

Effects of Legalization of Marijuana

Administration of Justice 319

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Table of Contents

Abstract	2
Introduction	4
Body	5
Conclusion	25
References	29

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Abstract

When researching this paper it was initially believed that legalization marijuana would have a relatively minor but net negative effect on the state of California. After completing the research it is now believed that legalization would have little to no positive effects, all of which would be grossly outweighed by negative effects.

Initially it was believed that there would be no major increase in health effects due to an increase in the number of regular marijuana users. Research found that long term usage can cause the user to become more violent as well as the high rate of marijuana dependence in users proved that belief to be incorrect. Smoking of marijuana also having similar deleterious health effects on the users to the smoking of cigarettes also indicates that the health effects would be quite harmful. As with cigarettes and drug dependence from current users of marijuana, the costs to the state can be quite significant.

The veracity of claims, while doubted by the author, that marijuana usage for medicinal purposes was a valid reason for legalization of marijuana have been found to be without merit. While the cannabinoid family of plants has many compounds within them that have medicinal properties, marijuana itself is not effective as a medicine. As with the production of morphine from poppies instead of personal use of heroin, marijuana can be a useful base for pharmaceutical development but not effective for self-administration.

Crime was believed by the author to be most likely to increase due to legalization of marijuana. This was based on the belief that most laws that were eliminated would be replaced by laws related to the production and sale of marijuana primarily in regards to taxation. It was also believed that most, but not all current production of marijuana would choose to legitimize when marijuana was legalized in the state. Without all producers converting to legal production

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

there would be a small black market for non-taxed, therefore cheaper, marijuana. This was primarily based on the belief that the remaining federal prohibition on marijuana would cause producers to be wary of legitimizing production. Research showing the likelihood of tax evasion being extremely high due to the proposed tax rates on marijuana is the primary reason for this belief to be changed. With an estimated black market of over 90% of the total market for marijuana, the number of marijuana related crimes would be increasing as the larger number of users would increase the demand and the supply would grow to accommodate this demand.

Finally it was believed that the taxation which would cause an increase of money flowing into state coffers would be the primary positive gain. While this money would not be a net positive if looked at purely in regards to the area of marijuana taxation, regulation and use, it would have a positive benefit on the state overall especially in times of tight state budgets and the reduction of state services. Primarily based on the large amount of the market for marijuana that would be illegal it does not seem likely that the state would even recoup the money it spent on marijuana related programs. This leads the author to believe that legalization of marijuana would cause a decrease in the available funds for other programs in the state budget and instead of helping the state would be harmful.

Looking at all the possible outcomes of legalization of marijuana it seems that the effects range from minorly harmful to grossly harmful.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Introduction

California has been reducing the laws restricting the possession and sale of marijuana in the state. This decriminalization applies only to state laws and marijuana still remains banned under federal law. Arguments for and against the decriminalization of marijuana range the gamut from a libertarian position that it is a matter of fundamental freedom to the position that it is a valid medication that can be used as a pain reliever where other medicines don't work, to using marijuana legalization as a source of new tax revenue to address government budget shortfalls. Although there are many reasons that people are advocating the legalization of marijuana, the two primary reasons are proponents of taxation of marijuana to increase state revenues and proponents of marijuana for medicinal usage. Both of these issues will be covered in detail in the paper.

No matter the desired reason for decriminalization, state and local laws have been changed to be more permissive of possession, production and sale of marijuana. The effects that decriminalization will have on crime, society, users and the government have been hotly debated. This paper will discuss some of the possible results of decriminalization of marijuana based on research of both marijuana use as well as decriminalization of marijuana in other parts of the world. Effects of marijuana usage on individuals and for medicinal reasons are also discussed based on statistical analysis of research as well as from first hand conversation with a cannabinoid researcher. From this, the author will attempt to determine what he believes the likely result of legalization of marijuana will have on the state.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Body

With a \$50 per ounce excise tax, the financial reward for evading the taxes on a pound of legal marijuana will exceed the current financial reward of smuggling a pound of Mexican marijuana into California. The excise tax per pound would be \$50 per ounce 16 ounces per pound or \$800 per pound. The sales tax on a pound of legal marijuana depends on the selling price. Caulkins estimates wholesale prices of \$413 per pound and an untaxed retail price of \$38 per ounce, suggesting a 9% sales tax would add another \$37 - \$54 per pound. For round numbers, we might consider the financial benefit of avoiding paying taxes on a pound of legal marijuana in California to be \$800 - \$850 per pound, at these tax rates. LA CLEAR (2006) lists the price of a pound of Mexican low-grade marijuana as \$300- \$340. (Smuggling and Excise Tax Evasion for Legalized Marijuana: Lessons from Other Excise Taxes, 2010, Page 8)

One of the main reasons for proposing legalization of marijuana has been to use the sale of marijuana as a revenue generator for the state. The idea is that as it would be a legal commodity it would be available to be taxed. Proposed taxes have usually been on the order of fifty dollars per ounce of marijuana. As shown in the quote above, such a high taxation rate would actually increase the cost per ounce from illegal marijuana. This would also most likely result in an increase in smuggling due to the larger financial gains. As taxes are increased the rate at which people attempt to avoid them increases as well. Cigarettes are an example of how a relatively high tax, even though it is by no means as high as the proposed tax on marijuana, can lead to a large black market. This is on taxes of only a few dollars an ounce. An avoidance of taxes as the tax rate increase can be seen to occur not just for taxes on specific products but also for income taxes. Greece is estimated to have a rate as high as 80% of its citizens that either do

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

not pay their taxes at all or that cheat on their taxes. Greece has an extremely high income tax rate. There is no reason to believe that people will willingly pay high taxes on marijuana when it has been repeatedly shown that the higher taxes are the more effort people are willing to go through to subvert the taxation.

