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# Reorienting the Criminal Justice System to Deal with Illegal Drugs More Effectively and Humanely

## ABSTRACT

Many judge the American criminal justice system to have largely failed in its drug enforcement role, and the justice system itself has suffered a loss of community support and internal morale as a consequence. Five principles should guide improvement of drug enforcement, including that drug enforcement be viewed as a preventive activity, whose main goal is reducing drug abuse and related harms, and it should be designed for sustainability. Six more specific proposals: first, make marijuana enforcement a minor matter for police through decriminalization of possession or outright legalization; second, induce drug users who are under criminal justice supervision to refrain from drug use by imposing appropriate monitoring and graduated sanctions programs; third, expand opioid substitution therapy for heroin- and other opioid-using offenders; fourth, reduce the average severity of sentences for drug offenses, particularly for minor functionaries who are easily replaced; fifth, base sentence length on culpability, danger, and replaceability, not quantity possessed or number of prior convictions; and sixth, reduce prescription drug abuse by policing that reinforces regulatory efforts. Jointly

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these proposals would provide an evidence-informed approach that should both reduce America's drug abuse problem and increase the perceived legitimacy of the criminal justice system.

Illegal drugs have presented a challenge for the American criminal justice system for at least 50 years. The rapid and sudden spread of marijuana and heroin use in the mid to late 1960s moved drug enforcement from an afterthought to a significant policy issue. The 1970s were a period of relatively liberal drug policies, the Rockefeller drug laws and President Nixon's invocation of the "war" metaphor notwithstanding. Nixon supported large expansions of treatment, and section 844 of the Controlled Substances Act created the option of imposing only civil penalties—with expungement of the record after 3 years—for first-time possession of amounts suitable for personal consumption. President Carter was rhetorically liberal on marijuana laws, famously saying that the punishment should not be more serious than the offense, but was otherwise uninterested in drug policy.

However, by the late 1970s marijuana use had spread from college campuses to teens and even preteens, spawning a reaction from the "Parent's Movement" that helped Ronald Reagan win the 1980 election. The challenge reached crisis levels with the crack epidemic of the 1980s, which threatened to overwhelm the criminal justice system and some cities more generally (Press 1987). By 1990, young black males in poor parts of American cities were being convicted in large numbers for drug distribution offenses. Reuter, MacCoun, and Murphy (1990) found that in Washington, DC, about 30 percent of black males were convicted of such offenses by age 24. The panicked, and ultimately dysfunctional, response was enactment of a series of laws toughening drug sentences. The most important were the Anti-Drug Abuse Acts of 1986 and 1988.

Drug problems stabilized in the 1990s. Although consumption of cocaine and heroin gradually ebbed in the first decade of the twenty-first century, they remain solidly entrenched. Total spending on illegal drugs has been stable at about \$100 billion per year at least since 2000 (Kilmer et al. 2014). Prescription drugs diverted into nonmedical use now kill more users than do heroin, crack, methamphetamine, and marijuana combined.

Despite decades of concerted effort, illegal drugs continue to destroy the lives of millions of dependent users—and their families—and to preoccupy large segments of the criminal justice system. Until about 2010,

tough enforcement had been at the heart of drug control policies, whether measured by budget, human lives touched, or rhetoric. Hence some blame the apparent failure of drug policy on the criminal justice system and on the very notion of framing the issue through a criminal justice lens. Moreover, many in the justice system see their current drug control responsibilities as forcing them to alienate the community (police) or levy unnecessarily harsh sentences (judges).

For some the frustration rises beyond dissatisfaction to true outrage. A reviewer of an earlier draft suggested that this essay needed more “righteous indignation.” While it is in our nature to strive more for dispassionate policy analysis than for moral indignation, it is worth acknowledging four overlapping complaints that evoke in some a feeling more of disgust than simple disappointment.

*Waste.* Low-level sellers and easily replaced functionaries are sent to prison in large numbers, even though there are more efficient ways to employ scarce criminal justice resources. From this perspective, the sheer scale of drug enforcement creates an obligation for greater accountability in terms of efficiency. We discuss below ways to improve the system’s performance from this utilitarian perspective.

*Drug Law Enforcement’s Contribution to Overall High Rates of Incarceration.* The issue from this perspective is that even if the “right” drug law violators were getting imprisoned, there are simply too many behind bars. The details get complicated, as we elaborate below, but drug enforcement was more restrained in the United States in the past and remains so today in most other countries, so there are no conceptual barriers to addressing this complaint.

*Racial Inequity.* It may be disappointing that we incarcerate so many people and have so little to show for it, but what is truly unconscionable is the racial disparities. We discuss below some drug policy-specific responses, but not the challenge of driving prejudice out of policing and the courts more generally. That would involve matters of organizational change that lie outside our expertise.

*Drug Prohibition Itself.* Making drug enforcement more efficient, less dependent on incarceration, and less racially disparate would not assuage libertarians who believe that producing and distributing drugs are as socially beneficial as producing and distributing milk or medical care. While we discuss marijuana legalization, we assume that society will continue to ban harder drugs; so the relevant question is how, not whether, those laws should be enforced.

Drawing these distinctions is useful to avoid having readers whose anger emanates primarily from one of these sources view certain of the recommendations given below as ineffectual just because it addresses a different concern.

It is not hard to identify major reforms that could help with America's drug problem, often building on initiatives that have already been tried on a smaller scale. These reforms could also improve both the popular perceptions of the effectiveness of the criminal justice system and the self-respect of police and judges.<sup>1</sup>

Because the list of potential reforms is so long, we do not attempt to catalog them all, but rather list five principles for reform and six specific policy recommendations. Our hope is that readers will be able to use the principles to develop their own recommendations and to have a foundation for judging whether other recommendations they encounter are sound. But we do include six specific policy recommendations for the sake of concreteness and because those six strike us as particularly important.

#### Drug Policy, Principles and Proposals

##### Five Principles:

PRINCIPLE 1.—*Law Enforcement as Prevention*: Recognize that prohibition and supply control are a form of prevention.

PRINCIPLE 2.—*Heterogeneity*: Policies should not be uniform across drugs.

PRINCIPLE 3.—*Collateral Damage*: Enforcement against established markets should focus on controlling collateral damage.

PRINCIPLE 4.—*Sustainability*: Drug control must be designed for sustainability.

PRINCIPLE 5.—*Levels of Government*: Recognize the distinctive roles of different levels of government.

<sup>1</sup> We do not include prosecutors in the list of actors who feel that drug enforcement has tarnished their image and integrity. Others may differ.

## Six Proposals:

PROPOSAL 1.—*Marijuana*: Make marijuana enforcement a minor matter for the criminal justice system.

PROPOSAL 2.—*Problem Users*: Manage better the problem users who are under criminal justice system supervision.

PROPOSAL 3.—*Substitution Therapy*: Provide substitution therapy for opioid-using offenders.

PROPOSAL 4.—*Sentencing*: Reduce the average severity of sentences for drug offenses.

PROPOSAL 5.—*Sentencing Goals*: Base sentence length on culpability, danger, and replaceability, not quantity possessed or number of prior convictions.

PROPOSAL 6.—*Police Prescription Abuse*: Reduce prescription drug abuse with policing that reinforces regulatory efforts.

Our recommendations cover a range of issues and all sectors of the criminal justice system. They address, for example, laws with respect to marijuana, sentencing reforms, police strategies, and the supervision of offenders in pretrial, probation, and parole programs. We believe that jointly these recommendations can place management of the drug and drug-related crime problems on a sustainable footing.

Another essay in this volume, by Harold Pollack (2017), deals specifically with drug treatment; thus we consider only criminal justice system provision of that service. Pollack's essay also deals with alcohol. We do not because of alcohol's legal status. Even though alcohol abuse drives a large share of crime, law enforcement rarely seeks to preempt those crimes by reducing alcohol supply or use.<sup>2</sup> From the justice system's perspective, an alcohol-related assault is not so different from any other assault, even though from a larger societal perspective there are options

<sup>2</sup> For example, police may take action in licensing procedures, arguing that a specific licensee has failed to meet requirements to maintain order around the premises. However, they do not take action in broader alcohol policy domains.

for reducing alcohol-related assaults in particular—notably increasing alcohol taxes (Cook 2007).<sup>3</sup>

Section I summarizes how the various sectors of the criminal justice system deal with, and are affected by, illegal drugs. Section II provides the analytic framework and five recommended principles for reforming drug enforcement. Section III presents six recommendations for particular programs or policies. Section IV closes with a discussion of the feasibility and implications of this vision for reform.

### I. How Drugs Affect the Criminal Justice System

Drugs and drug policy affect the criminal justice system through two distinct paths. First, a substantial portion of resources at every level, from police through corrections, are used to enforce laws prohibiting the production, distribution, and possession of these substances. Second, a high proportion of nondrug crimes are committed either by drug dealers or by criminals who use these substances with sufficient intensity that their drug use contributes causally to their rates of offending directly or indirectly. Keeping these paths distinct is helpful in describing the current system and developing methods for improving it. We arrange this description by sector of the criminal justice system.

A distinctive feature of drugs as a criminal justice issue is that the federal government is an important player. For example, federal prisons account for only 5 percent of persons incarcerated for nondrug offenses but hold about 20 percent of those incarcerated for drug offenses. Thus we give significant attention to federal issues.

#### A. Police

Drug possession and distribution offenses involving both adults and juveniles are consistently among the top three in number of arrests.<sup>4</sup> Over 1990–2006 the number of drug arrests rose from 1.1 million to 1.9 million, during a period when total arrests for all offenses held steady at around 15 million. The number of drug arrests subsequently fell grad-

<sup>3</sup> Below we discuss an innovative criminal justice program—24/7 Sobriety—that does seek to suppress alcohol consumption of people who have been arrested. That it is so exceptional proves the general rule.

<sup>4</sup> The other two are assault and the total for the three primary alcohol-related categories of driving under the influence (DUI), liquor laws, and drunkenness.

ually to 1.5 million in 2012, not much higher in per capita terms than the 1990 figure.<sup>5</sup>

In terms of police effort, there is less to these numbers than meets the eye. The driver of the changes has primarily been arrests for simple possession of marijuana. From a low of 226,000 in 1991 it rose to a peak of 870,000 in 2007, but that increase mostly paralleled increases in use, once intensity of use is taken into account. Respondents to national surveys reported 66 million days of past-month marijuana use in 1993 (the nadir on that measure) versus 179 million in 2007. So arrests per day of use grew by about 40 percent over this period.<sup>6</sup> Marijuana arrests then fell by 20 percent through 2013 even as reported days of use grew by over 50 percent, effectively halving the arrest risk per day of use between 2007 and 2013 and bringing it back below the levels of the early 1990s.

These trends in marijuana possession arrests are much discussed, and there is much worry that arrest for simple possession can cascade into long-term entanglement with the criminal justice system. Likewise, an arrest for simple possession of someone who is on probation or parole for a serious crime could lead to revocation of that community release. However, given that these are usually misdemeanor arrests<sup>7</sup> and often are made incidental to some other policing activity (Reuter, Hirschfield, and Davies 2001), they probably do not generate much direct burden on the criminal justice system, though few studies attempt to explicitly estimate that figure.<sup>8</sup>

Proactive drug enforcement in the United States is primarily aimed at the distribution of cocaine, methamphetamine, and heroin. This has

<sup>5</sup> Drug arrests per 100,000 people were volatile around 1990, with a sharp peak in 1989 and a trough in 1991, but averaged 455 per 100,000 between 1988 and 1992. After exceeding 600 per 100,000 in the mid-2000s, the rate fell to 495 in 2012 and 475 in 2013.

<sup>6</sup> Past-month days of use is reported in the variable MJDAY30A; totals can be computed with the Survey Documentation and Analysis tool available through the Interuniversity Consortium for Political and Social Research site at <http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/00064>. Self-reported days of use is an odd metric, but it is the best available. Denominating merely by numbers of users is inadequate since the proportion of past-month users who consume daily or near-daily has more than tripled. Grams would be better, but it is not reported in national surveys and is complicated by large changes in potency over time.

<sup>7</sup> In some states, some marijuana possession arrests are no longer subject to criminal sanctions at all, except for failure to pay the fine imposed.

<sup>8</sup> Caulkins, Kilmer, Kleiman, et al. (2015) estimate the number for Vermont and find it to be quite small, but Vermont is atypical. It would be unusual for a major city's narcotics squad to have making many low-level marijuana arrests as its objective; most such arrests are made by uniformed patrol in the course of other enforcement activities.

been a major activity for urban police in ways that may be better captured by *The Wire* television series (focused on heroin) than by drug arrest figures. Open-air drug markets were the bane of many city neighborhoods in the 1980s and continue to be so to a lesser extent today, attracting crime and disorder while driving out investment and legitimate commercial activity (Haroscopos 2005; Corsaro, Brunson, and McGarrell 2009).

Aggressive policing of those markets often exacerbates the divide between the community and the police. Some of this tension reflects a community ambivalence. Individual drug dealers and drug-dealing gangs that operate place-based markets use violence—or the threat of violence—to deter rivals and robbers and also to deter neighbors from reporting their activity to the police. Yet they also bring money to some households.<sup>9</sup> Police, frustrated by an uncooperative citizenry and by the arrogance of successful dealers, sometimes ride roughshod over procedural justice (Alexander 2012). Even when fully compliant with due process, a drug raid executed by a team of heavily armed officers who begin by smashing down an apartment door is out of step with the ideals of community policing. Both problems are perhaps abating, though these are hard phenomena to capture in quantitative fashion. Some combination of ongoing police pressure and the spread of cellphones seems to have induced sellers and buyers to find each other more often without concentrating their activity in open-air markets. Also, whether through programs such as the High Point Drug Market Initiative (Corsaro et al. 2012) or learning from their own experiences, many police forces seem to have a better sense now of the goals of drug enforcement and of tactics to achieve those goals.

Those two trends—in typical low-level marijuana arrests that are only modestly burdensome on police and in cocaine/heroin/methamphetamine enforcement that is a central activity of policing—are the most important. However, a third trend has captured the most attention because it is particularly brutal, racist, and dysfunctional.

Some police departments have clearly used marijuana possession arrests as a pretext for harassing and controlling minority communities, particularly young males from those communities whom the police per-

<sup>9</sup> Drug dealers do not generally bring money into the neighborhood as a whole, since most sales are to local addicts; the drive-through “export market” serving a suburban clientele was the exception even in the 1980s and may be all the more so today when more of the selling occurs through social networks (Rengert et al. 2000).

ceive as problematic or undesirable. As so often, New York City provides an extreme example, and one that dominates the discourse because New York hosts the nation's newspaper of record and some of its top criminologists. Arrests for marijuana possession account for almost 15 percent of charges stemming from that city's stop and frisk policy (New York State Attorney General 2013) and are a source of anger in the minority communities that have borne the brunt of the roughly 50,000 annual arrests (Golub, Johnson, and Dunlap 2007). By comparison, there were fewer than 2,000 such arrests back in the early 1990s, before the stop and frisk program expanded.<sup>10</sup> The disparity between minorities and whites in marijuana arrest rates in many cities has been an important driver of the marijuana legalization movement.<sup>11</sup>

The most sophisticated research on the possible role of police racism in drug arrests comes from Seattle. In two separate studies, Beckett and colleagues (Beckett et al. 2005; Beckett, Nyrop, and Fingst 2006) used data from a variety of sources to show that the disproportionately high drug arrest rates for blacks could not be accounted for by such factors as black users' higher share of outdoor transactions or delivery of drugs; it seemed to be the exercise of police discretion. A more recent critique by Engel, Smith, and Cullen (2012) argues that the distribution of citizen calls for services may account for the racial arrest disparities.

Some of the disparity may not reflect pure, raw racism. For example, Burns et al. (2013) observe that while non-Hispanic African Americans' share of arrests is disproportionate relative to the corresponding share of past-year users (23 percent vs. 13 percent), it is not disproportionate compared to the share of self-reported purchases (24 percent); and the risk of arrest from mere use per se is very low, already only on the order of one in 3,000 in 2007 (Nguyen and Reuter 2012) and having since fallen to one in 5,800 by 2013. Furthermore, African Americans

<sup>10</sup> The New York State Attorney General (2013) provides a thorough and troubling report on the stop and frisk program.

<sup>11</sup> The campaign slogan for Initiative 71 in the District of Columbia was "legalization ends discrimination," which referred to several civil liberties studies that found that DC police had among the highest arrest rates, of mostly African Americans, for marijuana possession in the country. In Washington State, the American Civil Liberties Union (ACLU) wrote the legalization referendum, which was seen as a means to end "unreasonable searches and seizures [that] disproportionately target people of color" ([http://www.washingtonpost.com/local/dc-politics/campaign-to-legalize-marijuana-in-dc-selects-new-slogans-for-november-vote/2014/09/15/6e57ad3c-3af3-11e4-bdfb-de4104544a37\\_story.html](http://www.washingtonpost.com/local/dc-politics/campaign-to-legalize-marijuana-in-dc-selects-new-slogans-for-november-vote/2014/09/15/6e57ad3c-3af3-11e4-bdfb-de4104544a37_story.html)).

tend to make purchases in riskier circumstances (e.g., are more likely to buy from a stranger; cf. Ramchand, Pacula, and Iguchi 2006).

Yet such niceties matter not a whit in the public discourse. The simple fact is that marijuana arrest patterns have contributed greatly to the racial divide that plagues police-community relations in particular and American society in general.

In addition to these efforts pertaining to enforcement of drug laws, drug-using offenders also account for a startlingly large share of those arrested for nondrug crimes. The Arrestee Drug Abuse Monitoring (ADAM) program, and its Drug Use Forecasting predecessor, which drug-tested samples of arrestees in county jails, consistently found that many arrestees test positive for at least one drug—for example, over 60 percent in 2013 (ADAM II 2013). Two-thirds of all inmates used illegal drugs regularly before being incarcerated (all inmates, not just those serving sentences for drug law violations). Numerous studies show that those who are dependent on expensive drugs (cocaine, heroin, methamphetamine) commit more crimes when using these drugs than when abstinent (Nurco et al. 1988; Anglin and Hser 1990; Chaiken and Chaiken 1990; Bukten et al. 2012). Longitudinal studies suggest that the relationship is causal; drug taking increases criminal activity rather than the other way around. Thus reducing drug use among these offenders would likely reduce crime and the demand for police services.

