have been identified for marihuana intake prior to driving. One problem is that the uneven quality of the marihuana being used makes it difficult to express limits in terms of number of cigarettes. Unless such standards can be developed and applied, driving after using any amount of marihuana should be strictly avoided.

Amotivation and Pre-Occupation

There is still controversy over whether chronic marihuana use causes a condition of apathy and listlessness known as an "amotivational syndrome." As with other marihuana effects, it is difficult to delineate the discrete influences of personality, setting, other drugs used concurrently and the action of marihuana itself.

A study in Jamaica several years ago failed to uncover evidence of such a syndrome among regular cannabis users there, but this finding cannot be considered conclusive or even significant in view of the small number of subjects investigated and the fact that only functioning persons were included in the sample.

For those individuals who become so involved with marihuana as to develop a psychological dependence, there arises, as in all other types of drug dependence, a pre-occupation with procuring and taking the drug, and with other aspects of the drug culture. The high social cost of this behavior lies in loss of productivity and inattention to the responsibilities of daily living.

FUTURE RESEARCH IMPERATIVES

There have been indications that marihuana derivatives may eventually have therapeutic uses, as for example in the treatment of glaucoma and pain. Such possibilities should continue to be investigated.

Because many of the hazards of smoking marihuana may involve relatively few users and take years to become evident as pathology, long-term longitudinal studies involving large numbers of subjects should have the highest priority for marihuana research dollars. Only through continuous and extensive monitoring can it be determined how frequently effects such as chromosomal damage, endocrine dysfunction and immune-response deficiency occur, and what their importance may be. Such investigations should not be disease or disorder oriented, but rather should address the question: In what ways do marihuana users change over an extended period of time, and what part does marihuana use play in these changes. Especially needed is a developmental model for measuring and evaluating the effects of marihuana use, as well as multiple drug use, on children and adolescents.

Much marihuana research has been open to criticism because of methodological flaws. In addition to small sample sizes and short periods of observation, selection of subjects and characterization of use have raised serious questions regarding the significance of some findings. Too

often the subjects involved — typically young healthy males — seem to be selected for the convenience of the investigator rather than the relevance the study might have for individual and social pathology. Also, there is considerable variation in the definition of "light," "moderate" and "heavy" use, so that even when the potency of the drug is uniform across studies it is difficult to compare findings and determine whether results are complementary or conflicting.

More aggressive and creative leadership by granting agencies could do much to improve research protocol and design, an improvement that is necessary if definitive answers to the many unresolved issues surrounding the use of marihuana are to be forthcoming in the years ahead.

THE LEGAL STATUS OF MARIHUANA

The sale and possession of marihuana are criminal offenses under federal law. Sale is a crime under all state laws, and possession is a crime under most. A few states have eliminated prison sentences as punishment for first offense possession of small amounts for personal use, substituting a fine that does not give the offender a criminal record. Other states appear to be moving in that direction, and the President has called for a similar revision in federal penalties.

Modification of state laws to reduce the severity of penalties for possession has been too recent to make an accurate assessment of its impact on marihuana use. Oregon was the first state to reduce penalties in late 1973. There was no apparent increase in use the following two years, but there was a rise in 1976. What effect, if any,the statutory change had on this increase is not known.

A criminal record is a handicap that an individual must bear for the rest of his life; stringent laws have stigmatized a considerable number of young people for their use of marihuana, many of them on the occasion of their first offense. The stress that can result from such stigmatization, as well as the anxiety that can develop from anticipation of punitive action, are of genuine medical concern.

The trend toward modifications of marihuana possession laws to reduce the severity of the penalties, therefore, should be encouraged in the interests of both the individual and society. Penalties in the form of fines should be applied to possession of small amounts, with criminal sanctions imposed for trafficking.

This more realistic and humane legal approach, once taken, should be enforced vigorously and equitably so as to discourage use wherever possible and to reflect the continuing conviction that marihuana is not a harmless drug.

SUMMARY OF

EFFECTS OF THE OREGON LAWS DECRIMINALIZING POSSESSION AND USE OF SMALL QUANTITIES OF MARIJUANA

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SUMMARY OF

EFFECTS OF THE OREGON LAWS DECRIMINALIZING

POSSESSION AND USE OF SMALL QUANTITIES OF MARIJUANA

Legislative Research report 74:96 on the "Effects of the Oregon Laws Decriminalizing Possession and Use of Small Quantities of Marijuana" presents the results of a statewide survey of law enforcement agencies', prosecutors', judges', mental health or alcohol and drug clinics', and juvenile departments' observations on the laws. The survey was conducted in mid-October 1974 after one year from the date the new Oregon laws became effective.

Responses were received from 35% of the 301 agencies contacted for the survey, although a greater percentage of responses was received from police departments (47%), clinics (54%) and juvenile departments (59%).

The report contains the following major subdivisions:

I. INTRODUCTION

II. BACKGROUND ON THE LAW

III. EFFECTS OF THE LAWS ON MARIJUANA

IV. CONCLUSION

The third section--Effects of the Laws on Marijuana--presents the results of the survey. These include drug offenses reported by law enforcement agencies (detailing the responses from the Oregon State Police, the Portland Police Bureau, and special interagency narcotics teams), prosecutors and judges. Observations from each respondent on changes in public attitudes towards marijuana, and on changes in the attitudes of law enforcement officers, prosecutors and judges are also included. Policy or procedural changes caused in office operations are discussed. Finally,

the guidelines which the three types of agencies employ in determining the quantity of marijuana possessed, the quantity of marijuana under cultivation, and the quantity of marijuana charged as being possessed when more than one person is present are summarized. Other effects of the laws not considered by this survey's questions are also mentioned.

I. The Introduction notes that Oregon was the first state to relax its laws punishing the use or possession of small quantities of marijuana, and that because of this, the Oregon laws have become a focus of attention for other states and the U.S. Congress. This report on the effects of the laws does not consider either the recent medical discussions of the possible health hazards which may be associated with marijuana use or the changes in drug use patterns which may have occurred in the state since the laws were enacted. The report does note, however, that analysis of two surveys conducted after the laws were in effect for one year, and one commissioned by the 1972 Interim Committee on Alcohol and Drugs might be some indication of drug use changes in the state.

II. The discussion of the Background on the Law considers the recommendations of the 1972 Interim Committee on Alcohol and Drugs that included proposals to legalize or reduce the penalties for simple possession of marijuana, and to provide an expungment procedure for the criminal records of one-time drug offenders.

Oregon law distinguishes narcotic (including marijuana) and dangerous (including hashish) drugs and provides that it is an offense for a person to engage in criminal activity in drugs, criminal use of drugs or criminal drug promotion. For each offense, however, possession, use or promotion where less than one ounce of marijuana is involved is a violation punishable by a fine not in excess of $100. A person convicted of such

a violation does not receive a criminal record because a violation is not a crime under Oregon law.

Because the wording of the criminal activity in drugs statute prohibits a number of specific acts, including cultivating, transporting or furnishing (selling) a narcotic or dangerous drug, and only makes possession of less than one ounce a violation, cultivation, transportation and furnishing marijuana (even though less than one ounce) is still considered a felony or a felony-misdemeanor in the discretion of the judge.

III. Effects of the Laws on Marijuana presents the results of the survey of law enforcement agencies, prosecutors, judges, clinics and juvenile departments. The introduction to the survey explains why the questionnaires were distributed and analyzes the responses received from each type of agency. The results of the survey are presented in six sections--drug case statistics, drug use observations of clinics and juvenile departments, observed changes in officials' attitudes towards marijuana, guidelines used for marijuana offenses, changes in procedures caused by the laws, and other effects of the laws.

Drug case statistics are presented from law enforcement agencies (27 agencies including the Oregon State Police, Portland Police Bureau and two interagency narcotics teams answered this section of the questionnaire). For marijuana possession cases, one more agency statewide reported an increase in arrests than those indicating a decrease, although the majority of respondents indicated no change or a decrease in enforcement effort for these cases (Table 1. of the report). For other marijuana offenses, cultivating, transporting and furnishing arrests showed an increase more often (Table 2.). Increases

in other drug cases (not including marijuana) were more prevalent than marijuana case increases (Table 3.), and increases in multiple drug (including marijuana) offenses showed an increase in agencies' responses more often (Table 4.).

Detailed consideration of the Oregon State Police, Portland Police Bureau, and three special interagency narcotics teams is given. The State Police reported an increase in all drug arrests with no change in enforcement effort. The Portland Police reported decreases in all marijuana offenses, except cultivation, with a general de-emphasis in enforcement, while other drug arrests increased. Data from the interagency narcotics teams in Josephine, Coos-Curry, and Marion counties are given which indicate the number of marijuana cases and other drug cases handled, but with no comparative statistics it is impossible to determine what effects the laws have had on these narcotics teams' work (Table 5.).

Drug case statistics for district attorneys and circuit or district court judges are summarized. In both situations, however, few responses were received. Most district attorney offices reported an increase in all drug cases (Table 6.). The report also considers district attorney responses received by the Oregon Attorney General for a questionnaire from U.S. Senator James O. Eastland including information on marijuana arrests and convictions, age categories for marijuana offenders, the range of sentences imposed, and state expungment procedures and drug education alternatives.

For court statistics, the only information available was collected by Legislative Research from records of the Multnomah County Circuit Court. This analysis concluded that fewer marijuana and other drug felony cases are being handled in the county, although because of the overlapping

responsibilities of the Circuit and District Courts, it is possible that the total number of drug cases has not changed.

Changes in drug use patterns observed by clinics (Table 7) and juvenile departments (Table 8) are given. Clinics appear less apt than juvenile departments to observe increases in drug use of all types.

Attitude changes towards marijuana in the public, and for law enforcement officers, prosecutors and judges as observed by these persons and clinic and juvenile department respondents are reviewed. Most respondents in each category have observed some change in public attitudes; of those commenting on the public's attitudes towards the decriminalization laws, more respondents in each category indicated public approval. Law enforcement agencies were most likely to observe that the public misunderstood the laws and that youth attitudes differed from those held by adults. (Table 9).

Most respondents indicated that they had observed law enforcement officers expressing either acceptance or approval of the decriminalization laws (Table 10). The same is true for prosecutors' attitudes towards marijuana (Table 11) and for judges' attitudes (Table 12). For each type of respondent and each area of attitude changes, representative observations are included.

Policy changes made as a result of the decriminalization laws were reported by law enforcement agencies, prosecutors and judges. The most significant changes reported by law enforcement agencies were in officer training sessions for the Oregon State Police and Portland Police Bureau and in record keeping changes for the Portland Police.

Half of the prosecutors offices indicated no changes in their procedures; and for courts, the most significant changes included

observations on the changes in drug cases being handled between the district and circuit courts in several areas of the state.

Law enforcement agencies, prosecutors and judges were asked for their guidelines in determining the quantity of marijuana involved in three areas: 1. For possession cases; 2. For cultivation cases; and 3. For situations involving more than one person. The determination of quantity for marijuana possession cases varied among law enforcement agencies; some make field analyses at the time of arrest or citation, others leave the matter to the State Police crime labs for analysis. Other variations included a "rule of thumb" that three lids are required to constitute more than one ounce of marijuana. The same kinds of variations were expressed for district attorneys and judges although one judge also noted that the question of whether marijuana had to be sifted and analyzed before it was weighed had not yet been raised in his court.

Guidelines for cultivation-quantity determinations also varied. Although the law does not require that quantity be a factor in such offenses, some agencies noted that all cultivation was considered a violation or that consideration was given to whether it appeared that the plants were intended to be used commercially.

Guidelines for determining the quantity of marijuana when more than one person is involved also showed that some variations existed. In some jurisdictions, the total amount of marijuana present is determined and divided among all individuals present; others indicated that possession by an individual had to be established; and a third type of response indicated that more than one person could be found to possess the same marijuana.

Three effects of the decriminalization laws not presented by the

questionnaire are also discussed in the report. The first involves the problem of establishing that a driver is under the influence of marijuana; the second relates to the inability under the law to sentence juveniles for violation of the marijuana laws where less than one ounce is involved; and the third concerns the interrelationship between the marijuana violation laws for possession and use and the criminal drug promotion law. It appears that factual situations could exist where each person except one could possess less than one ounce, and be subject to a fine for a violation; the one person not in possession might be subject to felony prosecution because of being in a place where more than one ounce of marijuana was found.

IV. The report concludes that although regional variations in enforcement still exist for marijuana offenses, the decriminalization laws appear to have successfully reduced the penalties for the use and possession of less than one ounce of marijuana. Some areas of confusion in the laws may be proper for future legislative consideration, including such matters as the sentencing of juveniles, the use of the promotion statute, and the proper standards for cultivation, transportation and furnishing marijuana offenses.

With these limitations, however, it appears that the laws have not caused the major problems for the state which some had predicted, and that the laws have for the most part been accepted or approved of by those officials who are responsible for enforcing and administering them.

The War Over MARIJUANA

The volley of charges against pot and the claims for it have made it our most researched drug. Here, a respected psychiatrist details what we know—and what we don't—about a drug millions use daily.

by Norman E. Zinberg

IN THE EIGHT YEARS that have passed since the first controlled experiments on marijuana, hundreds of human subjects and countless laboratory animals have been given enormous amounts of the drug, day in and day out. The results have been recorded in thousands of articles in scientific journals alone, and coverage by the mass media is impossible to measure. Not one of the findings that demonstrates marijuana's potential for harm has been consistently replicated by other research or could be regarded as proved. Few of the oldest, most publicized findings—those concerned with the areas of brain damage, lack of motivation, psychosis, and the steppingstone-to-heroin theory — are now supported by any member of the scientific community, regardless of where he stands on marijuana. The remarkable thing is that these studies got as much attention as they did, a fact that can only be ascribed to the fears rampant at the time. The articles continue, despite comments like this one by Michael Baden, made back in 1972: "We know more about marijuana than we do about penicillin."

In summarizing the major findings on marijuana, I will consider the above possible effects of use, as well as chromosome damage (birth defects), a reduction in immune response, an incitement to crime, a health hazard, and impairment of sexual activity.

If I have overlooked an article here or there, it is not because it represented a point of view contrary to my own. At the same time, I am aware that objectivity in marijuana research is difficult; a study of the literature indicates that scientists on both sides of the marijuana question have been influenced by their prejudices.

The accompanying chart characterizes the views expressed in the writings on marijuana use and its effect in the seven most important areas of contention. The charges that marijuana leads to crime and is a general health hazard are not included on the chart because they lack continuity and support.

In addition to itemizing the results of actual research, the chart also lists key public reports, investigations, and important media responses. Key reports and investigations had to be included because they often generated data or summed up existing data. I included media responses because one of my basic conclusions—perhaps the most essential one—is that scientific data do not determine society's responses to the marijuana question. Instead, these responses reflect the complex of emotions expressed through the media. Hence, former President Nixon's rejection of the report of his own National Commission on Marijuana and Drug Abuse (Shafer Commission) belongs on the chart, as does Ann Landers' column containing her pronouncement on marijuana use. In one sense, the entire chart reflects media responses, for none of the articles from scientific journals would have excited interest unless they had received coverage.

Amotivational syndrome.

The term "amotivational syndrome" was used by Louis J. West, Chairman of the Department of Psychiatry at UCLA, in 1972 to describe the belief that marijuana use reduces the capacity to think straight, and produces a loss of will. In 1970 the National Clearing House for Drug Information had reported that marijuana users appeared to do about as well academically as nonusers. Within the month, the Federal Bureau of Narcotics and Dangerous Drugs issued a report claiming the opposite. In 1971 two reports claimed that marijuana caused physical dependence (addiction). In 1972 the second annual HEW report on Marijuana and Health summed up a number of studies in colleges and high schools that showed no difference between users and nonusers. About the same time an interview with West appeared in the Los Angeles Times, and within a month an article was published that showed that countries (usually described as "primitive") where marijuana use was not generally punished had always accomplished less than other countries.

Throughout 1972, the notion that marijuana sapped the will received enormous media coverage and almost certainly became the conventional wisdom. Yet that year also witnessed the appearance of several reports favorable to marijuana use. First, there was the release of the Shafer Commission's first report, which denied the existence of an amotivational syndrome, followed by the initial release of data from the Jamaica study authorized by the Commission. The Jamaica report compared chronic users physiologically and psychologically with a control group of nonusers. The users had smoked seven to 25 cigarettes of strong Jamaican marijuana a day, averaging about three percent THC, the active ingredient in marijuana, for between 10 and 25 years. This report of long-term use revealed no differences in motivation between users and nonusers, although it did hint that the users were better motivated.

In 1973, the American Journal of Psychiatry published a study by Joel Hochman and Norman Brill. They had studied a random sample of 140 UCLA students and found no motivational dif-

he said that there was no evidence linking marijuana with loss of sex drive or birth defects, but he added gratuitously, "I still care about morality and decency and I'm tired of phrases like 'credibility gap.'"

The big blast on chromosome breaks came with the publication of an article by Morton A. Stenchever in the American Journal of Obstetrics and Gynecology. He found that 20 women and 29 men who had used marijuana showed almost three times more breakage in chromosomes than a control group of 20 nonusers. One of the most damning findings, quoted and requoted since, was that of the users, 22 used marijuana only once a week or less. It seemed to make no difference whether use was light or heavy. At a lecture in Cleveland in April 1973, Stenchever began by saying, "We're concerned that marijuana may be legalized and that it may be a much more dangerous drug than we realized." That phrase and his findings received enormous press coverage, which publicized the idea that chromosome breaks resulting from marijuana use might result in birth defects.