A \$50 per ounce marijuana excise tax would be almost 20 times greater on a per unit weight or volume basis than any of the other excise taxes, although California's tobacco excise taxes match it on a percentage basis and in terms of total annual burden for a typical daily user. One case study that supports emphasizing the tax per unit weight, rather than the percentage rate, is diamonds in Canada. Canada recently repealed a 10% excise tax on jewelry that had been instituted during World War I to suppress luxury consumption. The tax had generated only about \$50 million a year, suggesting that the illegal market for diamonds was up to 75% of the total market prior to the repeal. Presumably that is because for diamonds an excise tax that is quite modest in percentage terms (10%) is still enormously high on a per unit weight basis. (Smuggling and Excise Tax Evasion for Legalized Marijuana: Lessons from Other Excise Taxes, 2010, Page 8)

Using tax evasion on cigarettes as the basis for estimating probable tax evasion for marijuana, it was found that at least ninety percent of all marijuana consumed in California would be non-taxed marijuana (Caulkins, J., Morris, E & Ratnatunga, R., 2010). This is mainly due to the amount of taxes relative to the cost of production. The amount of tax paid on legal marijuana would be equal to about four-thirds of the retail cost. As a portion of the wholesale cost this would be far higher. As mentioned in the quote, a tax of fifty dollars per ounce of marijuana would work out to about twenty times by weight of the tax on cigarettes. Smuggling of cigarettes is already very common as there is a large market for lower price tobacco products.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Having taxes as such a large amount of the total legal purchase price of marijuana would provide the same incentive for smuggling as with cigarettes, but for a far greater profit margin. Such high profit margins also run the risk of having a shift of smuggling away from other drugs or illicit commodities by current smugglers to take advantage of the higher profit margins on marijuana if not resulting in an increase in the number of people smuggling items into California. This coupled with a possible reduction in penalties for marijuana possession could make marijuana smuggling not only more lucrative than other black market goods, but also less dangerous in regards to punishment from the government for being caught and convicted.

When looking at the smuggling of cigarettes one of the main ones is that smuggled cigarettes are usually of a known brand still in the package. This allows the final purchaser to know what they are going to be getting in regards to the quality of product. For marijuana this would not be the case. Purchasers of illegal marijuana would not be able to count on the quality, nor the type of marijuana that is available for purchase. While at first this may seem to be a factor that would help counter the likelihood of smuggling it should be taken into account that this is already the standard practice for the purchase of marijuana. People are unable to have the trust in the source and quality of the product when the process or production and distribution is secretive and prone to disruption due to the necessity of avoiding being caught by law enforcement. Instead purchasers are relying on, if anything, a relationship with the person that they are buying it from. Even in "medical marijuana" dispensaries this is still very much the case. As marijuana is still banned by federal law, dispensary owners and suppliers have to be very secretive when it comes to the source of their marijuana. The fact that there is also the possibility of dispensaries of being robbed both for their product as well as for any money also leads them to being secretive about suppliers. While the former reason for dispensaries to

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

remain secretive is a trait of marijuana being illegal, the latter is not uncommon even with legal merchandise. It is especially common in fields such as with jewels or rare coins, as with marijuana there is a very high price per both volume and weight and by the nature of the products they are fungible. With both completely illegal sources, such as street dealers, and quasi illegal sources, dispensaries for example, being secretive of their sources and not having the ability to guarantee a known quality source the way regular cigarette companies are able to, the lack of identifiable brands of marijuana is not going to be in my opinion a factor that would reduce the likelihood of people to buy illegal marijuana to avoid the cost of taxes.

When looking at the smuggling of cigarettes another main consideration is going to be the smuggling of marijuana into other states where it will still be illegal. When smuggling cigarettes from one state to another, smugglers are not going to go to Costco and simply buy 100,000 cartons. This would be very noticeable and traceable to law enforcement. Instead an illicit source for large quantities of cigarettes is desired by smugglers. With cigarettes it is mostly after production where the cigarettes are acquired illegally, but if demand is high enough, or the supply is large enough, a noncommercial source for cigarettes would be viable economically. In the case of marijuana 100% of all demand is for illegal, at the very least at the federal level, non-commercially grown marijuana. In addition to the large demand for non-commercially grown marijuana there is already a large existing supply of non-commercially grown marijuana. There is no reason for illegal producers of marijuana to convert to commercial production when it would mean a reduction in profit margin.