The exercise of trying to “attribute” the share of nondrug crimes that can be viewed as being caused by drug use has created its own small literature. Pacula et al. (2013) provide a review. At one time more or less all crimes committed by people who were dependent on illegal drugs were viewed as attributable to drug use, which was clearly wrong even though heroin addicts may spend an astonishingly large share of their criminal income on the drug (Goldman 1981).<sup>12</sup> Then the pendulum swung too far in the other direction, and there was a tendency to view as drug-related only those crimes that the offenders described as having been committed to obtain money to buy drugs plus a small proportion of those committed while high. That, though common, is just as clearly wrong. If someone is unemployable because of a past addiction and steals to get money to buy food, that crime may not have occurred but for the addiction; and when a drug dealer shoots an associate over

<sup>12</sup> For a critical review of the literature on the crime consequences of drug use, see Stevens (2011).

a deal gone bad, that is even more clearly drug-related yet outside the overly narrow contemporary definition. Alas, more reasonable notions of causal relation are difficult to operationalize, given data limitations, so it is hard to provide more than rough estimates. But clearly a considerable proportion of crime and violence is caused by, not merely correlated with, substance abuse.

### *B. Courts*

In an era of judicial decision making constrained by sentencing guidelines and mandated sentences, discretion has shifted to prosecutors; their charging choices are the most important decisions in the system after arrest (Tonry 2016, 2017; Wright 2017). There has been broad concern that prosecutors, particularly at the federal level, overcharge drug offenders so that they end up with inappropriately long sentences. Federal judges have been outspoken in their criticism of the lengthy sentences that they have to impose on convicted drug dealers, who constitute a majority of the defendants who come before federal judges for sentencing.<sup>13</sup> In state courts, the share of all felony defendants who are charged with drug offenses has been about one-third in recent years,<sup>14</sup> a little more than half of whom are charged with trafficking. Median sentence length for the approximately two-thirds of drug defendants who are sent to prison or jail is 24 months; for those convicted of trafficking offenses the median sentence is 36 months, comparable to the figure for violent offenses.

Many efforts have been made to find ways to divert drug-involved offenders away from conventional courts. A prominent example is California's Proposition 36, passed in 2000, which required that eligible first-time drug possession arrestees be offered probation and referral to drug treatment, provided that they met certain conditions with respect to their prior record. Proposition 36 appears to have reduced imprisonment and saved the state money, but in the absence of compelling

<sup>13</sup> Judge Jack Weinstein, a highly respected judge in the Eastern District of New York, expressed this most vividly 20 years ago. In justifying his refusal to handle any more cases against minor drug dealers, Judge Weinstein noted that he was "just a tired old judge who has temporarily used up his quota of remorselessness" (quoted in Toobin 1993, p. 35). More recently, the *Washington Post* devoted a long front-page story to the ways in which a federal judge dealt with his remorse at the long sentences he had to give drug defendants (Saslow 2015).

<sup>14</sup> The most recent data are for 2009.

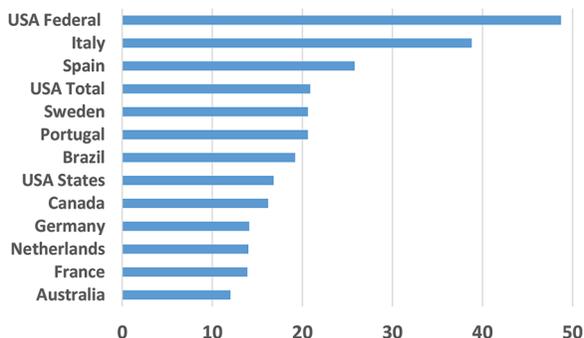


FIG. 1.—Percentage of prison population whose main offense is a drug offense, United States and 10 other countries. Source: Institute for Criminal Policy Research (2015) plus authors' calculations for the United States based on Bureau of Justice Statistics data series.

sticks, treatment completion rates were low and rearrest was common (Hawken 2006; Hawken and Grunert 2010).

A second prominent example is drug courts, which have attracted a great deal of praise for their efforts to find ways to get drug-involved offenders into treatment rather than jail or prison. Yet drug courts often restrict eligibility to nonviolent defendants with short criminal histories; so for all its prominence, the drug court movement remains a boutique activity, with only about 116,000 defendants processed in 2008 (Huddleston and Marlowe 2011), barely more than twice the 47,000 handled by Proposition 36 in California that same year (Urada et al. 2009).

### C. Prisons

It is widely believed that the United States stands out from its peers by filling its prisons mostly with drug law violators; but that is true only of the federal system, not of the much larger state prison and local jail systems. Overall, as figure 1 shows, the proportion of prison inmates in the United States whose main offense is a drug offense is above average, but not strikingly so, in league with Portugal and Sweden, higher than in France or Germany, but lower than in Spain or Italy.<sup>15</sup>

<sup>15</sup> Jail populations are rarely considered in these kinds of comparisons, whether across countries or across states. Yet the total number of jail inmates on any one day is about 60 percent as much as that of the state prison population, 730,000 in 2013.

Likewise, it is widely believed that drug enforcement drove the rise in prison populations over the period 1980–2010 (e.g., Blumstein and Beck 1999; Alexander 2012; Belenko and Spohn 2014). While true for the federal prison system, that orthodoxy has been challenged with respect to state prisons, which incarcerate far more people (Pfaff 2008). Drug offenders’ share among state prison inmates was 10 percent back in 1974, before falling for a time. It rose sharply in the late 1980s but has been stable at about 20 percent since 1991. So although the increase in the number of drug law violators who were behind bars was just as great in absolute numbers during the 1990s as it was during the 1980s (Caulkins and Chandler 2006), it is misleading—if not simply false—to say that drug enforcement drove the overall growth in incarceration since 1990, since that growth was as great for nondrug offenses as it was for drug law violations. Figure 2 shows some of the relevant trends.

Though drug inmates constitute only about 20 percent of the population of state prisons, as a consequence of their relatively short sen-

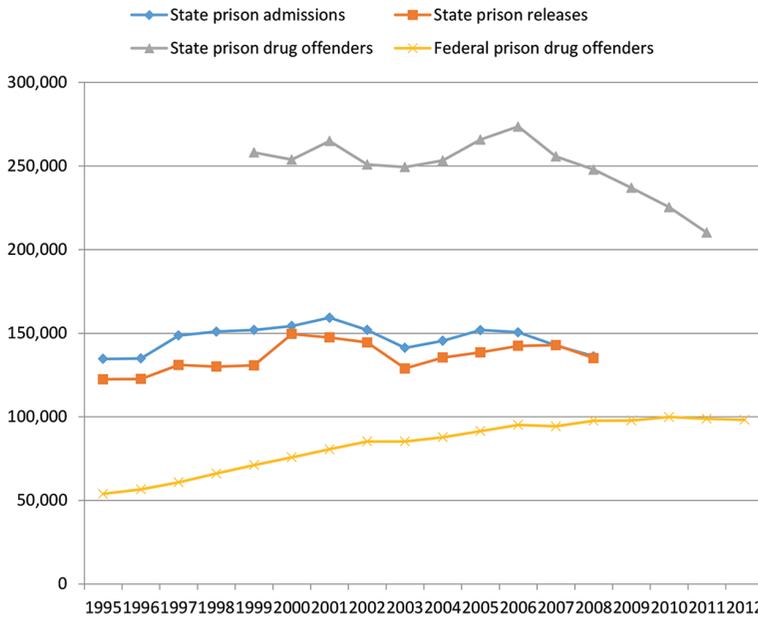


FIG. 2.—Prison populations and flows involving drug offenses, 1995–2012. Source: Authors’ calculations using Bureau of Justice Statistics data series.

tences, they account for approximately 30 percent of admissions. The number of individuals who spend time in state prison for a particular kind of offense is a useful measure of the harm arising from the offense and enforcement against it, distinct from the harm measured by the share of prison cells occupied by such offenders at a specific time. The finding that 20 percent of all black males of the birth cohort 1965–69 and 60 percent of those who drop out of high school had spent time in prison by the time they are age 30–34 is indicative of that problem (Pettit and Western 2004; Western and Wildeman 2009).

Another major charge against drug enforcement is that its burdens are even more racially disparate than those of the criminal justice system generally. In terms of incarceration, the rates are distressingly different: 3,000 per 100,000 for black males in 2010 compared to 500 per 100,000 for white males. Yet Bureau of Justice Statistics data show that disproportionality in recent years is no greater than for nondrug offenses: in 2013, 37.7 percent of those imprisoned under state jurisdiction for drug law violations were black (79,300 out of 210,200), and 37.9 percent of those imprisoned for nondrug violations were black (418,800 out of 1,104,700; Carson 2014). Likewise, while comparing the large disparity among inmates to the small differences in the prevalence of past-year drug use contributes to the sense that drug enforcement is racist, it is a red herring. Those imprisoned for drug law violations, even drug possession, almost always played some—albeit perhaps minor—role in drug distribution.<sup>16</sup> People who have committed no crime other than possession of amounts suitable for personal consumption might go to jail, but they rarely go to prison. Data on drug use say nothing about the composition of the dealing population, but they are frequently cited, perhaps because there are no meaningful data on the demographic breakdown of drug dealers.<sup>17</sup>

For federal prisons, the role of drug offenses is dominant: drug offenders have accounted for a majority of prisoners in every year since 1990, though the share has been steadily trending down from a peak of 61 percent in 1994 to 51 percent in 2013.

<sup>16</sup> In state courts it is common for an arrested drug dealer to agree to a felony possession charge in order to get a lighter sentence.

<sup>17</sup> The household survey has one question about drug selling, but one should be skeptical both because drug dealers are likely to be hard to recruit into survey samples and because underreporting could be severe since it is subject to so much harsher penalties than is mere drug use.

The unusually prominent role of federal enforcement is not without reason. Until the recent explosions in domestic cannabis cultivation and abuse of diverted pharmaceuticals, most of the illegal intoxicants consumed in the United States were imported from abroad and were then distributed domestically by organizations whose activities crossed state lines. Burglary and even murder are mostly local crimes; wholesale drug distribution is not.

Drug offenses may not account for a very large share of the prison population, but drug-involved offenders certainly do. Using data from self-reports of inmates in local jails in 2002 and in federal and state prisoners in 2004, Sevigny, Pollack, and Reuter (2013) find that over half of inmates either are dependent on, or are abusers of, one or more of cocaine, heroin, or methamphetamine.<sup>18</sup> Some additional proportion committed nondrug crimes (murder, money laundering, etc.) that were motivated by participation in drug distribution. So the share of incarceration that is drug-related, through either drug selling or dependence or abuse, greatly exceeds the proportion of inmates serving time for drug law violations.

Another common but erroneous belief is that marijuana law violations account for a substantial portion of the incarcerated population, but it is the controlling offense for only about 1 percent of inmates (National Center on Addiction and Substance Abuse 2010). In all jurisdictions for which data are available, it appears that a negligible fraction of those arrested for simple marijuana possession receive even a jail sentence, unless the individual was on community release from a separate, previous conviction. Reuter, Hirschfield, and Davies (2001) found that even in Maryland, which had not decriminalized marijuana, not a single individual in a sample of about 1,000 arrestees received a jail or prison sentence for simple possession of marijuana, though about one-third stayed at least overnight in a jail before trial. And as of 2015, more than 40 percent of the US population lives in states that have legalized or effectively decriminalized marijuana.

Marijuana growers and dealers have higher probabilities of incarceration than do marijuana users, but they still account for a small fraction of the total (Sevigny and Caulkins 2004; Caulkins and Sevigny 2005).

<sup>18</sup> These surveys are done on only a very occasional basis. The successor to the two inmate surveys was fielded only in 2015, and data are not yet available for analysis.

There has been considerable controversy around the extent and cost of incarceration of marijuana offenders. Legalization advocates have estimated high costs (e.g., Miron 2003, 2010). However, Miron's assumption that marijuana arrestees are as likely as other drug arrestees to end up incarcerated is implausible. Caulkins and Kilmer (2014) show that actual costs in California are only about one-tenth what Miron estimates. Likewise, when Caulkins, Kilmer, Kleiman, et al. (2015) asked officials in Vermont how many inmates were incarcerated for marijuana violations as part of an analysis of potential consequences of legalizing marijuana, the answer was three (not three per 100,000 but just three!).

Federal incarceration for drug offenses also shows disproportionately few non-Hispanic white inmates. For blacks the differential is primarily from crack offenses; African Americans have typically accounted for 80 percent of those sentenced for that offense. Federal statistics also show a much higher percentage of Hispanic inmates for drug offenses, relative to state and local systems, between 40 percent and 47 percent. In part, the reason is that until recently almost all of America's illegal drugs were imported from Latin America, primarily Mexico, and federal drug enforcement effort is mostly aimed at importation and high-level distribution. Using data from the 2004 survey of state and federal prison inmates, Caulkins and Sevigny (2013) found that citizens of Mexico account for 6 percent of those incarcerated for federal drug offenses; other foreign nationals account for 11 percent. Thus the share who are American-resident Hispanics may not be much higher than in state prisons.

#### *D. Summary*

Drug dealers and drug abusers present large burdens for the criminal justice system. There is a widespread perception that both are punished too harshly and that policing drug markets has eroded many aspects of police performance. For drug abusers the system is seen as fumbling the chance to take full advantage of coercive powers to get those whose criminality is exacerbated by drug use into effective drug treatment. As we elaborate below, the new insight is that treatment, relatively expensive and known to have high dropout rates, may not be necessary for many offenders; it may be enough to manage their incentives for staying drug-free.

## II. Policy Analysis

The drug problem continues to roil the American criminal justice system. Drugs have arrived amid explosive epidemics and ensuing panics, from marijuana and heroin in the 1960s, crack in the 1980s, and prescription opioids in the first decade of this century. Crises prompt reaction, not reflection (Critchler 2006).

While in Section IV we, like many others before, offer a list of specific suggested reforms, we have tried to develop our recommendations from an explicit analytic framework that constitutes its own set of recommendations, but at the level of principles, not particular programs.

That framework encompasses five themes.

**PRINCIPLE 1.**—Recognize that prohibition and supply control are a form of prevention.

The basic function of prohibition is to reduce drug use and abuse, principally by raising price and reducing availability, secondarily through reinforcing the message that these drugs are dangerous. The motivation for this paternalistic intervention is simple: drugs can be bad for users and for their families.<sup>19</sup> Drug enforcement is thus part of a preventive strategy.

The price paid for this reduction in abuse is the myriad problems created by black markets and by drug enforcement. The basic analysis of the pros and cons of legalization is familiar and has been articulated with particular elegance by Kleiman (1992) and more elaborately by MacCoun and Reuter (2001). Doubtless some readers—particularly those with a libertarian perspective—would prefer legalization, but that is moot. As a practical matter, the principal “hard drugs” (cocaine/crack, methamphetamine, and heroin) that preoccupy the criminal justice system will almost certainly remain banned in the United States for the foreseeable future.

The dangers of some drugs, notably heroin, are poignantly illustrated in death statistics. In a pioneering study, Vaillant (1973) reported that of 100 New York narcotic addicts admitted to the Lexington treatment hos-

<sup>19</sup> One reviewer pointed out that the historical origins of prohibitions reflected a complex of religious, cultural, and diplomatic factors, as is well documented in David Musto's *The American Disease* (1999). We think that those considerations are much less important now.

pital in 1952, 23 were known to have died 20 years later, and less than half had achieved stable abstinence. Likewise, Hser et al. (2001) followed up 581 male heroin addicts admitted to California's Civil Addict Program between 1962 and 1964. Thirty-one years later, 284 (48 percent) were dead, and 40 percent of those interviewed had used heroin within the last year.

Such outcomes are not confined to the United States. Perucci et al. (1991) found that mortality rates were elevated above the baseline 10-fold for males and 20-fold for females among injection drug users who enrolled in one of Rome's three largest public treatment centers. Likewise, studies have found mortality rates to be 12 times higher for heroin treatment clients in London (Oppenheimer et al. 1994), Israel (Rosca et al. 2012), and Austria (Risser et al. 2001). Similar ratios were found in Italy (13: Quaglio et al. 2001) and Glasgow (9: Nambiar et al. 2015), and even larger ones in Catalonia (Sánchez-Carbonell and Seus 2000) and Asturias (Jimenez-Treviño et al. 2011). It is worth noting that these locations span a variety of policy regimes, from liberal to conservative, vis-à-vis both drugs and responses to HIV/AIDS. It is also important to note that most of these samples are drawn from people entering or enrolled in treatment, so calls for greater treatment funding are a useful but only partial response.

A principal mechanism through which drug enforcement, particularly at higher levels, limits abuse is by constraining supply in order to reduce availability and drive prices up and purity down. Purity-adjusted prices are indeed much higher than they would be if the drugs were legal (Caulkins and Reuter 2010; Caulkins 2014). When economists estimate the drugs' elasticity of demand, they find that consumption is surprisingly responsive to price (Grossman 2005; Gallett 2014). For example, Olmstead et al. (2015) find that two independent empirical strategies, using separate data sets concerning both actual market transactions and responses to hypothetical scenarios by 120 established heroin users, agree that their conditional elasticity of demand for heroin is 0.8; that is, a 10 percent increase in price will induce an 8 percent decline in consumption by those who continue to use (and the possibility of inducing some to stop use altogether). One reason price responsiveness is so great may be that most drugs are consumed by heavy users who spend a considerable proportion of their disposable income on their drug of choice.

Another possible reason is substitution; driving up the price of one drug may induce switching to another, although there is very limited evidence concerning such cross-price elasticity effects; and pairs of drugs can also

be complements, perhaps particularly in the long run, so that reducing use of one substance may indirectly induce reductions, not increases, in use of other substances. Understanding better such cross-price effects is an important but neglected area of research; some existing research is summarized in Caulkins, Kilmer, Kleiman, et al. (2015, app. A).

The caveat about prices being purity-adjusted is important. Nominal prices are sometimes sticky, with constrained supply translating into greater dilution more than changes in the sticker price;<sup>20</sup> but such changes in purity have been observed to translate into fewer emergency department mentions and other sequelae of drug abuse (Dave 2008; Zhu et al. 2014).

Drug enforcement has a credibility problem because its primary benefit—namely, the drug abuse that does not occur—is invisible.<sup>21</sup> What are visible are various process outcomes, such as numbers of arrests or quantities seized. Not only are those process outcomes not the ultimate objective; they are actually costs.