In a country already terrorized by the thalidomide scandal, this threat packed a real punch. There were a few attempts, notably one by R. Keith Stroup, head of the National Organization for the Reform of Marijuana Laws, to explain that even if marijuana did cause chromosome breaks, we don't really know what the breaks mean and have no evidence that they result in birth defects. Many common substances, such as aspirin or caffeine, cause chromosome breaks. Most important of all, as Stroup pointed out, the Stenchever study had obtained no information about the condition of the subjects before they used marijuana. Thus, the possibility that they had previously used other substances was not ruled out.

Despite the attempts to minimize the effect of Stenchever's findings, the media responses continued for months. Two are included on the chart: one by the medical columnist Lindsay B. Curtis and the other by Ann Landers. These columnists stated the case as if proved—Ann Landers' headline read, "It's Medically Proven: Grass Can Harm Babies"—and their columns were picked up and reported on by wire services in the news sections of the daily papers.

The Canadian Le Dain Commission report of 1974 minimized Stenchever's findings, but it received little publicity in the United States. In July 1974 W.W. Nichols and his co-workers published in Mutation Research a report showing that the 24 people they studied experienced no chromosome breaks. Nichols had checked the condition of his subjects' chromosomes before giving them marijuana and rigidly excluded, for the study period, the use of any substance that might cause chromosome damage. Scientifically, Nichols' work is definitive. It has not been seriously challenged, and in fact has been supported by the Jamaica study and by studies at the University of Mississippi and the Upstate Medical Center of SUNY. Yet there were no Landers columns about W.W. Nichols, and while the name Stenchever is well known in circles interested in drug use and abuse, I venture to say that Nichols is virtually unknown.

> Each of his subjects received at least 210 milligrams of THC per day. That would produce 50 to 100 cigarettes a day. If that much grass can't produce change, a lot of people are wasting their time.

W.W. Nichols, M.J. Thorburn of the University of West Indies (a director of the Jamaica study), H.B. Pace of the University of Mississippi, and Richard L. Neu of the State University of New York were not mentioned at the Eastland Commission hearings. An Akira Morishima came to prominence, however. Morishima testified that his research on lymphocytes showed that the lymphocytes of marijuana smokers contained one third fewer chomosomes than did a control group of nonsmokers and that his work supported Stenchever. It took the ever-vigilant Consumer Reports to inform even careful readers that Morishima had studied only three people. To my knowledge, this fact was not mentioned during the extremely well-publicized hearings.

Brain damage. The belief that marijuana causes irreversible brain damage goes back to the 1930s and the This view came up in the 1970 report of the Federal Bureau of Narcotics and Dangerous Drugs; the next year it was countered by the HEW report. In early 1971, an experiment on rats claimed that marijuana damaged the brain. The report got a flurry of attention, but the real bomb was dropped later, in December 1971. A.M.G. Campbell and his associates reported in The Lancet, a highly respected British medical journal, that X-ray studies of the brains of 10 heavy marijuana smokers showed "evidence of cerebral atrophy." That is, these smokers showed an actual diminution of brain tissue when they were subjected to a rather hazardous procedure called an air encephalogram. Due to the nature of this procedure, no one has repeated the enormously publicized Campbell project. But it has been challenged, first, by the Shafer Commission report that President Nixon rejected, and again in 1972 in a critique by Lester Grinspoon published in Contemporary Drug Problems. Grinspoon pointed out that Campbell referred to his 10 subjects as addicts, a term not usually applied to marijuana users. Not only had all 10 already used LSD, but eight had used amphetamines, four had suffered significant head injuries, and a number had used sedatives, barbiturates, heroin, or morphine. All had used alcohol, a drug for which there is proof of eventual brain damage. Therefore, Campbell's association of marijuana use with cerebral atrophy followed no principle of science or logic.

In the spring of 1973, a flurry of marijuana brain-damage articles appeared. One long piece in Prevention stated that Campbell had found "marijuana smokers' brains to have actually shriveled." In April 1973 the Journal of Nervous and Mental Disease published a study by A. J. Stunkard and his associates, which compared a group of 29 students using marijuana regularly over a period of at least three years with a non-using control group. On the basis of a wide range of neurological and neuropsychological tests, Stunkard found no differences between the two groups.

In the light of Stunkard's study, as well as the Le Dain Commission report, the belief that marijuana caused brain damage should have been set to rest. But no. Robert G. Heath emerged from the Eastland Committee hearings to report that six rhesus monkeys with electrodes planted in their brains showed persistent changes in brain-wave patterns after re-

the New England Journal of Medicine that the reaction of marijuana smokers' T-lymphocytes to sheep red blood cells in laboratory cultures was weaker than that of nonsmokers. Further, a bewildering variety of reports from laboratory investigators in places as various as East Tennessee State University, the University of Laval in Quebec, the Medical College of Virginia, the University of Toronto, the Mason Research Institute, and the Pasteur Institute stated a weakened immune response in cultured cells after exposure to very potent solutions of marijuana. All of these findings got a thorough review at the Eastland Committee hearings.

As usual, there are contradictory findings. Unfortunately, these more favorable findings cannot be exactly matched to the unfavorable findings and therefore cannot be taken as discounting them absolutely. For example, the study of S. C. White and his associates, reported in Science in April 1975, found no significant differences in microcultures of blood lymphocytes between 12 long-term marijuana smokers and a control group. But this group of smokers, like the group reported on by Melvin J. Silverstein and Phyllis J. Lessin of UCLA, smoked an average of three or four times a week, which may not constitute sufficiently heavy use. The UCLA study is of particular interest, however, because it investigated the immune response in individuals and not in tissue culture. Silverstein and Lessin's 22 marijuana smokers showed intact skin immune responses when compared to a control group with impaired responses. These unimpaired responses were confirmed by trying other foreign substances on the subjects that led to identical results with users and nonusers.

Even more effective in contradicting the impaired-immune-reaction theory is the Jamaica study. The 30 long-term users had no greater history of infection than the control group, and an extremely thorough physical examination failed to reveal any evidence of physiological impairment. It could be argued, however, that other heavy users whose immune reactions had been affected had dropped by the wayside.

In the long run, epidemiological studies will settle the issue. So far the reports emerging from college health services, free clinics, or other health facilities frequented by marijuana users have not indicated the higher incidence of infection that would be expected if the immune reaction had been damaged. This fact demonstrates that moderate marijuana use, as shown by the White and Silverstein studies, simply leaves the immune reaction untouched. Certainly, the number of extremely heavy users in this country is too small to affect the national disease rates appreciably.

The claim that marijuana causes sexual impairment is all the more frightening because it is unexpected. The word from users has been that sex and marijuana go together like bacon and eggs.

Incitement to crime.

The claim that marijuana use is associated with crime and violence dates back to the 1930s. Only politicians have leveled such charges during the period covered by this summary. In May 1971, for example, Representative John Murphy (Democrat-N.Y.) made the headlines by asserting the U.S. soldiers in Vietnam committed "bizarre acts of murder, rape, and aggravated assault" as a result of marijuana use. Similar but more sedately worded comments emerged during the Eastland Committee hearings. Today this marijuana myth has been dropped, perhaps because of the painstaking 1930s study of 17,000 offenders by Walter Bromberg and, more recently, a study by Jared Tinklenberg of Stanford, which show no relationship between marijuana use and crime.

General health hazard.

The claim that marijuana is a health hazard has appeared, vanished, and reappeared over the last six years. It has been asserted, for example, that marijuana causes skin cancer or a profound metabolic change in various kinds of animals, usually mice or rats. So far none of these reports has been substantiated. Interestingly, not all of the unsustained, extravagant research studies have found marijuana harmful. One researcher reported that marijuana stopped three kinds of cancer in mice; another noted that mice gained in thoritarianism. The claim that marijuana adversely affects electrocardiograms, which appeared in the July 1973 issue of the Journal of the American Medical Association, acquired weight through the publication of an editorial in the same issue supporting those findings. In November 1973 the Journal printed a short letter that persuasively discredited the original study, but this was done without editorial fanfare. Lung damage due to marijuana smoking is mentioned now and again, but this particular fear, which is probably realistic, has been partially negated by the fact that marijuana, unlike nicotine, causes vasodilatation and expansion of lung bronchioles.

Sex impairment.

In recent years, the biggest fear has resulted from the claim that marijuana causes sexual impairment, at least in men. The claim is all the more frightening because of its unexpectedness. The word from users has been that sex and marijuana went together like bacon and eggs.

Consequently, when a letter in the November 1972 issue of the New England Journal of Medicine said explicitly that marijuana contains a feminizing ingredient and claimed that it causes gynecomastia (breast enlargement and a milky discharge from the nipples) in men, there was general disbelief. Gynecomastia in adolescence is not unknown, and the author of that letter apparently made no effort to find a comparable control group. Sophisticated users argued among themselves. Perhaps, they said, the increased empathy toward one's partner during sexual experience could represent a feminization of the man; on the other hand, since a similar thing happened to women, that would speak against a general increase in the feminine hormone. Thus this finding was generally discounted.

In April 1974, however, the New England Journal of Medicine raised a storm by publishing the findings of Robert Kolodny and his associates at the Reproductive Biology Research Foundation in St. Louis. This study compared the testosterone (male sex hormone) blood levels of 20 marijuana smokers with those of 20 nonsmokers and showed the smokers' levels to be lower. Although testosterone levels for all the subjects were within normal limits, smokers who smoked 10 or more joints

to disease, and birth defects. In the meantime, the counterclaims, the arguments against the harmfulness of marijuana use, appear to be stronger. And we cannot proceed as if long-term data did not exist.

As a matter of fact, this country has already begun to generate its own long-term epidemiological data. When we examine marijuana smoking in the United States, we are no longer looking at a few youngsters with a new fad. A 1972 forecast made by the Federal Bureau of Narcotics and Dangerous Drugs predicted that by 1976, 50 million Americans would have tried marijuana. That figure may be low, and we are not talking about using the drug only once or twice. In 1972 the Shafer Commission surveys found that over 13 million people regarded themselves as regular users of marijuana, a finding that prompted the Commission to declare: "What this shows is that there are three recreational drugs in this country: alcohol, tobacco, and marijuana."

The data show further that it is no longer simply the young who use marijuana. Previously, some authorities believed that high-school and college use was a passing fancy that was abandoned in serious adult life. The arrest rates now indicate that marijuana use continues into the late 20s and 30s. One recent survey revealed that 14 percent of users were in professional occupations, and another 11 percent in trades that netted incomes of over $15,000. The evidence accumulates that we have a sizable body of citizenry who are long-term, regular users.

I have mentioned the Jamaica study again and again, and it may seem that, like those I have criticized, I am building a large edifice of my preferences on a tiny base of actual data. But the Jamaica study was not just a carefully controlled examination of 60 subjects, 30 chronic users and 30 nonusers. It was also a splendid piece of anthropological research. The team spent 18 months in carefully selected rural and urban areas gathering convincing natural data about marijuana use and its effects. Not only did they find its use extremely widespread—in some areas involving over 60 percent of the population—and heavy but they found that it was being used in various ways: smoked, brewed, rubbed on, and mixed with other things. They discovered many legends about the medicinal, herbal, and enhancing

dicating that users were more prone to illness, sexual difficulties, sterility, or that it caused birth defects. That sort of natural data, also found in Greece, is accumulating in this country. It makes the argument that we must wait and wait for long-term epidemiological data seem more of a cover-up for an ideological or political position than a firm stance on the evaluation of evidence.

Obviously there are areas of concern. Drawing any hot substance into the lungs cannot be good for anyone, but we should remember that no marijuana smoker in this country uses as many cigarettes a day as tobacco smokers do. Also, marijuana is an intoxicant; and despite the research showing that someone high on marijuana does better on a driving simulator than someone high on alcohol, driving under the influence of any intoxicant must be considered a real danger. Finally, it is my absolute conviction that adolescents below the age of 18 should not use intoxicants of any kind, whether nicotine, alcohol, or marijuana. The 14-, 15-, or 16-year-old struggling to develop in this complex society needs as clear a head as possible. One argument made some years ago for the legalization of illicit substances was based on the possibility that parents and other authorities could more readily control above-ground use of licit substances than they could control the underground use of illicit substances.

While searching through the thousands of pages I read for this report, I reached one other conclusion that again places me in opposition to Senator Eastland. Eastland stated that the reason he needed to give the opponents of marijuana a chance to be heard was that the mass media overwhelmingly favored marijuana proponents. I planned to quantify the number of words in selected periodicals on both sides of the question, but I lost patience and have had to leave that research to others. It is my guess, however, that space has been given to opponents as against proponents at a ratio of five or six to one.

In my review of the writings on marijuana use, I found that certain "straight" world periodicals tilted as consistently away from marijuana as counterculture publications tilted toward it. The difference was that the straight magazines and papers always presented themselves as reporters, while the counterculture publications had the grace to admit they were giving opinions. Those reading only Good

that marijuana is considerably more dangerous than the black plague. Until very recently The New York Times also showed a distinct bias, as evidenced by the space devoted to scare stories and the general antimarijuana tone of other stories. Worst of all, Science, the official organ of the American Association for the Advancement of Science, has not fulfilled its position as the representative of objective science. This has been evident in its editorial reports on marijuana. How else could one account for the fact that in one article of a series on marijuana, published on August 23, 1974, the retrospective Stenchever experiment rated a careful discussion while the prospective Nichols report was casually lumped in with other research? One important record must be righted. Ann Landers relented. She signed a National Organization for the Reform of Marijuana Laws petition calling for decriminalization of marijuana, defending her change of heart in her column of November 14, 1974.

In the end, after all this work and all these words, I still find myself echoing the remark made by Daniel X. Freedman of the University of Chicago, after a Drug Abuse Council conference on marijuana. "Nobody can tell you it's harmless. Each person must decide for himself what he wants to do." With each passing day, however, more people agree with Andrew T. Weil's remark that marijuana is "among the least toxic drugs known to modern medicine."

Norman E. Zinberg is one of the country's foremost authorities on the use and effects of marijuana and other consciousness-altering drugs. He has written dozens of articles and books on the subject, and serves as consultant to numerous drug programs and research projects, including the Drug Abuse Council. Since receiving his B.A. and M.D. degrees from the University of Maryland, Zinberg has taught psychiatry at Tufts, Clark, and Boston universities, and is now professor of psychiatry at Harvard Medical School. He also serves as staff psychiatrist at several teaching hospitals in the Boston area.

For more information, read:

Grinspoon, Lester. Marihuana Reconsidered; Harvard, 1971. $15.00.

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For reprints of this article, see Classified Advertising.

For the March 15, 1979, Topeka Hearings

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Background Considerations for the March, 1979 Hearings in Topeka re the "Decriminalization of Marijuana"

Drugs, Realities and the Search

C. Schwep

This is an era of search - for meaning, values, relationships and for a quality of life which relates to expectations and demands which are often unrealistic and difficult to attain. We seek, and often demand, not only security, but abundance; not only equality of opportunity, but privilege for all men; not only relief from hardship, but instant gratification and satisfaction.

The American dream can become an expression of individual avariciousness and materialism. We demand privilege without responsibility; reward without effort and we practice indulgence without restraint. Demands for equality compromise the reality of liberty. But our most serious error may be the assumption that infinite growth is possible within a finite nation and planet. We are not planning ahead.

The consequences of indulgence today can limit the attainable horizons of future generations. Yet the philosophy of self-indulgence persists, in fact is expanding. The impact of advertising and political promises creates increased demands which are unrealistic. Yet simultaneously basic issues reinforce the fact that limitations are real; that potentials exist to a lesser degree than they did in the past. These realities are hard to accept. Most of us will not yet accept the fact of an energy crisis.

Confusion and uncertainty develops. This relates not only to comprehension and acceptance of the facts, but to the credibility of leadership. There have been too many Watergates -- big and small. The moral standards and values which were the fabric of an established order appear no longer relevant. A vacuum is created in which neither permissiveness, self-indulgence nor introspection provides satisfaction or replenishment. Guidelines are missing.

Leadership is wanting. Positive examples seem not to exist. Different lifestyles, cults and philosophies are invented to fill a need for structure or belonging. Most of them fail, or succeed only partially. Some groups search for "roots" in an effort to gain pride, recapture or fabricate identity. Many replace faith with skepticism and hope with cynicism. But perhaps most maintain a posture of searching for something which does not seem apparent, and may not exist.

Within this climate there is a tendency to escape what appears to be unfriendly circumstances and unacceptable realities. Yet it is impossible to escape bad news. The medium of television dramatizes the "particular," which is usually some kind of disaster or problem. There is no dramatization or documentation supporting hope, renewal or the kind of quality of life we might dream of. If we dare to dream.

Among the host of social and environmental problems which result from these conditions, the most frightening is that of drug abuse. Drugs appear to be an ideal copout from unpleasant reality. They appear to be an escape from problems, pressures, fears and boredom. They appear to make the vision of an uncertain future in which expectations are unrealistic and both potentials and identity into an obscure, less threatening kind of abstract reality. And of course, drugs reduce the ability of individuals to deal with themselves and the world around them in a constructive way.

The vacuum created is most pronounced but least recognized in the lives of our young people. In generations past, youth dared to dream. Thoughts and discussions concerned ideals, great ideas and hopes and aspirations. The sense of the possible knew no bounds. Today, the situation is quite different. What is possible appears very limited. Talks of dreams and aspirations are commonly replaced by complaints about problems. Ideals are replaced by different forms of introspection. The search for good relationships with others becomes one of agonizing self-analysis. We are obsessed with self; we demand "rights" under the assumption that somehow such rights of themselves will bring fulfillment without the requirement for effort or the assumption of responsibility.

