Is Prevalence an Appropriate Target for Drug Policy?

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Getting Beyond the Legalization Debate

When Mark Kleiman was a young faculty member at the Kennedy School, a senior colleague asked "What is it you work on?" When Mark answered "Drug policy," the response was: "Why would you do that?" The underlying assumption was that if you didn't legalize drugs, there were no worthwhile policy options to discuss. That view is probably held by most economists and many intellectuals; I believe that it is narrow-minded and has some unfortunate consequences.

In the 1990s Robert MacCoun and I intensively studied the consequences of changing the basic laws with respect to drugs[2]. We concluded that legalization advocates, who for better or for worse bear the burden of proof, face three fundamental problems. First, the projections about how drug use and behavior would change with legalization are extremely uncertain; these projections are unlikely to get better in the foreseeable future. We concluded that legalization would increase use. We saw, however, no method for projecting whether prevalence would rise by 50% or 500%. The average harms associated with an episode of use or with a single user would be massively reduced. Hence the consequences for the total harms caused by drugs, to users and to society generally, are impossible to predict.

The second fundamental difficulty is that, even if one could make projections confidently, there is no persuasive way of comparing the harms under the two regimes. How do you compare reducing the intrusiveness and divisiveness of our existing policies with an increase in addiction? There is an emerging literature on

Quality Adjusted Life Years that suggests that addiction is seen as a very costly health condition[3]. Estimating the social cost of the increased divisiveness of a policy that African-Americans see as disparately and adversely impacting them is, to put it mildly, difficult. Modest increases in addiction might by some standard calculation look like it worsens aggregate wellbeing. But, except to economists, the whole notion of adding up such disparate consequences into a single figure is unpersuasive.

Third, there is a massive redistribution of harms under legalization. Under any plausible scenario there will be a sharp diminution, if not elimination, of the sources of disorder and crime associated with drug marketplaces in minority urban communities. These same groups may have higher rates of addiction and other adverse consequences of drug use, but I believe those are overwhelmed by the gains from the reduction in the market related activities. On the other hand, as a middle class parent I would become much more concerned that my son might actually try cocaine and become addicted to it. Legalization would probably make me worse off. I am a (shallow) Rawlsian; the principal obligation of a government is to protect the most vulnerable groups. It is cheap for me to say I am perfectly comfortable with this redistribution but others may disagree with that value judgment. Even the assumption of the redistribution can be challenged, though I find my friends' arguments unpersuasive.

For all these reasons, I do not think that legalization, other than for marijuana, is a useful topic for policy research. Since I spent 10 years working on the topic, I say that with some pain. *Drug War Heresies* is probably the most seriously analytical book about legalization. We predicted that neither side in the debate would like it, and we were quite right about that. It is not highly regarded by either drug warriors or legalizers. On the other hand we take comfort from the fact that it has been favorably reviewed by those interested in policy analysis[4].

Can Drug Policy Choice under Prohibition Influence Prevalence?

If legalization is not an option then our task is to discover how to make prohibition work better. In doing so, we have to acknowledge that a lot of our current policies cause enormous harm. Those policies are intrusive, bringing the state into our lives in uncomfortable ways, such as drug tests of civil service applicants;

divisive, certainly by race and probably even by age; and they are very expensive —an estimate of $40 billion is not an unreasonable estimate of what we spend on trying to control drug problems in this country. It is fair to say the policies are ineffective, inasmuch as the United States has the Western world’s worst drug problem and has not been able to reduce it rapidly. Lots of other countries have a heroin addict population of about the same size, but no one has both our heroin problem and our cocaine problem.

The mainstream policy debate is very narrow. In the last few years a great deal of attention has been taken up with the struggle to end the absolutely indefensible 100 to 1 disparity in federal sentences for powder and crack cocaine offenses involving comparable amounts of the drug. Though it did end the mandatory minimum for simple possession (a rare offense in the federal courts), the trumpeted success is that Congress agreed to reduce the disparity to 18 to 1 for dealers. That is a very modest achievement indeed, comparable to the very slight reforms achieved in New York State following a decade long campaign to roll back the excesses of the Rockefeller drug laws. Reversing punitive criminal justice policies is a slow business.