Conceptually we would like to achieve a given target reduction in abuse while minimizing arrests and seizures, but all too often the criminal justice system slips into an emphasis on maximizing, not minimizing, those process outcomes. Remembering that a principal purpose of prohibition is to protect people—and their families—from their own bad choices may insulate against a mentality of having to burn the village in order to save it. For conventional crimes, justice is served by punishing the criminal; but if the justice system can steer an individual away from drug use without incarceration, that is the true win.

**PRINCIPLE 2.**—Policies should not be uniform across drugs.

The idea that different drugs should be treated differently should be noncontroversial and yet is routinely ignored, at least implicitly. In our

<sup>20</sup> Dilution is done by adding not only diluents—which by definition are inert psychoactively—but also adulterants, which are psychoactive. Most adulterants are mild, such as caffeine, or occasionally they simulate some aspects of the drug experience, as, e.g., procaine added to cocaine. There are some important exceptions, such as when MDMA contains methamphetamine or heroin contains fentanyl; but for purposes of creating informative price series, the key point is that one must adjust for the reality that the proportion of a bag of “cocaine” that is actually cocaine can vary substantially over time, by market level, and across locations.

<sup>21</sup> We deliberately choose the term abuse rather than use; if we define abuse as use that is harmful, then the benefits flow from preventing abuse, not all use. This does not mean one should not monitor use. After all, use can progress into abuse and use is easier to track.

collectively more than 50 years of work in the drug policy field, we have been struck (not to say depressed) at how often people argue, in effect, “Marijuana should be banned because heroin is dangerous” or “Marijuana is harmless; ergo, all drug prohibition is stupid.” Both of these views, presented with only minor hyperbole, reflect an inability to fully internalize this simple principle.

Different policies are appropriate for different psychoactive substances because the drugs themselves differ in terms of health and behavioral consequences. Compare marijuana (minimally connected to crime and violence), steroids (not intoxicating in the conventional sense), crack (highly addictive and disinhibiting), and MDMA (aspects of tolerance make use somewhat self-limiting). It is also important to note how sharply death risk varies by substance and modality. Opioids—including legally regulated and pharmaceutically pure prescription drugs as well as street heroin—are particularly lethal because they have such a low safety ratio (Gable 2004); studies often find lower rates of mortality among stimulant abusers than among opioid abusers (e.g., Bartu et al. 2004). On the other hand, the technology of treatment is best for opioid abuse; it is the only class of illicit substances for which pharmacotherapies are widely available (Babor et al. 2009).

Drugs also differ importantly in characteristics related to their supply. The cannabis plant is extraordinarily productive, capable of yielding 40 grams of high-quality marijuana per square foot of canopy per harvest (Caulkins, Cohen, and Zamarra 2013). So a heavy user can be supplied by just 2–5 square feet under intensive cultivation, making home cultivation viable in a way that has no analogue for coca or poppies. The tendency for marijuana users to buy in larger quantities (a week or more of supply at a time) also facilitates purchase through social networks, not from professional drug sellers.

As another example, LSD is much harder to synthesize than are amphetamine-type stimulants. That may explain why the LSD market has never truly recovered after the 2001 arrest of a major producer (Grimm 2009), whereas the methamphetamine market repeatedly bounces back after interventions that disrupt its precursor chemicals and lab operations (Dobkin and Nicosia 2009).

While policies should differ across substances, they cannot be made independently because of interactions on the supply and demand side. Coca leaves, cocaine hydrochloride (“cocaine powder”), and cocaine base (including crack) all have the same active ingredient but differ

sharply in their abuse liability. If it were impossible to produce cocaine or crack from coca leaves, there might be little reason to ban coca leaves and their products (e.g., teas), but one form is effectively a “precursor chemical” for the other. In particular, it is very easy to convert cocaine powder into crack, so it is impractical to ban crack but not powder and ineffective and perhaps unjust to impose radically different penalties on crack and powder.

Likewise, popular efforts notwithstanding (e.g., Nutt, King, and Phillips 2010), it is quixotic to rate the dangerousness of individual substances when they are commonly consumed in combinations that produce greater health harms than either drug poses alone. As we have noted previously (Caulkins, Reuter, and Coulson 2011, p. 1888), “If mephedrone is predictably consumed with alcohol, then the assessed harms of mephedrone should reflect that use pattern, not the essentially clinical exercise of judging the effects of mephedrone alone.”

Similarly, studies that compare the impairment of drivers who have recently consumed only marijuana with those who have consumed only alcohol may be less informative than those examining the effects of concurrent intoxication, since concurrent use is common.<sup>22</sup> Of the 2.4 million 18–25-year-old past-month marijuana users who admitted to driving under the influence of alcohol in the 2013 National Survey on Drug Use and Health (NSDUH), 55 percent reported using marijuana the last time they drank alcohol. Recent surveys do not have similarly detailed questions about driving under the influence of marijuana; but in the 1996 survey, more than half of respondents who reported driving within 2 hours of using marijuana within the last year said they “sometimes” or “often” used alcohol along with marijuana on those occasions.<sup>23</sup>

The word “drugs” like the word “crime” labels a broad category, not a single phenomenon. While we speak of “crime policy,” no one leaps from that phraseology to the conclusion that the policies addressing homicide, prostitution, and securities fraud should all be the same. Likewise, although prohibiting something creates certain common circumstances— notably black market supply—so there are some general principles for ef-

<sup>22</sup> Such studies tend to find that intoxication with both substances leads to greater impairment than does intoxication with either substance alone. See, e.g., Dubois et al. (2015).

<sup>23</sup> Authors’ analysis of data available at the Substance Abuse and Mental Health Data Archive (SAMHDA) data site.

fective drug control, there are also differences in how those principles should be applied because the drugs differ.

**PRINCIPLE 3.**—Enforcement against established markets should focus on controlling collateral damage.

The markets for illegal drugs that absorb the most supply control effort—namely those for cocaine/crack, heroin, and methamphetamine—are established both in the sense of existing above *de minimus* levels and in facing stable demand. Hence, expanding the intensity of attacks on their supply chains is a terribly inefficient way to purchase further reductions in use beyond those provided by prohibition plus a baseline level of enforcement. Yet those illegal markets create many additional problems besides availability of the drug, including crime, violence, disorder, and corruption. Thus in addition to reducing drug abuse, the second objective of drug enforcement is to mitigate the adverse consequences of prohibition, and for those substances in this country at this point in history, that second objective becomes paramount. If enforcement can steer a market into less violent forms, that is a win even if there is no change in the quantity of intoxicant delivered to users. More generally, enforcement toward those drugs should focus on containing collateral damage, not on reducing use, since there is little evidence or theory that enforcement can reduce use in these markets.

The amazing adaptability of drug markets is the bane of law enforcement when it seeks to suppress drug use. Shutting down a specific physical marketplace without having another pop up somewhere else is difficult. Suppressing the market in the more general sense of the term is even harder, because distribution activity can pop back up not only in another location but also in another form or using another tactic. When police crush a distribution network that had been selling 100 kilograms a year, that rarely reduces consumption in the next year by as much as 100 kilograms; the market finds another way to bring sellers and buyers together.

However, that same amazing adaptability of drug markets becomes a boon when law enforcement seeks to suppress their collateral consequences. As in jujitsu, the opponents' strength can be used to good advantage (Dorn and South 1990). Markets try to meet demand. Attempts to block that reality are fighting against the tide. But markets have no innate desire to produce collateral consequences. They also have no de-

sire to minimize collateral consequences; externalities are, by definition, of no direct concern to the market participants.

If promulgating terror, violence, and corruption will make dealers more money, they will do so. But conversely, it should be possible to induce sellers to change their tactics in ways that reduce the collateral damage they create if doing so will reduce their costs even modestly. Sellers are primarily motivated to making money, not to thwarting harm reduction.

Caulkins and Reuter (2009) offer the example of a flagrant street market that creates harms for a nearby sensitive facility (school, treatment center, playground, etc.). If a law enforcement intervention displaced that market to a nearby abandoned industrial area, there might be no noticeable change in drug use, with the same dealers selling to the same users. But that selling might expose fewer children, recovering addicts, and others to the disorder and violence, thereby reducing the harm drugs—particularly the drug markets—do to society.<sup>24</sup> Furthermore, law enforcement is the only organization that can deliver that service. When a crack house opens up next door, residents cannot expect to obtain immediate relief by demanding greater funding for treatment or changes in the local school's drug prevention curriculum.

We use the term “harm” here intentionally to be provocative. In much of the developed world “harm reduction” is recognized as one of the four pillars of drug control, alongside enforcement, treatment, and prevention. It is understood to refer to programs to aid dependent drug users without attempting to curtail their use (e.g., providing supervised injection facilities) and adopting a human rights–based approach to drug policy, with emphasis on the rights of users (as opposed to their families, crime victims, or others). In the United States “harm reduction” became a toxic term, seen within law enforcement circles as a Trojan horse for legalization;<sup>25</sup> the national drug strategy statements use the phrase “drug-related consequences,” not “drug-related harms.”

Focusing on harms caused by drug markets falls through the cracks of the culture war rhetoric surrounding drugs. Progressives focus on harms

<sup>24</sup> Høigård (2011) describes just such an operation in Stockholm, moving a drug market from a popular park to one less used.

<sup>25</sup> This accusation is particularly odd, since those countries that have adopted harm reduction most enthusiastically, such as Britain and Germany, have made no moves toward legalization.

suffered by drug users, not harms created by drug markets. Conservatives want to blame drugs and drug users, not the black markets created by their prohibition. Yet markets are central to what troubles the general public about illegal drugs.

Arguably the greatest problem associated with illegal drugs other than marijuana is crime and violence. Goldstein (1985) offered the classic tripartite division of crimes that are proximally caused by drugs:

- Psychopharmacological crimes are those caused by drug intoxication or withdrawal.
- Economic-compulsive crimes are those committed by users to obtain money to buy drugs.
- Systemic crimes are those committed by drug dealers in the course of their trade, including not only “turf wars” but also use of violence to intimidate witnesses, collect debts, and enforce discipline within a dealing organization.

Only the first is driven directly by drug use, and it is likely the smallest of the three. It is extraordinarily hard to quantify the frequency of each type. The definitions are neither mutually exclusive nor collectively exhaustive, and police data are not designed to inform these distinctions.

So if law enforcement could somehow defang drug dealers, inducing them to supply drugs in ways that never involve weapons or violence, that would make an extraordinary contribution to public safety, even if it had no effect whatever on drug use and, hence, psychopharmacological crime. The counterfactual is indeed hard to specify; less violent drug markets might draw in more users.

Such a transformation is not beyond imagination. When internet-based drug distribution systems such as the old Silk Road website ship drugs directly to users, they bypass the domestic drug distribution system, leaving few opportunities or incentives for the exercise of violence.<sup>26</sup> While volumes sold on such dark sites appear not to have achieved large market share, they might in the future, and other technological innova-

<sup>26</sup> In theory there might be robberies of parcel delivery people, and there could still be violence upstream, in source countries. So systemic violence would not necessarily literally fall to zero.

tions may already have made an impact.<sup>27</sup> In the 1980s most cocaine and heroin were sold in place-based street marketplaces that engendered enormous amounts of disorder and violence. By the late 1990s, much of that activity had been replaced by arranged meetings. It is not clear how much of the credit for that transformation goes to focused police enforcement that suppressed street markets and how much to the advent of pagers and cellphones, but likely both played a role.

The key insight implicit in this discussion is that rates of violence can vary dramatically from one type of drug distribution to another. There is no universal physical constant guaranteeing that there must be so-and-so many homicides per metric ton of cocaine delivered to users. Indeed, the European cocaine market is now very roughly as large as the US market, in value at least and perhaps also by weight, and yet it is thought to be far less violent.<sup>28</sup>

The fundamental principle is to encourage law enforcement to seize on opportunities to mold markets into less destructive forms, even if that does not reduce the quantity of drugs consumed. That is the essence of harm reduction, even though most reviews of harm reduction do not even consider interventions by police or targeting markets to be within their scope (e.g., Ritter and Cameron 2005).

PRINCIPLE 4.—Drug control must be designed for sustainability.

“Sustainability” has become the contemporary synonym for “good,” and drug control might do well to embrace the mantra. Most observers agree with the following two propositions. First, some dependence-inducing psychoactive drugs, such as crack and methamphetamine, should remain banned from general commerce. Second, achieving a drug-free society is not a viable option. Those propositions imply the necessity of enforcing prohibition in perpetuity, yet a large, harsh “drug war” cannot be maintained indefinitely without triggering a backlash.

<sup>27</sup> In 30 months it is estimated that Silk Road, which handled more than just drugs, had transactions totaling only \$214 million (Böhme et al. 2015). Estimated US drug retail sales volume in 2010 was about \$100 billion (Kilmer et al. 2014).

<sup>28</sup> The statement is impressionistic because there are no systematic data on drug market-related violence in the United States or any other country. We think it uncontroversial, though one might argue about the causes of the difference.

An important implication is the need to tone down the intensity of enforcement and redefine law enforcement's role and objective in the ongoing prohibition of drugs with large, established markets, notably heroin, cocaine/crack, and methamphetamine. But following from the second principle of admitting different policies for different drugs, it is important to clarify that the imperative of sustainability does not imply that the same approach need be taken with all substances; a more conventional supply control posture may be sustainable for markets that are small or not yet established.

The reason is that illegal markets have a minimum viable operating size, so the cost of prohibiting something that does not yet have a functioning market can be low regardless of the approach or philosophy underpinning enforcement of that prohibition. The risk of participating in a market depends not on the amount of enforcement directed at that market but rather on the ratio of enforcement to market size. So when the market is small, enforcement risk can be large even if the energy invested in enforcement remains modest (Caulkins 1993; Kleiman 1993).

Also, among the structural consequences of product illegality is poor information flows (Reuter 1983); if the proportion of a population participating in an illegal activity is low enough, it can be hard for transaction partners to find each other, raising search time costs and increasing opportunities for sellers to mark up prices, which can constrain consumption. Though cellphones, accessible to almost everybody, ought to make it easy for buyers and sellers to find each other, street markets nonetheless continue to play an important role in the distribution of cocaine and heroin.

So a relatively tough enforcement regime can be sustainable for a drug that has a minimal established market or user base. One reason alcohol prohibition failed was that it was an attempt to retroactively impose a prohibition on a substance that already had a very large user base.

Another situation is a market that is small but growing rapidly. Drug use can diffuse by word of mouth in a manner that is aptly described as contagious (Ferrencia 2001), even though there is not literal contagion. When new users recruit other initiates, use can spread exponentially, and sometimes supply cannot keep up. During such periods, supply can be the constrained factor, as suggested by above-equilibrium prices such as those for cocaine in 1980. Attacking supply when supply is the

constrained factor is more valuable than when it is not constrained or can easily be replaced. So deploying tough enforcement against a market that is small but might become large may be sensible, even if it ceases to be so later, once markets are established and use has become endemic (Caulkins 2005).

In sum, on a substance by substance basis, drug enforcement must choose between focusing on minimizing supply and minimizing collateral damage caused by the supply chain. Minimizing collateral damage is the only option that is sustainable in the long run when a drug market is large and established.

**PRINCIPLE 5.**—Recognize the distinctive roles of different levels of government.

More than other types of law enforcement, drug enforcement raises questions of the right balance of responsibilities among the different levels of government. The most conspicuous issue is the role of the federal government, which accounts for a much larger share of drug enforcement activity than it does for violent or property crimes. Drug law violators constitute an absolute majority in federal prisons and federal inmates account for more than one-fifth of all those in prison or jail for drug violations.

There are several sensible reasons why the federal government should play a larger role in drug enforcement than in enforcement of laws against burglary. For one, all of the heroin and cocaine/crack, and the majority of methamphetamine, consumed in the United States are produced abroad and smuggled into the United States, and the federal government has particular responsibilities for border control. Furthermore, interdiction does not flow primarily from lucky searches at the border, but rather from intelligence developed in partnership with the military and law enforcement in source and transshipment countries; so interdiction inevitably intersects with international relations.

A second reason is that even within US borders, the supply chain for large areas of the country can concentrate in a smaller area, potentially swamping the resources of that community. A prominent early example of this was when Miami was overwhelmed with cocaine trafficking and trafficking-related violence in the early 1980s, before the primary smuggling routes shifted to pass through Mexico rather than the Caribbean. Since it was demand from around the country, not just residents of

Miami, that was supporting that trade, it made sense to draw on federal law enforcement resources that were financed by the national tax base, not just residents of Miami-Dade County or Florida.

A third reason is that sometimes drug law enforcement requires specialized skills or equipment, such as when dismantling a toxic methamphetamine lab, that not all local police departments have. Finally, the interstate nature of domestic trafficking makes it appropriately a target for federal enforcement.

However, it is not clear that the federal role has been limited to instances in which those or similar arguments were paramount. Notably, federal prisons house a significant number of relatively low-level crack sellers. Sometimes the primary specialized resource that led to federal involvement was simply that federal sentencing laws were harsher, but other times it may be prosecutorial resources. Thus the federal crack cases, which are all low level because the drug is manufactured well down in the distribution system, are found mostly in states with many small local prosecutors' offices.<sup>29</sup> This may be an efficient allocation of responsibilities given current competencies, but it exposes crack sellers in specific states to the tougher justice of federal sentencing, an issue of distributional justice; a state might want to exert its own authority by developing a state-level competence at making these cases.

There have also been concerns that the federal policy of sharing seized assets with local law enforcement agency partners may corrupt or skew enforcement priorities (Benson, Rasmussen, and Sollars 1995; Worrall 2001). Attorney General Holder in 2015 ended that policy precisely for that reason (O'Harrow, Horwitz, and Rich 2015).

Another natural role for the federal government is in supporting data collection and research. Left to their own devices, states would underinvest in such measures because many of the benefits would accrue to other states. The federal government performs this function energetically with respect to treatment, prevention, and epidemiology. The National Institute on Drug Abuse (NIDA) funds considerable research on

<sup>29</sup> The cross-state variation is striking. In fiscal year 2014, the US courts in heavily rural Tennessee (population 6.3 million) handled 114 defendants charged with crack offenses, whereas the federal courts in California (population 37 million) handled only 52 crack defendants (US Sentencing Commission 2014). Even West Virginia, another rural state, with a population of only 1.9 million, had more federal crack defendants (73) than California.

drug abuse and addiction,<sup>30</sup> and the household and high school senior surveys (formally, the NSDUH and Monitoring the Future) are world-class.

