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# Toward a Psychology of Harm Reduction

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*This article discusses 3 different strategies for dealing with the harmful consequences of drug use and other risky behaviors: We can discourage people from engaging in the behavior (prevalence reduction), we can encourage people to reduce the frequency or extent of the behavior (quantity reduction), or we can try to reduce the harmful consequences of the behavior when it occurs (harm reduction). These strategies are not mutually exclusive; this article offers a framework for integrating them. The framework is useful for examining frequent claims that harm reduction "sends the wrong message." Opposition to harm reduction is based in part on a recognition of potential trade-offs among the strategies, but it is also fueled by several more symbolic psychological factors. Strategies for successfully integrating prevalence reduction, quantity reduction, and harm reduction are explored.*

**D**uring the 1980s, a grassroots movement called *harm reduction* (or harm minimization) emerged in Amsterdam, Rotterdam, and Liverpool as a response to pervasive drug-related public health problems (Heather, Wodak, Nadelmann, & O'Hare, 1993). The movement gradually spread to many other European cities, eventually influencing the policies of several nations (MacCoun, Saiger, Kahan, & Reuter, 1993). Harm reduction is not yet a well-developed approach. Rather, it is a set of programs that share certain public health goals and assumptions. Central among them is the belief that it is possible to modify the behavior of drug users, and the conditions in which they use, in order to reduce many of the most serious risks that drugs pose to public health and safety. Examples of specific harm reduction interventions for drug use include needle and syringe exchange, low-threshold methadone maintenance, "safe-use" educational campaigns, and the use of treatment as an alternative to incarceration for convicted drug offenders.

## The Ends of Drug Control

Table 1 lists and briefly defines six overlapping drug control strategies. The first two have dominated the American drug policy debate, centered on the appropriate balance between *supply reduction* (interdiction, source country control, domestic drug law enforcement) and *demand reduction* (treatment, prevention) in the federal budget. But despite their disagreements, demand-side and supply-side advocates share a common allegiance to what

might be called the use reduction paradigm—the view that the highest, if not the exclusive, goal of drug policy should be to reduce (and hopefully eliminate) psychoactive drug use. In both practice and rhetoric, use reduction usually means *prevalence reduction*. That is, the goal has been to reduce the total number of users by discouraging initiation on the part of nonusers, and by promoting abstinence for current users. Table 1 introduces three newer terms—*quantity reduction*, *micro harm reduction*, and *macro harm reduction*—that are described in more detail below. These terms add more jargon to an already jargon-laden domain, but I hope to show that they make it possible to think more strategically about options for effective drug control.

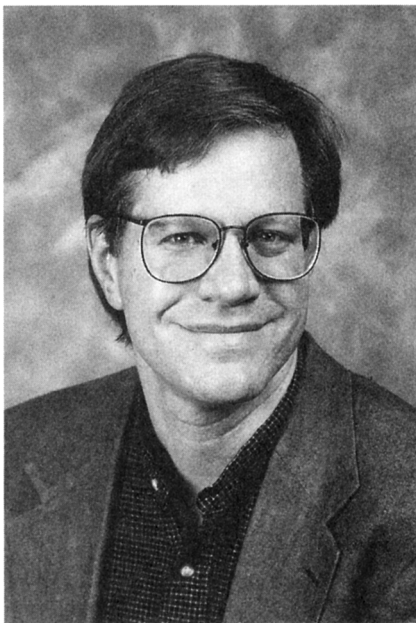
The harm reduction critique of the enforcement-oriented U.S. drug strategy is twofold. First, prevalence-reduction policies have failed to eliminate drug use, leaving its harms largely intact. Second, these harsh enforcement policies are themselves a *source* of many drug-related harms, either directly or by exacerbating the harmful consequences of drug use (Nadelmann, 1989). Although many drug-related harms result from the psychopharmacologic effects of drug consumption, many others are mostly attributable to drug prohibition and its enforcement (MacCoun, Reuter, & Schelling, 1996). These harms would be greatly reduced, if not eliminated, under a regime of legal availability. The acknowledgment that prohibition is a source of harm does not imply that legalizing drugs would necessarily lead to a net reduction in harm; as we shall see, much depends on the effects of legal change on levels of drug use (MacCoun, 1993; MacCoun & Reuter, 1997). But by almost exclusively relying on use reduction—especially drug law enforcement—as an indirect means of reducing harm, we are foregoing opportunities to reduce harm directly. We are even increasing some harms in the process.