One factor that has inhibited the mainstream debate is that there is only a weak empirical base for dealing with what I take to be the most important source of policy induced harms in the US, namely our very aggressive enforcement. Arguing for less punitive policies is conventional enough, but I want to put this in the context of a deviation from the conventional wisdom that drug policy matters to the prevalence of drug use.

Most governments target drug prevalence explicitly. Indeed ONDCP, until recently, specifically measured success solely in terms of reducing drug use in broad population surveys such as Monitoring the Future (high school students) and the National Survey on Drug Use and Health. The assumption is that policy can indeed influence drug use. That is, good prevention programs would lower initiation, particularly among youth. A better treatment system, with more addicts entering it, would reduce the extent of use in that population; treatment clients, at least while in treatment, would stop use of illicit drugs. Finally, it is assumed that effective enforcement can raise price, reduce availability, and thus lower the extent of use.

I would suggest that experience, both in the United States and other Western countries, contradicts all those assumptions. Instead, drug use is driven mostly by broader social, economic and cultural factors, as well as by the internal dynamics of epidemics. Everything we do by way of policy within the context of prohibition has fairly minor effects on prevalence. The major issue for drug epidemiology is the occurrence of epidemics, short periods of explosive growth in initiation, followed by comparably sharp declines in initiation and, for addictive drugs, slow declines in prevalence. No policy measures can in fact affect whether an epidemic of drug use starts, how severe that epidemic will be, or how rapidly it ends.

I am stating these *ex cathedra*. If you don't agree with them then what follows will not be persuasive, but if you do, the following lays out what I hope you will agree are the logical implications.[5]

On the other hand, we do know that bad policy choices can make drug use, drug distribution and production more harmful. All that policy can do, in fact, is to reduce the harmfulness of drug use, distribution and production. Though that proposition may sound very negative, I believe it has enormously liberating effects for policy. At present, many laws and interventions are justified because they might reduce drug use, even though we know with greater confidence that they do cause harms; if prevalence is no longer seen as a plausible policy goal, then the harms can be avoided.

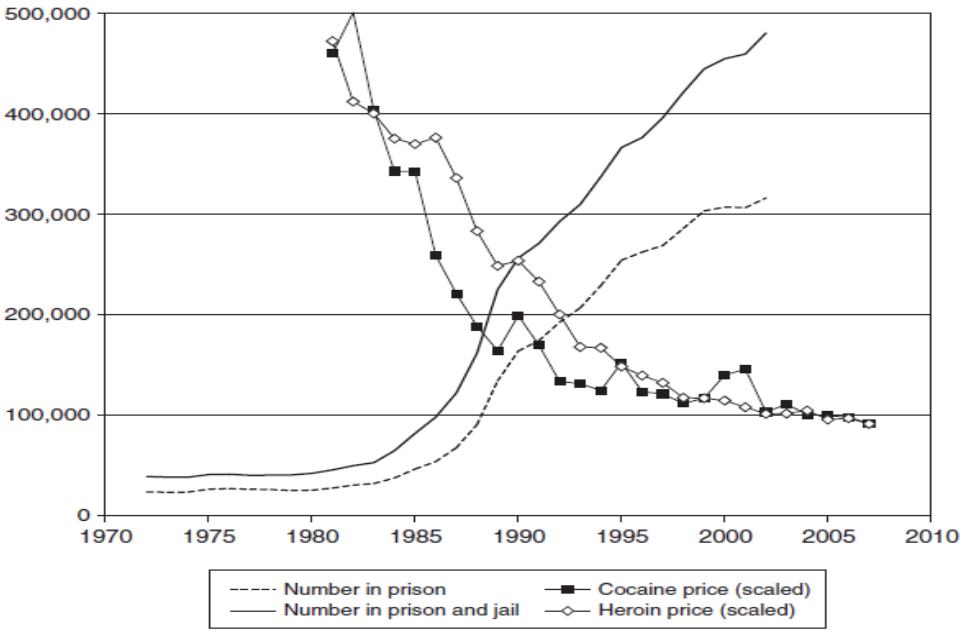
So let me defend the proposition, at least in broad terms, that drug policy has little effect on drug prevalence.