The most insidious of the "recreational drugs" is the one which is rapidly replacing most other substances of intoxication by young people. It is also one which makes intoxification by youth 10 to 15 years old acceptable, a kind of needed "equalizer" -- even a requirement of "belonging" to certain peer groups. The drug of course is marijuana. By its very nature, this substance represents the escape mechanism the likes of which no society in the history of man has ever experienced. It represents release from fear, pain, frustration, alienation and dissatisfaction. It creates an artificial "high" which provides neither reward nor enduring escape. It leads to neither comraderie nor accomplishment. It retards maturity. It limits personal potential. It compromises the ability to find joy, satisfaction -- even healthy sexual pleasure. It can reduce our ability to solve problems and face the future.

December 5, 1977

THE MYTH OF HARMLESSNESS

Henry Brill, M.D. *

More than a decade of attack on the marijuana laws has so far over-proved its point: the general public is now persuaded that marijuana is a virtually harmless drug. This belief has led to a major under-reporting of adverse reactions produced by marijuana and its products. A circular reasoning leads to the conclusion that any reaction which occurs cannot be due to the drug, in whole or part, because marijuana is harmless. Therefore any bad effect must be coincidental, or due to alcohol, other drugs, the social situation or a special weakness in the person; it cannot be due to marijuana and is not so reported.

This myth of harmlessness persists in the face of a mass of long experience and new evidence to the contrary. It persists even though the marijuana proponents themselves state that the drug is not harmless for certain persons, and for all persons under certain conditions. For example they say it should not be taken by the immature, nor the emotionally vulnerable, nor should it be taken by persons who are driving. But there is much more on the negative side. Centuries of experience have shown that abuse of this drug is associated with a wide spectrum of effects on the mind, effects that range from bad trips and flash-backs to frank psychosis and

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personality change. A growing experience in this country confirms all this. Professionals who deal with mental and emotional disorders of youth agree that this drug ranks high among the intoxicants taken by youths who suffer from drug-associated social, emotional and/or scholastic problems. Experienced psychiatrists report that the condition of such cases improves when the user can be persuaded to stop taking the drug which he has been convinced is a harmless weed. As in the case of alcohol it is hard for him to believe that what appears to be harmless to others may be noxious for him, especially when he finds the immediate effects so pleasant. He must first be persuaded about important differences due to dosage, duration, steadiness of use and personal vulnerabilities.

The full story of the potential of cannabis products to produce adverse reactions is only slowly emerging but it is already clear that many of the pro-marijuana arguments and much of the dialectic of the last decade were in error. First, contrary to many promises marijuana has not tended to replace alcohol as an intoxicant. Instead the use of both drugs has increased simultaneously, and in the same groups of users. Second, the theory of reverse tolerance has proved false. It was argued that marijuana was different from other recreational drugs because it took less not more to produce a given effect with continued usage. Recent work has proved that this too is false and that dose tends to increase with time. A strong tolerance to marijuana can be built up as in

the case of many other intoxicants. Third, it was thought that the effect was purely on the mind with no changes in body or brain. Now it is known that gross changes can be produced in the lungs by heavy smoking and the mental effects are in themselves evidence of an effect on the brain. Fourth, the idea of "self-titration" must be abandoned. It was argued a few years ago that this drug was different from other intoxicants in that people would take only enough to feel good and then stop. This does occur with many persons with marijuana as it does with alcohol, but it is not "built into" the drug effect. With both substances there are many who lose control and these suffer various consequences. Finally the idea that marijuana is different from other intoxicants and is harmless is disproved by a large series of laboratory and clinical studies. The harmful biological effects demonstrated in the laboratory include changes in endocrine function, gonadal damage and changes in the immune system.

All of this shows that the time has come to dispel the modern myth of marijuana harmlessness. Cannabis is a drug like all others, and its use exacts a price. It is an intoxicant and its effects are brain effects. These effects are dose dependent and they become more intense and pervasive with increasing dose duration and continuousness of use. Thus far it is somewhat like alcohol but in many important respects it is very different. As an intoxicant it regularly produces

hallucinations and delusions if taken to the point of full intoxication and while its effects are dose dependent they are also much more variable and unpredictable than those of alcohol. Finally marijuana is far more insidious in its effects but at the same time it can produce socially destructive changes of personality much more rapidly; a year or two for marijuana as compared with a decade or two or longer for alcohol.

To get these facts to the public and to counteract the myth of harmlessness is an immediate and urgent task of public education. We must breach the barrier of denial and this will permit us to begin actually counting cases which have been harmed by this drug acting alone or in combination with other factors. The public must be able to see what is going on before the marijuana situation can be really evaluated, and the present under-reporting corrected.

MARIHUANA: BIOLOGICAL EFFECTS

ANALYSIS, METABOLISM, CELLULAR RESPONSES, REPRODUCTION AND BRAIN

Proceedings of the Second Satellite Symposium on Marihuana
7th International Pharmacological Congress

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IV. CANNABIS AND THE BRAIN

CANNABINOIDS AND CELLULAR RESPONSES: A SUMMARY

J.-C. JARDILLIER

THE effects of different cannabinoids (psychoactive and non-psychoactive) on several mammalian cells lines are exerted at micromolar concentrations.

1. ACTION AT THE LEVEL OF THE PLASMA MEMBRANE

These effects are numerous and related in most cases to the lipophile nature of THC and of its derivatives. Na^+, K^+ and Mg^{++} ATPases are inhibited *in vitro* with concentration of 10^{-6} M. *In vivo*, tolerance seems to develop to this effect. The inhibitory mechanism is not the same for all ATPases.

Biosynthesis of membrane phospholipids is also altered as a result of acyltransferase inhibition. The membrane action of cannabinoids is also reflected by their inhibitory effect on intracellular incorporation of the precursors of the biosynthesis of macromolecules such as thymidine, uridine and leucine. In the case of thymidine inhibition of uptake may be observed within 15 seconds after exposure to 6.5×10^{-5} M THC.

2. HORMONAL INTERACTIONS AND EFFECTS ON THE NUCLEUS

In vitro, cannabinoids interfere with certain hormone mediated cellular mechanisms: In Leydig cells, they inhibit testosterone synthesis mediated by choriogonadotropic hormone (HCG) or by dibutyryl cyclic AMP. The inhibitory effect of dexamethasone on the biosynthesis of nucleic acids and proteins is potentiated by cannabinoids. There is no effect of THC at the level of the binding between steroid and cytosol receptor. However, THC facilitates the translocation of the hormone receptor complex as indicated by a concentration of nuclear material clearly visible on the electron microscope.

At the level of the nucleus, cannabinoids exert certain specific effects in altering the biosynthesis of chromosomal proteins especially histones and non histones.

3. ACTION ON SPECIALIZED CELLS

The specific functions of certain types of specialized cells may be altered by THC. In neurons, there is a preferential fixation of THC to mitochondria, and a decrease of ribosomes fixed to the nuclear membrane; THC produce biphasic alterations in the neurotransmitters dopamine and norepinephrine, which are related to concentration of the drug: stimulating with nanomolar concentrations, inhibiting with micromolar concentrations.

In myocardial cells cultured *in vitro*, THC decreases the frequency of contraction and number of "pace maker" cells. Assorted biochemical changes include alteration of glycolysis and of the activity of several intracellular enzymes.

In micromolar concentrations, which may be reached in chronic consumption, psychoactive and non-psychoactive cannabinoids alter basic cellular functions including structural and functional properties of the genome. These include condensation of the nucleus and inhibition of chromosomal protein synthesis such as histones.

CANNABIS AND REPRODUCTION: A SUMMARY

H. TUCHMANN-DUPLESSIS

EXPERIMENTAL investigations as well as clinical observations described in the nine papers presented at this session demonstrated the harmful effect of cannabis on the testis, the ovary and the hypothalamic-pituitary axis. These investigations also describe the developmental effects of cannabis in rodents and primates.

TESTIS

In rodents, Delta-9-THC and cannabidiol significantly decrease testosterone and impair spermatogenesis. Such effects may be related to a direct effect of cannabinoids on the gonads through a decrease in RNA synthesis, and also to an inhibition by THC of the gonadotropin function of the pituitary.

OVARY

Ovarian function is also inhibited. In the female rhesus monkey, THC produces a dose-related depression of ovarian function, with a decrease in gonadotropic hormones, LH and FSH. During the luteal phase, THC administration impairs progesterone production and produces anovulatory cycles. In rodents, THC or cannabis extract induces ovarian and uterine atrophy.

PRENATAL DEVELOPMENT

Different cannabinoids are embryotoxic and produce foetal resorptions in rats, mice and rabbits, but they are not grossly teratogenic. When THC is administered before mating to female rhesus monkeys, the incidence of abortion and neonatal mortality is 3 to 4 times higher than in control animals. The offspring from THC-treated mothers present abnormal behaviour to sensory stimuli.

CLINICAL OBSERVATION

In man, one observes a depression of reproductive functions with intermittent decrease of testosterone and presence of morphologic abnormalities of spermatogenesis.

Although considered by some as a soft, if not innocuous, drug, cannabis is undoubtedly harmful to man.

The papers and lively discussions of this session resulted in a clear picture of a problem which had given rise to contradictory statements.

CANNABIS AND THE BRAIN: A SUMMARY

P. ETEVENON

IN THIS session, ten reports were presented on the effects of cannabis on the central nervous system.

Experimental results have shown catecholamine changes in the brains of self-stimulated rats, EEG changes (from deep electrodes in the lymbic area) in chronically treated rats and monkeys as well as behavioral changes. Following repeated administration, tolerance and withdrawal can be observed in animals as well as in man.

Clinical results have shown that cannabinoids affect epilepsy. Electroencephalographic studies have placed cannabis in the psychotropic group of "psychodysleptics" according to the classification of Delay and Denker.

CATECHOLAMINES

Rats with implanted electrodes and stimulated in the reward system described by Olds, showed one hour after THC administration a decrease in brain norepinephrine, an increase in brain serotonin, together with a decrease of the rate of self-stimulation. This was followed by a rebound with reversal of the effects and later on by a persistent depression. Mescaline produced the same effects.

ELECTROPHYSIOLOGICAL AND NEUROANATOMICAL EFFECTS

In rats treated for 9 months with THC, or monkeys after 3 months exposure to marihuana via a "smoking machine", permanent subcortical EEG changes can be observed in limbic structures and sensory thalamic nuclei. "Irritative" tracings, with sharp high amplitude waves, appear. After 5 months of marihuana smoking, limbic brain tissues of a monkey, examined by electron microscopy, presented ultrastructural abnormalities.

BEHAVIORAL EFFECTS

Rats, following 6 months of chronic treatment by THC or ethanol, have presented impairment of learning curves. Following 2–3 months of THC treatment, monkeys living in a colony became withdrawn, showed immobility and a tendency to isolation. After longer treatment they became very aggressive and they were apparently unable to cope with the demand of a new stressful situation.

TOLERANCE AND WITHDRAWAL

Tolerance following cannabis has been observed in mice, rats, pigeons, dogs and monkeys as well as in humans. A crossed tolerance exists between THC and cannabidiol, THC and diphenylhydantoin or phenobarbital, THC and ethanol, THC and morphine. A withdrawal syndrome can be obtained after 3–8 weeks in THC self-injected monkeys and in man after 10–21 days of chronic administration. THC diminishes an experimental withdrawal syndrome induced in rats but this effect is not reversed by naloxone. There is no cross-tolerance between THC and LSD or mescaline. In man, cutaneous sensitivity to pain is enhanced after THC and the reverse is observed for visceral pain.

EFFECTS IN EPILEPSY

THC can precipitate epileptic fits. In clinical trials cannabidiol showed anti-epileptic properties similar to diphenylhydantoin.

EFFECTS ON HUMAN EEG AND MEMORY

Electroencephalographic changes following small doses of THC have revealed quick shifts of vigilance between states of arousal and drowsiness. Subjects have presented body image changes together with visual hallucinations or states of "reverie" associated with intensely vivid imagery. At increasing doses, the psychodysleptic properties of cannabis are enhanced. The quantitative EEG profile of cannabis places it in a subgroup of "euphoriants" within the group of psychodysleptics such as morphinomimetics and hallucinogenic psychotropic drugs. Recall memory was also impaired. Acute and chronic cannabis intoxication is accompanied by abnormal brain function and behavior.

A DEBATE
ON THE LEGALIZATION OF MARIJUANA
FOR:
KEITH STROUP, NATIONAL ORGANIZATION FOR THE REFORM OF MARIJUANA LAWS
AGAINST:
SUE RUSCHE, DEKALB FAMILIES IN ACTION
EMORY UNIVERSITY, JANUARY 25, 1979

YOU HAVE COME HERE TONIGHT TO HEAR TWO SPEAKERS DEBATE WHETHER MARIJUANA OUGHT TO BE LEGAL. I OPPOSE LEGALIZATION BECAUSE I THINK MARIJUANA POSES A SERIOUS THREAT TO THE HEALTH OF ITS USERS, BECAUSE I AM ALARMED BY THE NUMBER OF CHILDREN AND TEENAGERS WHO HAVE BECOME CHRONIC USERS, AND BECAUSE I THINK THE EFFORT TO DECRIMINALIZE MARIJUANA HAS CREATED THE FALSE IMPRESSION THAT THE DRUG IS SAFE. MR. STROUP TAKES THE OPPOSITE VIEW. HIS ORGANIZATION, THE NATIONAL ORGANIZATION FOR THE REFORM OF MARIJUANA LAWS, RECENTLY CHANGED ITS POLICY FROM DECRIMINALIZATION TO LEGALIZATION. BECAUSE OF THIS SHIFT, IT SEEMS FAIR TO ASK IF LEGALIZATION IS WHAT NORML HAS HAD IN MIND ALL ALONG?

NORML BEGAN ITS CAMPAIGN TO REFORM MARIJUANA LAWS BY CORRECTLY POINTING OUT THE INEQUITIES BROUGHT ABOUT BY VARYING LAWS IN DIFFERENT STATES. OR COURSE IT WAS LUDICROUS TO JAIL A PERSON IN ONE STATE FOR POSSESSION OF A SMALL AMOUNT OF MARIJUANA WHEN A SIMILAR OFFENSE IN ANOTHER STATE WENT UNPUNISHED. REMOVING THE MARIJUANA SMOKER FROM THE CRIMINAL JUSTICE SYSTEM BECAME A CAUSE AROUND WHICH NORML RALLIED BOTH LIBERALS AND CONSERVATIVES ALIKE.

BUT NORML SPOKESMEN HAVE A TENDENCY TO SPEAK OUT OF BOTH SIDES OF THEIR MOUTHS. MR. STROUP, FOR INSTANCE, TOLD THE SELECT COMMITTEE ON NARCOTICS ABUSE AND CONTROL THAT "NORML IS A NONPROFIT, CITIZEN ACTION LOBBY WHOSE ONLY PURPOSE IS TO DECRIMINALIZE THE MARIJUANA SMOKER."[1] AT ABOUT THE SAME TIME, MR. STROUP TOLD A ROLLING STONE INTERVIEWER THAT "IT JUST DOESN'T MAKE SENSE TO HAVE DECRIMINALIZATION. DECRIMINALIZATION IS A CEASE-FIRE, A HALFWAY STEP....WHAT DECRIMINALIZATION IS SAYING POLITICALLY IS THIS: WE RECOGNIZE THAT MARIJUANA SMOKERS ARE NOT CRIMINALS AND SHOULDN'T BE TREATED LIKE CRIMINALS. AT THAT POINT, YOU HAVE REMOVED MORALITY FROM THE ISSUE. ONCE THE MORALITY'S REMOVED, IT'S GONNA BE A GROWTH INDUSTRY THAT'S GONNA BE TREATED LIKE TENNIS SHOES....YOU'RE GONNA SEE MARIJUANA GO MIDDLE CLASS. AND I MEAN MIDDLE CLASS....IT'S GONNA BE BOOM TOWN FOR AT LEAST ANOTHER TEN YEARS."[2]

WHILE MR. STROUP WAS TELLING CONGRESS THAT NORML "DOES NOT ADVOCATE THE USE OF MARIJUANA...AND FULLY SUPPORTS A DISCOURAGEMENT POLICY TOWARD THE RECREATIONAL USE OF ALL DRUGS,"[3] A NORML BOARD MEMBER, CHARLOTTE FAYE GREENBERG, PUBLISHER OF HEAD MAGAZINE, EDITORIALIZED AS FOLLOWS: "THE EFFORTS NOW UNDERWAY TO 'DECRIMINALIZE' THE PERSONAL POSSESSION OF SMALL AMOUNTS OF POT, WHILE AT THE SAME TIME LEAVING DEALERS AND OTHER DRUG USERS IN JAIL TO ROT, DON'T EVEN BEGIN TO DEAL WITH THE MOST SERIOUS THREAT TO OUR LIBERTIES OF THIS CENTURY...WE MUST RESPOND WITH AN ALL-OUT EFFORT OF OUR OWN TO LOBBY FOR THE ELIMINATION OF PRESENT CRIMINAL PENALTIES FOR THE POSSESSION, USE, DISTRIBUTION, OR SALE OF ANY SUBSTANCE."[4] MEANWHILE, THE DIRECTOR OF NORML, THAT ORGANIZATION THAT DOES NOT

ADVOCATE THE USE OF MARIJUANA, TOLD THE MIAMI HERALD, "THE REASON MOST PEOPLE SAY THEY SMOKE MARIJUANA, AND I'M REALLY NO DIFFERENT, IS FOR RELAXATION AND FUN. IT'S A RECREATIONAL DRUG, A SOCIAL LUBRICANT. THE MOST NATURAL THING IN MY LIFE IS TO LIGHT UP A JOINT AND PASS IT AROUND. IT'S LIKE, 'HAVE A DRINK OF MY SCOTCH AND I'LL HAVE A DRINK OF YOURS.'"[5]

IT WAS NOT TOO SURPRISING, THEREFORE, TO READ IN THE ATLANTA JOURNAL A FEW MONTHS AGO THAT NORML'S "OLD EUPHEMISM, DECRIMINALIZATION, IS TRASHED FOR GOOD. (ACCORDING TO MR. STROUP) 'IT'S TIME WE FINALLY TOOK THE HONEST STEP TO DECLARE TO THE WORLD: WE WANT LEGAL MARIJUANA....IT MAY HURT A LITTLE, BUT IT'S A PRICE WE HAVE TO PAY FOR INTELLECTUAL HONESTY'"[6] IN THE NAME OF INTELLECTUAL HONESTY, IT IS TIME TO CONSIDER A SECOND QUESTION: WHOSE INTERESTS DOES NORML REALLY REPRESENT? IS IT THE MARIJUANA SMOKER, AS NORML CLAIMS? OR IS IT PERHAPS THE PARAPHERNALIA AND DOPE TRADES WHOSE PROFITS INCREASE WITH EACH NEW DRUG USER? AN EXAMINATION OF NORML'S FINANCIAL SUPPORT MAY PROVIDE AN ANSWER.