Reduction of profit margin by converting to commercial production from illegal production would not just be due to the cost of the taxes imposed on marijuana. If marijuana was treated as an agricultural product it would then also need to be inspected and graded just as

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

other agricultural products. With tobacco, all tobacco produced has to be inspected by the FDA. There are rules and regulations on how tobacco is to be grown, harvested, treated and also in how cigarettes are manufactured. If the same system is put in place for marijuana the cost of it would either have to be borne by the taxes on marijuana, or it would have to be factored into production costs of marijuana and would eventually be borne by the end purchaser. As marijuana would only be legalized at the state level and not at the federal level of government, this would not occur. Instead marijuana would still have to be grown illicitly to avoid seizure and destruction by the federal government, or it would have to be smuggled into the state. As these two methods are the primary production of marijuana at current it seems that it would be easier for producers to maintain the status quo when it comes to selling their product. It seems unlikely for example that a group that is smuggling drugs across the US border and breaking federal laws in doing so would then willingly go to the California state government to pay taxes on their smuggled marijuana. If California tried instituting agricultural regulations and required inspections separate in lieu of what the FDA normally does, the likelihood of this occurrence seems nonexistent.

A final consideration when it comes to the likelihood of marijuana production to be legitimized is the percentage of the marijuana that is used that is produced within the United States versus that that is produced outside of the United States. Domestic production of marijuana is estimated to account for between 12% and 25% of the total marijuana consumed within the United States. (Childress, M. 1993) This means that a significant majority of all marijuana consumed is from international sources. As these sources are already required to smuggle their crops in through the international border which is and for the foreseeable future

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

will remain a federal crime no matter what laws the state of California enacts, the sources must remain illicit for their own protection from federal law enforcement.

Producers of foreign marijuana have two options available to maintain their market share. The first is to continue to smuggle in marijuana into California from outside the United States. Especially for countries that do not share a land border with the United States this will be the primary if only feasible option available. The second option, which is primarily available to foreign producers that share a border with the United States is to begin or increase illegal domestic production within the United States. In fact one of, if not the largest, sources for marijuana the Mexican drug cartels have begun to increase marijuana production within the United States. National and State Parks have been prime targets for these agricultural operations as there are large amounts of land that are rarely seen by people except from differences where it is difficult if not impossible to discern from marijuana cultivation and natural vegetation. As marijuana is a very hardy plant it is possible to grow large amounts with only a minimum of supporting infrastructure.

If current producers of foreign marijuana do not take steps to maintain their market share it would allow domestic state allowed production of marijuana to be undertaken by California residents. As most foreign marijuana production is run by criminal organizations it seems unlikely that they will be willing to relinquish their portion of the black market for marijuana. As profit margins for marijuana would increase due to legalization both due to a greater demand from an increase in users as well as an increase in demand to avoid taxes it seems even less likely that criminal organizations would be willing to simply stop major income producing operations.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Taxation of marijuana would require an increase in government spending to support law enforcement that would be required to enforce the taxation and to interdict smuggling efforts. As the expected amount of smuggling would be quite a large percentage of the total market for marijuana, the state would be required to spend a significant portion of tax monies from the sale of marijuana on the enforcement of the taxation and the implementation of the taxation itself of marijuana. While there would most likely be a concomitant reduction in funds spent on the enforcement of current possession laws, sale and production laws due to legalization, many of these crimes would be replaced with similar crimes. Instead the crimes that are being enforced now would simply have new crimes primarily related to taxation replace them.

Legalization of marijuana would most likely lead to the elimination of current possession crimes. I do not believe this would eliminate possession crimes, but as mentioned above would instead change the reasoning of why possession above certain quantities was criminalized. For example, in California it is a felony to have in one's possession more than twenty-five pounds of fruit without proof of ownership. This law is intended to counter theft and illegal resale of agricultural products. As marijuana would be an agricultural product it does not seem farfetched that an implementation of a similar law would be emplaced, especially if modified to require proof of taxation of the marijuana. A law of this type would make the prosecution of tax evasion and smuggling much easier to prosecute and convict on. As possession of marijuana above an amount considered reasonable for personal use is banned now in an attempt to counter illegal sales, possession of marijuana above an amount considered reasonable for personal use could be banned in the future, except that it would be for the intent of avoiding tax evasion. This would for all intents be the same crime on a functional level, even though it would be enacted for a different purpose. As marijuana has a higher value per weight as well as being consumed in

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

much smaller quantities than fruit it would be logical for the limit on possession without proof of taxation to be significantly lower than twenty-five pounds and instead be on the order of current limits on marijuana for quantities of personal use.