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## American Resistance to Harm Reduction

With remarkable consistency, the U.S. government has aggressively resisted harm reduction (Kirp & Bayer, 1993; Reuter & MacCoun, 1995). For example, there are probably more than 1 million injecting drug users in this country, and injection drug use accounts for about one third of all AIDS cases. Though the evidence is not unanimous, a considerable body of evidence demonstrates that needle exchange programs can bring about significant reductions in HIV transmission (Des Jarlais, Friedman, & Ward, 1993; General Accounting Office, 1993; Hurley, Jolley, & Kaldor, 1997; Lurie & Reingold, 1993).<sup>1</sup> Lurie and Drucker (1997) recently estimated that between 4,394 and 9,666 HIV infections could have been prevented in the United States between 1987 and 1995 if a national needle exchange program had been in place. Yet there are fewer than 100 needle exchange programs operating in the United States. Why? Because prescription laws, paraphernalia laws, and local "drug-free zone" ordinances ban needle exchange programs in most of the country. Indeed, almost half of the existing programs are operating under an illicit or quasi-legal status. Despite the fact that these programs have been endorsed by the Centers for Disease Control, the National Academy of Sciences, and various leading medical journals and health organizations, drug policy officials in the federal government and most state governments have actively opposed needle exchange. In 1998, Department of Health and Human Services (DHHS) Secretary Donna Shalala publicly endorsed needle exchange on scientific grounds, but subsequently announced that the administration had decided that federal funding of needle exchanges would be unwise. A *Washington Post* story claimed that DHHS officials had arranged her press conference in the mis-

taken belief that the President would support needle exchange funding; Secretary Shalala's memo of talking points announcing his support was reported to say "the evidence is airtight" and "from the beginning of this effort, it has been about science, science, science" (J. F. Harris & Goldstein, 1998).

Our almost exclusive emphasis on use reduction rather than harm reduction probably has many causes (Reuter & MacCoun, 1995). One is the fear that harm reduction is a Trojan horse for the drug legalization movement (e.g., McCaffrey, 1998). Another factor might be that whereas harm reduction focuses on harms to users, drug-related violence and other harms to *nonusers* are more salient in the United States than in Europe. In addition, prevalence is more readily measurable than harms, and few harm-reduction programs, with the notable exception of needle exchange, have been rigorously evaluated—though political opposition to harm reduction is itself a major cause of the lack of relevant data. But other objections involve beliefs about behavior. For example, it may seem only logical that reducing use is the best way to reduce harm. But this logic holds only if the elimination of drug use is nearly complete, and if efforts to reduce use do not themselves cause harm. Unfortunately, many prevalence-reduction policies often fail on one or both counts. Although it is true that abstinence from drugs (or teenage sex, or drinking among alcoholics) is "100% effective" at reducing harm, the key policy question is whether we are 100% effective at convincing people to *become* abstinent. Finally, the most frequent objection to harm reduction is the claim that harm reduction programs will "send the wrong message." The logic by which harm reduction "sends the wrong message" is rarely articulated in any detail, suggesting that for its proponents, the proposition is self-evident. It seems likely that harm-reduction advocates will continue to face opposition in the United States until they successfully address this concern.