As summarized in the 2010 volume *Drug Policy and the Public Good*[6], prevention is focused largely on marijuana, the illegal drug of first use. By and large the program evaluations have been quite negative. Certainly there are no robust positive findings of substantial effects on drug use; Jonathan Caulkins has pointed out that they are more justified by their effects on alcohol and cigarette use. To make matters worse, school systems systematically choose bad programs. Given the choice between an effective program and a bad program with a nice label they'll choose the nice label. Prevention science is improving but at present drug prevention in schools is more a slogan than an effective program.

Research on treatment has shown evidence of effectiveness and indeed even of cost effectiveness; see again *Drug Policy and the Public Good*. What is striking, though, is that most individuals under treatment continue to use drugs, they use less of them, they cause less harm, etcetera. However treatment tends to generate modest reductions in the actual measured prevalence of drug use. Most of those in treatment are still in fact users of illicit drugs.

There is very little evidence that enforcement can raise prices or reduce availability. Figure 1 is my standard graphic on this point. Over a 25-year period (1980-2005) the number of persons incarcerated for drug offences (i.e. for drug distribution, drug manufacturing or drug use) in local jails and State and federal prisons increased about 10-fold; that does not include individuals incarcerated for "drug-related" crimes, such as robbery to provide money for drug purchases. During that period of massively increased enforcement intensity, the price of heroin and cocaine both fell about 70%; it is interesting that price declines have been very parallel, even though the drugs are not good substitutes for each other.

Figure 1.



Drug prices and total drug-related incarceration, 1980 to 2005

It would be nice to have more sophisticated studies and not just rely on this very descriptive analysis. There is a dearth of good studies at a more localized level[7]. The limited available evidence is that enforcement can do little to raise price. That is not to say prohibition does not have an effect on price, but tougher enforcement may not further increase the price.

To give you another sense of the possible irrelevance of drug policy within the context of prohibition, Figure 2 is a graph from a paper by Mireille Jacobson[8]. It shows past month marijuana use amongst high school seniors, a well-tracked figure, and the size of the age 15 to 19 cohort each year from 1975-2000. There is a remarkable positive correlation between cohort size and drug use in that age group. This is consistent with the work of Richard Easterlin[9] that shows the influence of cohort size on many aspects of individual behavior. Jacobson conducted other sub-analyses that further supported the notion that cohort size was really a very important driver.

Figure 2.

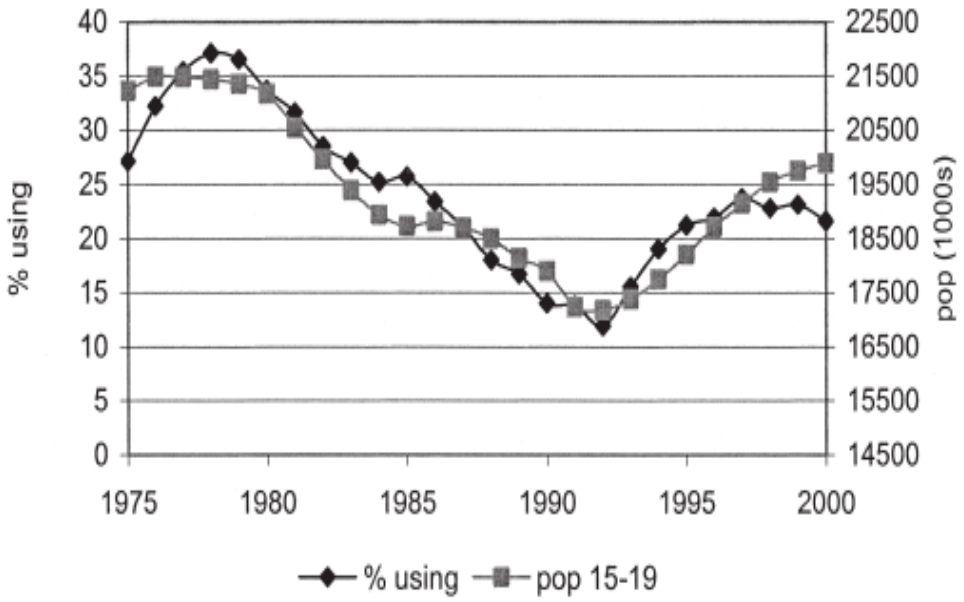


FIGURE I
Past Month Marijuana Use among High School Seniors and Cohort Size, Monitoring the Future Data 1975–2000