MR. STROUP TOLD THE SELECT COMMITTEE THAT NORML'S 1976 BUDGET WAS ABOUT $300,000. $20,000 CAME FROM HIGH TIMES MAGAZINE, $40,000 FROM THE PLAYBOY FOUNDATION, AND THE REST FROM MEMBERSHIPS.[7] MR. ANDREW KOWAL, BOARD MEMBER OF NORML AND PUBLISHER OF HIGH TIMES MAGAZINE, STATED THAT HIGH TIMES "HAS BEEN REORGANIZED AND IS NOW OWNED BY A CHARITABLE TRUST SO PROFITS GO TO WORTHY CAUSES. NORML HAS BEEN NAMED BENEFACTOR OF 50% OF THE PROFITS."[8] IN 1976, HIGH

TIMES ASKED PARAPHERNALIA MANUFACTURERS IF THEY GAVE FINANCIAL SUPPORT TO THE DECRIMINALIZATION EFFORT. "'OUR COMPANY CONTRIBUTES MONEY TO NORML, BASED ON A PERCENTAGE OF OUR PROFITS' (LENWOOD STEPHENS, UBC GRAIN COMPANY, ONE OF THE COUNTRY'S LARGEST DISTRIBUTORS OF HEAD ITEMS) "'WE WERE THE FIRST TO DONATE TO NORML AS FAR AS THE MANUFACTURERS WERE CONCERNED." (BURT RUBIN, E-Z WIDER ROLLING PAPERS)"[9] MORE RECENTLY, HIGH TIMES REPORTED THAT THE PARAPHERNALIA INDUSTRY RAISED $67,600 FOR THE FIRST THREE MONTHS OF NORML'S 1978 BUDGET. CONTRIBUTIONS CAME FROM SARAH'S FAMILY, NALPAC, TOKE INTERNATIONAL, WODLET, LENTER ENTERPRISES, U.S. BONGS, EL DORADO, ADAMS APPLE DISTRIBUTING COMPANY (JOB AND BAMBU ROLLING PAPERS), E-Z WIDER, THAI POWER, AND HIGH TIMES.[10]

SO, NORML SAYS IT REPRESENTS YOU, THE MARIJUANA "CONSUMER," YET ACCEPTS FINANCIAL SUPPORT FROM THE PARAPHERNALIA INDUSTRY. THAT'S ABOUT LIKE RALPH NADER ACCEPTING MONEY FROM GENERAL MOTORS. HERE'S ANOTHER WAY TO PUT IT. WHERE DO YOU GET YOUR INFORMATION ABOUT THE MEDICAL EFFECTS OF SMOKING CIGARETTES? FROM THE TOBACCO INSTITUTE? OR THE SURGEON GENERAL? WHERE DO YOU GET YOUR INFORMATION ABOUT THE MEDICAL EFFECTS OF SMOKING POT? FROM NORML? AN ORGANIZATION THAT OFFICIALLY WARNS AGAINST DRIVING UNDER THE INFLUENCE OF MARIJUANA[11] YET ACCEPTS MONEY FROM AN INDUSTRY THAT SELLS DASHBOARD PIPES WHICH ENABLE A DRIVER AND HIS DATE TO GET STONED WHILE TOOLING DOWN THE FREEWAY? AN ORGANIZATION THAT CONSISTENTLY CLAIMS IT DISCOURAGES THE USE OF ALL RECREATIONAL DRUGS[12] YET ACCEPTS HALF THE PROFITS FROM THE LARGEST OF THE PRO-DOPE MAGAZINES AND PLACES ITS PUBLISHER AND THE PUBLISHERS OF OTHER PRO-DRUG MAGAZINES ON

ITS ADVISORY BOARD? AN ORGANIZATION THAT CLAIMS TO DISCOURAGE DRUG USE BY CHILDREN[13] YET ACCEPTS CONTRIBUTIONS FROM THE MAKERS OF MARIJUANA PIPES DISGUISED AS "STAR WARS" SPACE GUNS? COMIC BOOKS THAT TEACH HOW TO SMOKE DOPE AND SNORT COCAINE? THE WHOLE DRUG MANUFACTURERS CATALOGUE WHICH LISTS THE CHEMICAL FORMULA FOR ANGEL DUST AND TELLS KIDS HOW TO COMBINE CHEMICALS FOUND IN THE KITCHEN CUPBOARD FOR A SUPER HIGH? CHRISTMAS STOCKINGS FILLED WITH POT PARAPHERNALIA? DRUGS SUCH AS NITROUS OXIDE AND ISO-BUTYL NITRITE? "BABY TOKER" T-SHIRTS? CANDY "QUAALUDES"?

AS NORML HAS APPEARED BEFORE VARIOUS STATE LEGISLATURES TO ARGUE FOR DECRIMINALIZATION STATUTES, IT REPEATEDLY CLAIMS THAT DECRIMINALIZATION WILL NOT INCREASE USE. IT OFTEN POINTS TO TWO STUDIES CONDUCTED AFTER DECRIMINALIZATION IN OREGON AND CALIFORNIA WHICH SEEM TO BEAR THIS OUT. WHAT NORML DOES NOT MENTION IS THAT NEITHER STATE SURVEYED USAGE RATES AMONG JUVENILES. THE CALIFORNIA STUDY DID, HOWEVER, FIND THAT JUVENILE TRAFFICKING ARRESTS SINCE DECRIMINALIZATION HAVE INCREASED 23% AND THAT ARRESTS OF JUVENILES DRIVING UNDER THE INFLUENCE OF A DRUG INCREASED 71%.[14] TO INSIST THAT DECRIMINALIZATION DOES NOT INCREASE DRUG USAGE IS TO IGNORE THE STAGGERING RISE IN THE AMOUNT OF MARIJUANA BEING SMUGGLED INTO THIS COUNTRY. 80% OF THE NATION'S HIGH SCHOOL STUDENTS TOLD A RECENT GALLUP POLL THAT MARIJUANA WAS EASY TO GET. 60% OF THE JUNIOR HIGH SCHOOL CHILDREN AGREED.[15] THE U.S. DEPARTMENT OF COMMERCE ESTIMATES THAT MARIJUANA TRAFFICKING AMOUNTS TO $48 BILLION DOLLARS. IT HAS BECOME THE NATION'S THIRD LARGEST BUSINESS, EXCEEDED ONLY BY EXXON AND GENERAL MOTORS. AMERICAN USERS SMOKE

12 TONS A DAY.[16] THE DOLLAR AMOUNT OF MARIJUANA COMING INTO GEORGIA EXCEEDS OUR STATE BUDGET.[17] MARIJUANA HAS BECOME FLORIDA'S LARGEST RETAIL BUSINESS.[18] THE NUMBER OF POUNDS OF MARIJUANA SEIZED BY U.S. AUTHORITIES HAS RISEN TEN-FOLD OVER THE LAST FIVE YEARS---FROM ½ MILLION POUNDS IN 1973 TO 5 MILLION POUNDS IN 1978.[19]

USAGE RATES AMONG THE NATION'S CHILDREN AND TEENAGERS MORE THAN DOUBLED OVER THAT SAME FIVE-YEAR PERIOD (FROM 12% TO 28%).[20] NINE PERCENT OF ALL HIGH SCHOOL SENIORS SMOKE POT EVERY DAY---NEARLY DOUBLE THE NUMBER WHO DID JUST THREE YEARS AGO. THE ONLY DECREASE SEEN IN ANY OF THESE FIGURES IS A DROP IN THE NUMBER OF KIDS (HIGH SCHOOL SENIORS) WHO THINK MARIJUANA IS DANGEROUS---DOWN FROM 43% TO 36%.[21] THE TRAGEDY BEHIND THE STATISTICS IS THAT THIS AGE GROUP---THE 12 TO 17 YEAR OLDS---IS MOST VULNERABLE TO THE ADVERSE EFFECTS OF MARIJUANA.

WHAT YOU SHOULD REALIZE ABOUT MARIJUANA RESEARCH IS THAT IT IS IN ITS INFANCY. THE ACTIVE INGREDIENTS IN THE DRUG WERE FIRST IDENTIFIED JUST FIFTEEN YEARS AGO. SO FAR, SCIENTISTS HAVE IDENTIFIED SOME 300 CHEMICALS IN MARIJUANA. (ALCOHOL HAS ONE.) SIXTY OF THESE CHEMICALS ARE FOUND EXCLUSIVELY IN THE CANNABIS PLANT. ALL MARIJUANA RESEARCH DONE SO FAR HAS BEEN CONDUCTED ON ADULT HUMAN MALES OR ON ANIMALS. UNTIL QUITE RECENTLY, ETHICAL CONSTRAINTS FORBADE RESEARCH ON WOMEN AND CHILDREN.

ONE OF THE FOUR PSYCHOACTIVE INGREDIENTS IN MARIJUANA IS DELTA-9 TETRAHYDROCANNABINOL (THC). THIS IS A FAT SOLUBLE CHEMICAL. IF

YOU GO HOME TONIGHT AND DRINK A BEER, THE ALCOHOL IN THAT BEER WILL BE METABOLIZED OUT OF YOUR SYSTEM BY TOMORROW NIGHT. IF YOU SMOKE A JOINT TONIGHT, 30% OF THE THC FROM THAT JOINT WILL STILL BE IN YOUR SYSTEM A WEEK FROM NOW. IT WILL TAKE A MONTH FOR ALL THE THC FROM THAT ONE JOINT TO LEAVE YOUR BODY. THC, WHICH IS ABSORBED INTO THE BRAIN, THE REPRODUCTIVE ORGANS AND OTHER VITAL ORGANS, THUS ACCUMULATES FOR A LONG PERIOD OF TIME IN DIRECT PROPORTION TO THE NUMBER OF JOINTS SMOKED. DOCTORS, GRAVELY CONCERNED BY THESE FINDINGS, CANNOT YET TELL US WHAT THEY MEAN. YOU SHOULD ALSO REALIZE THAT MOST OF THE RESEARCH CONDUCTED SO FAR HAS USED MARIJUANA WITH LOW LEVELS OF THC. THC IN MARIJUANA AVAILABLE TODAY IS EIGHT TO TEN TIMES STRONGER THAN JUST FOUR YEARS AGO.

EDWIN NEWMAN EXAMINED THE EFFECTS OF CHRONIC MARIJUANA SMOKING ON YOUNG PEOPLE IN AN NBC-TV DOCUMENTARY CALLED "READING, WRITING AND REEFER." HE EXPLAINED THAT WHEN MARIJUANA ENTERS YOUR LUNGS, THE THC CIRCULATES THROUGHOUT YOUR BODY. YOUR THOUGHT PROCESSES ARE CHEMICALLY ALTERED AND YOUR HEART BEAT INCREASES. HEAVY MARIJUANA SMOKERS TEND TO DEVELOP A TOLERANCE, WHICH MEANS THEY NEED TO SMOKE MORE OR STRONGER MARIJUANA TO FEEL HIGH. SOME DOCTORS HAVE EXPRESSED CONCERN THAT CHRONIC MARIJUANA USE CAN INTERFERE WITH THE PSYCHOLOGICAL GROWTH OF YOUNG PEOPLE AND THAT SOME MENTAL IMPAIRMENT CAN TAKE PLACE WHICH IS NOT COMPLETELY REVERSIBLE. MARIJUANA SMOKE CONTAINS MORE CARCINOGENS THAN TOBACCO SMOKE. NBC REPORTED THAT 5 MARIJUANA CIGARETTES HAVE THE SAME EFFECT ON THE LUNGS AS 112 TOBACCO CIGARETTES. IN FACT, THE NEGATIVE EFFECT OF MARIJUANA ON THE LUNGS INCREASES WHEN IT IS USED IN COMBINATION WITH TOBACCO.

MARIJUANA IS AN INTOXICANT. IT IMPAIRS A DRIVER'S PERCEPTION, CONCENTRATION, REACTION TIME, AND OVERALL DRIVING SKILL. THE DRIVER'S ABILITY DECREASES IN PROPORTION TO THE AMOUNT OF MARIJUANA HE SMOKES. THIS IMPAIRMENT PERSISTS SEVERAL HOURS AFTER THE "HIGH" DISAPPEARS. FIFTEEN PERCENT OF THE NATION'S AUTO FATALITIES ARE DUE TO MARIJUANA INTOXICATION, ACCORDING TO DR. ROBERT DU PONT, FORMER DIRECTOR OF THE NATIONAL INSTITUTE ON DRUG ABUSE. A GALLUP YOUTH POLL TAKEN LAST NOVEMBER FOUND THAT 1 IN 8 TEENAGERS HAVE DRIVEN WHILE HIGH ON MARIJUANA.[22] WHEN MARIJUANA IS COMBINED WITH ALCOHOL, A CROSS TOLERANCE CAN TAKE PLACE WHICH CAN RESULT IN ACUTE ALCOHOL POISONING. IN 1978, THE AMERICAN MEDICAL ASSOCIATION'S HOUSE OF DELEGATES, CITING "CONVINCING EVIDENCE OF HEALTH HAZARDS TO CERTAIN PERSONS" WARNED AGAINST MARIJUANA USE BY CHILDREN, PREGNANT WOMEN, HEART PATIENTS, AND THE EMOTIONALLY UNSTABLE.[23]

FINALLY, YOU MIGHT WANT TO READ ABOUT A CONFERENCE WHICH WAS HELD LAST SUMMER IN RHEIMS, FRANCE, WHERE SCIENTISTS FROM AROUND THE WORLD PRESENTED THEIR FINDINGS ON MARIJUANA. GRAVE CONCERN WAS EXPRESSED ABOUT THE EFFECT OF MARIJUANA ON THE DEVELOPING REPRODUCTIVE SYSTEMS OF TEENAGERS. FEMALE RHESUS MONKEYS GIVEN THE HUMAN EQUIVALENT OF ONE TO THREE JOINTS A DAY DURING THEIR MATING SEASON LOST FORTY-FOUR PERCENT OF THEIR BABIES. WHEN THE THC CONTENT WAS DOUBLED, THE BIRTH LOSS DOUBLED. MARIJUANA WAS FOUND TO HAVE AN EMBRYOCIDAL, OR FETUS-KILLING, EFFECT IN MICE, RATS AND RABBITS. LOW-DOSE THC INJECTIONS PRODUCED A FIFTY-PERCENT REDUCTION IN FULL-TERM PREGNANCIES; HIGH-DOSE THC A NINTY PERCENT REDUCTION. NURSING FEMALE MICE INJECTED WITH THC STOPPED LACTATING AND THEIR OFFSPRING

STARVED TO DEATH. STUDIES OF HUMAN MALES SMOKING FIVE TO TEN JOINTS A DAY SHOWED A MARKED DECREASE IN THEIR SPERM COUNT AND A MARKED INCREASE IN THE FORMATION OF ABNORMAL SPERM. A BREAKDOWN IN THE IMMUNITY SYSTEMS OF THE ANIMALS UNDER STUDY WAS ALSO NOTED. STRUCTURAL CHANGES WERE DOCUMENTED IN MONKEYS'BRAINS. THERE WERE REPORTS OF EVIDENCE THAT MARIJUANA MAY INTERFERE WITH THE PRODUCTION OF DNA, THE CHEMICAL THAT CARRIES THE GENETIC CODE.[24]

BEFORE YOU DECIDE WHETHER YOU THINK MARIJUANA SHOULD BE LEGAL, YOU MIGHT CONSIDER THESE THOUGHTS FROM A PSYCHIATRIST WORKING IN DRUG REHABILITATION: "IT IS IMPORTANT TO REMEMBER THAT LEGISLATION IS A FORM OF EDUCATION, AND THAT WHEN A LEGISLATURE DECRIMINALIZES, AND IN FACT LEGALIZES MARIJUANA, IT ALSO MAKES THE VERY POWERFUL EDUCATIONAL STATEMENT, 'MARIJUANA IS NOT A VERY BAD DRUG.' ONCE THIS HAPPENS, IT'S ALMOST IMPOSSIBLE TO REVERSE LOCAL OPINION. WE'RE HAVING ENOUGH TROUBLE REVERSING OURSELVES ON CIGARETTES AND LIQUOR. WE SHOULD THINK LONG AND HARD ABOUT LEGALLY MAKING MARIJUANA ANYTHING BUT A HARMFUL DRUG."

NOTES

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2 Abe Peck, "The Rolling Paper Revue," Rolling Stone, January 27, 1977, p. 43.