## Harm Reduction in Other Policy Domains

The tension between preventing a behavior and reducing the harmfulness of that behavior is not unique to the debate about illicit drugs. Table 2 lists some intriguing parallels in other contemporary American policy debates. Despite many superficial differences, each domain involves a behavior that poses risks to both the actor and others. And each raises the question about the relative

<sup>1</sup> This finding is not universal; participation in needle exchanges was associated with elevated HIV risk in recent studies in Vancouver (Strathdee et al., 1997) and Montreal (Bruneau et al., 1997), though the authors caution that this association might reflect features that distinguish these evaluations from others in the literature; for example, they were conducted at the peak of the HIV epidemic, their clients were heavily involved in cocaine injection, and the number of needles dispersed fell well short of the amount needed to prevent needle sharing (Bruneau & Schechter, 1998). A broader comparison of 81 U.S. cities estimated a 5.9% increase in HIV seroprevalence in 52 cities without needle exchange, and a 5.8% decrease in 29 cities with needle exchange during the period 1988 to 1993 (Hurley, Jolley, & Kaldor, 1997).

**Table 1**  
*Overlapping Drug Control Strategies*

Strategy	Goal
Supply reduction	Reduce total supply of drugs
Demand reduction	Reduce total demand for drugs
Prevalence reduction	Reduce total number of drug users
Quantity reduction	Reduce total quantity consumed
Micro harm reduction	Reduce average harm per use of drugs
Macro harm reduction	Reduce total drug-related harm

efficacy of policies that aim to reduce the harmful consequences of a risky behavior (harm reduction) versus policies designed to discourage the behavior itself (prevalence or quantity reduction).

The first row of Table 2—safety standards for consumer products—is notable for its relative lack of controversy outside of the halls of Congress. Even though these safety regulations clearly have a harm-reduction rationale—albeit one generally not recognized as such—recent Congressional efforts to scale them back have received a remarkably lukewarm public response. But in the other domains listed in Table 2, a debate centers on the fear that an intervention to reduce harm—harm reduction in spirit if not in name—will in some way “send the wrong message,” encouraging the risky behavior. The parallels to drugs are particularly striking for the topic of condom distribution in schools (and to a lesser degree, sex education). Advocates argue that condom distribution is needed to reduce the risks of unplanned pregnancies and sexually transmitted diseases, whereas opponents vociferously argue that distribution programs and other safe sex interventions actually promote sexual activity (Mauldon & Luker, 1996). On the other hand, recent U.S. debates about welfare and immigration benefits may seem

to have little to do with concepts like risk regulation or harm reduction. But at an abstract level, the issues are similar. Assertions are made that policies designed to mitigate the harmful consequences of being unemployed, or of immigrating to the United States, actually encourage people to become (or remain) unemployed, or to immigrate to the United States. Aside from brief excursions into the lessons of motor vehicle safety standards and tobacco and alcohol policy, this article focuses almost exclusively on harm reduction for illicit drugs. But it seems possible that the analysis might provide insights for other domains of risk reduction—in part because my arguments were often informed by those literatures but also because it seems unlikely that the underlying behavioral questions are unique to the drug domain.

## Overview

The remainder of this article explores critics’ concerns about harm reduction. This article does not attempt a comprehensive review of the evaluation literature on harm reduction or on the specifics of interventions at the clinical level (see Des Jarlais, Friedman, & Ward, 1993; Heather et al., 1993). Instead, the article has four goals: (a) to demonstrate the value of distinguishing microlevel harm from macrolevel harm, and prevalence of a behavior from the quantity or frequency of that behavior; (b) to identify potential trade-offs between prevalence reduction, quantity reduction, and micro harm reduction; (c) to explore some nonconsequentialist psychological bases for opposition to harm reduction; and (d) to offer some tentative suggestions for successfully integrating harm reduction into our national drug control strategy. The next section examines two different senses in which harm reduction might “send the wrong message,” either directly through its rhetorical effects or indirectly by making drug use less risky. I offer a theoretical framework for integrating prevalence-reduction and harm-reduction policies. I believe it offers a way of thinking about harm reduction that might reduce some of the barriers to a more