As with laws regarding to possession, I believe the current laws regarding the sale of marijuana would be eliminated. This, as with possession, is not saying that there would be no laws on the sale of marijuana, in fact I think the laws would become greater in number and possibly even more stringent, at the very least as commerce and taxation is involved I firmly believe that they would become more convoluted. The sale of marijuana would have to be more tightly controlled than just a simple ban for taxation purposes. In addition as it is an agricultural product there would be health code regulations that would need to be followed. There would be laws requiring strict records on how much marijuana was bought and sold by the stores for tax purposes. In addition there would be laws on how the tax on the marijuana would be paid and collected. Laws would also be required for how to mark marijuana that has been taxed versus marijuana that has not been taxed. Other laws such as bans on sales of alcohol by people under twenty-one and restrictions on ages of people working in establishments that serve alcohol would not be unlikely in my opinion to be enacted. If marijuana is legalized overall, and not just for medicinal purposes, I could see marijuana retailers required to get a license similar to a restaurant or liquor license. If pot is legalized only for medicinal use I envision there being laws restricting the behavior and location of dispensaries as there are already.

Production, of which transportation is a part, is where I think the largest changes in law would occur. Production would not just be legal with no restrictions. For both taxation and for safety reasons production would need to be regulated. For taxation it would need to be known by the state who is producing marijuana as well as how much they are producing. This also

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

brings into question if marijuana would be taxed at the production level or at the sales level. For many products, such as alcohol, the taxation occurs after production, but before sales to the public. How taxes on marijuana would be implemented during the production stage offer several challenges and is dependent on the requirements placed by the state. Similar problems occur in regards to regulation of quality. It would be poorly advised of the state to allow the marijuana industry to be self-regulating. If the government is going to allow the use of marijuana and is going to tax it for the benefit of the state, than the state also assumes a responsibility beyond its normal duty to guarantee that the marijuana produced meets acceptable standards. It would be unacceptable for the state to allow producers and retailers to produce and modify a drug with no oversight.

The question then becomes how are the inspections and taxation going to occur. As marijuana would still be banned under federal law this becomes a challenging problem. If the state required onsite inspectors than this would mean that the state would have legal records that were open to subpoena by the federal government. This method would require producers to inform the government of where there production facilities are located. Informing one level of government of where you are partaking in an illegal act would not be an incentive to illegal marijuana producers to convert to legitimate production. This legitimate production would still only be partially legal. If instead of requiring onsite inspection of production facilities it was required for producers to bring their harvests into inspection offices this too causes problems. Instead of having the production locations a matter of government record producers would be required to bring their entire crop into one convenient location for the federal government to be able to easily seize. If the government did not want to seize the crops at the office it would give a known location for federal drug agents to follow known producers in an effort to track back to

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

the production areas. It would be possible for the state to only require part of the crop to be brought in for inspection, but as it would be the farmer selecting the part of the crop to be inspected this does not create a realistic safety inspection.

Legalization of marijuana at the state level does not mean total legalization. In fact it could lead to an expansion of drug laws. An outright ban on a substance is relatively simple to codify into law. The regulation on production, sale, taxation and possession can become quite complex. The fact that marijuana would only no longer be banned by one level of government also complicates the issue. Producers and retailers of marijuana could follow the letter of state law and in no way violate the new state laws, but would still be violating federal law. The only way that would seem to be practical for legalization of marijuana would be if the strictness of laws only increased as the level of government decreased. This would mean for California to be able to legalize marijuana as proposed the federal government would have to have as permissive or more permissive laws regarding marijuana. As there is no indication of legalization of marijuana at the federal level it seems unlikely because of the problems involved in legalization that the creation of a practical legalization plan that would allow for taxation, even barring the problems of a black market, would be at the present possible.

Legalization of marijuana, even left untaxed, does not necessarily mean a total elimination of marijuana related crime. There has been no definitive causal link found between marijuana use and commission of crimes, but research has shown that there are definite links between violent crimes and property crimes with marijuana. Researchers while still not having been able to find a definitive causal link have also not been able to prove that the links are purely associative. Part of this uncertainty is due to the majority of criminals that test positive for use of marijuana use at time of arrest also test positive for use of other illicit drugs. This makes it

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

extremely difficult if not impossible to determine which specific drug, if it is not in fact a combination of them, has a causative effect on commission of crimes. Further clouding the issue is that a test for marijuana use will show any use by the user within the previous thirty days. This then forces researchers to rely on self-reporting from arrestees as to when they last used marijuana. Being forced to rely on an intoxicated person for accurate recording of facts also tends to lend itself to uncertainty in recorded results.

Reports from the United States, England, and Australia, for example, all show that approximately 60% of arrestees test positive for marijuana use and that marijuana is the drug whose metabolites are most frequently found in arrestees' urine. (Marijuana and Crime: Is There a Connection Beyond Prohibition?, 2004, Page 4)

Research has shown that marijuana tends to inhibit violence and aggressive behavior in users in the short term. This has been used as an argument by people to suggest that there is no causative link between marijuana use and crime. At best, this fact can be used to argue that there is evidence against a causative link between marijuana use and violent crime. In addition though, marijuana has been shown to cause aggression in some users when used over the long term. This precludes people from being able to argue that marijuana has no causative link to violent crime and then limits them to only a general statement that marijuana use may not have a causative link to violent crimes for some users.