3 Hearings, p. 334.

4 Charlotte Faye Greenberg, Editorial, Head Magazine, April, 1978, p. 8.

5 Paul Hendrickson, "Mr. Marijuana," The Miami Herald, April 23, 1978.

6 Brenda Bell, "Cat Out of the Baggie....NORML Wants Legal Pot," The Atlanta Journal Constitution, December 29, 1978.

7 Hearings, p. 394.

8 "U.S. Has More Press Freedom Than Canada: High Times ed.," The Journal, February 1, 1977, p. 2.

9 "The Paraphernalia Game: Where Times of No Dope are Times of No Money," High Times Symposium, High Times Magazine, May, 1976, p. 19-25.

10 "Paraphernalia Moguls Give 67G's to NORML," High Times Magazine, June, 1978, p. 26.

11 "Official NORML Policy 1978." A NORML publication which contains "...Statements of Official Policy...adopted at the 1977 Annual Meeting of the NORML National Policy Committee, consisting of the Board of Directors, Executive Committee, Advisory Board, and State and Regional Coordinators, Washington D.C., December 8, 1977.

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14 "A First Report of the Impact of California's New Marijuana Laws (SB 95)," Health and Welfare Agency, State Office of Narcotics and Drug Abuse, January, 1977, p. 7-8.

15 Edwin Newman, "Reading Writing and Reefer," NBC-TV, December 10, 1978.

16 Charles Seabrook, "Bourne Says Pot is No. 3 Industry Behind Exxon, GM," The Atlanta Journal Constitution, December 3, 1978.

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24 Peggy Mann, "The Case Against Marijuana Smoking," The Washington Post, July 30, 1978.

NEW MEDICAL FINDINGS

THE CASE AGAINST MARIJUANA

Pot use among young people has soared to what the National Institute on Druge Abuse (NIDA) terms "epidemic proportions." FAMILY CIRCLE printed the story of how one mother dealt with the legal and emotional problems of her children's smoking pot in our November 20, 1978, issue. For young people and parents faced with a similar decision, here is frightening medical evidence of the real health dangers of pot. By PEGGY MANN

Pot is *not* harmless. During the past three years startling new medical evidence of the dangers of marijuana has surfaced, and the warning signals are loud and clear. Marijuana can affect the lungs and pulmonary system, the reproductive system, the genes and chromosomes, the white blood cells and certain areas of the brain. It also has damaging psychological effects.

Yet most pot smokers who hear of such findings tend to put them down. A frequent comment: "Well, it doesn't hurt *me*." Others also often quote the reassuring results of early superficial studies that did not use the necessary sophisticated methodology to analyze body cells for evidence of marijuana damage. Or, they quote from the same handful of "pro-pot" doctors who continue to rate marijuana as "harmless." Or, they quote out of context — and consequently *mis*quote — such authorities as Dr. Robert L. DuPont, former director of the National Institute on Drug Abuse, who has stated for this article:

"While Americans were debating the question of criminal penalties for marijuana possession, the real tragedy has overtaken us almost unnoticed: the alarming levels of very high marijuana use among our young people. For all practical purposes, decriminalization took place several years ago, and nowhere in this country are more than a handful of people in prison because of marijuana possession. The real issue is the *health danger posed by this epidemic*, danger of at least two kinds. One is the *effects* of the intoxication, ranging from the hazardous impact on driving to caring less about everything. The other area is purely physical. Here the concerns range from the regular occurrence of chronic bronchitis among marijuana smokers to the very real possibilities of harmful hormonal effects, effects on the immune system and possibly even cancer."

Everyone has the right to know what marijuana can do to them. Once they have the accurate, up-to-date unpoliticized scientific information, they will be better able to make the decision — which only they can make — whether or not they will smoke pot.

At an international symposium on marijuana held last July in Rheims, France, 41 scientists from 13 countries revealed many of the latest findings. The two-day conference was limited to three areas: damage to cells, to the brain and to the reproductive system and sexual function. Other recent reports supplement these findings.

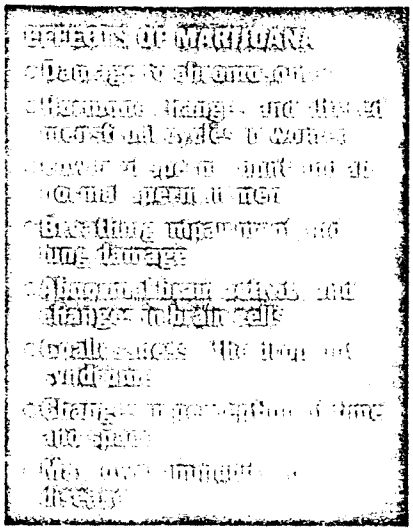
Reproduction — female: In November 1978, Dr. Joan E. Bauman and Dr. Robert C. Kolodny of the Reproductive Biology Research Foundation in St. Louis reported their new study on human females. The women had smoked pot for at least six months prior to the study, ranging from three times a week to daily. The researchers found that 38.3% of the women who smoked pot had defective menstrual cycles, compared to 12.5% in a control group of non-smokers.

Bauman and Kolodny also detected "statistically and consistently higher testosterone levels in the groups that used marijuana." Testosterone is the chief male sex hormone. However, it is also found in *lower* levels in all normal human females. The fact that the testosterone level is raised in females by marijuana smoking can lead to hirsutism (excessive facial and body hair).

There were also significantly lower prolactin levels in the marijuana users. Prolactin is a hormone involved in milk production of a nursing mother. It is also thought to have other effects on the reproductive system.

All the subjects in this study were ages 18 through 30. Said Dr. Bauman: "We are particularly worried about what marijuana might be doing to the adolescent female. Any of the effects might potentially be even stronger before the body's endocrine regulatory systems have matured."

This alarm is backed up by the striking results of long-term studies on the rhesus monkey (which has a reproductive and hormonal system very similar to humans) reported at the Rheims symposium by Dr. Ethel Sassenrath and Dr. Loring Chapman of the department of behavioral biology at the University of California School of Medicine at Davis. For six years, the monkeys were given daily the human equivalent of one to two



PEGGY MANN has written 30 books and is currently working on two on the hazards of marijuana — one for young readers.

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"joints" containing 1% delta-9-THC. Much of the pot smoked in the U.S. today has a THC content ranging from .01% to over 6%. (Of the 57 known components of marijuana, delta-9-THC is the strongest of the three psychoactive, or mind-altering, ones.)

Forty-four percent of the pregnant monkeys did not produce healthy living offspring as compared to 12% of the control group of monkeys, which had not received THC. The THC mothers lost their offspring at various stages, from early abortion to stillbirth and newborn death.

In a subsequent evaluation (completed in November 1978) it was found that in *each* of the THC babies that died, there was some abnormality which showed up only in microscopic evaluation of tissues by the pathologist. There were no such defects found in the control babies.

Reproduction — Male: Six scientists at the Rheims conference reported on marijuana's effect on the chief male sex hormone, testosterone, and on sperm. Pot markedly decreased sperm count in animals and humans; there also was a marked increase in abnormal sperm. Scientists labeled the deformed sperm as having "banana-shaped heads, formless heads, broken hooks." Major chromosome changes and chromosome breaks were also indicated.

A study conducted by Dr. Arthur Zimmerman of Toronto showed a threefold increase in abnormal sperm in mice given THC and a fivefold increase in abnormal sperm in mice given CBN, one of the non-psychoactive components of marijuana.

Lungs: In October 1978, Dr. Donald T. Tashkin, a specialist in pulmonary medicine at the UCLA School of Medicine, completed breathing function tests on 74 marijuana smokers (ages 21 to 33) who had smoked an average of five joints a week for five years. Each was closely matched by computer selection with a non-smoker of the same age, height, occupation, health history, place of residence and so on, as well as tobacco-smoking history. Said Dr. Tashkin: "We found a 25% increased airway resistance among the marijuana smokers compared to the ones who didn't smoke marijuana. Airflow obstruction means you can't get as much air in or out. This was an abnormality that did not occur in heavy *tobacco* smokers. If one smokes one joint a day, one is likely to develop some airway resistance which one would not develop from smoking 16 tobacco cigarettes a day."

Dr. Cecile Leuchtenberger of the Swiss Institute for Experimental Cancer Research at Lausanne, who testified to the U.S. Senate Committee on the health hazards of marijuana in 1974, has studied over 5,000 animal and human lung-cell cultures exposed to puffs of smoke from a marijuana cigarette and from a tobacco cigarette. She concluded her detailed report: "It thus appears that fresh smoke from marijuana cigarettes is harmful to lung cells in that it contributes to the development of premalignant and malignant lesions. The smoke from the tobacco cigarette had much less effect."

Further lung research has raised other flags of warning. For one, a study by Harvard's Dr. Gary Huber showed that marijuana smoke, with or without THC, reduced the capacity of lung macrophages to kill bacteria.

The Brain: People use pot because of its mind-altering properties; this is, generally speaking, a short-term effect on the brain. As to its possible long-term effects — actual physical damage to brain tissue — the clearest and most frightening evidence to date was presented at Rheims (and in earlier reports) by Dr. Robert Heath, chairman of the department of psychiatry and neurology at Tulane Medical School, New Orleans, who in 1973 started his marijuana research on the actual areas of the brain that were related to reactions and emotions. He implanted electrodes in specific brain sites of rhesus monkeys exposed to the human equivalents of one to three joints a day at 1% to 2% THC. According to Heath, the deep-planted electrodes showed "bursts of abnormal electrical activity in the septal area of the brain — a focal point for pleasure, and also in the hippocampus and amydala, sites of such negative emotions as irritability and fear."

More recently, Dr. Heath exposed monkeys to the human equivalent of one marijuana cigarette a day at 2.5% THC, five days a week for three months. Electron microscope pictures of brain areas showed structural changes in the brain cells of the monkeys that were exposed to marijuana; these visible changes occurred in the very sites that had previously been identified by the deep-planted electrodes.

Why should marijuana affect the brain? One reason may be that, unlike alcohol, it is fat soluble. It enters the bloodstream and is then quickly soaked up by fatty cells. One of the chief fatty organs of the body is the brain.

It takes at least three days to get rid of just half the THC of one joint, and many more days for the body to be rid of it completely. If another joint is smoked during that time, the residue, including THC, accumulates, and the body is not drug-free.

Psychological effects: Among the earliest warnings about marijuana were those from psychologists and psychiatrists who were in daily contact with large numbers of students. Dr. Harvey Powelson was in touch with the case histories of thousands of students as director of the psychiatric department of the student-health service at the University of California, Berkeley. He saw many of them directly and knew about others through their therapists. He saw the same psychological symptoms occurring with astounding similarity in pot smokers. He calls pot "our most dangerous drug because of its nationwide prevalence and because people use it thinking nothing bad is happening to them. By the time it does psychological harm, the pot smoker's ability to judge that harm is impaired to such an extent that he rejects the evidence that is obvious to everyone else."

One of the symptoms noted by Powelson is the so-called "amotivational" or "dropout" syndrome, which psychiatrists Dr. Harold Kolansky and Dr. William T. Moore of the University of Pennsylvania term "goallessness." These two doctors studied the psychological effects of marijuana in 51 people who had smoked three or more times a week for many months. They reported: "all subjects clearly demonstrated an early diminution in self-awareness and judgment, along with slowed thinking and shorter span in concentration and attention. We also found a gradual development of 'goallessness,' blunted emotions, a counterfeit impression of calm and well-being and a prevailing illusion of recently developed insight and emotional maturity. Many demonstrated difficulty in depth perception and an alteration in the sense of time, both of which are particulary hazardous during automobile driving."

All these symptoms disappeared within three months to a year after marijuana use had been stopped.

Genes and chromosomes: Marijuana's effect on cell functions could prove to be the most damaging finding of all. One of the pioneers in marijuana research, Dr. Gabriel Nahas of Columbia University, and President of the International Medical Council on Drug Use, reported that THC lowered the rate of cell division by diminishing the cell's ability to make DNA, RNA and essential proteins. (DNA is the all-important genetic material of a cell. RNA controls gene "expression.") Effects of this kind could influence the immune system as well as the sperm and many of the other physiological processes described above. Nahas' DNA/RNA finding was subsequently replicated by scientists in 12 major research centers here and abroad. The mechanism by which marijuana produces these changes was discussed at the Rheims Symposium. A number of other scienists have reported chromosomal abnormalities related to marijuana use.

Therefore, the marijuana smoker may not only be damaging his own mind and body, but may, in effect, be playing "genetic roulette" with unborn generations. ■

The Case Against Marijuana

By Peggy Mann

"I get a very sick feeling in the pit of my stomach when I hear talk about marijuana being safe. Marijuana is a very powerful agent which is affecting the body in very many ways. What the full range of these consequences is going to prove to be, one can only guess at this point. But from what we already know, I have no doubt that they are going to be horrendous."

— Dr. Robert L. DuPont, former director, National Institute on Drug Abuse

REIMS, France — "The full range of these consequences" is now starting to come clear. At the medical school of this historic city last weekend, 41 scientists from 13 nations presented new research findings linking the use of marijuana with harmful effects on human reproduction, the brain and other body cells, including the lungs.

Because previous findings had been disputed on the ground that the research dosages were artificially high, the Reims conference organizers had insisted that in all the experiments reported, "the dose must be relevant to what human beings are actually smoking," as Dr. Monique Braude put it in her opening remarks. Dr. Braude, one of the conference's four organizers, heads the pre-clinical pharmacology branch of the National Institute on Drug Abuse (NIDA) in Rockville, which paid for travel expenses of some of the American participants.

Under a NIDA contract, the University of Mississippi School of Pharmacy — in a huge, closely guarded compound — produces a number of standard grades of cannabis indigenous to various parts of the world. (Cannabis is the Latin name of the plant from which marijuana and hashish are prepared.) Only since 1970 have researchers throughout the world been able to use this "NIDA marijuana" in which the exact cannabinoid content is listed. Cannabis has some 56 known cannabinoids (substances unique in nature which can be found only in the cannabis plant). Of these, Delta 9-THC and at least three others are psychoactive.

In addition to the precisely labeled product, marijuana researchers now have at their disposal new and detailed methodological procedures for precisely determining the nature and amount of each of the components as the cannabinoids are traced in blood plasma, urine and tissue samples. (Indeed, five more new procedures were detailed at the symposium.)

A recent NIDA-funded study of U.S. marijuana use gave further immediacy and importance to the work of the scientists at the symposium. One in 11 high school seniors in the United States smoke marijuana daily (as compared to 1 in 17 in 1975). During the month preceding the survey, 29 percent of 16-to-17-year-olds had smoked pot; 15 percent of 14-to-15-year-olds, and 4 percent of 12-to-13-year-olds. Among these youths, regular marijuana use exceeded regular alcohol use. The survey was a random sampling of every state except Alaska and Hawaii. It included all ethnic and income groups, with use growing at a greater rate among whites than other races.

The Pregnant Monkeys

I CAME to Reims from Paris with Dr. Ethel Sassenrath, who has been doing intensive and original research in this area for three years. She works with monkeys at the primate center of the University of California Medical School at Davis. Her studies were with rhesus monkeys, since this breed metabolizes marijuana in a way very similar to man.

Six years ago, Dr. Sassenrath, a warm and attractive woman in her early 50s, began a study of the behavioral effects of chronic pot smoking. Her primates were given (in their favorite brand of cookie) the Delta 9-THC equivalent of one to three "good" reefers a day (containing 2 percent THC).

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This article summarizes many of the most significant findings presented by world renowned scientists at the International Symposium on Marijuana held in Reims, France, July 22 and 23, 1978. Peggy Mann, the author of 30 books, is now working on two books on the dangers of marijuana.

Eventually, two of the THC mothers became pregnant. One of the infants died with *hydroencephalus* (water on the brain) which, Dr. Sassenrath says, is a very rare condition in a monkey colony. The other infant, who was named Mylo, was extremely hyperactive compared to the babies born at the same time to control mothers. He played harder, slept less and was more aggressive than his baby peers. Also, as in the hyperkinetic human child, he showed a marked inability to concentrate when compared to the babies born at the same time from nondrugged mothers or fathers.

As more "THC females" became pregnant, Dr. Sassenrath received a further grant and the project now changed its focus. Were Mylo and the dead THC baby merely unhappy coincidences? Or did long-term daily use of THC affect reproduction?

Dr. Sassenrath reported the results of that three-year study at the symposium. Of all the pregnancies of THC-treated mothers who had been given the human equivalent of 1 to 3 reefers a day, 44 percent did not result in healthy, living offspring. The mothers lost the baby during pregnancy by resorption, abortion or stillbirth, or by infant death soon after birth. (In comparison, the control group of undrugged monkey mothers had a 12 percent birth loss.)

During one mating period the THC level was doubled. Result: The birth loss doubled. Dr. Sassenrath had to go back to the lower dose in order to have enough living offspring to study.

What of the infants which survived? Had Mylo been an unusual case? "They all appeared physically normal," said Dr. Sassenrath, "though they had a lower birth weight than the control babies. But most of them — like Mylo — seemed to show excessive activity and over-responsiveness to their environment."

A Fetus-Killing Effect

DR. HARRIS ROSENCRANTZ of the EG&G Mason Research Institute in Worcester, Mass., has been a pioneer in marijuana research. In carefully controlled studies on pregnant rats and mice, he established that marijuana smoking and THC given orally have an embryocidal (fetus-killing) effect. At high doses, entire litters were reabsorbed. When the dose was lowered, the litters were smaller in number and lower in birth weight, though they did not have any visible abnormalities.

Dr. Rosencrantz's results were replicated by biochemist George Fujimoto of Albert Einstein College of Medicine in New York. "Low-dose THC and marijuana extract-treated rodents showed a 50 percent reduction in full-term pregnancy; high-dose, 90 percent reduction. Nonpregnant rodents treated with THC showed marked decreases in uterine and ovarian weights." This reflects a shrinkage of these organs under the influence of the drug.