**Table 2**  
*Policies Aimed at Reducing Harms Associated With Risky Behaviors*

Policy	Risky behavior	Harms that policy tries to reduce
Mandated safety standards for motor vehicles, toys, sports equipment, food, pharmaceuticals, and so on	Driving, participation in sports, consumption of products, and so on	Physical injury, illness, death
Needle exchange	Intravenous drug use	HIV transmission
Teaching of controlled drinking skills	Drinking by diagnosed alcoholics	Social, psychological, and physical harms of alcohol abuse
School condom programs	Unprotected sexual contact among teens	Sexually transmitted diseases, unwanted pregnancies
Welfare	Becoming or remaining unemployed	Poor quality of life (housing, health, education), especially for children
Provision of benefits for illegal immigrants	Illegal immigration to the United States	Poor quality of life (housing, health, education), especially for children

flexible public health orientation to U.S. drug policy. But not necessarily. The tone of the harm-reduction debate suggests that attitudes toward drug policies—on both sides—are influenced by deeply rooted and strongly felt symbolic factors that are largely independent of concerns about policy effectiveness per se. These factors are explored in a later section.

## Use Reduction and Harm Reduction: An Integrative Framework

### Micro Versus Macro Harm Reduction

The efficacy of harm reduction depends on behavioral responses to policy interventions. In explaining this point, it is important to make a distinction between levels of analysis that is sometimes obscured in the harm-reduction literature. Let me begin with a truism that is largely overlooked in the harm-reduction debate:  $Total\ Harm = Average\ Harm\ per\ Use \times Total\ Use$ , where total use is a function of the number of users and the quantity each user consumes, and average harm per use is a function of two vectors of specific drug-related harms, one involving harms to users (e.g., overdoses, addiction, AIDS) and the other involving harms to nonusers (e.g., HIV transmission, criminal victimization; MacCoun & Caulkins, 1996; Reuter & MacCoun, 1995).

Figure 1 depicts this relationship graphically using a causal path diagram. Links *a* and *b* depict the intended effects of harm-reduction and use-reduction policies, respectively. Links *c*, *d*, and *e* depict the ancillary harmful effects—unintended and often unanticipated—these policies might have. Link *c* denotes the unintended harms caused by prohibiting a risky behavior (e.g., the lack of clean needles, lack of drug quality control, violence associated with illicit markets, inflated prices that encourage income-generating crime, and so on; Nadelmann, 1989). This category of unintended harms is of central

concern to any assessment of alternative legal regimes for drug control (MacCoun, Reuter, & Schelling, 1996). But here I focus on a second set of unintended consequences, those resulting from harm-reduction policies, to see whether objections to harm reduction have merit. If a harm-reduction strategy reduces harm per incident but leads to increases in drug use (links *d* and *e*), the policy might still achieve *net* harm reduction; on the other hand, a sufficiently large increase in use could actually result in an *increase* in total harm. There are two potential mechanisms for such an unintended consequence, one direct and one indirect. For reasons to be explained, link *d* can be conceptualized as the direct *rhetorical* effect (if any) of harm reduction on total use; link *e* is an indirect *compensatory behavior* effect. Either might be interpreted as “sending the wrong message.”

### Direct Version: Does Harm Reduction Literally Send the Wrong Message?

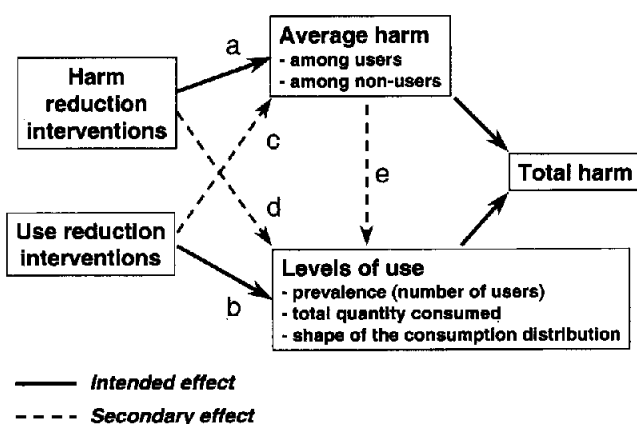
The rhetorical hypothesis is that irrespective of their effectiveness in reducing harms, harm-reduction programs literally communicate messages that encourage drug use. As noted earlier, those who espouse this rhetorical hypothesis rarely explain how it is supposed to work. The most plausible interpretation is that without intending to do so, harm reduction sends tacit messages that are construed as approval—or at least the absence of strong disapproval—of drug consumption.