Moreover, when you think about drug problems and policy it may well be that it is not drug policy that matters most. Other domains of social policy may be just as important. Keith Humphreys, probably the only senior government participant in the Affordable Care Act decision making process who cared about helping drug users specifically, talked about how the ACA provides a massive expansion in access to drug treatment. The ACA is certainly much more important than any of the efforts to adjust the Substance Abuse and Mental Health Block Grant formula or any of the other targeted drug treatment funding schemes.

The fact that in Europe you don't have to be a deserving poor to get access to income support may also be very important. Drug users in Western Europe may be less criminally active because they have access to other sources of state payment. Other domains of social policy really deserve our attention when we're trying to deal with drug problems in this country, and we should be less concerned about drug policy itself.

The Centrality of Harms for Policy

Let me now return to the claim that this nihilism about drug policy is useful. I am arguing that we can reduce programs whose adverse effects are certain and whose capacities to achieve the desired goals of lower prevalence are very uncertain. About 500,000 persons are locked up now for drug offences[10]. Jonathan Caulkins and I argue that if the nation cut that number in half, which would still make it much tougher than in the Ronald Reagan era, there's no reason to believe that availability would increase or prices decline; the prevalence of drug use would be essentially unchanged. However, 250,000 fewer persons would be locked up; that not only saves a substantial amount in public funds, but also decreases the inhumanity of what is a very harsh policy both by historical and international standards.

In making this argument, I am assuming that the principal goal of drug policy (i.e. that set of laws and programs that have the explicit goal of dealing with drug problems) is to avert harm caused by drug use and distribution, including policy itself. Robert MacCoun and I argued that this is just a version of conventional cost benefit analysis. In CBA you lay out all the consequences of a policy intervention,

not just the advertised and desired ones but all the consequences positive and negative. Some will be intended and many will be unintended. Harm reduction,[11] in our formulation, is little more than that.

It will not end up as a full CBA with numbers because, as already argued, lots of the consequences cannot be quantitatively estimated and/or valued. Nonetheless, it's a very useful exercise to go through. It is to be done not just with programs that are labeled harm reduction, i.e. that explicitly target the harmfulness of drug use rather than the prevalence of drug use. It applies to any intervention. This isn't the conventional statement of harm reduction, which has historically been associated with a very narrow range of programs that specifically target the harmfulness of drug use – typically needle exchange, safe supervised injection, et cetera[12].

The criterion can be applied to a whole array of supply side interventions, driving open air markets underground, targeting the particularly harmful dealers, et cetera. But it also has use in decisions about international programs, namely to US efforts to intervene in Mexico and other source and transit countries. These programs have had essentially zero consequences for drug availability and use in this country. Captured under the label "balloon effect," the interventions cannot affect how much is produced globally but only where production or trafficking occurs, as well as some effect on the consequences in the source countries[13].

The evidence for the balloon effect is abundant, though the reasoning highly inferential. When Peru and Bolivia cracked down in the 1990s, Colombia then became the major coca producer, a shift that was bolstered by the huge internal displacement of rural populations in Colombia as a consequence of the drug-related guerilla violence.

You can also see the same effect for trafficking. Around 2003, the Dutch government became tired of all the cocaine trafficked from the Netherlands Antilles to Schiphol Airport. As a consequence, it did a very un-Dutch thing; all passengers were searched and anyone caught with cocaine was required to hand it over and was not allowed on the plane. The result was many fewer people flew from the Netherlands Antilles to Schiphol, and a lot less cocaine came in through Amsterdam.

However at the same time, a new route from Colombia to Europe via West Africa opened up. It is highly plausible, though not proven, that this was a response to the shutting down of the Netherland Antilles route. Suddenly countries such as Ghana and Guinea-Bissau had to deal with drug traffickers; they were singularly ill-equipped to do so.