Similar results on rabbits were reported by Dr. David Cozens from Huntingdom Laboratories in England.

The conclusion of this panel, reported by Prof. H. Tuchmann-Duplessis of Paris University, a world expert in birth defects, was that marijuana, though not teratogenic (producing deformed babies), was embryocidal.

The work of these doctors was related to the long-term pot smoker, but Dr. Carol Grace Smith's short-term studies on rhesus monkeys could be applied to the occasional or weekend pot smoker.

Dr. Smith, from the Uniformed Services Medical School in Bethesda, is the research director of a project relating to all aspects of the hormonal control of the menstrual cycle. The rhesus monkey has a reproductive system very similar to the human being, with a 28-day menstrual cycle. Its hormonal control also is very similar to the human being. Since the Food and Drug Administration has, until recently, forbidden controlled marijuana studies on women, the rhesus monkey has been used as an excellent "understudy."

Dr. Smith found that a single injection of THC, the equivalent of one "street joint," will lower, for several hours, two basic hormones (LH and FSH) which control the function of the ovary. In another study she showed that daily injections of THC, starting when the menstrual cycle begins, will result in the absence of ovulation in the following menstrual cycle. All the control monkeys did ovulate.

But her finding should not induce pot smokers to try THC as a contraceptive. Dr. Smith points out that "our studies also show THC's direct effect on the reproductive system may cause disruption of gonadal function. And we're extremely concerned about the effects of the drug on the developing reproductive system of female teenagers. This phase of development is particularly vulnerable to disruption by drugs."

How much THC does it take to inhibit sex hormones? "As little as one to two joints a day," she said.

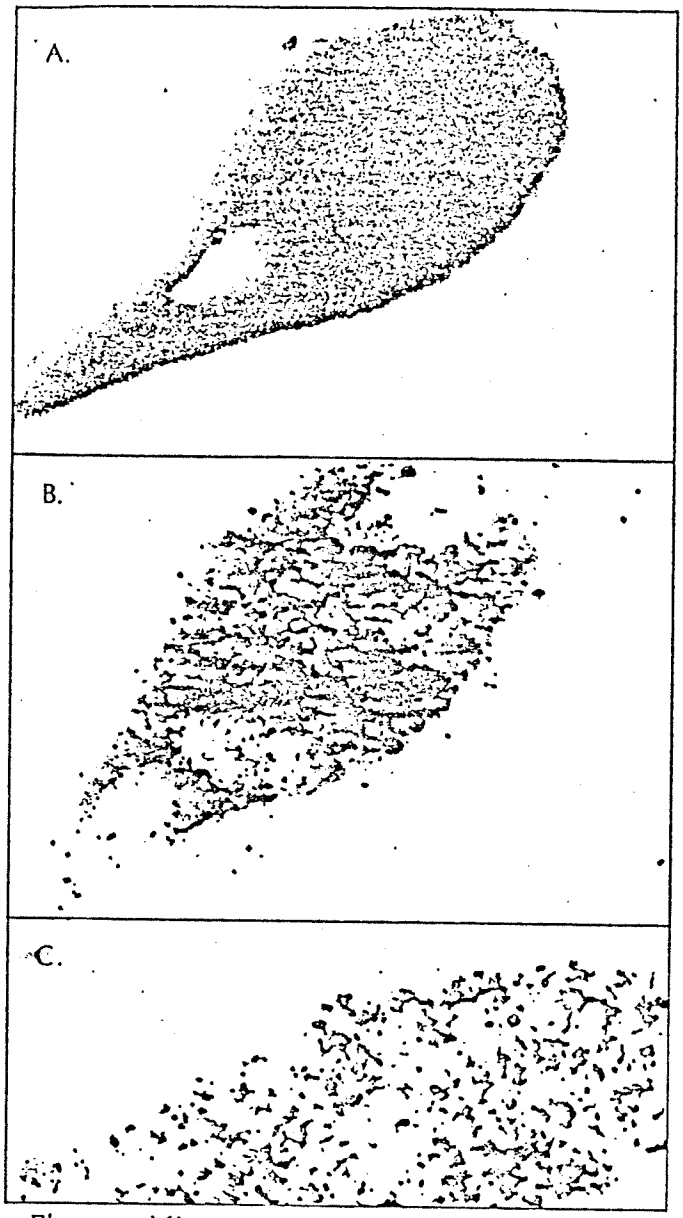
How long does the effect of these joints last? "As long as two days. The acute effects are reversible, for the occasional or weekend smoker who stops. The chronic, long-term hormonal effects — we don't know yet."

Less Mother's Milk *replicated*

DR. JOSEL SZEPSENWOL of Miami reported injecting female mice (from a few days after their birth through maturity) with the human equivalent of one to two joints a week. In one strain of mice the THC completely stopped lactation — so that all the babies died of starvation, except those which were taken from the mothers and nursed by lactating control mothers. Those babies lived. (In other strains, lactation was inhibited, though not stopped completely.)

That evening at dinner I sat between Dr. Szepsenwol and Dr. W.D.M. Paton of Oxford University, one of the world's leading pharmacologists and former chairman of the Committee on Drug Dependence of the British Medical Research Council. Dr. Paton told us that one of his graduate students, Dr. June Raine, had just replicated Dr. Szepsenwol's findings about lactation. "She first tried to milk the mice by hand," Dr. Paton reported. "It didn't work. So she invented a mouse-milking machine — like a teeny breast pump. Terribly good, you know."

Six scientists reported on pot's effects on sperm and testosterone levels (the male sex hormone). Dr. Wylie Hembree of Columbia University recruited 16 young male chronic pot smokers and put them in the hospital for three months. The first month they went potless. But the following month they were told to smoke all the carefully measured "NIDA joints" they wished (2 percent THC). And they smoked 5 to 20 a day. Then followed another smokeless month. Sperm analyses were performed throughout the hospital stay. At the end of the period there was a marked decrease in sperm count, mobility of sperm was decreased, and a marked increase in ab-



Electron Microscope Pictures of Spermatozoa
A. Spermatozoa from a control subject.
B. and C. Spermatozoa from chronic hashish users in Athens, Greece.

Spermatozoa from hashish users show a decreased amount of essential proteinaceous substances. (From the work of Stefanis and Issidorides, 1976.[72] See p. 54)

normal forms of sperm was recorded. Such changes — reversible when pot was discontinued — occurred without any alterations in the male hormone testosterone. However, testosterone levels were measured before the subject started his daily smoking.

Dr. Monroe Wall, from North Carolina's Research Triangle, then reported that the ups and downs of the testosterone level depend on when the sample is taken. In order to register a drop, the level must be measured shortly after the subject has started smoking. Thus the five-year-old "testosterone controversy" was finally clarified at Reims.

Dr. Jack Harclerode, of Lewisburg, Pa., and Dr. A. Jacubovic of Vancouver each showed the different mechanisms by which cannabis inhibits the production of the male sex hormone in rodents. Dr. Hosea Huang of New York showed the abnormal appearance of the tubes of the testes where fat sperm is formed. Dr. Fujimoto showed shrinkage of the prostate and seminal vesicles (fluid-filled sacs) in rodents given THC by mouth.

And Dr. Arthur Zimmerman of Toronto injected one group of mice with THC, and another group with CBN, a cannabis product which is not psychoactive. Thirty-five days later he observed a threefold increase in abnormal forms of sperm in animals treated with THC, and a fivefold increase in those treated with the nonactive cannabinoid, CBN. This confirmed previous studies showing that the nonpsychoactive byproducts of cannabis can be even more toxic to cells than THC.

Dr. Marietta Issidorides, research professor in neurobiology at the University of Athens, conducted studies on the cells of chronic hashish users. The drug interfered with protein substances essential for the normal development of sperm, and it altered the metabolism of sperm cells, "thus possibly affecting expression of the genetic material."

When the last speaker on reproduction had left the podium, there was little doubt here that the detrimental effects of marijuana smoking on the reproductive function of men and women had been firmly established.

Lung Lesions and Brain Changes

SINCE THE LUNG is the point of entry of marijuana into the body it is obviously in this organ that the drug reaches its highest concentration.

Dr. Harris Rosencrantz studied lung tissue from groups of rats exposed to the human equivalent of one to six joints a day. No lung damage was noted for the first two months. But exposure from three months to a year resulted in significant tissue breakdown. Some of the deepest air passageways had become blocked with tissue debris, including cholesterol, a substance resulting from cell destruction. These lesions were observed one month after the marijuana exposure had stopped, indicating they were not readily reversible.

A similar study was performed on rats exposed to marijuana smoke by Dr. Gary Huber of Harvard Medical School. He showed slides illustrating how cannabis smoke impairs the ability of pulmonary macrophages to destroy bacteria. (Macrophages are cells of the immunity system which line the airways of the lung in order to protect them against infection.)

The man who has done most work on marijuana and the brain is Dr. Robert Heath, chairman of the department of psychiatry and neurology at Tulane Medical Center in New Orleans. Dr. Heath showed the symposium two startling slides of the synaptic cleft (nerve junction) of a brain cell in the septal area, magnified 30,000 times. One picture came from the brain of a monkey exposed to the human equivalent of one marijuana cigarette a day, five days a week, for three months. The other was from the same brain area of a control monkey.

Using a pointer, Dr. Heath identified three distinct structural changes in the brain cells of the pot-smoked monkey:

1. The synaptic cleft had widened in a significant manner. This causes a slowing down in transmission of nerve impulses, and may impair some brain processes.

2. Synaptic vesicles were clumped. "This," said Dr. Heath, "occurs when there are very early changes of pathology of the brain. You see it with early brain damage."

3. "There was a significant increase in inclusion bodies in the nuclei — a structural abnormality which is not normally present."

"The conclusion," said Dr. Heath, "is that there are structural changes in the brain of the marijuana-smoked monkeys at the sites where activity has been correlated with emotion and behavior."

Dr. Heath was followed by Dr. Loring Chapman, chairman of the department of behavioral biology at the University of California at Davis, who had studied with Dr. Sassenrath the behaviorial effects on monkeys fed with THC over a long period of time. After an initial "stoned" period, which lasted several months, the pot-fed animals displayed signs of increased irritability. They hit, bit and chased other monkeys; some became so aggressive that they killed a few of the more placid control monkeys — a very unusual occurrence among "normal" monkeys. Furthermore, on videotape studies all the "THC mothers" showed far less concern for their offspring than did the control mothers. They didn't "hug their babies, didn't groom them, restrain them or retrieve them" as undrugged mothers do.

Dr. Ralph R. Karler, a neurophysiologist from the University of Utah Medical School, then announced that he could cast a ray of sunshine on the proceedings. He reported experimental studies indicating that huge doses of cannabidiol — one of the nonpsychoactive ingredients of cannabis — may have some therapeutic value in the treatment of certain forms of epilepsy. He pointed out, however, that "It is street knowledge — if you're an epileptic, you don't smoke pot. This is because, as many experiments have shown, Delta 9-THC, unlike cannabidiol, can precipitate epileptic seizures."

Persistence in the Body

HOW COULD one substance seemingly so innocuous as marijuana produce so many changes in such vital organs? Some answers were given in the sessions describing the effects of marijuana on body cells.

Dr. Edward Garrett of the University of Florida described how fat-soluble marijuana products are stored in the body. It takes 30 days for a single dose to be eliminated. After five days, Garrett could identify 20 percent of a single dose of psychoactive THC and 20 percent of its byproducts.

Other papers showed how psychoactive marijuana components prevent cell proliferation and the synthesis of DNA, the chemical which carries the genetic code. Dr. Bernard Desoize of Reims and Dr. Alan Mellors of Canada's Guelph University described how THC and other cannabinoids clog up the cell. And Dr. Moshe Hershkowitz of Israel and Dr. William Dewey of Richmond showed how THC and other cannabinoids change the production of the brain neurotransmitters in different clusters of brain cells.

Perhaps the symposium was best summed up in two words spoken by Dr. Gabriel G. Nahas of Columbia University, one of the pioneers in marijuana research and one of the four organizers of the symposium. As he passed the desk where I sat I heard Dr. Nahas say to another scientist:

"Harmless, huh?"

Marijuana Use in Adolescence: A word of caution

Adolescence, or puberty, is a time of maturation for the endocrine system. During these years, the glands involved in reproduction begin to secrete increasing amounts of hormones, and a delicate system of "checks and balances" is set up between the hypothalamus, the pituitary gland, and the gonads (ovaries in girls and testis in boys). In response to low levels of gonadal steroids (estrogens and testosterone, respectively) the hypothalamus secretes gonadotropin-releasing hormone. This hormone stimulates the pituitary to release increasing amonts of follicle-stimulating hormone (FSH) and luteinizing hormone (LH). These gonadotropins (FSH and LH) are secreted in a cyclic pattern in women, and non-cyclically in men. In women, gonadotropins stimulate the ovary to secrete estrogens and to begin the process of follicular maturation that will allow ovulation and fertility. It takes time for this system to mature; it is common for girls to have irregular and anovulatory cycles for a few years after menstruation begins. In men, gonadotropins act on the testis to stimulate production of testosterone and spermatozoa.

Under the influence of the gonadal hormones, physical maturity progresses. Estrogens cause the young girl to develop wide hips, thin waist, and breasts, as well as pubic and axillary hair. Testosterone in boys causes development of larger muscles and bones, increased size of the genital organs, growth of body hair and beard, and deepening of the voice.

Several scientific research reports have indicated that marijuana can influence or change hormone levels. Animal studies have found decreased testosterone, disruption of spermatogenesis, decreased gonadotropins, and deterioration of sexual performance in male rodents to whom marijuana had been administered.

Female rats or mice given marijuana in some studies showed suppression of LH, FSH and prolactin (a hormone involved in milk production). In some cases ovulation was suppressed.

In studies of adult human heavy, frequent marijuana smokers, the following have been noted: increased incidence of gynecomastia (breast development) and lowered testosterone in males; increased incidence of defective menstrual cycles, decreased prolactin, and increased testosterone in females.

Since there have been to date no actual studies of the endocrine effects of marijuana on human adolescents, caution must be used in drawing conclusions from the above data. Both the animal and human studies involved very heavy, frequent dosages of marijuana; the same effects might not occur in the casual user. The studies were also done on relatively small numbers of subjects, and some results have been contradictory. The possibility exists, however, that the adolescent endocrine systiem while still in a state of development might be more sensitive to changes produced by marijuana.

The following are <u>potential</u> hazards that might be faced by adolescent users of marijuana based on the sparse endocrine data that is available.

For girls, suppression of gonadotropins before regular menses are established might lead to fertility problems in later life, and through failure to stimulate

estrogen production might prevent or slow normal breast development. Increased male hormone (testosterone) in women with ovarian and adrenal tumors is known to cause acne, hirsutism (body and facial hair) and deepening of the voice. The same might occur if marijuana sufficiently raises testosterone levels.

In boys, lowered testosterone levels could delay normal changes in body stature, genital size, muscles, voice and beard growth, or might induce increased susceptability to abnormal breast development.

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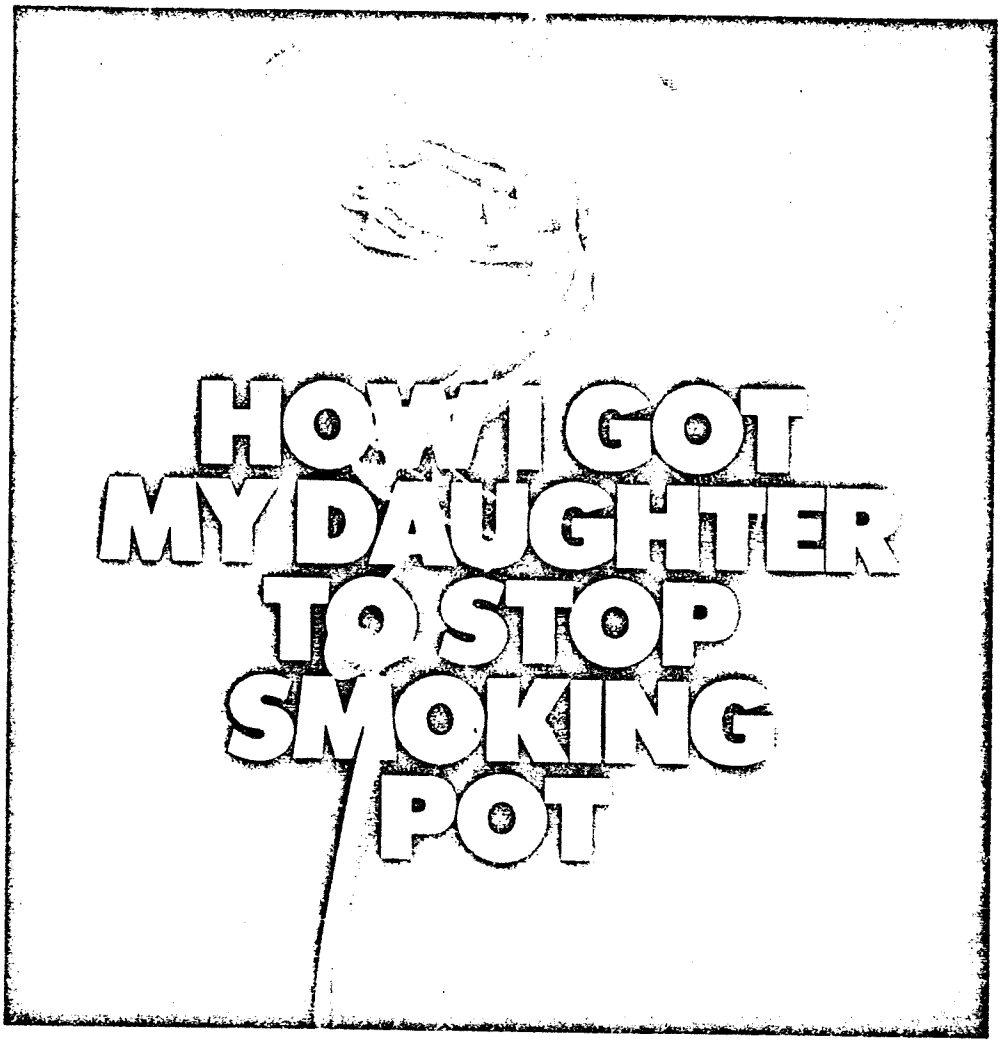
Good Housekeeping March 1979



HOW I GOT MY DAUGHTER TO STOP SMOKING POT

When drug experts told me what marijuana could do to Maggie's health, I had to get her off it. I hope all those children—and adults—who still think the drug is harmless will read my story. By Susan Bromwell

"Yes, I smoke pot," my 15-year-old daughter Maggie said calmly. "*Everyone* does. But don't worry, Mom. It's harmless."