If harm reduction service providers *intend* to send a message, it is something like this: “We view drugs as harmful. We discourage you from using them, and we are eager to help you to quit if you’ve started. But if you will not quit using drugs, we can help you to use them less harmfully.” Is that the only message? Psycholinguistic theory and research do suggest that people readily draw additional inferences that are *pragmatically implied* by an actor’s conduct, regardless of whether those inferences were intended, or even endorsed, by the actor (R. J. Harris & Monaco, 1978; Wyer & Gruenfeld, 1995). Thus if we provide heroin users with clean needles, they might infer that we don’t expect them to quit using heroin—if we did, why give them needles? Arguably, this perception could undermine their motivation to quit.

But would users infer that we believe heroin use is *good*, or at least “not bad”? It is not obvious how harm reduction might actually imply *endorsement* of drug use. Ultimately, whether any such rhetorical effects occur is an empirical question. It would be useful to assess the kinds of unintended inferences that users and nonusers draw from harm-reduction messages, and from the mere existence of harm-reduction programs. But in the absence of such evidence, the rhetorical hypothesis that harm-reduction conveys approval of drug use is purely speculative.

Moreover, it is difficult to reconcile this notion with the secondary prevention and treatment efforts that frequently accompany actual harm-reduction interventions. Through such efforts, users are informed that their behavior is dangerous to themselves and others and that assis-

**Figure 1**  
Use Reduction and Harm Reduction: An Integrative Framework.



tance and support are available to help them if they wish to quit drug use. Braithwaite's (1989) research on *reintegrative shaming* indicates that it is possible simultaneously to send a social message that certain acts are socially unacceptable while still helping the actors to repair their lives. Braithwaite suggests that this approach is integral to Japanese culture, but it is also reflected in the Christian tradition of "hating the sin but loving the sinner."

### **Indirect Version: Does a Reduction in Harm Make Drugs More Attractive?**

Even if no one took harm reduction to imply government endorsement of drugs, harm reduction might still influence levels of drug use *indirectly* through its intended effect, that is, by reducing the riskiness of drug use. This is a second interpretation of "sending the wrong message." Though there are ample grounds for being skeptical of a pure "rational-choice" analysis of drug use (MacCoun, 1993), the notion that reductions in risk might influence drug use is certainly plausible and would be consistent with a growing body of evidence of compensatory behavioral responses to safety interventions. Thus we should be mindful of potential trade-offs between harm reduction and use reduction.

Risk assessors have known for some time that engineers tend to overestimate the benefits of technological improvements in the safety of traffic signals, automobiles, cigarettes, and other products. The reason is that engineers often fail to anticipate that technological improvements lead to changes in behavior. When technological innovations successfully reduce the probability of harm given unsafe conduct, they make that conduct less risky. And if the perceived risks were motivating actors to behave somewhat self-protectively, a reduction in risk should lead them to take fewer precautions than before, raising the probability of their unsafe conduct to a higher level. This notion has been variously labeled *compensatory behavior*, *risk compensation*, *offsetting behavior*, or in its most extreme form, *risk homeostasis*—a term that implies efforts to maintain a constant level of risk (Wilde, 1982). Although some find this general idea counterintuitive, one economist has noted that, on reflection, it is hardly surprising that "soldiers walk more gingerly when crossing minefields than when crossing wheat fields," and "circus performers take fewer chances when practicing without nets" (Hemenway, 1988).