The federal government fails badly to support research and data collection adequately with respect to drug enforcement and market monitoring. Funding to evaluate the efficacy of supply-side programs is perhaps 1 percent of what is invested in research on demand-side interventions (Reuter 2001). The single most valuable data system for monitoring heavy drug users, ADAM, was recently axed to save a few million dollars a year, a small fraction of what is spent on the NSDUH. The Drug Enforcement Administration (DEA) owns the world's best data on drug market transactions, with its System to Retrieve Information from Drug Evidence (STRIDE). Although its sharing of those data has led to many valuable research contributions (e.g., Dobkin and Nicosia 2009), it tends to share STRIDE data grudgingly and with inadequate documentation.

There are also coordination issues between local and state governments. The most important is that when local police and prosecutors cause a drug offender to be sentenced to prison, the cost of that prison sentence is usually paid by taxpayers throughout the state, even though the majority of the benefits accrue locally. This creates a “tragedy of the commons” that can incentivize over-incarceration.

Taken together, these five principles lead to the following general rule: For any given dependence-inducing intoxicant that will harm an important number of those who use it, try first to preempt creation of a substantial market for that substance. No society will ever be “drug-free” overall, but in various places and times certain substances have been so rare as to be effectively unavailable to much of the population. For example, at present methamphetamine is largely absent from New England, even though it is common in other parts of the country. When achieved, as with PCP, DMT, GHB, methcathinone, and various other substances, we do not think much about them precisely because their prevalence is so low; we can declare success and leave the prohibition intact. Society gets the benefit from prevented abuse of that substance and at minimal cost.

<sup>30</sup> NIDA has claimed for many years that it accounts for 85 percent of the world's funding for research on drug issues; see, e.g., a 2001 news release (<http://archives.drugabuse.gov/newsroom/01/NR7-19.html>). No documentation is available for that claim.

Arguably this was the situation in most of the United States for all illegal drugs between World War II and the 1960s. Use was low, and enforcing prohibition was not costly. In 1950 the FBI's *Crime in the United States* reports that among 205 cities with populations over 25,000, just 2,608 people were charged with drug law violations, compared with 105,464 for burglary.<sup>31</sup> So in 1950 there was one drug arrest for every 40 burglary arrests, whereas in 2013 there were six drug arrests for every burglary arrest—a change in relative frequency of 240. For many decades drug prohibition provided the preventive benefits of low availability at very low cost.

When for whatever combination of reasons prohibition fails to prevent the establishment of a substantial drug market, there are three fallback positions. First, there is outright legalization, an option some argue is worth considering for steroids, cannabis, and MDMA, but not for drugs with high intrinsic dangers such as cocaine, crack, and methamphetamine. Second, preserve only the structural consequences of product illegality via minimal enforcement against suppliers and just enough against users to keep the law from being a dead letter. Prohibition against prostitution may provide an example (MacCoun and Reuter 2001, chap. 7). Arguably that is also a fair description of cannabis in many states around 2010, and it remains a viable alternative to full legalization for marijuana going forward. Third, implement prohibition in a manner that is sustainable, which implies pursuing a temperate prohibition against drugs that have an established market and user base.

Our current policy of zealous prohibition toward heroin, cocaine, crack, and methamphetamine is not on this short list of viable long-run options. The ongoing cost is not sustainable. The primary limitation is not so much the budgetary cost, which is high but less burdensome than, say, defense spending during the Cold War; instead it is the consequences in terms of race relations, police-community relations, and harm inflicted on those punished.

The federal government is a player in all these matters. The retention of a federal prohibition on marijuana possession, distribution, and manufacture, though temporarily suspended for the legalization states, hangs over states considering the option of legalization because that suspen-

<sup>31</sup> Tables 19 and 20 from <https://archive.org/stream/uniformcrimerepo1950unit#page/58/mode/2up>.

sion was created by an easily reversed administrative decision by the Department of Justice. Thus, for example, legalization states are reluctant to adopt a regime that would bring state employees directly into the business, though that might be a desirable option for preventing promotion of legal marijuana. The federal government has also been, in the past, a major promoter of “truth in sentencing” laws (Bowman 2005), although it is not clear that has had much effect on time served by those sentenced in state courts (Turner et al. 2006). The willingness of federal prosecutors to take up high-profile distribution cases developed by local police has also increased average prison time for high-level offenders. Thus in almost all instances of reform, it is important to consider how responsibilities should be allocated between federal and lower-level jurisdictions.

So at the broadest level we have three principal conclusions: Consider some form of legalization or decriminalization for marijuana (and possibly also steroids and some new psychoactive substances) to render them minor matters from a criminal justice perspective. Mend but don’t end prohibition for cocaine/crack, methamphetamine, and heroin. Happily maintain the status quo for all other substances, except prescription opioids, for which a more aggressive stance may be useful. We now elaborate six specific policy recommendations that flow from this general framework.

### III. Policy Proposals

On the basis of those principles, we offer six concrete proposals. None will, nothing could, eliminate drug abuse. For the major and most harmful contemporary drugs of choice, heroin, cocaine/crack, and methamphetamine, they would, if significantly adopted, reduce both direct and collateral harms associated with drug abuse and current drug enforcement practices. For opioids and other substances diverted or stolen from pharmacological users, they would lay a foundation for addressing an as yet underaddressed social problem of steadily increasing scale.

**PROPOSAL 1.**—Make marijuana enforcement a minor matter for the criminal justice system.

As noted in a recent *Crime and Justice* essay (Reuter 2013), marijuana is a drug for which policy implications, like the problem, are distinct from

those of other illegal drugs. Marijuana is much more widely used than are other illegal drugs.<sup>32</sup> It is not without harms (Hall and Degenhardt 2009; Volkow et al. 2014; Hall 2015), but on some very important dimensions—including risk of death and promotion of violence—marijuana has very modest consequences.

A simple way to make marijuana a minor issue for the criminal justice system is to extend decriminalization to the remaining 60 percent of the country that has not yet implemented it. The existing research suggests that decriminalization either does not affect marijuana prevalence or increases it only modestly (Pacula et al. 2005). And a thorough decriminalization can cut enforcement costs to the point where the additional reductions that would be provided by full legalization are of minor consequence. Caulkins, Kilmer, Kleiman, et al. (2015) estimate that after its decriminalization, Vermont spends only about \$1 a year per person enforcing its marijuana laws against adults.

Reductions in sanction severity can be accompanied by net widening. If the sanctions really are lower, that could be useful inasmuch as the criminal justice literature argues that certainty is more effective than severity. But sometimes the nominally reduced sanctions can pack an unanticipated punch (Shiner 2015). For example, if the new policy requires a court appearance or completion of treatment, then failures to satisfy these requirements can inadvertently place burdens on both the offender and the criminal justice system. However, that risk is ameliorated if the postreform sanction is merely a fine. The number of speeding tickets written each year dwarfs the number of arrests in the United States, and no one views speeding tickets as swamping the criminal justice system.

So substantially freeing the criminal justice system from the financial burdens and reputational damage of extensive marijuana involvement requires only a thorough decriminalization, not legalization. Nevertheless, legalization appears to be the path down which the country is headed.

<sup>32</sup> Among recent birth cohorts old enough to have finished their initiation, about 55 percent have ever used. Combining that finding with older data on proportions of ever-users who reached various use-related milestones, one might guess that 30 percent have used a dozen or more times and perhaps one in six have used 100 times or more often (authors' analysis of NSDUH and National Household Survey on Drug Abuse data available at the SAMHDA website: <http://www.icpsr.umich.edu/icpsrweb/content/SAMHDA/index.html>).

We have written extensively about the various options for legalizing marijuana (Caulkins, Kilmer, Kleiman, et al. 2015; Caulkins, Kilmer, Reuter, and Midgette 2015). Each model has its own merits and drawbacks. For example, allowing only “grow your own” implies that the state can neither tax production nor assure quality. The commercial or “alcohol” model allows for product regulation and taxation, but it also creates companies whose profit growth depends on expanding use by the minority of frequent users who dominate demand. Though in principle one could subject the commercial marijuana industry to tight regulation, the experience with alcohol suggests that the industry is likely to be able to erode such restrictions over time through political activities. Indeed, already industry representatives hold one-third of the seats on the Oregon Liquor Control Commission’s cannabis rules advisory committee. Supreme Court doctrines concerning commercial free speech will also hinder restrictions on promotion after the drug becomes legal federally.

As of this writing, four states have approved a commercial model of legal marijuana. It is likely that other states will approve marijuana legalization in 2016. Even if the country is headed for legalization, there is much to be said for pursuing only a limited legalization, at least initially (Rolles and Murkin 2013). This might forbid for-profit industries but allow individual users to grow a small number of plants for their own consumption or gifts to friends and to join cooperatives with a limited number of members (perhaps no more than 50?) that would be licensed to grow enough for the membership’s use. This provides a legitimate supply to existing users without providing incentives for promotion of marijuana use. If adopted by all states, it would substantially eliminate importation of marijuana from Mexico and the large illegal marketing organizations that distribute the imported drug now (Kilmer et al. 2010).

These changes should lighten the burden on the criminal justice system, particularly the police. They will not eliminate marijuana enforcement as a criminal justice responsibility entirely, if only because laws continue to prohibit possession by, and sales to, minors. Those under 21 account for about 20 percent of marijuana use in the United States.

Indeed, there are about as many alcohol arrests per dependent alcohol user as there currently are marijuana arrests per dependent marijuana user (Caulkins and Kilmer 2012). However, it seems unlikely that these latter responsibilities will be substantial; they will become like enforcement of laws against underage drinking, a low-level routine irritant of policing (Wagenaar and Wolfson 1994).

There has been growing anger in recent years at the use of marijuana possession arrests to apprehend youths in minority communities that the police judge as high risk. The gains of this recommendation are not so much in reduced burden on the police as in improved relations with the community.

**PROPOSAL 2.**—Manage better the problem users who are under criminal justice supervision.

Most of the US drug problem, in terms of both public health and crime, is concentrated among the approximately 3 million frequent users of expensive drugs, primarily cocaine/crack, heroin, and methamphetamine (Kilmer et al. 2014). For better or for worse, many of these users are regularly under the supervision of the criminal justice system. Contrary to cynical reports, most do not use regularly while incarcerated, but offenders under community supervision—whether in pretrial release, probation, or parole—present a great opportunity for better drug control. Of those adults under correctional supervision, more than half are thought to have a drug problem, but most (80–85 percent) who would benefit from treatment do not receive it while incarcerated (Chandler, Fletcher, and Volkow 2009). The modeling and analysis underpinning Kilmer et al. (2014) implies that in any given 12-month window, fully half of all adult males who use cocaine (including crack), heroin, or methamphetamine four or more times per month not only get arrested but also would test positive for their drug at the time of arrest. That proportion grows if one considers time windows longer than 1 year.

Until recently, little effort was made to take advantage of this finding. Supervised offenders were drug-tested occasionally, but even repeated positive tests were often ignored until one final violation suddenly led to revocation of probation or parole and, hence, extended incarceration. This was psychologically flawed and institutionally foolish; showing that rules can be broken with impunity encourages more rule-breaking. The prisons were overcrowded with parolees being returned to prison for the remainder of their sentences.

Mark Kleiman has long argued for “mandated desistance,” that is, a regime of swift, certain, and fair graduated punishments for violations (e.g., Kleiman 1997*a*, 2009). For example, a parolee who has tested positive for an illegal drug at arrest might initially be required to take a

drug test twice a week, at randomly chosen times. A failed or missed test would automatically result in spending an afternoon in court watching others being tried and sentenced; a second failure would lead to a two-night stay in jail, and so forth. An experimental evaluation of such a regime in Hawaii (Hawken and Kleiman 2009) found that among parolees, the experimental group had a recidivism rate that was less than half that of the control group. This population included a high percentage who admitted to using methamphetamine, a particularly dangerous drug.

A similar rationale has driven the development of “24/7 Sobriety,” a program started in South Dakota to reduce recidivism among repeat DUI offenders by twice-a-day testing and short-term punishments; a recent experimental evaluation found it to be highly effective and not expensive (Kilmer et al. 2013). The program was so successful that it was extended well beyond DUI to include arrestees for all sorts of offenses and from monitoring only alcohol to also testing for other substances. North Dakota, Montana, and Wyoming have now also implemented variants of the program, and it has been piloted in Alaska, Nebraska, and Washington.

Note that these interventions change the behavior of large numbers of people with substance abuse problems without requiring entry into a treatment program. They thus challenge the conventional wisdom that everyone with a substance use disorder “needs” treatment but are consistent with other ways of understanding addiction (e.g., Heyman 2009) and long-standing evidence concerning the success of behavioral approaches that use rewards, vouchers, and monetary tokens to improve rates of desistance with and without concurrent treatment (e.g., Higgins et al. 1993).

They also thus differ fundamentally in rationale from drug courts. Drug courts are defined by 10 key components, the very first of which is that they integrate alcohol and other drug treatment services into justice system case processing (National Association of Drug Court Professionals 1997, 2013). Mandated desistance and 24/7 show that changes in incentives are enough for many abusers to induce desistance. Yet these programs do not so much threaten treatment as complement it. As Hawken (2010) notes, mandated abstinence can serve as a form of “behavioral triage” in which the majority of abusers’ use is controlled without treatment, thereby allowing scarce and expensive treatment resources to be concentrated on the residual minority of users.

These programs suggest that the criminal justice system can make a major contribution to reducing drug demand through specific deterrence of heavy users who have already been arrested, not through general deterrence of initiation. A large share of consumption is concentrated among a relatively small number of very heavy users, many of whom are regularly under correctional supervision. If a smarter supervision regime is enough to reduce their drug taking, that can make a dent not only in drug-related criminality of those individuals but also in the market more generally (e.g., not only of economic-compulsive but also of systemic drug-related crime).

PROPOSAL 3.—Provide substitution therapy for opioid-using offenders.

Pollack (2017) discusses ways in which drug and alcohol treatment can help reduce America's crime and criminal justice problems. The potential is considerable. Holloway, Bennett, and Farrington's (2006) meta-analysis of 28 evaluations of drug treatment programs' ability to reduce offending found that the odds of reoffending were between 29 and 36 percent lower in treatment groups than in comparison groups. Treatment is of particular importance for helping opioid-dependent offenders because there are effective pharmacotherapies for opioid dependence (technologies that are still largely absent for stimulants, despite decades and billions of dollars of effort).<sup>33</sup>

Here we focus on treatment within the criminal justice system, in particular, the possibility of expanding opioid substitution treatment for supervised populations. Prison-based treatment, particularly when accompanied by residential-based postrelease aftercare, has also been found to reduce rates of recidivism (Hiller, Knight, and Simpson 1999).

Heroin dependence appeared to decline from about 1980 to 2005,<sup>34</sup> suggesting that the problem had been reduced to managing the behaviors of an aging cohort of users, long trapped in a particularly dangerous lifestyle. However, the sharp increase in heroin deaths after 2010

<sup>33</sup> NIDA has invested heavily in research to develop a comparable agonist or antagonist drug for cocaine; the results have been discouraging (Babor et al. 2009), with the possible exception of vaccines, which raise their own set of issues and complications (Harwood and Myers 2004).

<sup>34</sup> This was indicated by the rising age of those entering drug treatment programs with heroin as the primary drug of abuse (Pollack, Reuter, and Sevigny 2012).

(Warner, Hedegaard, and Chen 2013), exceeding 10,000 in 2014 (Compton, Jones, and Baldwin 2016), is indicative of the creation of a new cohort of regular heroin users, some of whom were previously addicted to prescription opioids such as oxycodone (Carey 2014). The tightening of regulations for prescriptions of these powerful narcotics has led to an increase in their prices in illegal market transactions. For many users, heroin looks like a cheap substitute (Unick et al. 2013). With the entry of this new cohort of heroin addicts, an old problem has become suddenly more acute.

Opioid substitution therapy (OST), as the name indicates, involves supplying heroin addicts with another opioid that reduces both their craving and the effect of heroin. The substitute opioid is itself addictive but can be taken less often and produces less intense acute effects. Methadone, developed in the late 1950s, has been the mainstay of OST (Krambeer et al. 2001). A substantial body of evidence attests to its effectiveness along many dimensions including reduced heroin use, lower crime, and improved social functioning (e.g., Mattick et al. 2009). Methadone maintenance also saves lives (Kleber 2008). Mathers and Degenhardt's (2014) review finds that non-AIDS mortality rates are only one-third as great when subjects are in OST as when they are out of treatment. And Hedrich et al.'s (2012) review finds that its benefits in prison are similar to those found when implemented in the community.

Methadone is just one of the substitutes available for OST. Buprenorphine, developed a decade after methadone, has also proven useful and presents less of a black market problem in that in some formulations it is not an attractive street drug (Mammen and Bell 2009). The latter fact has allowed for buprenorphine to be distributed, at least in some states, through regular medical practices of doctors who, following 100 hours of training, have been certified as competent in such therapy. There are limits, however, on the number of patients that such doctors can treat, and they must also pass DEA scrutiny.<sup>35</sup> These states do not require the extremely rigorous and expensive security measures (e.g., special safes for holding the methadone) that lead methadone to be dispensed only through specialized programs that are separate from mainstream medicine.

<sup>35</sup> For the details see <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm191523.htm>; also <http://buprenorphine.samhsa.gov/faq.html> and [http://www.naabt.org/faq\\_answers.cfm?ID=29](http://www.naabt.org/faq_answers.cfm?ID=29).

There is considerable resistance to providing OST within the criminal justice system, particularly of buprenorphine. For example, OST is not permitted in almost one-half of drug court programs according to a 2013 survey (Matusow et al. 2013). In a study of community corrections, Cropsey et al. (2012) found that fewer than 1 percent of those dependent on opioids received methadone. A study of treatment practices in four criminal justice settings (jail, prison, probation, drug courts) in 2009 found that buprenorphine was available in no more than one-sixth of agencies in any category (Friedmann et al. 2012).