I had no idea till that morning that Maggie was using marijuana. I found out when a repairman in our house handed me a packet of rice papers he'd found on the floor and asked, "Who smokes pot in this house?" I had hoped the papers belonged to one of Maggie's friends, but Maggie unhesitatingly admitted they were hers.

My husband, Jim, and I had thought that we had no major problems with either Maggie or her 11-year-old sister Elise. True, Maggie had become withdrawn and apathetic of late. She'd lost interest in school and her A and B grades had slid to C's. She was depressed at times; sometimes her behavior seemed a little irrational; often she was hostile. Jim and I had reassured each other that all this was just normal teenage behavior. Now it seemed something far more serious was involved.

In an attempt to reassure me, Maggie offered to tell me all she knew about the teen pot scene. I knew little about pot, except that it was illegal (even though in 11 states, the possession of marijuana has been decriminalized, it has *not* been legalized), so I took her up on her offer, telling her that after our talk I would go to the top drug authorities to find out if smoking pot was really harmless. "I'll tell you what I learn," I said. "What you do about it then is up to you."

Maggie agreed. When we sat down to talk, I first asked her, "When did you start to smoke pot?"

"When I was 13," Maggie replied. "It seemed like the thing to do. When I smoked at home I'd burn incense to cover the smell. Or I'd smoke out the window. Mostly I'd smoke at other people's houses, in bathrooms, in the movies, at concerts, in the park, practically anywhere. I used to smoke everyday. A lot of kids in my class still do. I'd smoke on the way to school because if you can get there stoned, school isn't such a drag. If you have a free period you get stoned in the park or on the street, just high enough so the teachers don't notice. After school, you get stoned again. When you get home and don't feel like doing your homework, you get stoned. On the weekends, you can hang out in the park

Photograph by Charles Gold

and be stoned all day. Saturday night you can go to a party and get stoned again."

I was shattered. Not only did my daughter smoke, she was, as she said, "a head," the term for a heavy smoker. I was surprised when Maggie assured me that most mothers were as oblivious as I to their children's marijuana use. "Aside from red eyes and sleepiness, a person won't really notice if someone is on pot," Maggie explained. "When you're stoned you can act the same as you usually do. You just look at things differently from inside yourself."

"Where do kids get the money for pot?" I asked.

"From baby-sitting," she replied. "And Christmas and birthday checks." She explained that by buying one large amount of pot, making joints out of it and selling them to friends at a dollar apiece, you not only had your own supply of pot in hand, but soon you made enough money to make another large buy.

"How much do you smoke now?" I asked.

Maggie replied, "Only a normal amount. Five to 10 joints a day on weekends. That's the total. When Bob [her current steady] and I smoke a joint between us, I figure that as half a joint for me."

As agreed, after our talk I phoned the National Institute on Drug Abuse in Rockville, Md., and asked to speak to a researcher who specialized in marijuana. I was connected with Dr. Jack Blaine, a research psychiatrist who had been assistant director of the National Commission on Marijuana and Drug Abuse. Dr. Blaine could not have been nicer or more understanding. Or less encouraging.

"Five to 10 joints a day every weekend?" he said. "I'd be *very* concerned if I were you."

"She used to smoke everyday," I said hoping for some reassurance. "She cut it down to weekends so it wouldn't affect her schoolwork."

"It could still be affecting her schoolwork," said Dr. Blaine. He explained that, unlike drugs like alcohol, marijuana is retained in the body for a long time. Pot has more than 57 unique ingredients. Several of these are psychoactive (mind-altering) and, of these, Delta-9-THC (commonly called THC) is the most psychoactive. Radioactively tagged THC has been traced experimentally in the body. The experiments have shown that three days after a person smokes one joint, 50 percent of the THC that was inhaled is still in the body in active form. Thereafter the body gets rid of only small amounts, perhaps over a period of weeks. The THC seeps into the fatty cells and fat-laden organs: liver, spleen, lungs, sex organs—and the brain. Each additional joint smoked adds more THC to the accumulation in the body. It is likely that the heavy pot smoker is never free of some of the effects of both THC and other ingredients in pot, which also have undesirable side effects.

Following this interview, I spoke with Dr. Stephen Szara, chief of the National Institute on Drug Abuse's Biomedical Branch. I asked him whether the chronic dry cough Maggie had developed could be caused by pot. In reply, Dr. Szara began a wide-ranging indictment of marijuana.

What "Pot" Does

"We're very concerned about youngsters who smoke pot heavily when they are developing," he said. "We, at NIDA, define a heavy smoker as anyone—teenager or adult—who smokes everyday, regardless of how much he or she smokes, or anyone who smokes four to five joints during an entire weekend."

What Dr. Szara told me about the effects of pot on the body can be summarized as follows:

Two Swiss scientists reported that tissue from human lungs exposed to tobacco smoke or marijuana smoke *both* show malignant transformation. Other studies have shown that chronic marijuana smoking can produce bronchitis, sinusitis, pharyngitis and emphysema in far *less* time than it takes to produce these effects by cigarette smoking. In addition, animal studies have demonstrated that some conditions caused by marijuana smoking can be precancerous.

A new study on adult females who have been smoking marijuana for more than one year shows a hormonal change has occurred which can be dangerous. Of special concern are the effects of these changes on the developing reproductive systems of teenagers. In another study, pregnant rhesus monkeys were exposed to marijuana at the human equivalent of one to two joints a day. In 44 percent of the cases, mothers aborted and infants died before, during and after birth. The pathologist found that, in the babies who died, there were developmental abnormalities in the nervous system, the cardiovascular system and in various organs.

Pot not only decreases the rate of cell division, but even small amounts of marijuana impairs the formation of DNA, the genetic material of the cells.

HOW I GOT MY DAUGHTER TO STOP SMOKING POT
continued

Also, research on human lymphocytes—the type of white-blood cells which produce antibodies to help fight germs and disease—suggests that marijuana may impair the immune system.

"Dr. Szara," I blurted, "for the past four months my daughter has been sick about every other week with a different virus. Could it be the marijuana that's causing it?"

"Ask her to try an experiment," said Dr. Szara. "Stop smoking for three months. See what happens."

I next spoke to Dr. Robert Peterson, NIDA's assistant director of research and editor of their yearly report, *Marijuana Research Findings*. He gave me some shattering statistics. In a nationwide survey in 1977, 28 percent of youngsters between the ages of 12 and 17 reported having used marijuana. Four percent of 12 to 13 year olds had smoked marijuana "during the past month." And *one in nine high school seniors smoked marijuana daily* (almost a doubling of the figure since 1975).

When I hung up after this phone call I was scared. I sent for the reading matter the doctors I'd spoken with during the past few days had suggested (see box on page 120).

Maggie, meanwhile, had taken to smoking openly in her bedroom. "Now that you and Dad know," she told me, "why should I risk getting busted by smoking in the park or on the street?" My husband and I, though torn, went along with her.

When the books and pamphlets I had sent for began arriving, I read them all—feeling mounting horror.

With notes from my reading and phone conversations at hand, I asked Maggie for an uninterrupted hour for us to talk. I also asked Elise to sit in with us. She was not a pot smoker, but I wanted to be sure she didn't become one. Before we even began, however, I was prepared to be rejected by Maggie. I had learned that a symptom of the pot-smoker's syndrome was a rejection of facts about the harmful effects of marijuana. Maggie had stated it clearly: "I like pot and I don't want to hear anything bad about it!"

How It Affects the Brain

I had learned from my reading that some scientists believe this pro-marijuana attitude may be *caused* by the physical effects marijuana has on the part of the brain known as the septal area. Fat-soluble THC accumulates in the fatty cells of the septal area which controls emotional behavior, deep-seated pleasurable sensations, in-

stincts, the subconscious and memory storage.

I had photographs of the brain cells of monkeys which had been exposed to marijuana smoke. All these monkeys showed very evident (and, to me, very scary) changes in brain cells when compared to cells from the same areas of healthy, control monkeys.

I had photographs of normal human sperm and sperm of donors who smoked pot. I also had photographs of white-blood cells from both smokers and nonsmokers. Again, the differences were clear—and frightening. The sperm of pot smokers looked spotty and faded compared to sperm from the nonsmokers. "This," said the scientists conducting the study, "may imply impaired ability to fertilize an egg."

The white-blood cells of the smokers looked "crumpled" compared with the firm, round cells of the "controls." The scientists concluded: "This shows abnormality of the membrane, which may affect the cell's ability to fight bacteria."

I started off the hour's discussion with my daughters by showing them the pictures. Maggie summed them up with a "Mmmmm."

I then read them a statement by Dr. Robert L. DuPont, formerly the director of the National Institute on Drug Abuse: *Marijuana is a very powerful agent which is affecting the body in very many ways. What the full outcome—the range of these consequences—is going to be, one can only guess at this point. But from what we already know, I have no doubt that they are going to be* horrendous.

"*God!*" said Elise, impressed.

Maggie did not say anything at all.

For an hour, I summarized much of what I had learned about marijuana's harrowing effects on the body. When the hour was up, Maggie said, "I appreciate your going to all this trouble, Mom. But none of it means a thing to me. I plan to smoke pot all my life."

I didn't sleep at all that night. Next day I was in despair. How could I help my daughter? I couldn't just give up. I had to *try* to make her see the terrible dangers of smoking pot.

That night at dinner I put the kitchen timer on the table. "I didn't have time last night to tell you *all* I found out about pot," I said to Maggie. "So every night at dinner, I'm going to give you 10 minutes more information." I set the timer for 10 minutes precisely. "As soon as it buzzes, I'll

shut it off and stop." I promised. Then I began to throw more facts, more figures at her. Every night from then on I found something new to add to the case against pot.

Usually I stopped when the timer sounded. But sometimes Maggie would turn it off—so we could keep on talking. What really got to her were the descriptions psychiatrists and psychologists gave of the symptoms of their pot-smoking patients. She "recognized" most of the symptoms. (The "Dropout" Syndrome: "That's like Andy! He used to be so great on the guitar. Now he doesn't play—just sits around, stoned." The "Paranoia" Syndrome: "That's like Phyllis. She's convinced the teachers are conspiring against her.")

Though I refrained from saying so, I, too, recognized many of the psychological pot symptoms in my own daughter. I read her a paragraph from *About Marijuana* by Dr. Franz Winkler: . . . *The abuse of marijuana is one of the major tragedies of our time. . . . Unknown to themselves and unnoticed by a generation of parents, teachers and physicians often too busy to pay real attention . . . some of the finest young people are condemned . . . to a gradual disintegration of their personality.*

I then suggested that Maggie try the proposal Dr. Winkler often put to young pot smokers: choose a person she'd known well before he or she started smoking pot heavily. Then compare the person that you remember with the person today. Dr. Winkler wrote: *I do not remember one single high school or college student seriously undertaking this investigation, who did not return (to me) deeply shocked by the experience. Most of them not only made a resolution to give up the drug, but became most effective crusaders among their contemporaries.*

Maggie shoved back her chair. "I've had enough," she said and left the table.

My Best Present Ever

Christmas came, Maggie's favorite day of the year. But this Christmas she sat on the couch, pale, yawning, without a flicker of interest in anything. "Like a non-person," my husband said later.

The night after Christmas she entered our bedroom. "Those pajamas I gave you, Dad, and that toilet water I gave you, Mom—they weren't too hot Christmas presents. So, I have something you'll like better. Bob and I have decided to stop smoking pot for three months."

That was Christmas 1977, over a year ago. Since then, Maggie has not smoked pot. All of her unpleasant personality symptoms that we'd attributed to "teenage difficulties" have disappeared. She once again enjoys school and is getting A's and B's ("Maggie has really *blossomed* this term!" her English teacher wrote). Her chronic dry cough has gone and, in over a year, she has been ill only once—for one day.

Bob has given up pot and so has Maggie's best friend, Annie. Their mothers have reported equally dramatic transformations to me. "We didn't realize," Bob's mother said, "how much he had changed until we got our boy back again!"

Maggie told me, "Mom, except for one thing, you handled my pot problem just right. Parents should show their concern and should give their kids medical findings about pot. The thing you did wrong was to let me smoke in the house. You should have said, 'I'm letting you make the decision as to whether you're going to smoke pot or not. But part of that decision is accepting the consequences—not only of the possibility of getting busted, but of what pot can do to you.' If kids have access to pot and they think it's harmless—as most kids do—they're definitely

going to get to abuse it. They've got to be given the facts about how pot can slowly wreck them—like it was doing to me. I know now that I'm cutting it out forever. Once you *realize* you're hurting yourself by smoking, you can't forget it—even when you're high."

Inspired by Maggie, I declared an all-out war on marijuana. I took the books and pamphlets I'd read to Maggie's school. The principal was so impressed he encouraged the school to inaugurate an in-depth marijuana-education program.

Maggie was asked to record her thoughts on tape for use in the program. She said, in part, "Pot weakens you. You lose your sense of self. One drugged-out person is like another drugged-out person. . . . You may think you're getting yourself together with pot, but you're not. You're pulling yourself apart.

"For the first time in a long time I feel that I'm going in the right direction. I've begun to genuinely like myself. I'm a much more happy person without pot."

After Jim, Elise and I listened to this tape, Maggie said, "Maybe we could start a turnaround in our school. Maybe we could make it so it's cool *not* to smoke pot."

"Oh, I hope so!" said Elise.

I know for sure that mothers everywhere echo these words. ◆

How To Get More Information

These are the publications I used in my war on marijuana. I recommend that other concerned parents read any or all of them.

Marijuana Research Findings. Free. From NIDA Clearing House, 5600 Fisher's Lane, Rockville, Md. 20857.

Senate Hearings on the Marijuana-Hashish Epidemic, Parts I and II. Price: $5.35. From Government Printing Office, Washington, D.C. 20402.

Marijuana Today: A Compilation of Medical Findings for the Layman; an updated edition. By Dr. George K. Russell. Price: $1.95. *About Marijuana*. By Franz E. Winkler, M.D. Price: 50 cents. Both from American Council on Marijuana and Other Psychoactive Drugs, 521 Park Ave., New York, N.Y. 10021.

Marijuana: Harmless Euphoriant or Dangerous Drug? By Dr. Walter X. Lehmann. Price: $1. *The Case Against Marijuana*. Report on International Marijuana Conference. Reprinted from *The Washington Post*. Free. Both from Society for Informed Choices on Marijuana, Inc., 300 Broad St., Stamford, Conn. 06901.

Four Question and Answer Leaflets About Marijuana. Price: $1. From Narcotics Education, Inc., 6830 Laurel St., N.W., Washington, D.C. 20012.

Keep Off the Grass: A Scientist's Documented Account of Marijuana's Destructive Effects (an updated edition to be published in May 1979). By Gabriel G. Nahas, M.D., Ph.D. Price: Hard cover, $14; soft cover, $7. From Pergamon Press, Maxwell House, Fairview Park, Elmsford, N.Y. 10523.

Sensual Drugs. By Dr. Hardin and Helen Jones. Price: $5.95. From Cambridge University Press, 32 East 57th St., New York, N.Y. 10022.

Families, Adolescents and Marijuana (a review of research and prevention programs). Free. From Pyramid (NIDA Prevention Assistance Project), 39 Quail Court, Walnut Creek, Calif. 94596.

THE REIMS SYMPOSIUM: THE BIOLOGICAL EFFECTS OF MARIJUANA

Today the prevailing opinion in the Western World is that marijuana is a mild euphoriant that has little untoward biological or medical effects. It is considered much less dangerous than either tobacco or alcohol. This simplified view has been challenged strongly by the findings reported at the recent Marijuana Symposium held in Reims, France last July under the aegis of the VIIth International Congress of Pharmacology.

Over 100 scientists from 14 countries attended the Symposium. It was sponsored by the National Institute on Drug Abuse (NIDA), The French Ministry of Health, the French National Institute for Health and Research (INSERM) and the International Medical Council on Drug Use, Inc. Organizers were Gabriel G. Nahas (Columbia University, College of Physicians & Surgeons), W.D.M. Paton (Department of Pharmacology, Oxford University) and Monique Braude (NIDA); all three had participated in the two previous international symposia on the same subject (the resulting monographs are: Pharmacology of Marihuana, Raven Press, 1976 and Marihuana: Chemistry, Biochemistry & Cellular Effects, Springer-Verlag, 1976). Proceedings of this most recent symposium will be published in May 1979 by Pergamon Press under the title, Marihuana: Biological Effects. Analysis, metabolism, cellular responses, effects on reproduction and brain were the topics discussed during the two day meeting.