Compensatory behavioral responses to risk reduction have been identified in a variety of settings. For example, everything else being equal, drivers have responded to seat belts and other improvements in the safety of automobiles by driving faster and more recklessly than they would in a less safe vehicle (Chirinko & Harper, 1993). Similarly, filters and low-tar tobacco each reduce the harmfulness per unit of tobacco, yet numerous studies have demonstrated that smokers compensate by smoking more cigarettes, inhaling more deeply, or blocking the filter vents (Hughes, 1995). In both domains, some of the safety gains brought about by a reduction

in the probability of harm given unsafe conduct have been offset by increases in the probability of that conduct. Though early correlational studies were criticized on methodological grounds, the compensatory behavioral hypothesis has received important support from recent controlled laboratory experiments (Stetzer & Hofman, 1996).

The compensatory behavioral mechanism suggests that if reductions in average drug-related harm were to motivate sufficiently large increases in drug use, micro harm reduction would actually increase macro harm. Blower and McLean (1994) offer a similar argument based on epidemiological simulations that suggest that an HIV vaccine, unless perfectly prophylactic, could actually exacerbate the San Francisco AIDS epidemic, provided that individuals behaved less cautiously in response to their increased sense of safety. But to date, research on compensatory responses to risk reduction provides little evidence that behavioral responses produce net increases in harm, or even the constant level of harm predicted by the "homeostatic" version of the theory. Instead, most studies find that when programs reduce the probability of harm given unsafe conduct, any increases in the probability of that conduct are slight, reducing but not eliminating the gains in safety (Chirinko & Harper, 1993; Hughes, 1995; Stetzer & Hofman, 1996). As a result, in our terms, micro harm reduction produces macro harm reduction.

### **Do Drug Interventions Achieve Macro Harm Reduction?**

It is impossible to calculate total drug harm in any literal fashion, or to rigorously compare total harm across alternative policy regimes (MacCoun, Reuter, & Schelling, 1996). Many of the harms are difficult to quantify, and observers will differ in their weighting of the various types of harm. Thus at the strategic level of national policy formation, macro harm reduction is not a rigid analytical test but rather a heuristic principle: Are we reducing drug harms, and reducing drug use in ways that do not increase drug harm? But at the level of specific interventions, macro reduction of *specific* harms is a realistic evaluation criterion, as illustrated by the compensatory behavioral research just cited. Unfortunately, few drug policy programs are evaluated with respect to both use reduction and harm reduction. Prevention and treatment programs are generally evaluated with respect to changes in abstinence or relapse rates, whereas harm reduction evaluators tend to assess changes in crime, morbidity, and mortality rates. As a result, researchers are unable to determine whether many programs achieve macro harm reduction.

The empirical literature on needle exchange is a notable and exemplary exception. There is now a fairly sizable body of evidence that needle exchange programs produce little or no measurable increase in injecting drug use (Lurie & Reingold, 1993; Watters, Estilo, Clark, & Lorvick, 1994). Because it significantly reduces average harm, needle exchange provides both micro and macro

harm reduction. But the empirical success record for needle exchange does not constitute blanket support for the harm reduction movement. Each intervention must be assessed empirically on its own terms.