There are of course multiple reasons for this resistance. The federal government is trying to increase OST in the criminal justice system. Funding is available for a drug treatment court or community correctional facility only if the jurisdiction allows for the provision of OST.<sup>36</sup>

**PROPOSAL 4.**—Reduce the average severity of sentences for drug offenses.

The large number of prisoners serving time for drug offenses is troubling to both conscience and purse. Drug dealers need to be punished, but not necessarily all with multiyear prison sentences.

The lightning rod issue has been the federal mandatory minimum sentences and their different triggers for cocaine powder compared with cocaine base or crack. Until passage of the Fair Sentencing Act of 2010, those convicted of selling 5 grams of crack received the same 5-year sentence as those convicted of selling 500 grams of cocaine powder. Since 80 percent of those convicted of crack violations in federal court were African American, this created a major racial disparity. The 2010 change reduced the disparity in trigger quantities from 100 to 17 in 2010 but did not eliminate it.

The focus on these disparate triggers distracted attention from two more fundamental problems, the length of the mandatory minimum and that the trigger was based on quantity possessed, not something more meaningful.<sup>37</sup> It also focused attention on federal law, even though far more offenders are sentenced under state laws.

<sup>36</sup> See, e.g., <http://www.alcoholismdrugabuseweekly.com/Article-Detail/samhsa-bans-drug-court-grantees-from-ordering-participants-off-mat.aspx>.

<sup>37</sup> An additional problem with quantity-based sentencing occurs when it is based on the total weight of the mixture that contains the controlled substance, not just on the weight of

Simply put, quantity possessed is a foolish basis on which to determine sentence length. Its only important advantage is objectivity;<sup>38</sup> the original appeal may have been as an antidote to racially disparate sentencing in the era of judicial discretion, but as just noted, quantity-based mandatory minimums fail to deliver even in that respect.

In theory, quantity possessed indicates the defendant's market level. Yet while it is true that higher-level dealers own and control larger lot sizes than do retail dealers, at higher market levels the dealers hire other people to possess, store, and transport the drugs. So quantity-based mandatorics sweep in more easily replaced functionaries than they do kingpins.

Furthermore, a primary means by which an offender can receive a lesser sentence is to provide information about other offenders. Mules, who simply deliver the drug, cannot provide that information because they do not possess it.

More fundamentally, even if the amount possessed were strongly correlated with amount owned, smart policy would not give the same sentence to all dealers who supply the same volume of drugs. While it is important to give all dealers some sanction, in order to give prohibition teeth, the goal of longer sentences is not to reduce use further. Locking up dealers is an inefficient way to suppress the quantity supplied by established markets (Rydell and Everingham 1994; Caulkins et al. 1997). Not only can low-level functionaries be replaced, but so can kingpins and entire dealing operations (Kleiman 1997*b*).

That "problem of replacement" is sometimes seen as the Achilles' heel of drug enforcement, but it can just as easily be seen as a boon. If an unusually nasty dealing organization is taken down, it may well be replaced by an organization that moves just as much weight but does so in a way that creates less chaos, corruption, and violence.

So the longest sentences should be reserved for dealers who cause other kinds of harms, as well as selling drugs; and if all dealers get very long minimums, no margin remains for being more punitive toward the

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the controlled substance itself. That is a distressing but correctable technical matter. Our critique of weight-based sentences is more fundamental.

<sup>38</sup> The claim to objectivity is undercut by the failure to take purity into account. A defendant with 10 kilograms of cocaine of 5 percent purity, totaling only 500 grams of pure cocaine, would get a more severe penalty than a defendant with 2 kilograms of cocaine with 50 percent purity, totaling 1,000 grams of pure cocaine.

worst actors. Dealers who corrupt public officials, hire juveniles as employees, or use violence as part of their business practice should be punished more harshly than those who do not, and the imposition of enhanced punishments for those specific practices should be widely publicized to maximize their deterrent effect. Any sentencing system that emphasizes the weight of the drugs involved needs changing (Sevigny 2009).

The obvious way to reduce sentences is to change laws, but that is not the only avenue available. Prosecutors can use their discretion to achieve some of the same results. Attorney General Eric Holder did that in August 2013 when he directed federal prosecutors to stop charging many nonviolent drug defendants with offenses that carry mandatory minimum sentences.<sup>39</sup>

Nationwide replication of this federal initiative in theory might have a significant impact. Yet an effort to find similar statements from local prosecutors in major cities did not turn up any examples of an intent to systematically change charging decisions for drug offenders. Indeed, the National District Attorneys Association (NDAA) was highly critical of Attorney General Holder's announcement, in part arguing that local prosecutors were already availing themselves of a wide array of options that did not lead to prison.<sup>40</sup> However true that claim may or may not be, the numbers in state prisons and local jails for drug offenses suggest that there may yet be opportunities to do more.

Even if prosecutors are unable (or merely unwilling) to do more, legislatures can go further. Rolling back the excesses of the sentencing zeal of the 1970s and 1980s is the subject of other essays in this volume (Rhine, Petersilia, and Reitz 2017; Tonry 2017; Wright 2017). We only add here that perhaps in no other area have the excesses gone further than for drug offenses. State legislatures facing budget pressures have taken some steps but so far have been timid. Consider New York State,

<sup>39</sup> The attorney general's statement included many comments sharply critical of sentencing and prosecuting policies generally, saying that these contributed to an unnecessarily large prison population (Horwitz 2013).

<sup>40</sup> The president of the NDAA condemned the attorney general for "repeating the myth that prisons are full of first-time, nonviolent offenders. [This] leaves America's 40,000 prosecutors, who handle over 95 percent of the criminal prosecutions in the country, shaking their collective heads. The reality is that almost every offender, in every state prison, is there for a violent offense or sexual offense, or for committing repeated offenses" ([http://www.ndaa.org/pdf/NDAA\\_press\\_release\\_response\\_Holder.pdf](http://www.ndaa.org/pdf/NDAA_press_release_response_Holder.pdf)). This misrepresented Holder's position but provided a good indication of attitudes of local prosecutors.

where there was a 15-year battle to reduce the severity of the notorious Rockefeller sentencing laws enacted in response to the heroin epidemic of the early 1970s; the Rockefeller laws included lifetime sentences for selling just 4 ounces of heroin. Even after passage of the reforms, there remained anomalies with respect to severity. A new A-class felony was created for kingpins that “applies to—directors and profiteers of—controlled substance organizations who sell controlled substances worth \$75,000 in a six-month period or act as the leader of an organization that sells controlled substances worth \$75,000 in a twelve-month period. Conviction as a King Pin holds a grave punishment—a fifteen to twenty-five year minimum with a maximum life sentence” (Mancuso 2010, p. 1576) An operation selling \$75,000 worth of drugs in a 6-month period has sold only moderately more than what one retailer might sell; the specified volume was far from any reasonable description of the kingpin level.<sup>41</sup>

Reforms like California’s Proposition 36, formalized in the Substance Abuse and Crime Prevention Act of 2000 (SACPA), carve out large populations for less harsh penalties but often suffer glaring weaknesses. SACPA mandated referral to treatment in lieu of incarceration for a broad class of those arrested for drug possession violations.<sup>42</sup> Yet judges had limited ability to sanction defendants who failed to comply with, or even participate in, the treatment program they were to enter as a condition of their guilty plea.<sup>43</sup> Treatment providers were frustrated about that aspect of the act and complained loudly, but since the act was derived from a referendum, change was impossible (Wood 2001).

<sup>41</sup> Cocaine retails for about \$50 a gram, 50 percent pure. A retailer who sold 12 grams a day, earning perhaps \$150 net per day as a result, would be at risk of violating this statute since his total volume would exceed \$75,000 in a 6-month period of 5-day-a-week selling.

<sup>42</sup> “Adults convicted of nonviolent drug offenses who meet SACPA eligibility criteria can be sentenced to probation with SUD [substance abuse disorder] treatment instead of incarceration or probation without treatment, regardless of treatment motivation level or other indicators of program suitability. . . . SACPA eligibility criteria include a requirement of no previous or concurrent serious or violent felonies, physical injury misdemeanors, or concurrent nondrug charges. The law was written to also allow offenders on probation or parole who commit nonviolent drug offenses or who violate drug-related conditions of community supervision to elect community-based treatment” (Anglin et al. 2013, p. 1097w).

<sup>43</sup> “Incarceration of offenders for program noncompliance is prohibited in most cases, and SACPA provides as many as 3 opportunities for most offenders (2 for parolees) to re-enter treatment without incarceration despite initial violations (e.g., stemming from failures to report to treatment or court appointments, subsequent drug-related arrests, or other acts of program noncompliance)” (Anglin et al. 2013, p. 1097w).

Despite such problems, the act made a substantial difference to the numbers incarcerated in California. Ziedenberg and Ehlers (2006) estimate that Proposition 36 accounted for a decline in the projected California prison population. Whereas the California prison population had been projected to increase from 162,000 to 180,000 between 2000 and 2005, the actual figure ended at 164,000. Moreover, the rate of prison commitments for drug possession offenses in California fell from 80 per 100,000 on June 1, 2001 (the date of implementation), to 57 per 100,000 4 years later. The evidence from state-funded evaluations indicates that individual outcomes (drug use, crime, health risk behaviors, and social functioning) are comparable to those of people entering treatment under other regimes and better than for people who do not receive treatment (e.g., Brecht and Urada 2011). And other, similar efforts to divert low-level drug offenders away from incarceration tend to receive favorable evaluations (e.g., Collins, Lonczak, and Clifasefi 2015).

**PROPOSAL 5.**—Base sentence length on culpability, danger, and replaceability, not quantity possessed or number of prior convictions.

The principles discussed above argue that drug enforcement directed at large, established markets should be sustainable and prioritize minimizing collateral damage, not attempting to reduce use by suppressing the markets altogether. Those principles can be implemented in myriad ways, ranging from equipping police to administer naloxone (to reverse opioid overdose) to maintaining a visible presence in neighborhoods where users and sellers congregate, so nonusers can go about their business with a greater sense of physical security.

Here, though, we discuss the application of harm-reduction principles to drug laws and sentencing. The concept is not novel (Kennedy 1997; Braga et al. 2001; Caulkins 2002; Spooner, McPherson, and Hall 2004; Curtis and Wendel 2007; Caulkins and Reuter 2009). Enhanced sentences for those selling near schools are a familiar example. Their goal is not so much to suppress drug use as to shift the location of marketplaces and thereby reduce the exposure of school-age children to drug offers and normalization. Drug-free school zones also illustrate the need for restraint and careful implementation. In many cities the protected radii are so large and schools so densely located that the zones cover much of the city (e.g., Brownsberger et al. 2004). The key to using differential sanctions to induce behavioral change is to make the “low-end” sanctions

sufficiently less punitive and the targeting of “high-end” sanctions sufficiently focused.

The feasibility of narrow targeting rests on the heterogeneity of dealers and dealing behavior. It has long been understood that a minority of unusually high-rate offenders commit a grossly disproportionate share of crimes (e.g., Wolfgang, Figlio, and Sellin 1972; Chaiken and Chaiken 1982). The corollary with respect to drug distribution is that a minority of unusually noxious dealers generate a disproportionate share of the collateral damage from drug markets. Admittedly the evidence base for this insight is thinner; it cannot be modeled as quantitatively as can the distribution of offense rates (Blumstein, Canela-Cacho, and Cohen 1993).

Nevertheless, simple back-of-the-envelope calculations illustrate the point. The retail value of illegal drugs sold in the United States is about \$100 billion per year (Kilmer et al. 2014). Even excluding marijuana (\$40 billion) and generously allowing that the average full-time retailer sells as much as \$100,000 per year, that figure still implies that there are at least 600,000 full-time-equivalent retail sellers. Since there are additional sellers at higher distribution levels and many retailers sell only part-time (Reuter, MacCoun, and Murphy 1990), most likely more than 1 million people sold an illegal drug other than marijuana in the United States within the last 12 months. Yet, there are “only” about 16,000 homicides, which implies that no more than 1.6 percent of those suppliers murder someone per year; the true percentage is much lower since many homicides have nothing to do with drug markets (e.g., most spousal violence) or are only tangentially related, as with violence by members of a gang that sells drugs but is not occasioned by any specific drug-related event.<sup>44</sup>

Nevertheless, violence—lethal and otherwise—perpetrated by drug dealers remains a very serious problem. It has ebbed considerably from the acute levels reached during the 1980s crack epidemic but remains a concern in urban neighborhoods with high concentrations of poverty (e.g., Gordon et al. 2014; Karandinos et al. 2014). If one could wave a

<sup>44</sup> For example, McLaughlin, Daniel, and Joost (2000) examine murders committed by 25 adolescent males incarcerated in Virginia—35 percent of whom were daily drug users—and find that a little over half were committed by individuals involved in drug selling, but only 28 percent were actually drug-related.

magic wand and make all systemic drug market violence disappear, the nation would be much safer and would feel much safer.

There are no magic wands, but incarcerating all dealers who committed lethal violence is entirely feasible; that would be a small effort compared to the nearly 450,000 people who are now incarcerated for drug distribution. While dealers are easily replaced, even if there is no deterrent effect of the new policy, the violent dealers will be replaced, on average, by less violent dealers.

Naturally there are not two pure types, dealers who murder someone each year and those who never do. Rather, there is a larger number of dealers who behave in ways that have some significant chance of leading to a murder in any given year. So the number of dealers at high risk of producing a murder is larger. But the overall point remains: incarcerating even the top 5 percent of dealers in terms of behaviors that create the greatest risk of homicide and replacing them with an equal number of dealers whose proclivities for violence were merely average might help solve the biggest problem that drug dealers cause for the great majority of Americans who do not use drugs.<sup>45</sup> A similar sort of analysis can be made with respect to any of the other noxious by-products of drug dealing, including corrupting public officials, employing youths, and so on.

It is exceedingly difficult to write laws that selectively target this minority of unusually noxious dealers, which is precisely why judges need to be given discretion. Whereas it might be more or less true that a burglary is a burglary and justice demands that all burglars receive the same sentence, that logic most decidedly does not apply to drug selling. There is a world of difference between someone who sells quietly to friends behind closed doors, while never carrying a gun, and someone who sells the exact same quantity brazenly on the street in front of a treatment clinic, employing children as lookouts to evade police, and using violence to keep subordinates and neighbors in line.

Drug sentencing policies make distinctions primarily according to simple, objective measures, notably quantity possessed and the number

<sup>45</sup> Two referees questioned whether these new recruits would remain merely average in their proclivities for violence or if their very experience of selling drugs drives everyone to commit similar levels of violence. As far as we know this issue has not been addressed empirically; it is hard to imagine what experiment could be run to test it. But we grant that our prescription does carry the implicit assumption that there is time-invariant heterogeneity across individuals in tendencies to commit violence. That is, behavior is not entirely driven by context.

of prior convictions, but those simple objective measures are poor indicators of harm. Indeed, at times they can even be inversely related. While in street markets the dealer with one-quarter of an ounce may be “higher level” than the juggler with a few rocks, the dealers operating in higher-level wholesale markets are rich and powerful enough to hire other people to possess and transport the drugs that the dealer owns and controls. And truly high-level dealers tend not to have long prior records precisely because when they get caught, they will exit from the trade for long enough that reentry at such a high level will be difficult. It is the low-level retailers who spin through the revolving door of the justice system enough times to rack up a record that repeat offender laws penalize.

A more sensible approach is to assess which of three bins the defendant belongs in, distinguishing first those who work in retail or lower levels of wholesale distribution from those who operate at higher market levels, and then within the latter group distinguish among unskilled hired help, owners and entrepreneurs, and technical specialists including enforcers and money launderers. Unskilled hired help who work for higher-level dealers are no more important than are retail sellers. Sentencing them to long terms is wasteful and unjust. By contrast, the criminal justice system could afford to give longish prison sentences to the owner/entrepreneurs of higher-level operations because there are not many of them. That last group is a mixed case; sometimes incarcerating them could have some incapacitative benefit if the skills they bring to the trade are in short supply.

**PROPOSAL 6.**—Reduce prescription drug abuse with policing that reinforces regulatory efforts.

Beginning around 2000, deaths resulting from misuse of prescription drugs rose sharply (Compton and Volkow 2006; Compton, Jones, and Baldwin 2016). As early as 2006, the number of deaths from opioid analgesics, the principal class involved, was approaching 15,000. The numbers have increased only modestly since then, with 16,000–19,000 deaths in each year from 2011 to 2014, but that is still a startlingly large number. It far exceeds the combined death totals for all purely illegal drugs (Office of National Drug Control Policy 2014) and even eclipses the number of homicides. The toll is large enough to be a prime contributor to changing demographic trends in life expectancy (Case and Deaton 2015).

Considering the death toll, response was slow, with a federal Prescription Drug Abuse Prevention Plan developed only in 2011 (e.g., Office of National Drug Control Policy 2011), and that plan placed education, monitoring, and medication disposal ahead of enforcement.<sup>46</sup> Criminal justice agencies—particularly local police—appear to be only slightly involved in reducing the supply. They could play a more substantial role.

The drugs are obtained from a great variety of sources. Many abusers shop for doctors, obtaining prescriptions from multiple prescribers that they then fill at different pharmacies, which may or may not be aware of the other prescriptions.<sup>47</sup> Others find rogue prescribers, often in pain clinics, who are willing to write prescriptions either without any medical justification or with only the most superficial examination (Dutko 2009). Others go to hospital emergency rooms claiming to have dental pain, a claim that is apparently hard to challenge (Saint Louis 2012).

Organized gangs may recruit potential patients to use these methods to collect large quantities of the drugs that the gang then sells on the street, or steal from pharmacies or wholesale distributors.<sup>48</sup> Still others obtain the drugs from friends or relatives who had legitimate prescriptions but did not need to use all the pills.

<sup>46</sup> It is curious that the lackadaisical response has not generated greater protest. As of March 1988, the year after Randy Shilts published *And the Band Played On*, the Centers for Disease Control reported that “more than 31,400” cases of HIV/AIDS had resulted in death (1988). That cumulative total for all years is only about double the annual rate of death from prescription drug overdose in each of the 5 years leading up to release of the 2011 national plan.