In the case of violent crime, we find that those who report use of marijuana in the past three days or being under the influence at the time of the crime are no longer less likely to be charged with a violent crime than non-marijuana users. In fact, those with a positive urine test for marijuana are statistically more likely to be charged with a violent crime than those testing negative. Given that marijuana can be identified in urine for up to 30

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

days past the time of consumption, this suggests that individuals who engage in violent crimes are also likely to engage in marijuana use but the marijuana use is not necessarily related to their decision to engage in crime. (Marijuana and Crime: Is There a Connection Beyond Prohibition?, 2004, Page 20)

In research studies it has been found that in habitual users there tends to be higher levels of aggression when compared to a control group. "In a study of 10,441 secondary students in New South Wales, Australia, students who were frequent cannabis users were two times more likely to participate in assault and malicious damage of property than students who did not use cannabis." (Kilmer, B., & Pacula, R., 2004) This is caused by changes in the nervous system from long term regular use. Marijuana use has been shown to cause a reduction in the ability to perform risk analysis as well as cost benefit analysis decisions. This combined with the increase in aggression in long term marijuana users is indicative of a possible causative link to violent crimes.

In regards to crimes for profit there are two matters to consider. The first is if the crime was committed because the person was under the influence of marijuana. Studies have found that at least in the case of adolescents there is a link between marijuana usage and crimes for profit. "In studies of juvenile offenders in the United States and Australia, young offenders who reported frequent use of marijuana reported greater involvement in theft than non-users. In addition, among juvenile offenders higher marijuana involvement was significantly correlated with higher rates of offending for specific property crimes." (Kilmer, B., & Pacula, R., 2004). From these studies it appears that there was not necessarily a motive of obtaining resources for the purchase of more marijuana, but instead it seems likely that it was due to a lowering of inhibitions as well as the reduction in the ability to make critical decisions.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

The second is if the crime was committed to earn money so that the person could purchase more marijuana. “By comparison with other illicit drugs, marijuana consumption does not typically produce compulsive patterns of criminal behavior among users as it is not as expensive as other illicit drugs.” (Kilmer, B., & Pacula, R., 2004). Results of research seem to primarily link a lack of increase in theft for the purpose of obtaining more marijuana more with the relative low cost of marijuana as opposed to any effect of the drug itself.

Results from these studies suggest that regular use of marijuana will increase both in prevalence and in terms of average level of use with a fall in the monetary price of marijuana and a reduction in the enforcement risk of using marijuana. The precise increase in use, particularly in terms of average quantities consumed among users, remains unclear because of inadequate analyses of conditional demand. However, it is clear that the number (prevalence) of regular users will rise in response to both. (Insights on the Effects of Marijuana Legalization on Prices and Consumption, 2010, Page 6)

The research found primarily related to either violent crimes or crimes such as theft and did not address nonviolent crimes that were not for profit to any significant degree. As such the author was unable to draw any significant conclusions as to the relationship between marijuana usage and these types of crimes. It is the belief of the author based on what little was discussed in the research found that there is a higher rate of not for profit property crimes committed by those under the influence of the user. What is unable to be determined is if this is in any way any different in statistical significance than users of other drugs or alcohol. The higher rate of for profit crimes committed by users of marijuana also leads the author to believe that marijuana users would be more likely to participate in not for profit property crimes.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

From studies done, it has been predicted that marijuana use is inversely proportional to the cost of marijuana. Legalization, or even a reduction in the criminalization, of marijuana has been linked to the reduction of the cost of marijuana. Reduction in the cost of marijuana has been linked to an increase in use and the total number of users. It is therefore a simple causal link that the legalization of marijuana would cause an increase of marijuana use, not just in the amount used by current users, but also in the total number of users of marijuana.

Approximately nine out of twenty-five of all self-reported marijuana users met the American Psychiatric Association's criteria for being dependent on marijuana (Pacula, 2009). This combined with the observation, that over 160,000 patients whose primary diagnosis was that of marijuana dependence were being treated in drug facilities in 2004 that were not ordered there by the criminal justice system (Pacula, 2009), shows the magnitude of marijuana dependence problems. The 160, 000 patients that were treated help illustrate the magnitude of the problem. These 160,000 people represent only a portion of those that have marijuana dependence. Those not represented by this number include anyone who was ordered into treatment by the criminal justice system, those who had a secondary diagnosis of marijuana dependence, and finally those who had a dependence on marijuana but did not receive treatment for the dependence issue. 160,000 people equates to roughly one person in every two hundred seventy people in California that have a dependence of marijuana. One in two hundred seventy seems a larger enough number of dependent people until it is remembered that this number understates the total people that are marijuana dependent.

Extrapolating from the information just discussed, as marijuana decreases in price due to decriminalization, the number of not just users, but people dependent on marijuana who require treatment will increase. Over one in three new users would become dependent on marijuana. An

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

addiction rate of over one in three by itself is cause for concern in allowing greater use of marijuana. This high rate of dependence would quite possibly result in the number of new people needing health services for treatment of marijuana dependence overwhelming the ability of current treatment programs and centers to provide help. While dependence on marijuana is a large enough concern on its own, it is only one narrow aspect of deleterious effects on users.