Let me offer a few cautionary tales. One harm reduction intervention that has been tried and rejected is the "zone of tolerance" approach tried by Zurich officials in the Platzspitz—or, as the American press labeled it, "Needle Park." By allowing injecting drug users to congregate openly in this public park, and to shoot up without police interference, city officials were able to make clean needles and other health interventions readily available at the time and place of drug use. Even sympathetic observers agree that these benefits were ultimately offset by increases in local crime rates and in the prevalence of hard drug use in the city (Grob, 1992). Another example involves bongs and water pipes. Though these devices have been touted as a means of reducing the health risks of marijuana smoking, a recent test found that they actually increase the quantity of tars ingested. The apparent reason harkens back to the compensatory behavioral mechanism. Water pipes filter out more THC than tar, so users smoke more to achieve the same high, thereby increasing their risk (Gieringer, 1996). The Zurich case and the bong study suggest that harm-reduction strategies can fail, but it is important to note that neither failure resulted from increasing rates of *initiation* to drug use. In the Zurich case, the prevalence of drug use rose because the park attracted users from other Swiss cities and neighboring countries. Arguably, the program might have been successful had other European cities adopted the idea simultaneously. In the bong case, the filtering benefits were offset by increases in consumption levels among users, but I am unaware of any evidence that bongs and water pipes have ever encouraged nonusers to start smoking marijuana.

One can imagine hypothetical examples of how a harm-reduction strategy might plausibly attract new users. For example, from a public health perspective, we are better off if current heroin injectors switch to smoking their drug. Imagine a public information campaign designed to highlight the relative health benefits of smoking. If some fraction of nonusers have resisted heroin because of an aversion to needles (for anecdotal evidence, see Bennetto, 1998), our campaign might indeed end up encouraging some of them to take up heroin smoking, despite our best intentions. Of course, no one has seriously proposed such a campaign. But the example demonstrates that concerns about increased use are plausible in principle.

### **Quantity Reduction as a Middle Ground?**

As noted earlier, American drug policy rhetoric is dominated by concerns about the number of users, drawing a bright line between "users" and "nonusers." This is illustrated by our national drug indicator data. Most available measures of drug use are *prevalence* oriented: rates of lifetime use, use in the past year, or use in the past month. But drug-related harms may well be more sensi-

tive to changes in the *total quantity consumed* than to changes in the total number of users. One million occasional drug users may pose fewer crime and health problems than 100,000 frequent users. Our nation's recent cocaine problems provide an illustration. After significant reductions in casual use in the 1980s, total consumption has become increasingly concentrated among a smaller number of heavy users. At an individual level, these heavy users are at much greater risk than casual users with respect to acute and chronic illness, accidents, job- and family-related problems, and participation in criminal activities. Thus although cocaine prevalence has declined, total cocaine consumption and its related harms have remained relatively stable (Everingham & Rydell, 1994).

This suggests that *quantity reduction* (reducing consumption levels) holds particular promise as a macro harm reduction strategy. Quantity reduction occupies a point halfway between prevalence reduction and micro harm reduction. Like prevalence reduction, quantity reduction targets use levels rather than harm levels. But like harm reduction, quantity reduction is based on the premise that when use cannot be prevented, we might at least be able to mitigate its harms.

What is less clear is the optimal targeting strategy for quantity reduction. Consider the distribution of users across consumption levels, which for most psychoactive drugs (licit and illicit) is positively skewed, with a long right tail indicating a small fraction of very heavy users. One strategy is to target those heaviest users—to "pull in" the right tail of the distribution. The marginal gains in risk reduction should be greatest at the right tail, and only a small fraction of users need be targeted.

This approach has received considerable attention—and notoriety—in the alcohol field under the rubric "controlled drinking." Few public health experts dispute the notion that problem drinkers are better off drinking lightly than drinking heavily. But there has been an extraordinary furor surrounding the notion of controlled drinking as a treatment goal. The evidence suggests that (a) although abstinence-based treatment programs experience high relapse rates, many of the relapsing clients successfully reduce their drinking to relatively problem-free levels; (b) it is possible to *teach* controlled drinking skills to many, but not all, problem drinkers; (c) we cannot yet predict which problem drinkers will be able to control their drinking at moderate levels; and (d) most treated problem drinkers fail to achieve either abstinence or controlled levels of drinking (Marlatt, Larimer, Baer, & Quigley, 1993). But opponents assert that, irrespective of any benefits to be derived from controlled drinking, the very notion undermines the goal of abstinence and discourages drinkers from achieving it. The small-scale studies conducted to date do not support that claim, but the evidence is not yet decisive.