<sup>47</sup> Consider, e.g., the details provided in the DEA’s complaint when it took action against CVS in 2012 for failure to adequately supervise pharmacists in two Sanford, Florida, branches. “A pharmacist at one of the Sanford CVS stores interviewed by DEA officials said they set a limit each day on how much oxycodone they would dispense, based on inventory and manpower. They dispensed the pills on a first-come, first-served basis, and sometimes the stores met their quotas just 30 minutes after the pharmacy opened. One pharmacy employee told agents they kept a reserve of oxycodone on hand for their ‘real pain patients.’ When an investigator asked the pharmacist why she would fill prescriptions for those not considered legitimate pain patients, she said that, ‘as a pharmacist she was stuck between a rock and a hard place, and that basically . . . she had not been trained to diagnose.’” (Pavuk 2012). The DEA ended prescription privileges for the pharmacy for the drugs that had been abused.

<sup>48</sup> The numbers for these forms of theft seem very small. Shepherd (2014) cites 129 pharmaceutical cargo thefts in the period 2006–11, barely 20 per year. In 2009 the stolen pharmaceuticals were valued at \$184 million; this is likely a tiny share of the total market value of diverted pharmaceuticals, but it is hard to know what those same drugs would have sold for in the illegal market. In 2010 there were 686 armed robberies of pharmacies, resulting in 1.3 million stolen pills (Shepherd 2014). That is again tiny when set against the hundreds of millions of pills consumed illegally.

How much each source contributes to total supply is difficult to determine. Population surveys, in particular, the NSDUH, ask questions about nonmedical use of prescription drugs, but they may miss the heaviest users of these drugs, just as they miss most of those who use cocaine or heroin frequently. Within the NSDUH, frequent users of prescription drugs are much less likely to obtain their drug from friends or relatives or for free as compared to the occasional users (41 percent vs. 68 percent) and three times as likely to have bought from a friend, relative, or the Internet (27 percent vs. 9 percent). With few arrests of either buyers or sellers, the ADAM sample is unlikely to add much. Impressionistically, rogue prescribers and patients who doctor-shop are the principal sources, though harried and well-intentioned doctors are also important.

The federal DEA has a well-defined role in the regulation of prescription drugs. Those who prescribe or dispense psychoactive drugs must have a DEA license, which imposes obligations on the license holder. Apart from arresting those whose abuse of licensing privileges is so flagrant that it can be proven in criminal proceedings, the DEA can remove the license in administrative proceedings in which a much lower standard of proof is accepted. The DEA allocates over \$300 million to diversion control, out of a total budget of \$3 billion.<sup>49</sup>

Yet DEA actions against prescribers are rare; a total of 10 doctors were convicted of abusing their prescription privileges in 2010.<sup>50</sup> Actions against distributors are even rarer; Coleman (2012) lists only 10 in the period 2006–12. License withdrawal and other civil actions may often be enough, but Coleman argues that the recidivism of major distributors in the face of large fines suggests that they should be supplemented by occasional criminal prosecutions.

Until the last few years there was little evidence that state or local police played any systematic role in enforcement against these sources. Doctors and pharmacists are very different from those whom the police usually arrest. They have a cloak of respectability, which is a barrier, even when there is evidence of abuse of professional privilege. Enforcement against pill mills has begun to receive more attention, but even today

<sup>49</sup> For details see [http://www.justice.gov/sites/default/files/jmd/pages/attachments/2015/02/01/25\\_drug\\_enforcement\\_administration\\_dea.pdf](http://www.justice.gov/sites/default/files/jmd/pages/attachments/2015/02/01/25_drug_enforcement_administration_dea.pdf).

<sup>50</sup> See [http://www.deadiversion.usdoj.gov/crim\\_admin\\_actions/doctors\\_criminal\\_cases.pdf](http://www.deadiversion.usdoj.gov/crim_admin_actions/doctors_criminal_cases.pdf).

they do not receive anything approaching the priority given to homicide investigation, even though homicides and diverted pharmaceuticals each kill about the same number of people each year.

Control efforts currently focus on implementing prescription monitoring programs (PMP) at the state level (US General Accounting Office 2002). These are systems that allow for tracking who is prescribing to whom. In principle they allow for the identification of doctors who are overprescribing and patients who are receiving too many prescriptions. The literature on PMPs has shown mixed results with respect to reductions in prescription overdoses (e.g. Haegerich et al. 2014; Surratt et al. 2014). This reflects limitations of the PMPs in terms of the completeness of the data entered, the timeliness of their availability, and limits on who can access the data (Shepherd 2014). For example, Buntin (2014) reported that “only 16 states require doctors to check their PDMPs before writing scripts for chronic pain relief.” And a recent *Los Angeles Times* investigation made a credible case that the state attorney general was failing to use the state’s version of PMP to track down rogue prescribers (December 12, 2012; <http://graphics.latimes.com/prescription-drugs-part-four>).

The evaluation literature is silent on the effectiveness of police and prosecutors supplementing these PMP efforts with more proactive interventions, yet multiple arguments suggest that there may be considerable potential. Vulnerability of overprescribing doctors and lax pharmacists to active policing would seem to flow precisely from the fact that they make so many transactions.<sup>51</sup> They depend on a reputation for providing drugs with little documentation. Indeed, some pain clinics provide clear clues as to their loose practices. Undercover work is likely to be relatively easy here, unlike the challenge faced in trying to reach a heroin kingpin. Moreover, a small number of convictions may have a high deterrent effect, given that doctors and pharmacists have a great deal more to lose from a criminal conviction than does the average cocaine or heroin retailer.<sup>52</sup>

<sup>51</sup> Before a crackdown in Florida, Dutko (2010) reported that “some Florida pain clinics post signs boasting such obvious tip-offs as ‘Out of State patients welcome’ or ‘No Wait for Walk-ins’” (p. 746).

<sup>52</sup> There is consistent concern that tougher enforcement will lead to overly cautious prescribing of pain medications, leaving many legitimate patients in pain (Heit, Covington, and Good 2004). Achieving the right balance is clearly a problem, and much may depend on the selection of targets for enforcement. In that respect pharmacies may be a more attractive target than doctors.

The issue is treated now as a public health problem. While that is probably the right way of framing the issue, the result is a marginalization of the criminal justice system even though there is a crime connection with dependent users seeking to satisfy an expensive habit.<sup>53</sup> For example, in a National Governors Association (2012) summary of what needs to be done to reduce the problem, only one of six interventions involved the criminal justice system. The Office of National Drug Control Policy 2011 report on the epidemic also gave short shrift to enforcement.

Taking a greater role in curbing prescription drug abuse raises complicated questions of performance metrics for the police. It is likely to generate a small number of arrests. The primary yield will be a decline in mortality related to prescription drug abuse, not an indicator that is traditionally tracked by the criminal justice system. We offer no solution to this metric problem at present. More generally, in this sphere the recommendation is to investigate options and experiment with different tactics, not to replicate any single evidence-based practice that is already well studied. Nevertheless, we believe that the social benefit from shifting some police resources away from markets for purely illegal drugs and toward prescription drug diversion could be substantial if done judiciously. The police mission to protect and serve can certainly be stretched to include reducing deaths from illegally obtained pharmaceuticals.

#### IV. Concluding Comments

The criminal justice system is responsible for enforcing the law and protecting public safety; it is not responsible for eradicating drug use. Nevertheless, by enforcing prohibition's laws against producing and distributing controlled substances, the criminal justice system does substantially reduce drug use and abuse. However much use occurs, it is well below what would be expected if corporations were allowed to produce and promote those drugs legally. That is true even for marijuana, for which the prohibition is not strict. Colorado, for example, has more

<sup>53</sup> At least in New York City, it appears that street drug addicts with high rates of property crime have been using prescription drugs for some years. Davis and Johnson (2008) found that prescribed opiates were used by about one-third of street drug users in New York and were sold by a similar fraction of drug sellers.

bricks-and-mortar marijuana stores than Starbucks. It holds to an even greater extent for cocaine/crack, methamphetamine, and heroin.<sup>54</sup>

Unfettered by the necessity of evading law enforcement, it would not be hard to produce any of the common illegal drugs for a dime a dose or less; yet users who want to buy cocaine/crack, heroin, and methamphetamine in the United States have to pay hundreds of dollars a gram—or five to 10 times the price of gold. Since even dependent users consume less when prices are high and more when they are low, this extraordinary result of prohibition saves millions of lives from being dominated by compulsive drug use.

A liberal society that embraces free markets normally dislikes anything that separates consumers from their indulgences—even raising Pigouvian taxes on alcohol, sugary soda, and gasoline is difficult—and prohibition is a fundamentally paternalistic doctrine, even if its historical origins included less noble purposes. Banning use of drugs by adults—as opposed to merely punishing harm to others caused by misuse—signals lack of trust in people’s ability to make judicious choices in the face of heavily promoted psychoactive drugs that can literally alter the brain’s reward circuitry that governs decisions to use those same substances. Libertarians might object to the premise, but all must concede that successful enforcement of a prohibition constrains use and use-related harm.

Not all prohibitions succeed. Alcohol prohibition cut drinking substantially but failed politically, in part because of a naive belief in the self-enforcing nature of prohibition. Marijuana prohibition is similarly failing now. The prohibitions against cocaine/crack, heroin, and methamphetamine could likewise lose popular support if zealotry undermines their legitimacy.

Ending marijuana prohibition would please some and trouble others, but ultimately that is only a medium-stakes policy choice, both because the drug is already widely accessible and because it results in modest harms for the vast majority of its users. But crack dependence is much more debilitating and dangerous than marijuana dependence. The stakes involved in not stemming the spread of prohibition’s failure beyond marijuana are very high indeed.

<sup>54</sup> There are middle path options between prohibition and commercial legalization (Caulkins, Kilmer, Kleiman, et al. 2015; Caulkins, Kilmer, and Kleiman 2016), but they have no important advocates politically in the United States for marijuana.

Prohibitions can fail in at least two ways. First, they can be overwhelmed by noncompliance, just as a riot can temporarily overwhelm law enforcement efforts to constrain violence. Second, overreach can undermine their legitimacy, in the way that Joseph McCarthy's unscrupulous pursuit of communist traitors made a mockery of the very reason why democracy opposed communism in the first place.

Prohibition of marijuana appears to be failing for the first reason, and that is not something the criminal justice system should fight. Ending that prohibition may or may not be good for public health or adolescents' ability to stay focused during high school classes, but it would be a boon for the criminal justice system, saving a modest amount of money and an enormous amount of credibility among certain constituencies. Even if voters decide to retain marijuana prohibition in some fashion, the criminal justice system has to make marijuana enforcement—particularly against users—a minor matter.

The higher-stakes prohibitions, though, are those against cocaine/crack, heroin, and methamphetamine. Here the threat is overreach and the mandate is to reform prohibition in a way that makes it sustainable for the long haul. Mend prohibition now, to prevent a backlash from ending it later in a rash or precipitous manner.

Our proposals for doing this mix the clearly feasible (e.g., increasing the availability of opioid substitution therapy) with the somewhat optimistic (making mandated desistance a routine element of community corrections supervision). None strike us as wildly unrealistic, particularly since we are arguing for lower expectations and effort ("less is more"), not an ambitious agenda predicated on greater spending. The key insight is that most of drug enforcement's benefits, in terms of reduced substance abuse, can be achieved with half the enforcement effort; the second half piles on costs while purchasing much less benefit (Caulkins and Reuter 2006).

There are more fundamental critiques and corresponding remedies. For example, Rasmussen and Benson (1994) argue that the root cause of overzealous and inefficient incarceration is that local police and prosecutors get to decide whether the entire state's taxpayers should pay for the incarceration of a local drug seller. Just as accountable care organizations ought to better align the incentives of providers and social welfare, one could imagine that if a municipality had to bear the fiscal cost of incarcerating its own drug dealers, long sentences might become less popular (e.g., Cullen, Jonson, and Mears 2017). However, we do not

expect the financing of the criminal justice system to be rejiggered just to deal with over-incarceration of drug offenders, and our proposals are consistent with the changes one would expect from a more proper alignment of incentives.

What is more, we believe that our recommendations jointly would go a substantial way toward dealing with three problems: the harmful consequences of drug use, drug markets, and drug enforcement; the erosion of the authority of the criminal justice system from an enforcement role that threatens its relationship with many urban communities; and the problematic level of American incarceration, which itself is a source of shame and inhumanity. Even if they all were adopted and implemented effectively, they would not end the drug problem, but drug policy would look more evidence-based and more in accord with generally accepted conceptions of justice.

Some of our recommendations are already being implemented. The effort to reduce the prison population, supported by both liberal and conservative groups, has already scored some successes (Perez 2015; *San Francisco Chronicle* 2015).<sup>55</sup> Supported by a changing view of drug addiction, seen now more as an illness rather than a moral failing, there is a willingness to seek both alternatives to imprisonment for users and shorter sentences for drug-addicted dealers. State legislatures are increasingly adopting forms of marijuana decriminalization that go much farther than did the reforms of the 1970s in removing the possibility of custodial arrests for marijuana possession. Our recommendation for prescription drugs is novel but fits well with emerging efforts to tighten control of prescription practices.

In terms of reducing the nation's drug problem, mandated desistance strikes us as the most promising intervention, and we are encouraged by its recent expansions. The federal government for the first time in fiscal year 2014 provided grants for local jurisdictions to implement pilot programs of this type,<sup>56</sup> and there is a growing set of positive evaluations that should encourage adoption of a program that is relatively easy to implement. The change in marijuana enforcement, along with a more

<sup>55</sup> The Koch brothers, financiers of very conservative Republican candidates, have formed an alliance with the generally liberal Center for American Progress and the ACLU to fight for reforms that will lead to smaller prison populations (Miller 2015).

<sup>56</sup> See <http://www.federalgrants.com/BJA-FY-14-Swift-and-Certain-Sanctions-SAC-Replicating-the-Concepts-Behind-Project-HOPE-45599.html>.

harm-reduction orientation toward drug enforcement generally, ought to help restore community relations. Sentencing reforms, which ought to reduce average lengths of sentences for drug offenders, should lead to a reduction in the collateral damage caused by the American criminal justice system, which currently weakens the moral authority of the United States internationally.

## REFERENCES

- ADAM II. 2013. *2013 Annual Report*. Washington, DC: Office of National Drug Control Policy, Executive Office of the President.
- Alexander, Michelle. 2012. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: New Press.
- Anglin, Douglas M., and Yih-Ing Hser. 1990. "Treatment of Drug Abuse." In *Drugs and Crime*, edited by Michael Tonry and James Q. Wilson. Vol. 13 of *Crime and Justice: A Review of Research*, edited by Michael Tonry and Norval Morris. Chicago: University of Chicago Press.
- Anglin, M. Douglas, Bohdan Nosyk, Adi Jaffe, Darren Urada, and Elizabeth Evans. 2013. "Offender Diversion into Substance Use Disorder Treatment: The Economic Impact of California's Proposition 36." *American Journal of Public Health* 103(6):1096–1102.
- Babor, Thomas, Jonathan Caulkins, Griffith Edwards, et al. 2009. *Drug Policy and the Public Good*. New York: Oxford University Press.
- Bartu, Anne, Nerelie C. Freeman, Geoff S. Gawthorne, James P. Codde, and C. D'Arcy J. Holman. 2004. "Mortality in a Cohort of Opiate and Amphetamine Users in Perth, Western Australia." *Addiction* 99(1):53–60.
- Beckett, Katherine, Kris Nyrop, and Lori Pflingst. 2006. "Race, Drugs, and Policing: Understanding Disparities in Drug Delivery Arrests." *Criminology* 44(1): 105–37.
- Beckett, Katherine, Kris Nyrop, Lori Pflingst, and Melissa Bowen. 2005. "Drug Use, Drug Possession Arrests, and the Question of Race: Lessons from Seattle." *Social Problems* 52(3):419–41.
- Belenko, Steven, and Cassia Spohn. 2014. *Drugs, Crime, and Justice*. Thousand Oaks, CA: Sage.
- Benson, Bruce L., David W. Rasmussen, and David L. Sollars. 1995. "Police Bureaucracies, Their Incentives, and the War on Drugs." *Public Choice* 83(1–2): 21–45.
- Blumstein, Alfred, and Allen J. Beck. 1999. "Population Growth in the U.S. Prisons, 1980–1996." In *Prisons*, edited by Michael Tonry and Joan Petersilia. Vol. 26. of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Blumstein, Alfred, José A. Canela-Cacho, and Jacqueline Cohen. 1993. "Filtered Sampling from Populations with Heterogeneous Event Frequencies." *Management Science* 39(7):886–99.

- Böhme, Rainer, Nicolas Christin, Benjamin Edelman, and Tyler Moore. 2015. "Bitcoin: Economics, Technology, and Governance." *Journal of Economic Perspectives* 29(2):213–38.
- Bowman, Frank O. 2005. "The Failure of the Federal Sentencing Guidelines: A Structural Analysis." *Columbia Law Review* 105(4):1315–50.
- Braga, Anthony A., David M. Kennedy, Elin J. Waring, and Anne Morrison Piehl. 2001. "Problem-Oriented Policing, Deterrence, and Youth Violence: An Evaluation of Boston's Operation Ceasefire." *Journal of Research in Crime and Delinquency* 38(3):195–225.
- Brecht, Mary-Lynn, and Darren Urada. 2011. "Treatment Outcomes for Methamphetamine Users: California Proposition 36 and Comparison Clients." *Journal of Psychoactive Drugs* 7(9):68–76.
- Brownsberger, William N., Susan E. Aromaa, Carl N. Brownsberger, and Susan C. Brownsberger. 2004. "An Empirical Study of the School Zone Anti-drug Law in Three Cities in Massachusetts." *Journal of Drug Issues* 34(4):933–50.
- Bukten, Anne, Svetlana Skurtveit, Michael Gossop, Helge Waal, Per Stangeland, Ingrid Havnes, and Thomas Clausen. 2012. "Engagement with Opioid Maintenance Treatment and Reductions in Crime: A Longitudinal National Cohort Study." *Addiction* 107(2):393–99.
- Buntin, John. 2014. "America's Biggest Drug Problem Isn't Heroin, It's Doctors." *Governing*. <http://www.governing.com/topics/health-human-services/gov-biggest-drug-problem.html>.
- Burns, Rachel M., Jonathan Caulkins, Susan S. Everingham, and Beau Kilmer. 2013. "Statistics on Cannabis Users Skew Perceptions of Cannabis Use." *Frontiers in Psychiatry* 4:161–70.
- Carey, Benedict. 2014. "Prescription Painkillers Seen as a Gateway to Heroin." *New York Times*, February 10. <http://www.nytimes.com/2014/02/11/health/prescription-painkillers-seen-as-a-gateway-to-heroin.html>.
- Carson, E. Ann. 2014. *Prisoners in 2013*. Washington, DC: Bureau of Justice Statistics, US Department of Justice.
- Case, Anne, and Angus Deaton. 2015. "Rising Morbidity and Mortality in Mid-life among White Non-Hispanic Americans in the 21st Century." *Proceedings of the National Academy of Sciences* 112(49):15078–83.
- Caulkins, Jonathan P. 1993. "Local Drug Markets' Response to Focused Police Enforcement." *Operations Research* 41(5):848–63.
- . 2002. "Law Enforcement's Role in a Harm Reduction Regime." *Crime and Justice Bulletin* no. 64. Sydney: New South Wales Bureau of Crime and Justice Research.
- . 2005. "Models Pertaining to How Drug Policy Should Vary over the Course of an Epidemic Cycle." In *Substance Use: Individual Behavior, Social Interactions, Markets, and Politics*, edited by Björn Lindgren and Michael Grossman. Amsterdam: Elsevier.
- . 2014. "Effects of Prohibition, Enforcement, and Interdiction on Drug Use." In *The Economics of International Drug Policy*, edited by John Collins. IDEAS Special Report. London: London School of Economics.