Using the ratio of approximately nine out of twenty-five people self-reporting that they meet the guidelines for marijuana dependence (Pacula, 2009), and applying it to the known number of people treated for marijuana dependence not referred by the criminal justice system for treatment returns an estimate of about 450,000 marijuana users in the state of California. Again this number is going to under represent the total number of marijuana users as it is based on a subset of users treated for marijuana dependence. Even using this number as the current number of marijuana users, this represents over one percent of the entire state population. This calculated number falls short of an estimate that in 2008 there was at least half a million marijuana users in the state of California (Pacula, 2010). Converting the total numbers to a ratio has the result that over one in two hundred fifty people in the entire state are dependent on marijuana.

The number of marijuana users increases as the price of marijuana decreases, therefore the number of people requiring health services from marijuana problems will increase as the price decreases. Many health issues associated with smoking cigarettes also applies to the smoking of marijuana. "Call it what it is. Legalize it or not. I don't care, but don't masquerade pot-smoking as medicinal, when pot smokers are filling their lungs with useless and sometimes toxic chemicals equivalent to unfiltered cigarettes." (R. Hampson, Ph.D., Personal Communication, December 3rd, 2011). The increase in marijuana related medical issues will not

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

be borne solely by the users of marijuana, it will also effect government health services. A comparison to the usage of tobacco can be drawn for the cost to government for marijuana usage. 193 billion dollars was estimated to have been spent nationally direct health costs related to the usage of cigarettes (Center for Disease Control and Prevention).

Regular long term use of marijuana has also been linked to neurological changes in the user. This was partly touched on earlier in this paper when referring to research that found that in long term users have higher levels of aggression than non-users. It has also been found that people with various psychological conditions, such as schizophrenia, have adverse long term results from marijuana use in addition to the harmful effects that all marijuana users experience. Marijuana use has also been proven to effect the sleep cycles of users. Regular usage will cause the user to increase the total amount of time spent sleeping while simultaneously reducing the amount of time that a person experiences Random Eye Movement (REM) sleep. REM sleep is required for the proper functioning of the brain and insufficient REM sleep can lead to such health problems as psychosis and even death. The long term effects on users of these changes in sleep patterns has not been studied yet to any great degree, but it is believed that they will have only harmful effects on long term users of marijuana.

Medical use of marijuana has been touted as a health reason to allow the legalization of marijuana, at least for some users. It has been argued that the harmful health results of smoking marijuana are far outweighed by the helpful benefits in combatting the illnesses that the user has. Smoking marijuana is most commonly claimed as a counter to pain and nausea, at which it does provide relief. The reason that smoking is considered an effective way to administer the chemicals in marijuana is that these chemicals are extremely insoluble in water. This hinders most other methods of absorption of the chemicals such as via an injection or pill. Smoking

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

marijuana while being able to provide relief from pain and nausea only counters pain and nausea and no other symptoms. (Hampson, 2011)

In addition to only treating these two symptoms there are other problems with smoking marijuana for medical use. The first is quality control. Pharmaceuticals are carefully controlled so that they give the same effect for each dose. Depending on how the marijuana was grown, or what brand is being used, there are going to be different effects on the user from batch to batch. Not all marijuana is the same. Smoking different types of marijuana to control pain is similar to swapping between different blood pressure medications to control high blood pressure. While in general blood pressure medications are good for treating high blood pressure, not all medications work equally as well on all people. In fact some medications that nominally treat high blood pressure can have interactions with other chemicals in a person's body or with that person's physiology. If this is so in specially formulated medications it is even more so in clandestinely grown plants. The second problem is the dosage. With prescription drugs they come in carefully measured amounts. Each carefully measured amount has a specific known quantitative effect on the user. This is one reason why it is so important to adjust the dosage amount on prescription drugs. By using marijuana by smoking it, it is impossible to use and ingest a known specific amount. Even if each joint that is smoked has the exact same amount of marijuana in it the very nature of smoking precludes a user from getting an exact dose each time they smoke. As the chemicals are ingested via both first hand and second hand smoke something as simple as the wind can affect the total dose received. "Smoking pot for medicinal purposes is akin to consuming moldy bread, dirt, and animal/insect by-products just in hopes of ingesting enough penicillium fungus to get a bit of antibiotic property out of it." (Hampson, 2011)

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Compounds within marijuana, or more accurately the cannabinoid family, and not marijuana in general are what are capable of treating other health problems such as glaucoma, epileptic seizures, tremors and depression. Marijuana that is touted as medical has not been bred to contain these other compounds. Marijuana has in almost all cases been bred to provide better or longer highs, not for medicinal use. In fact some of the most helpful compounds are not naturally occurring in marijuana plants.