Incidents like this pose an important question: Should the international community be thinking about strategic locations of production and trafficking, given how destructive production and trafficking are? Is it possible to identify countries in which these activities will be less destructive to global well-being. I believe that it is desirable to have drug production and trafficking to be highly concentrated in small countries close to the consuming countries so there aren’t too many transit countries. Belize is my preliminary choice for cocaine; small, highly corrupt already and close to the United States. I haven’t worked out a candidate country for heroin production but I know the answer is not Afghanistan, a relatively large country with many other internationally important problems that are worsened by the drug trade and very distant from most of the relevant markets.

Another argument against US aggression abroad is that the act of moving the traffic around has harmful consequences. The adverse consequences of having been a producer country do not go away when production or trafficking is reduced. They may be reduced less than proportionately as the nation’s share of the market goes down. However now a new country gets involved. It acquires a whole set of harms that were not there before and that plausibly will outweigh the gains to the original country. So I think that the act of shifting is itself problematic.

Let me conclude now at a very high level. My suggestion is that prevalence is never a good target for drug policy. In fact, we are forced by the realities of what we know about effects of interventions to use harm reduction as the principal criterion. What we can do as a practical matter is aim to reduce the adverse consequences of drug use, distribution, production and policy. That applies to international as well as domestic efforts. It’s not just a choice; that’s all that we have available.

[1] Jonathan Caulkins and Keith Humphreys provided valuable comments.

[2] MacCoun, R.J. and P. Reuter (2001) *Drug War Heresies: Learning from Other Vices, Times and Places* New York, Cambridge University Press. We have recently extended this analysis in MacCoun, R. and Reuter (in press) "Assessing Drug Prohibition and its Alternatives: A Guide for Agnostics" *Annual Review of Law and Social Sciences.*

[3] See, for example, Pyne, J. M., M. French, K. McCollister, S. Tripathi, R. Rapp, and B. Booth, "Preference-Weighted Health-Related Quality of Life Measures and Substance Use Disorder Severity," *Addiction*, Vol. 103, No. 8, August 2008, pp. 1320–1329.

[4] See for example Cook, P.J *Journal of Policy Analysis and Management* 2002 pp.303-306.

[5] Jonathan Caulkins has done much of the work on modeling these epidemics. See for example Caulkins, Jonathan P., Doris A. Behrens, Claudia Knoll. Gernot Tragler, and Doris Zuba. 2004. "Markov Chain Modeling of Initiation and Demand: The Case of the US Cocaine Epidemic." *Health Care Management Science*. Vol. 7, No. 4, 319-329.

[6] Thomas Babor, Jonathan Caulkins, Griffith Edwards, David Foxcroft, Keith Humphreys, Maria Medina Mora, Isidore Obot, Jurgen Rehm, Peter Reuter, Robin Room, Ingeborg Rossow, and John Strang. 2010. *Drug Policy and the Public Good*. Oxford University Press.

[7] The only high quality published study is Kuziemko, Ilyana and Steven D. Levitt (2004) An Empirical Analysis of Imprisoning Drug Offenders. *Journal of Public Economics,* 88, 2043-2066.

[8] Jacobson, M. (2004) "Baby Booms and Drug Busts: Trends in Youth Drug use in the United States, 1975–2000" *Quarterly J. Economics* pp.1481-1512.

[9] See for example, Easterlin, R. *Birth and Fortune*(1987) Chicago, University of Chicago Press.

[10] Caulkins, J. and Reuter (2006) "Re-orienting Drug Policy" *Issues in Science and Technology* 23(1).

[11] The argument is given in detail in Reuter (2009) "Do no harm: sensible goals for internatioinal drug policy" *The American Interest* IV(4) 46-52.

[12] For example, the Harm Reduction Coalition provides the following definition: "Harm reduction is a set of practical strategies that reduce negative consequences of drug use, incorporating a spectrum of strategies from safer use, to managed use, to abstinence. Harm reduction strategies meet drug users "where they're at," addressing conditions of use along with the use itself." http://www.harmreduction.org/section.php?id=62 [accessed August 3, 2011].

[13] The latter point is expanded in Chapter 10 of Paoli, L., Greenfield, V. and Reuter *The World Heroin Market: Can Supply be Cut?* (2009), Oxford University Press.