- Caulkins, Jonathan, and Sara Chandler. 2006. "Long-Run Trends in Incarceration of Drug Offenders in the United States." *Crime and Delinquency* 52 (4):619–41.
- Caulkins, Jonathan P., Matthew Cohen, and Luigi Zamarra. 2013. *Estimating Adequate Licensed Square Footage for Production*. Los Angeles: BOTEC Analysis Corporation.
- Caulkins, Jonathan P., and Beau Kilmer. 2012. *Marijuana Legalization: What Everyone Needs to Know*. New York: Oxford University Press.
- . 2014. "Criminal Justice Costs of Prohibiting Marijuana in California." In *Something's in the Air: Race, Crime, and the Legalization of Marijuana*, edited by Katherine Tate, Lance Taylor, and Mark Sawyer. New York: Routledge.
- Caulkins, Jonathan P., Beau Kilmer, and Mark A. R. Kleiman. 2016. *Marijuana Legalization: What Everyone Needs to Know*. Oxford: Oxford University Press.
- Caulkins, Jonathan P., Beau Kilmer, Mark A. R. Kleiman, Robert J. MacCoun, Gregory Midgette, Pat Oglesby, Rosalie Liccardo Pacula, and Peter H. Reuter. 2015. *Considering Marijuana Legalization*. Research report. Santa Monica, CA: RAND. [http://www.rand.org/pubs/research\\_reports/RR864.html](http://www.rand.org/pubs/research_reports/RR864.html).
- Caulkins, Jonathan P., Beau Kilmer, Peter H. Reuter, and Greg Midgette. 2015. "Cocaine's Fall and Marijuana's Rise: Questions and Insights Based on New Estimates of Consumption and Expenditures in US Drug Markets." *Addiction* 110(5):728–36.
- Caulkins, Jonathan P., and Peter Reuter. 2006. "Reorienting U.S. Drug Policy." *Issues in Science and Technology* 23(1):79–85.
- . 2009. "Towards a Harm-Reduction Approach to Enforcement." *Safer Communities* 8(1):9–23.
- . 2010. "How Drug Enforcement Affects Drug Prices." In *Crime and Justice: A Review of Research*, vol. 39, edited by Michael Tonry. Chicago: University of Chicago Press.
- Caulkins, Jonathan P., Peter Reuter, and Carolyn Coulson. 2011. "Basing Scheduling Decisions on Scientific Rankings of Drugs' Harmfulness: False Promise from False Premises." *Addiction* 106:1886–90.
- Caulkins, Jonathan, C. Peter Rydell, William Schwabe, and James Chiesa. 1997. *Mandatory Minimum Drug Sentences*. Santa Monica, CA: RAND.
- Caulkins, Jonathan, and Eric L. Sevigny. 2005. "How Many People Does the U.S. Imprison for Drug Use, and Who Are They?" *Contemporary Drug Problems* 32 (3):405–28.
- . 2013. "The U.S. Causes but Cannot (or Will Not) Solve Mexico's Drug Problems." In *A War That Can't Be Won: Binational Perspectives on the War on Drugs*, edited by Tony Payan, Kathleen Staudt, and Anthony Kruszewski. Tucson: University of Arizona Press.
- Centers for Disease Control. 1988. "Quarterly Report to the Domestic Policy Council on the Prevalence and Rate of Spread of HIV and AIDS in the United States." *Morbidity and Mortality Weekly Report* 37(14):223–26.
- Chaiken, Jan M., and Marcia R. Chaiken. 1982. *Varieties of Criminal Behavior*. Santa Monica, CA: RAND.

- . 1990. “Drugs and Predatory Crime.” In *Drugs and Crime*, edited by Michael Tonry and James Q. Wilson. Vol. 13 of *Crime and Justice: A Review of Research*, edited by Michael Tonry and Norval Morris. Chicago: University of Chicago Press.
- Chandler, Redonna K., Bennett W. Fletcher, and Nora D. Volkow. 2009. “Treating Drug Abuse and Addiction in the Criminal Justice System: Improving Public Health and Safety.” *Journal of the American Medical Association* 301(2):183–90.
- Coleman, John J. 2012. “The Supply Chain of Medicinal Controlled Substances: Addressing the Achilles Heel of Drug Diversion.” *Journal of Pain and Palliative Care Pharmacotherapy* 26:233–50.
- Collins, Susan, Heather Lonczak, and Seema Clifasefi. 2015. “LEAD Program Evaluation: Recidivism Report.” UW LEAD Evaluation Team, LEAD Program Evaluation. Seattle: University of Washington.
- Compton, Wilson M., Christopher M. Jones, and Grant T. Baldwin. 2016. “Relationship between Nonmedical Prescription-Opioid Use and Heroin Use.” *New England Journal of Medicine* 374(2):154–63.
- Compton, Wilson M., and Nora D. Volkow. 2006. “Major Increases in Opioid Analgesic Abuse in the United States: Concerns and Strategies.” *Drug and Alcohol Dependence* 81(2):103–7.
- Cook, Philip J. 2007. *Paying the Tab: The Costs and Benefits of Alcohol Control*. Princeton, NJ: Princeton University Press.
- Corsaro, Nicholas, Rod K. Brunson, and Edmund F. McGarrell. 2009. “Problem-Oriented Policing and Open-Air Drug Markets: Examining the Rockford Pulling Levers Deterrence Strategy.” *Crime and Delinquency* 59(7):1085–1107.
- Corsaro, Nicholas, Eleazer D. Hunt, Natalie K. Hipple, and Edmund F. McGarrell. 2012. “Overview of: ‘The Impact of Drug Market Pulling Levers Policing on Neighborhood Violence: An Evaluation of the High Point Drug Market Intervention.’” *Criminology and Public Policy* 11(2):165–66.
- Critchler, Chas. 2006. *Critical Readings: Moral Panics and the Media*. Berkshire, UK: McGraw-Hill Education.
- Cropsey, Karen L., Ingrid A. Binswanger, C. Brendan Clark, and Faye S. Taxman. 2012. “The Unmet Medical Needs of Correctional Populations in the United States.” *Journal of the National Medical Association* 104(11–12):487–92.
- Cullen, Francis T., Cheryl Lero Jonson, and Daniel P. Mears. 2017. “Reinventing Community Corrections.” In *Reinventing American Criminal Justice*, edited by Michael Tonry and Daniel S. Nagin. Vol. 46 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Curtis, R., and T. Wendel. 2007. “You’re Always Training the Dog: Strategic Interventions to Reconfigure Drug Markets.” *Journal of Drug Issues* 37(4):867–91.
- Dave, Dhaval. 2008. “Illicit Drug Use among Arrestees, Prices and Policy.” *Journal of Urban Economics* 63(2):694–714.
- Davis, W. Rees, and Bruce D. Johnson. 2008. “Prescription Opioid Use, Misuse, and Diversion among Street Drug Users in New York City.” *Drug and Alcohol Dependence* 92(1–3):267–76.

- Dobkin, Carlos, and Nancy Nicosia. 2009. "The War on Drugs: Methamphetamine, Public Health, and Crime." *American Economic Review* 99(1):324–49.
- Dorn, Nicholas, and Nigel South. 1990. "Drug Markets and Law Enforcement." *British Journal of Criminology* 30(2):171–88.
- Dubois, Sacha, Nadia Mullen, Bruce Weaver, and Michel Bédard. 2015. "The Combined Effects of Alcohol and Cannabis on Driving: Impact on Crash Risk." *Forensic Science International* 248(3):94–100.
- Dutko, Ashley. 2010. "Florida's Fight against Prescription Drug Abuse: Prescription Drug Monitoring Program." *Nova Law Review* 34:739–63.
- Engel, Robin S., Michael R. Smith, and Francis T. Cullen. 2012. "Race, Place, and Drug Enforcement." *Criminology and Public Policy* 11(4):603–35.
- Ferrence, Roberta. 2001. "Diffusion Theory and Drug Use." *Addiction* 96(1):165–73.
- Friedman, Peter D., Randall Hoskinson, Michael Gordon, et al. 2012. "Medication-Assisted Treatment in Criminal Justice Agencies Affiliated with the Criminal Justice–Drug Abuse Treatment Studies (CJ-DATS): Availability, Barriers, and Intentions." *Substance Abuse* 33(1):9–18.
- Gable, Robert S. 2004. "Comparison of Acute Lethal Toxicity of Commonly Abused Psychoactive Substances." *Addiction* 99(6):686–96.
- Gallet, Craig A. 2014. "Can Price Get the Monkey Off Our Back? A Meta-Analysis of Illicit Drug Demand." *Health Economics* 23(1):55–68.
- Goldman, Fred. 1981. "Drug Abuse, Crime and Economics: The Dismal Limits of Social Choice." In *The Drugs-Crime Connection*, edited by James A. Inciardi. Beverly Hills, CA: Sage.
- Goldstein, Paul J. 1985. "The Drugs/Violence Nexus: A Tripartite Conceptual Framework." *Journal of Drug Issues* 15(4):493–506.
- Golub, Andrew, Bruce Johnson, and Eloise Dunlap. 2007. "The Race/Ethnicity Disparity in Misdemeanor Marijuana Arrests in New York City." *Criminology and Public Policy* 6:131–64.
- Gordon, Rachel A., Hillary L. Rowe, Dustin Pardini, Rolf Loeber, Helene Raskin White, and David P. Farrington. 2014. "Serious Delinquency and Gang Participation: Combining and Specializing in Drug Selling, Theft, and Violence." *Journal of Research on Adolescence* 24(2):235–51.
- Grimm, Ryan. 2009. *This Is Your Country on Drugs*. Hoboken, NJ: Wiley.
- Grossman, Michael. 2005. "Individual Behaviours and Substance Use: The Role of Price." *Advances in Health Economics and Health Services Research* 16:15–39.
- Haegerich, Tamara M., Leonard J. Paulozzi, Brian J. Manns, and Christopher M. Jones. 2014. "What We Know, and Don't Know, about the Impact of State Policy and Systems-Level Interventions on Prescription Drug Overdose." *Drug and Alcohol Dependence* 145(12):34–47.
- Hall, Wayne. 2015. "What Has Research over the Past Two Decades Revealed about the Adverse Health Effects of Recreational Cannabis Use?" *Addiction-Abingdon* 110(1):19–35.
- Hall, Wayne, and Louisa Degenhardt. 2009. "Adverse Health Effects of Non-medical Cannabis Use." *Lancet* 374(9698):1383–91.
- Haroscopos, Alex. 2005. *Drug Dealing in Open-Air Markets*. Collingdale, PA: Diane.

- Harwood, Henrick J., and Tracy G. Myers. 2004. *New Treatments for Addiction: Behavioral, Ethical, Legal, and Social Questions*. Washington, DC: National Academies Press.
- Hawken, Angela. 2006. "The Economics of Alternative Sentencing: Assessing the Substance Abuse and Crime Prevention Act." PhD diss., RAND Graduate School.
- . 2010. "Behavioral Triage: A New Model for Identifying and Treating Substance-Abusing Offenders." *Journal of Drug Policy Analysis* 3(1):1–5.
- Hawken, Angela, and Jeremy Grunert. 2010. "Treatment for All Means Real Treatment for Few." *Offender Programs Report* 13(6):81–86.
- Hawken, Angela, and Mark Kleiman. 2009. "Managing Drug Involved Probationers with Swift and Certain Sanctions: Evaluating Hawaii's HOPE." Final Report, grant no. 2007-IJ-CX-0033, to the National Institute of Justice. Washington, DC: US Department of Justice.
- Hedrich, Dagmar, Paula Alves, Michael Farrell, Heino Stöver, Lars Möller, and Soraya Mayet. 2012. "The Effectiveness of Opioid Maintenance Treatment in Prison Settings: A Systematic Review." *Addiction* 107(3):501–17.
- Heit, Howard A., Edward Covington, and Patricia M. Good. 2004. "Dear DEA." *Pain Medicine* 5(3):303–8.
- Heyman, Gene M. 2009. *Addiction: A Disorder of Choice*. Cambridge, MA: Harvard University Press.
- Higgins, Stephen T., Alan J. Budney, Warren K. Bickel, John R. Hughes, Florian Foerg, and Gary Badger. 1993. "Achieving Cocaine Abstinence with a Behavioral Approach." *American Journal of Psychiatry* 150(5):763–69.
- Hiller, Matthew L., Kevin Knight, and D. Dwayne Simpson. 1999. "Prison-Based Substance Abuse Treatment, Residential Aftercare and Recidivism." *Addiction* 94(6):833–42.
- Højgård, Cecilie. 2011. "Policing the North." In *Crime and Justice in Scandinavia*, edited by Michael Tonry and Tapio Lappi-Seppälä. Vol. 40 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Holloway, Katie R., Trevor H. Bennett, and David P. Farrington. 2006. "The Effectiveness of Drug Treatment Programs in Reducing Criminal Behavior: A Meta-Analysis." *Psicothema* 18(3):620–29.
- Horwitz, Sari. 2013. "Holder Seeks to Avert Mandatory Minimum Sentences for Some Low-Level Drug Offenders." *Washington Post*, August 11. [http://www.washingtonpost.com/world/national-security/holder-seeks-to-avert-mandatory-minimum-sentences-for-some-low-level-drug-offenders/2013/08/11/343850c2-012c-11e3-96a8-d3b921c0924a\\_story.html](http://www.washingtonpost.com/world/national-security/holder-seeks-to-avert-mandatory-minimum-sentences-for-some-low-level-drug-offenders/2013/08/11/343850c2-012c-11e3-96a8-d3b921c0924a_story.html).
- Hser Yih-Ing, V. Hoffman, C. E. Grella, and M. Douglas Anglin. 2001. "A 33-Year Follow-Up of Narcotics Addicts." *Archives of General Psychiatry* 58(5): 503–8.
- Huddleston, West, and Douglas B. Marlowe. 2011. *Painting the Current Picture: A National Report on Drug Courts and Other Problem-Solving Court Programs in the United States*. Alexandria, VA: National Drug Court Institute.

- Institute for Criminal Policy Research. 2015. *World Prison Brief—2015*. London: Institute for Criminal Policy Research, Birkbeck, University of London.
- Jimenez-Treviño, Luis, Pilar A. Saiz, M. Paz García-Portilla, Eva M. Díaz-Mesa, Fernando Sánchez-Lasheras, Patricia Burón, M. José Casares, Pedro Marina, Eduardo Gutiérrez, and Julio Bobes. 2011. “A 25-Year Follow-Up of Patients Admitted to Methadone Treatment for the First Time: Mortality and Gender Differences.” *Addictive Behaviors* 36(12):1184–90.
- Karandinos, George, Laurie Kain Hart, Fernando Montero Castrillo, and Philippe Bourgois. 2014. “The Moral Economy of Violence in the US Inner City.” *Current Anthropology* 55(1):1–22.
- Kennedy, David M. 1997. “Pulling Levers: Chronic Offenders, High-Crime Settings, and a Theory of Prevention.” *Valparaiso University Law Review* 31(2):449–84.
- Kilmer, Beau, Jonathan P. Caulkins, Brittany M. Bond, and Peter H. Reuter. 2010. *Reducing Drug Trafficking Revenues and Violence in Mexico*. Santa Monica, CA: RAND.
- Kilmer, Beau, Susan S. Everingham, Jonathan P. Caulkins, Greg Midgette, Rosalie Liccardo Pacula, Peter H. Reuter, Rachel M. Burns, Bing Han, and Russell Lundberg. 2014. *What America’s Users Spend on Illicit Drugs: 2000–2010*. Santa Monica, CA: RAND.
- Kilmer, Beau, Nancy Nicosia, Paul Heaton, and Greg Midgette. 2012. “Efficacy of Frequent Monitoring with Swift, Certain, and Modest Sanctions for Violations: Insights from South Dakota’s 24/7 Sobriety Project.” *American Journal of Public Health* 103(1):e37–e43.
- Kleber, Herbert. 2008. “Methadone Maintenance 4 Decades Later.” *Journal of the American Medical Association* 300(19):2303–5.
- Kleiman, Mark. 1992. *Against Excess: Drug Policy for Results*. New York: Basic Books.
- . 1993. “Enforcement Swamping: A Positive-Feedback Mechanism in Rates of Illicit Activity.” *Mathematical and Computer Modelling* 17(2):65–75.
- . 1997a. “Coerced Abstinence: A Neopaternalistic Drug Policy Initiative.” In *The New Paternalism: Supervisory Approaches to Poverty*, edited by Lawrence Mead. Washington, DC: Brookings Institution Press.
- . 1997b. “The Problem of Replacement and the Logic of Drug Law Enforcement.” *Drug Policy Analysis Bulletin* 1(3):8–10.
- . 2009. *When Brute Force Fails: How to Have Less Crime and Less Punishment*. Princeton, NJ: Princeton University Press.
- Krambeer, L. L., W. von McKnelly Jr., W. F. Gabrielli Jr., and E. C. Penick. 2001. “Methadone Therapy for Opioid Dependence.” *American Family Physician* 63(12):2404–10.
- MacCoun, Robert J., and Peter Reuter. 2001. *Drug War Heresies: Learning from Other Vices, Times, and Places*. New York: Cambridge University Press.
- Mammen, Kristie, and James Bell. 2009. “The Clinical Efficacy and Abuse Potential of Combination Buprenorphine-Naloxone in the Treatment of Opioid Dependence.” *Expert Opinion on Pharmacotherapy* 10(15):2537–44.
- Mancuso, Peter. 2010. “Resentencing after the Fall of Rockefeller: The Failure of the Drug Law Reform Acts of 2004 and 2005 to Remedy the Injustices of