Many of the veteran marijuana researchers were in attendance: Agurell from Sweden; Mechoulam, the discoverer of THC, from Jerusalem; Mellors, Zimmerman and Jacubovic from Canada; Kaymakcalan, from Turkey;

Waller, from the University of Mississippi "Marijuana Farm"; Hollister, from California; Rosenkrantz from the Mason Research Institute; Dewey from the University of Virginia; and Wall from the research Triangle Institute in North Carolina. Present also were younger scientists in biochemistry, pharmacology and cell biology who were eager to present their latest findings to the "experts".

Even for biologists, the first session was forbidding, dominated as it was by the organic chemists. Recorded on the projection screen was a dazzling array of pictures of the many formulas of the different cannabinoids - 58 of them identified so far. The expert "pharmacokineticists" described the complicated curves which trace the storage of the cannabinoids in the body and their slow elimination over several days. They are scientists who specialize in the study of the absorption, transformation and elimination of drugs, and more particularly for this conference, of cannabinoids from the organism.

Dr. Edward Garrett, Graduate Professor of Chemistry at the University of Florida (Gainesville), stated that in his experiments with dogs, it took 30 days for a single dose of THC, whether large or small to be eliminated from the body. After five days Garrett could detect that 40% of the administered dose was still present in the organism, 20% as THC and 20% as by-products (metabolites). He described how THC is transformed by the liver into other compounds which are eliminated via the bile into the intestine and then re-absorbed into the "portal circulation", that is, the veins which go from the intestine to the liver. This process of "enterohepatic recirculation" contributes to the lingering of THC by-products in the body. Since no THC is

eliminated by the kidney, it must be transformed by the liver before being excreted. This explains, said Garrett, the great difference between THC administered by mouth and by inhalation. In the former case, after absorption by the intestine, THC passes through the liver where much is broken down before it reaches the tissues where it is stored. When THC is smoked, however, it goes first into the tissues where more can be stored because the supply has not yet been diminished by absorption in the liver.

These experimental considerations by Garrett were fully confirmed by Professor Agurell in his work with human volunteers. On alternate days, doses of marijuana containing known amounts of THC were given to the volunteers either by smoking or by ingestion. After each type of administration, the concentration of marijuana reaching the blood stream was 10 to 20 times greater when smoked than when ingested.

To translate these experiments into practical terms, in animal experiments, what has appeared to be abnormally high dose levels of marijuana ingested is in reality similar to levels reached in human consumption. When absorption in body fluids is compared, animals must be administered large doses of marijuana by mouth in order to end up with the same amount that might result when marijuana is smoked by an individual.

Whatever the route of administration, Garrett reported that after 27 days of daily dosage, the amount of delta-9-THC retained in the body would be tenfold greater than from a single dose.

Although most of the reports at Reims dealt with the negative health effects of marijuana, one paper did carry a ray of hope for a useful application of a substance derived from marijuana. Dr. Ralph Karler, a neurophysiologist from the University of Utah Medical School reported that cannabidiol (CBD), a non-psychoactive cannabinoid, had proved to be a potent anticonvulsant agent, as effective in animal preparations as drugs commonly used for epilepsy. Doses administered were rather high, 100 mg/kg, and on a prolonged usage would be associated with the impairment of cell division in the sex organs. However, when one is treating a disease with potent medications to alleviate life-threatening conditions, side effects may have to be accepted. Dr. Mechoulam, from the Hebrew University at Jerusalem, reported that three out of four patients treated with daily doses of 300 to 400 mg of CBD during a three week period had been relieved of their epileptic seizures.

By contrast, THC in the same proportions as used by Dr. Karler did trigger certain forms of epileptic tracings. And he pointed out that it was "street knowledge to avoid smoking marijuana if one is epileptic", a statement seconded by Dr. Feeney from Albuquerque, New Mexico, who reported similar studies.

The media, while ignoring the reports of the damaging effects of "pot", have dramatized the potential therapeutic applications of the weed. Marijuana extracts were used in the prescientific era for a wide range of ailments... from tetanus to menstrual cramps. When modern pharmacology developed specific medications for specific ailments, however, cannabis preparations were no longer prescribed. More recently, marijuana and THC have been advocated for the treatment of high pressure in the eyeball (glaucoma) and for the relief of nausea in cancer patients

being treated with chemical substances which, while destroying the tumor, induce vomiting. But for such specific applications, THC has to be proven more effective than currently used drugs, for example, the phenothiazines for nausea, pilocarpine and beta blockers for glaucoma. Furthermore, in line with modern pharmacology, organic chemists have been able to modify the chemical structure of THC so as to increase the therapeutic action of the drug and eliminate its mind-altering side effects. This method has resulted in the synthesis of a new compound, "nabilone" which is being tested according to the scientific standards of the Food and Drug Administration. On a dose basis in the preliminary trials, nabilone has proven more effective than THC in lowering intraoccular pressure and relieving nausea withoug producing the side effects of THC. It seems, therefore, that modern pharmacology has not found a use for THC which could not be more effectively produced by other druggs... including the new synthetic cannabinoid, nabilone.

A French based Paris newspaper summed up the meeting by saying that the scientists assembled at Reims had delivered a "severe biological indictment of marijuana". Only longitudinal epidemiological studies of marijuana smoking populations may document the pathologic effects of long term cannabis usage. Therefore the human pathology of marijuana cannot be written before 2 or 3 decades (it took 60 years to establish the pathology of tobacco smoking). Meanwhile, the observations on animals and man reported at Reims suggest that such pathology might involve the lung, reproductive function and brain.

Gabriel G. Nahas, M.D., Ph.D.
Professor of Anesthesiology
Columbia University, College of
Physicians & Surgeons

Eric A. Voth
medical Student
University of Ks.

Ladies and gentlemen, I am here before you to counter an editorial supporting the decriminalization of marijuana, and I intend to dispell certain myths about its medical and legal status.

It is a blatant disregard of medical facts to say that marijuana is harmless. Such views are based on outdated, poor research. To say that marijuana is only comparable to alcohol and tobacco will prove to be an understatement.

Recent research is demonstrating suppression in sperm counts in animals and humans and abnormal changes in the sperm itself. Elegant work with deep brain electrodes by Dr. Robert Heath, Chairman of the Department of Psychiatry and Neurology at Tulane, University noted changes in the behavioral regions of the brain with moderate usage, which persisted even six months after stopping the usage. The scientists also noted structural changes in the brain nerve cells in these cases. These findings agree well with the findings of psychiatrists who have noted severe lack of motivation and emotional changes in chronic users. Dr. Gabriel Nahas, President of the International Medical Council on Drug Use, reported that the active ingredients in marijuana lower a cell's ability to make DNA -- essential genetic material. This can affect a person's immunity against illness. This work has also been replicated by twelve major research centers. Marijuana has been shown to have sixteen times more effect on the respiratory system than tobacco. What's more, marijuana cannot be compared to alcohol on any grounds largely due to its greater affinity for certain tissues such as the brain and testes.

Even Dr. Robert DuPont, former director of the National Institute on Drug Abuse who supported marijuana decriminalization in the past, is now contending that marijuana poses a major health hazard. The Legislation before the legislature does not provide controls for the wide range of potency that exist with different types of marijuana. By the way, an ounce of marijuana is equivalent to about thirty marijuana cigarettes or joints. Time doesn't permit thorough consideration of the vast amount of new research being done on marijuana. However, the data at best is frightening considering the multitudes of people using marijuana.

Today we are just beginning to understand the effects of the commonly abused drugs, alcohol and tobacco. Why add another poorly understood drug to this spectrum of condoned abuse.

This is a highly emotional issue, with many vested interests supporting decriminalization, but on what grounds?

Let's <u>do</u> be realistic. We don't put people in jail for drinking a beer, but seldom are people going to jail for minor first offense marijuana possession charges as for example in Shawnee and Johnson Counties. Actually, many serious drug offenses are going unpunished.

Let's also be realistic when we say that now all high schools, all junior high schools, and some grade schools in Topeka alone are reporting usage. By decriminalizing marijuana we are only further tacitly condoning its usage.

What can you do about it? First help stop this bill now, write you legislators. Also, look into the facts. The data is immense. Don't just take my word for it.

But remember, before you support such legislation, that when there is great heat and frenzy to change a statute, the consequences are not always favorable.

Thomas J. Gleaton, Ed.D.
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Background

Despite many public pronouncements that the drug crisis has passed, national and regional surveys show that the use of alcohol, marijuana, and other drugs by adolescents is growing at a disturbing rate. The increasingly tolerant attitude toward "recreational drug usage" displayed in the popular media, in the youthful entertainment world, and among many drug professionals tends to blur the differences between drug effects on immature adolescents versus mature adults. Thus, the more casual attitude toward "responsible drug use" as opposed to "irresponsible drug abuse" assumes that the user possesses the maturity and judgment to control his use before it becomes abuse. Although this assumption is sometimes questionable even for adults (because of the problems of psychological and physiological dependency often associated with the use of euphoriant chemicals), it is a naive and even dangerous assumption for children and adolescents. Furthermore, surveys show that youngsters are beginning drug and alcohol experimentation at earlier ages, when their immature minds and bodies render them more vulnerable to the negative psychological and physical effects of using any psychoactive drugs.

At the same time that children, during the highly impressionable and confused years of early adolescencem are subjected daily to "use drugs" messages (from rock music, movies, T.V., and drug-culture merchandizers), they are also subjected to powerful peer pressures to indulge in whatever youth fads and experimentation seem to be the "in" thing. To an unprecedented degree in American history, the use of mind-altering, mood-changing chemicals--both legal and illegal--is the "in" things among ordinary, mainstream, "normal" American youngsters. Drug usage is no longer just a problem within deprived or broken homes; it is no longer primarily linked with teenage rebellion, political activism, or disaffection from parents. Drug abuse, especially marijuana and alcohol usage, has become a "normal" part of growing up in America.

However, a large segment of American society does not view this increasing "normalization" of adolescent drug usage as a healthy, humane, or beneficial trend. And this often ignored but deeply worried population consists of parents, who see drugs as a serious threat to the healthy development of their children and to the integrity of their families. With usage rates for marijuana and alcohol accelerating among 10 to 15 year-old children, more and more parents are learning the hard way that

casual intoxication often exacts high prices from immature youngsters and that regular drug use often distorts and debilitates the maturation process of adolescents. To a greater degree than any other adults concerned about drug problems, parents have more to lose when their child becomes drug-oriented or drug-dependent.

Strangely, though, parents are frequently left out of professional, educational, and governmental efforts at preventing or curtailing adolescent drug use. During the past decade, the major drug educational effort has been aimed at the children and their school teachers; thus, awareness of and information about drugs have been linked to the peer-centered world of school and not to the parent-centered world of home. The resultant familiarity with and sophistication about drugs among peers are thus at odds with the unfamiliarity and naivete about drugs among parents. When parents are left out of drug-education programs, a further wedge is driven between parental values and creditibility versus adolescent fads and skepticism. Parents are too often the ones who know the least, as well as being the last to know, about the complex motivations and ramifications of their own child's drug involvement.

Furthermore, when parents do face up to the problem and seek out professional help, they are often subjected to hasty

accusations that they are hypocrites or failures and to glib assumptions that their deficient values triggered the child's drug usage. The pervading anti-parent attitudes of many drug counselors, often based on stale and superficial psychoanalytic presumptions, further undermine the parents' willingness or ability to intervene in or assert controls over the drug usage of their child. When counselors advocate democratic, free choice by adolescents, regardless of parental wishes, and when they condone illegal marijuana usage by juveniles as harmless "recreation" (a situation which occurs with disturbing frequency), then parents too often throw up their hands and accept the "everybody is doing it" argument as overwhelming.

Unfortunately, by blaming parents, many well-intentioned professionals increase the parents' sense of guilt, bafflement, and helplessness. By ignoring marijuana use as a contributing factor to adolescent problems, some drug counselors reinforce the youngster's sense that drug usage is harmless and legitimate. By siding with children against parents on drug-use issues, some family counselors undermine parental authority, place unrealistic burdens on immature youngsters, and render the family more vulnerable to unhealthy peer and environmental influences. Obviously, not all parents experience these counter-productive reactions when they seek professional help for their child's drug problems; but enough do to make clear the need for alternative methods of parent education and support.

Philosophy

We believe that a child's parents are his best bulwark against drug involvement. We also believe that the universal instinct of parents to protect their young is society's best bulwark against the expansion of the commercialized drug culture. However, at a time when parents and families are becoming increasingly isolated and fragmented because of changing social conditions, economic pressures, and community values, parents need all the help they can get to maintain control over the nurturing and guidance of their children and over the immediate environment which influences the growth and development of their children. And this help must come from people who respect parents--who sympathize with their problems, who have faith in their concern for their children, and who believe in their rights to affirm behavioral and ethical standards within their families.

We believe that the most innovative and effective helpers for parents who are trying to cope with adolescent drug and drinking problems are other parents--other adults who have experienced similar difficulties or who want to prevent similar situations from arising. The major antidote to the individual parent's sense of isolation and helplessness when faced with a walled-in youthful peer culture is the cooperative company of

other parents. When parents band together to prevent unhealthy or illegal adolescent behavior, they can create positive parental peer pressure to counteract or even reverse negative adolescent peer pressure.

When groups of parents commit themselves to mutual respect, candor, concern and support, they can eliminate the blaming, scapegoating, and denying processes that tend to undermine the parents' confidence in and commitment to direct personal involvement in the prevention of drug and alcohol usage by their own and neighborhood youngsters. Rather than imposing a sense of guilt and failure on parents, we believe in bolstering a parent's sense of concern and purpose; rather than convincing parents that they did not give enough, we believe in convincing them that they have a lot to give--and that other children and parents will benefit from their contribution. Thus, we hope to draw upon the tremendous diversity in individual personality and style and upon the rich pluralism of American family life to build clusters or networks of mutually committed and communicating parents who can re-define and re-establish a sense of cohesive community values and standards. Whether the newly created "community" consists of five families or fifty families, of five city blocks or fifty country miles, it can provide a more controllable, constructive, and coherent environment for the growth and development of young people.

Goal

We hope to educate parents about the current trends in drug and drinking behavior among children and adolescents, about the effects of legal and illegal drugs on particular stages of adolescent development, and about the forces in the local community and in the larger society which encourage youngsters to use intoxicants for fun and for escape. We will then help parents to organize into effective groups to counteract these negative influences on their children. These parent-groups may be based on their children's circle of friends, on school classes, on sports teams, on special interest groups, on neighborhoods, or on other community activities and institutions.

By bridging the gap between parental awareness and adolescent realities regarding the drug and drinking scene, we aim to help parents educate and help their children and to help groups of parents educate and help their neighbors, friends, and colleagues. We will also include the many adults who work with and influence youngsters and who often function in loco parentis--such as scout leaders, youth ministers, guidance counselors, coaches, etc. As each parent group develops, we will put the members in touch with other groups, until a network is established in Georgia and in other states. We envision a time

when an individual parent can call in for information or advice and we can refer him or her to a parent-group near the caller's home area or help the parent develop a new group.

We believe that parents have many more resources and much more muscle than they realize when they are up against unhealthy social and peer pressures among their children. We believe that the best way for parents to discover those resources and utilize that muscle is through communication and cooperation with other parents. Most importantly, we believe that children have the most to lose from premature drug or alcohol usage and the most to gain from strong, concerned, and loving anti-drug involvement by their parents. A child's drug usage can tear a family apart, but a sincere parental effort to give a child a drug-free adolescence can strengthen and enrich the whole family relationship. An extended communal effort by groups of parents can strengthen and enrich the whole community relationship.

Purpose and Methods

To diminish drug and alcohol use among children and adolescents by educating and developing parent groups in Georgia and the nation through the Parents' Center for Drug Information and Training. This Center will be located at Georgia State University, and during the initial stages, will primarily serve Georgia residents with the intent of expanding to a national model. The Center will provide this service by:

1. Gathering and disseminating information on:

   A. the latest medical and psychological findings on the effects of drugs on children and teenagers;

   B. current patterns of drug and alcohol use among children and teenagers;

   C. social and cultural pressures that encourage children and teenagers to use drugs;

   D. institutional and legal efforts being made to prevent drug usage, to reduce drug supplies and to prosecute drug traffickers;

   E. any other facts pertaining to drug and alcohol use among children and teenagers.

2. Educating parents by training and developing a network of speakers to make presentations to PTA's and other groups exerting a major influence on children, such as Parents Without Partners, Big Brothers, YMCA's, YWCA's, scout leaders, athletic coaches, etc.

3. Developing a referral system for responsible treatment where professional intervention is indicated.

KANSAS SHERIFFS' ASSOCIATION

March 15, 1979

Senator Elwaine F. Pomeroy, Chairperson
Senator Jack Steineger, Vice-Chairperson
Senator Donald Allegrucci, Member
Senator Arnold Berman, Member
Senator Paul Burke, Member
Senator Norman Gaar, Member
Senator Frank Gaines, Member
Senator Ronald R. Hein, Member
Senator Paul Hess, Member
Senator William Mulich, Member
Senator Jim Parrish, Member
Senator John M. Simpson, Member
Senator Merrill H. Werts, Member
Judiciary Committee
State Senate
Statehouse
Topeka, Kansas 66612

Re: S.B. 357

Dear Senators:

The Kansas Sheriffs' Association's position is that we are opposed to any relaxation of penalties for the possession or use of marihuana and that we oppose the enactment of this legislation.

Because of a prior commitment, I will be unable to appear and testify in opposition to this bill.

Any consideration you can give toward our Association's position, will be greatly appreciated.

Very truly yours,

Robert Tilton

Robert E. Tilton

RET:th