There are 63 cannabinoid chemicals in cannabis leaves, seeds and stems, and over 400 *other* compounds in the smoke (including *all* of the tars etc. that have been *removed* from cigarettes over the past 50 years). The common ingredient to virtually all varieties of cannabis is delta-9-tetrahydrocannabinol (THC). Other compounds such as cannabidiol (CBD), cannabigerol (CBG), tetrahydrocannabivarin (THCV), cannabidivarin (CBDV) are present in varying amounts in cannabis. CBD appears to be much more important to the medicinal effects and countering side effects, yet "commercial" pot varies from 5-10% CBD all the way down to no CBD at all. Arguably THE MOST IMPORTANT medicinal cannabinoid is not present or present in insufficient amounts in about one-third of the marijuana approved for "medicinal" use in California, Colorado, etc. CBG, THCV and CBDV are present in amounts from 0-2% and are more frequently absent than present. The tumor and lymphoma suppression are properties of a synthetic cannabinoid called HU-210; appetite suppression, smoking cessation and weight loss are due to cannabinoid *antagonists* - blockers of the receptor that converts the signal from a cannabinoid molecule into a biological action, it should be noted that *neither* of these compounds are *ever* present in the cannabis plant. (Hampson, 2011)

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

While the use of marijuana itself is not truly effective as a prescription drug, the compounds in it can be used to create effective pharmaceuticals. The compounds are able to be extracted and synthesized. This allows only the compound or compounds that have a positive effect to be used. It also allows the compound or compounds to be incorporated in a delivery method, such as an oil based emulsion that is being experimented with in Europe, that are able to be quantized and controlled. This also allows compound mixtures to be modified to provide the specific health benefits that are required.

Smoking pot for medicinal purposes is akin to consuming moldy bread, dirt, and animal/insect by-products just in hopes of ingesting enough penicillium fungus to get a bit of antibiotic property out of it. There are two primary problems with the current state of "medical" marijuana in the U.S. and other countries. First is the lack of precision and control. Patients allowed to select their "favorite ganja" to fill their prescriptions have *no* idea if they are getting the appropriate compounds in sufficient amounts for effective medicinal value. The lack of consistency across products means there are no dosing limits and no repeatability from batch to batch. (Hampson, 2011)

Medicinal use of marijuana is not an argument that is borne out by the scientific evidence. In fact the advocacy of marijuana as a drug has hindered the proper research and acceptance of true pharmaceuticals derived from cannabinoids. Allowing people to use marijuana for medicinal purposes as has been proposed by advocates of legalization does not make sense. Many pharmaceuticals are only able to be obtained by prescription. Most of these prescription drugs do not have as harmful side effects as marijuana does. No prescription drug that I have been able to find out about is nothing except trimmings from a plant. Quite a few are derived from compounds within plants, such as the oil emulsion made from compounds in

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

marijuana, but in no case is the raw plant itself prescribed. It makes no sense for marijuana to be the only exception to this occurrence in all of modern medicine except if the claimed desire for legalization for medicinal purposes was simply a smoke screen to cover people's other reasons for legalization.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Conclusion

It is my conclusion that the legalization of marijuana would be harmful to California. While there are several hypothetical benefits that could occur from legalization, such as a reduction in funds spent on enforcement of marijuana drug crimes, they seem impractical when it comes to actual implementation. These hypothetical benefits look to actually cause a negative effect on the state of California. The known negative effects on the state are quite great on their own as well. While there are problems and difficulties in the enforcement of marijuana related crimes, these laws in my opinion counter a larger potential problem that would occur from legalization.

The primary potential benefit of legalization that is proposed is an increase in revenue to the state coffers through taxation of marijuana. When examined closely indications are that the proposed tax rates would actually encourage tax avoidance and illicit production, transportation and sale of marijuana. As the market for marijuana would be mostly black the state would be required to enforce taxation regulations. The cost of such enforcement methods would in my opinion be greater than the savings from not enforcing pre legalization marijuana related laws.

The majority of marijuana consumed in the United States is by foreign criminal organizations. Legalization of marijuana would result in an increase of users and therefore an increase in demand. It seems inconceivable that criminal organizations would not be willing to expand their own production capabilities to cope with this increase in market demand, especially for such a lucrative profit generator. This increase in production would also cause an increase in operations within the United States by these criminal organizations. Many of these organizations are not adverse to the use of violence in the obtainment of their goals as can be seen in the drug wars raging in Mexico. Violence from these drug wars has already begun to spill over into the

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

United States. I cannot see any reason why organizations such as these would unwilling to operate in the way they do now in the United States if they were able to profit from them. This increase in drug cartel activity in the United States in and of itself would require a large increase in law enforcement expenditure, and possibly even in military expenditure, less we face the prospect of having Mexican drug wars fully cross the border into our cities here in California.

An increased of marijuana related costs due to expanded marijuana use because of legalization would not be limited to the enforcement of taxation regulations. One of these increased costs is the increase in costs to public health services. As the rate of dependence on marijuana for users approaches 40%, over one in three new users of marijuana would require treatment for drug dependence. This in and of itself would be a significant increase in costs to the state. Smoking in marijuana also results in health problems similar to the smoking of tobacco. Health programs across the country have been pushing for a reduction in the smoking rate as a way to save money. Increasing the number of people that use marijuana, which is mostly smoked, would be similar to switching from demonizing smoking, which is done by many health agencies, to recommending that people smoke. The cost could range into the billions of dollars a year.