- New York's Rockefeller Drug Laws and the Compromise of 2009." *Albany Law Review* 73:1535–81.
- Mathers, Bradley M., and Louisa Degenhardt. 2014. "Examining Non-AIDS Mortality among People Who Inject Drugs." *AIDS* 28:S435–S444.
- Mattick, Richard P., Courtney Breen, Jo Kimber, and Marina Davoli. 2009. "Methadone Maintenance Therapy versus No Opioid Replacement Therapy for Opioid Dependence." *Cochrane Database Systematic Reviews* 3, no. CD002209.
- Matusow, Harlan, Samuel L. Dickman, Josiah D. Rich, Chunki Fong, Dora M. Dumont, Carolyn Hardin, Douglas Marlowe, and Andrew Rosenblum. 2013. "Medication Assisted Treatment in US Drug Courts: Results from a Nationwide Survey of Availability, Barriers and Attitudes." *Journal of Substance Abuse Treatment* 44(5): 473–80.
- McLaughlin, Colleen R., Jack Daniel, and Timothy F. Joost. 2000. "The Relationship between Substance Use, Drug Selling, and Lethal Violence in 25 Juvenile Murderers." *Journal of Forensic Sciences* 45(2):349–53.
- Miller, Jake. 2015. "An Unlikely Alliance Forms between Koch Brothers and Liberal Groups." CBS News, February 19. <http://www.cbsnews.com/news/koch-brothers-conservative-liberal-groups-unite-on-criminal-justice-reform/>.
- Miron, Jeffrey. 2003. "The Budgetary Implications of Marijuana Legalization in Massachusetts." Unpublished manuscript. Department of Economics, Harvard University.
- . 2010. "The Budgetary Implications of Drug Prohibition." Unpublished manuscript. Department of Economics, Harvard University.
- Musto, David F. 1999. *The American Disease: Origins of Narcotic Control*. 3d ed. New York: Oxford University Press.
- Nambiar, Dhanya, Amanda Weir, Esther J. Aspinall, Mark Stoové, Sharon Hutchinson, Paul Dietze, Lynsey Waugh, and David J. Goldberg. 2015. "Mortality and Cause of Death in a Cohort of People Who Had Ever Injected Drugs in Glasgow: 1982–2012." *Drug and Alcohol Dependence* 147(2):215–21.
- National Association of Drug Court Professionals. 1997. *Defining Drug Courts: The Key Components*. Alexandria, VA: National Association of Drug Court Professionals.
- . 2013. *Adult Drug Court Best Practice Standards*. Alexandria, VA: National Association of Drug Court Professionals.
- National Center on Addiction and Substance Abuse. 2010. *Behind Bars II: Substance Abuse and America's Prison Population*. New York: Columbia University.
- National Governors Association. 2012. "Issue Brief: Six Strategies for Reducing Prescription Drug Abuse." <http://www.nga.org/cms/home/nga-center-for-best-practices/center-publications/page-hsps-publications/six-strategies-for-reducing-pres.html>.
- New York State Attorney General. 2013. *A Report on the New York City Police Department's Stop and Frisk Practices*. Albany, NY: Office of the Attorney General.
- Nguyen, Holly, and Peter Reuter. 2012. "How Risky Is Marijuana Possession? Considering the Role of Age, Race, and Gender." *Crime and Delinquency* 58(6): 879–910.

- Nurco, David N., Thomas E. Hanlon, Timothy W. Kinlock, and Karen R. Duszynski. 1988. "Differential Criminal Patterns of Narcotic Addicts over an Addiction Career." *Criminology* 26:407–23.
- Nutt, David J., Leslie A. King, and Lawrence D. Phillips. 2010. "Drug Harms in the UK: A Multicriteria Decision Analysis." *Lancet* 376:1558–65.
- Office of National Drug Control Policy. 2011. *Epidemic: Responding to America's Prescription Drug Abuse Crisis*. Washington, DC: Office of the President.
- . 2014. *Fact Sheet: Opioid Abuse in the United States*. Washington, DC: Office of the President.
- O'Harrow, Robert, Sari Horwitz, and Steven Rich. 2015. "Holder Limits Seized-Asset Sharing Process That Split Billions with Local, State Police." *Washington Post*, January 16. [http://www.washingtonpost.com/investigations/holder-ends-seized-asset-sharing-process-that-split-billions-with-local-state-police/2015/01/16/0e7ca058-99d4-11e4-bcfb-059ec7a93ddc\\_story.html](http://www.washingtonpost.com/investigations/holder-ends-seized-asset-sharing-process-that-split-billions-with-local-state-police/2015/01/16/0e7ca058-99d4-11e4-bcfb-059ec7a93ddc_story.html).
- Olmstead, Todd A., Sheila M. Alessi, Brendan Kline, Rosalie Liccardo Pacula, and Nancy M. Petry. 2015. "The Price Elasticity of Demand for Heroin: Matched Longitudinal and Experimental Evidence." *Journal of Health Economics* 41(5):59–71.
- Oppenheimer, Edna, Clive Tobutt, Colin Taylor, and Toby Andrew. 1994. "Death and Survival in a Cohort of Heroin Addicts from London Clinics: A 22-Year Follow-Up Study." *Addiction* 89(10):1299–1308.
- Pacula, Rosalie L., Jonathan Caulkins, Sarah Greathouse, Russell Lundberg, and Paul Steinberg. 2013. "Rethinking Drug-Attributable Crime beyond DAFs: Toward a New Conceptual Framework and a Dashboard Approach." Washington, DC: RAND.
- Pacula, Rosalie L., Robert MacCoun, Peter Reuter, Jamie Chriqui, Beau Kilmer, Katherine Harris, Letizia Paoli, and Carsten Schäfer. 2005. "What Does It Mean to Decriminalize Marijuana? A Cross-National Empirical Examination." In *Substance Use: Individual Behavior, Social Interactions, Markets, and Politics*, edited by Björn Lindgren and Michael Grossman. Amsterdam: Elsevier.
- Pavuk, Amy. 2012. "CVS DEA Oxycodone: Details about DEA's Investigation into Two Sanford CVS Stores Released." *Orlando Sentinel*, October 28. [http://articles.orlandosentinel.com/2012-10-28/news/os-cvs-dea-oxycodone-ban-20121028\\_1\\_sanford-cvs-sanford-pharmacies-sanford-stores](http://articles.orlandosentinel.com/2012-10-28/news/os-cvs-dea-oxycodone-ban-20121028_1_sanford-cvs-sanford-pharmacies-sanford-stores).
- Perez, Evan. 2015. "Holder Claims Success in Fewer Drug Prosecutions." CNN, February 17. <http://www.cnn.com/2015/02/17/politics/attorney-general-eric-holder-drug-sentencing-prosecutions/index.html>.
- Perucci, Carlo A., Marina Davoli, Elisabetta Rapiti, Damiano D. Abeni, and Francesco Forastiere. 1991. "Mortality of Intravenous Drug Users in Rome: A Cohort Study." *American Journal of Public Health* 81(10):1307–10.
- Pettit, Becky, and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review* 69(2):151–69.
- Pfaff, John F. 2008. "The Empirics of Prison Growth: A Critical Review and Path Forward." *Journal of Criminal Law and Criminology* 98(2):547–619.

- Pollack, Harold. 2017. "Problematic Substance Use and Crime: The Alcohol Challenge and the Opportunity of Health Reform." In *Reinventing American Criminal Justice*, edited by Michael Tonry and Daniel S. Nagin. Vol. 46 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Pollack, Harold, Peter Reuter, and Eric Sevigny. 2012. "If Drug Treatment Works So Well, Why Are So Many Drug Users in Prison?" In *Controlling Crime: Strategies and Tradeoffs*, edited by Phil Cook, Jens Ludwig, and Justin McCrary. National Bureau of Economic Research Conference Report. Chicago: University of Chicago Press.
- Press, Aric. 1987. "Piecing Together New York's Criminal Justice System: The Response to Crack." *Record of the New York Bar Association* 1987:541–69.
- Quaglio, Gianluca, Giorgio Talamini, Alessandro Lechi, Luca Venturini, Fabio Lugoboni, and Paolo Mezzelani. 2001. "Study of 2708 Heroin-Related Deaths in North-eastern Italy 1985–98 to Establish the Main Causes of Death." *Addiction* 96(8):1127–37.
- Ramchand, Rajeev, Rosalie Pacula, and Martin Y. Iguchi. 2006. "Racial Differences in Marijuana-Users' Risk of Arrest in the United States." *Drug and Alcohol Dependence* 84(3):264–72.
- Rasmussen, David W., and Bruce L. Benson. 1994. *The Economic Anatomy of a Drug War*. Lanham, MD: Rowman & Littlefield.
- Rengert, George, Sanjoy Chakravorty, Tom Bole, and Kristin Henderson. 2000. "A Geographical Analysis of Illegal Drug Markets." *Crime Prevention Studies* 11:219–39.
- Reuter, Peter. 1983. *Disorganized Crime: Economics of the Visible Hand*. Cambridge, MA: MIT Press.
- . 2001. "Why Does Research Have So Little Impact on American Drug Policy?" *Addiction* 96(3):373–76.
- . 2013. "Why Has US Drug Policy Changed So Little over 30 Years?" In *Crime and Justice in America, 1975–2025*, edited by Michael Tonry. Vol. 42 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Reuter, Peter, Paul Hirschfield, and Curt Davies. 2001. "Assessing the Crackdown on Marijuana in Maryland." Unpublished manuscript. Department of Criminology, University of Maryland. [http://www.drugpolicy.org/docUploads/md\\_mj\\_crackdown.pdf](http://www.drugpolicy.org/docUploads/md_mj_crackdown.pdf).
- Reuter, Peter, Robert J. MacCoun, and Patrick Murphy. 1990. *Money from Crime: A Study of the Economics of Drug Dealing in Washington, D.C.* With Allan Abrahamse and Barbara Simon. Washington, DC: RAND.
- Rhine, Edward E., Joan Petersilia, and Kevin R. Reitz. 2017. "The Future of Parole Release." In *Reinventing American Criminal Justice*, edited by Michael Tonry and Daniel S. Nagin. Vol. 46 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Risser, Daniele, Selma Hönigschnabl, Martin Stichenwirth, Susanne Pfudl, Dieter Sebald, Alfred Kaff, and Georg Bauer. 2001. "Mortality of Opiate Users in Vienna, Austria." *Drug and Alcohol Dependence* 64(3):251–56.

- Ritter, Alison, and Jacqui Cameron. 2005. *A Systematic Review of Harm Reduction*. Drug Policy Modelling Program Monograph Series, no. 06. Fitzroy, Australia: Turning Point Alcohol and Drug Centre, University of New South Wales.
- Rolles, Steve, and George Murkin. 2013. *How to Regulate Cannabis: A Practical Guide*. Bristol, UK: Transform Drug Policy Foundation. <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabispractical-guide>.
- Rosca, Paula, Ziona Haklai, Nehama Goldberger, Peres Zohar, Anatoly Margolis, and Alexander M. Ponzivsky. 2012. "Mortality and Causes of Death among Users of Methadone Maintenance Treatment in Israel, 1999–2008." *Drug and Alcohol Dependence* 125(1–2):160–63.
- Rydell, C. Peter, and Susan S. Everingham. 1994. *Controlling Cocaine: Supply versus Demand Programs*. Washington, DC: RAND.
- Saint Louis, Catherine. 2012. "Emergency Room Doctors, Dental Patients and Drugs." *New York Times*, April 30. <http://www.nytimes.com/2012/05/01/health/emergency-room-doctors-dental-patients-and-drugs.html>.
- Sánchez-Carbonell, Xavier, and Laura Seus. 2000. "Ten-Year Survival Analysis of a Cohort of Heroin Addicts in Catalonia: The EMETYST Project." *Addiction* 95(6):941–48.
- San Francisco Chronicle*. 2015. "California's Prison-Population Reduction Is Good News." June 9. <http://www.sfchronicle.com/opinion/editorials/article/California-s-prison-population-reduction-is-6052893.php>.
- Saslow, Eli. 2015. "Unwinding the Drug War: Against His Better Judgment." *Washington Post*, June 6. <http://www.washingtonpost.com/sf/national/2015/06/06/against-his-better-judgment/>.
- Sevigny, Eric. 2009. "Excessive Uniformity in Federal Drug Sentencing." *Journal of Quantitative Criminology* 25(2):155–80.
- Sevigny, Eric, and Jonathan Caulkins. 2004. "Kingpins or Mules: An Analysis of Drug Offenders Incarcerated in Federal and State Prisons." *Criminology and Public Policy* 3(3):401–34.
- Sevigny, Eric, Harold Pollack, and Peter Reuter. 2013. "Can Drug Courts Help to Reduce Prison and Jail Populations?" *Annals of the American Academy of Political and Social Science* 647(1):190–212.
- Shepherd, Joanna. 2014. "Combating the Prescription Painkiller Epidemic: A National Prescription Drug Reporting Program." *American Journal of Law and Medicine* 40(1):85–112.
- Shiner, Michael. 2015. "Drug Policy Reform and the Reclassification of Cannabis in England and Wales: A Cautionary Tale." *International Journal of Drug Policy* 26(7):696–704.
- Spooner, Catherine, Mark McPherson, and Wayne Hall. 2004. *The Role of Police in Preventing and Minimising Illicit Drug Use and Its Harms*. Melbourne: Australian Centre for Policing Research, University of Melbourne.
- Stevens, Alex. 2011. *Drugs, Crime and Public Health: The Political Economy of Drug Policy*. London: Routledge.
- Surratt, Hilary L., Catherine O'Grady, Steven P. Kurtz, Yamilka Stivers, Theodore J. Cicero, Richard C. Dart, and Minxing Chen. 2014. "Reductions

- in Prescription Opioid Diversion Following Recent Legislative Interventions in Florida.” *Pharmacoeconomics and Drug Safety* 23(3):314–20.
- Tonry, Michael. 2016. *Sentencing Fragments—Penal Reform in America, 1975–2025*. New York: Oxford University Press.
- . 2017. “Making American Sentencing Just, Humane, and Effective.” In *Reinventing American Criminal Justice*, edited by Michael Tonry and Daniel S. Nagin. Vol. 46 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Toobin, Jeffrey. 1993. “Benchmark.” *New Yorker*, May 3.
- Turner, Susan, Peter W. Greenwood, Terry Fain, and James R. Chiesa. 2006. “An Evaluation of the Federal Government’s Violent Offender Incarceration and Truth-in-Sentencing Incentive Grants.” *Prison Journal* 86(3):364–85.
- Unick, George Jay, Daniel Rosenblum, Sarah Mars, and Daniel Ciccarone. 2013. “Intertwined Epidemics: National Demographic Trends in Hospitalizations for Heroin- and Opioid-Related Overdoses, 1993–2009.” *PLoS ONE* 8(2):e54496. doi:10.1371/journal.pone.0054496.
- Urada, Darren, Elizabeth Evans, Joy Yang, et al. 2009. *Evaluation of Proposition 36: The Substance Abuse and Control Prevention Act; the 2009 Report*. Los Angeles: University of California, Los Angeles, Integrated Substance Abuse Programs.
- US General Accounting Office. 2002. *Prescription Drugs: State Monitoring Programs Provide Useful Tool to Reduce Diversion*. GAO-02-634. Washington, DC: US General Accounting Office. <http://www.gao.gov/assets/240/234687.pdf>.
- US Sentencing Commission. 2014. *Federal Sentencing Statistics*. Washington, DC: US Sentencing Commission.
- Vaillant, George E. 1973. “A 20-Year Follow-Up of New York Narcotic Addicts.” *Archives of General Psychiatry* 29(2):237–41.
- Volkow, Nora D., Ruben D. Baler, Wilson M. Compton, and Susan R. B. Weiss. 2014. “Adverse Health Effects of Marijuana Use.” *New England Journal of Medicine* 370(23):2219–27.
- Wagenaar, Alexander C., and Mark Wolfson. 1994. “Enforcement of the Legal Minimum Drinking Age in the United States.” *Journal of Public Health Policy* 15(1):37–53.
- Warner, Margaret, Holly Hedegaard, and Li-Hui Chen. 2013. “CDC Trends in Drug-Poisoning Deaths: United States, 1999–2012.” [http://www.cdc.gov/nchs/data/hestat/drug\\_poisoning/drug\\_poisoning.htm#references](http://www.cdc.gov/nchs/data/hestat/drug_poisoning/drug_poisoning.htm#references).
- Western, Bruce, and Christopher Wildeman. 2009. “The Black Family and Mass Incarceration.” *Annals of the American Academy of Political and Social Science* 621(1):221–42.
- Wolfgang, Marvin E., Robert M. Figlio, and Thorsten Sellin. 1972. *Delinquency in a Birth Cohort*. Chicago: University of Chicago Press.
- Wood, Daniel B. 2001. “Kinks in California’s Shift to Drug Treatment.” *Christian Science Monitor*, September 26. <http://www.csmonitor.com/2001/0926/p2s1-usju.html>.

- Worrall, John L. 2001. "Addicted to the Drug War: The Role of Civil Asset Forfeiture as a Budgetary Necessity in Contemporary Law Enforcement." *Journal of Criminal Justice* 29(3):171–87.
- Wright, Ronald F. 2017. "Reinventing American Prosecution Systems." In *Reinventing American Criminal Justice*, edited by Michael Tonry and Daniel S. Nagin. Vol. 46 of *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press.
- Zhu, He, Fernando A. Wilson, Jim P. Stimpson, and José A. Pagán. 2014. "Correlation between Cocaine Prices and Purity with Trends in Emergency Department Visits in a Major Metropolitan Area." *Journal of Urban Health* 91 (5):1009–18.
- Ziedenberg, Jason, and Scott Ehlers. 2006. *Proposition 36: Five Years Later*. Washington, DC: Justice Policy Institute.

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