One thing that I was unable to find research relating to was in regards to smoked marijuana being an aerosol intoxicant. Many people pushing for the legalization of marijuana want it legalized and in fact accepted in society much as the smoking of tobacco was in the middle of the twentieth century. The difference between smoking tobacco and smoking of marijuana for non-users is the effect of second hand smoke. Second hand smoke from tobacco when breathed in large enough or consistent enough quantities can have harmful health side effects. As mentioned previously in this paper these effects are similar to those from marijuana

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

smoke. The difference between second hand tobacco smoke and second hand marijuana smoke is that only one of these can cause intoxication in the person that breathes the smoke.

There are many locations where smoking is banned by regulation if not in fact by law. At these locations it is not unusual to see someone smoking a cigarette. If the smoking of tobacco products cannot be prevented in public in prohibited areas, why would people believe that the smoking of marijuana if legalized would also not be done in public and even prohibited areas of the public? For instance the most common inconvenience of rainy weather here in California is to have to run the gauntlet of smokers and clouds of smoke that begin just outside of public doorways and extends out in a cloud from there. If marijuana is legalized for general use in the state what is to say the same occurrence, but with clouds of marijuana smoke would not also occur? Instead of just risking smelly clothes and an irritation of my allergies I would instead be forced to risk receiving a contact high.

Marijuana is one of the few and by far the most common drug where receiving a contact high would be a major regular concern. While it is possible with other drugs, both legal and non-legal, to become accidentally intoxicated, due to the nature of the drugs and the methods of how they are ingested a contact high would be almost always a matter of a fluke scenario, not a normal risk having to do with regular consumption. As neither societal pressures nor legal restrictions have been able to keep tobacco smokers from exposing others unwantedly to their second hand smoke I find it unlikely that the same methods would be successful in regards to marijuana smoke. While others may choose to alter their consciousness, I do not do so and I find it intolerable that a change in the law could allow others to risk exposing me to drugs that I do not choose to use.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

With a full legalization of marijuana usage receiving a contact high from exposure of marijuana in public use it also increase the likelihood of usage near children. Children are more susceptible to the harmful effects of drugs and alcohol due to them still growing and developing. Allowing widespread usage of marijuana would risk an epidemic of second hand exposure to the chemicals that would put concerns of exposure to second hand tobacco smoke to shame.

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

References

- Childress, M. (1993). *A system description of the marijuana trade* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 23, 2011, from <http://www.rand.org/pubs.html>
- Pacula, R. (2009). *Issues to Consider Before Reforming California State Law* Santa Monica, CA: RAND Corporation. Retrieved October 23, 2011, from <http://www.rand.org/pubs.html>
- Pacula, R. (2010). *Examining the Impact of Marijuana Legalization on Harms Associated with Marijuana Use* Santa Monica, CA: RAND Corporation. Retrieved October 23, 2011, from <http://www.rand.org/pubs.html>
- Kilmer, B. (2010). *Insights on the Effects of Marijuana Legalization on Prices and Consumption* Santa Monica, CA: RAND Corporation. Retrieved October 22, 2011, from <http://www.rand.org/pubs.html>
- Caulkins, J., Kilmer, B., MacCoun, R., Pacula, R. & Reuter, P. (2010). *Altered State? Assessing How Marijuana Legalization in California Could Influence Marijuana consumption and Public Budgets* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 22, 2011, from <http://www.rand.org/pubs.html>
- Kilmer, B., & Pacula, R. (2004). *Marijuana and Crime: Is There a Connection Beyond Prohibition?* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 20, 2011, from <http://www.rand.org/pubs.html>
- Chrqui, J., King, J., & Pacula, R. (2004). *Marijuana Decriminalization? What does it Mean in the United States?* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 20, 2011, from <http://www.rand.org/pubs.html>
- Caulkins, J. (2010). *Cost of Marijuana Prohibition on the California Criminal Justice System* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 20, 2011, from <http://www.rand.org/pubs.html>
- Caulkins, J., Morris, E & Ratnatunga, R. (2010). *Smuggling and Excise Tax Evasion for Legalized Marijuana: Lessons from Other Excise Taxes* (RAND Research paper). Santa Monica, CA: RAND Corporation. Retrieved October 19, 2011, from <http://www.rand.org/pubs.html>

Effects of the Legalization of Marijuana

Administration of Justice 319

Due December 13th, 2011

Reuter, P. (2010). *What Can Be Learned from Other Countries?*

(RAND Research paper). Santa Monica, CA: RAND Corporation.

Retrieved October 19, 2011, from <http://www.rand.org/pubs.html>

Center for Disease Control and Prevention. (2011). *Smoking and Tobacco Fact Sheet.*

Retrieved November 14, 2011 from

http://www.cdc.gov/tobacco/data_statistics/fact_sheets/

Hampson, Robert, Ph.D. Personal Interview, December 3rd, 2011. Associate Professor, Dept. of Physiology & Pharmacology, Wake Forest University School of Medicine.