In addition to the abstinence–moderation debate, a second quantity-reduction debate has emerged among alcohol experts. Are problem drinkers even the appropriate intervention target? An alternative quantity-reduc-

tion strategy targets the middle of the alcohol consumption distribution. For some years, many experts have argued that the total social costs of alcohol might be better reduced by lowering average consumption levels rather than concentrating on the most problematic drinkers at the right tail (Rose, 1992; Skog, 1993). If so—and this is a matter of ongoing debate in the pages of *Addiction* and other journals—broad-based efforts to reduce total drug use might indeed be the best way to achieve total harm reduction, at least for alcohol consumption. The controversy here has been more purely technical and less emotional than the controlled drinking debate, in part because few people still champion the notion of abstinence for casual drinkers. Many Americans seem quite willing to accept the notion of “nonproblem” alcohol consumption yet reject the notion of “nonproblem” marijuana or cocaine consumption.

In fact, the viability of “lower-risk” drug consumption, and the relative efficacy of the “pull in the tail” and the “lower the average” strategies, will depend on a variety of factors. One factor is the degree of skew of the consumption distribution: The greater the probability mass in the right tail, the greater the efficacy of targeting heavy users. A second is the dose-response curve for risks, which is usually S-shaped for those drug-risk combinations that have been studied. (We know a great deal more about dose-response functions for health and public safety risks involving licit drugs than for comparable risks involving illicit drugs.) When this function is very steep, even moderate consumption levels are very risky, making the “shift-the-distribution” strategy more efficacious. A third factor involves the possibility that individuals with a higher propensity for danger self-select higher consumption levels. The latter effect will spuriously inflate the quantity–risk relationship. To the extent that this effect predominates, convincing right-tail users to cut back may yield fewer benefits than anticipated.

### The Public Acceptability of Harm Reduction

Whereas American citizens and policymakers have embraced drug strategies that promote prevalence reduction, harm reduction and some forms of quantity reduction are often greeted with considerable hostility—when they are not ignored altogether. In this section, I offer a number of hypotheses about this negative reaction. The opposition to harm reduction surely has multiple causes, so these explanations are not mutually exclusive. They vary along a continuum ranging from *consequentialist* to *symbolic* grounds for opposition. Many people probably hold both kinds of views. Harm reduction opponents might be placed along this continuum based on their responses to the following hypothetical questions:

1. If new evidence suggested that needle exchange (or some other harm-reduction strategy) reduced total harm, would you still be opposed?
2. If the answer is “yes”: If new evidence suggested a reduction in harm, *with no increase in use*, would you still be opposed?

3. If the answer is “yes”: Would you be opposed to drug use even if it were made *completely* harmless?

Those who would say “no” to the first question are pragmatic or consequentialist in their opposition to harm reduction. Those who say “yes” to the third question are at the other extreme; for them, drug use is intrinsically immoral, irrespective of its consequences—what philosophers call a *deontological* stance. Those who would support harm reduction only if there were no increase in drug use fall somewhere in between. Their views might reflect a complex mix of instrumental and symbolic concerns.

#### Consequentialist Grounds

The consequentialist grounds for opposing harm reduction are the easiest to describe. They are characterized primarily by the belief that harm reduction will be counterproductive, either by failing to reduce average harm or by increasing drug use enough to increase total harm. Those who oppose harm reduction on truly consequentialist grounds should change their mind and support it if the best available facts suggest that an intervention reduces harm without producing offsetting increases in use. In recent years, the favorable evidence for needle exchange has received increasing publicity in the mass media. This media coverage may explain why a 1996 poll found that 66% of Americans endorsed needle exchange as a means of preventing AIDS—a dramatic increase over earlier surveys (The Henry J. Kaiser Family Foundation, 1996). Of course, this may be an over-optimistic reading of the impact of empirical research (MacCoun, 1998). Program evaluations rarely yield unequivocal verdicts; even when effects are statistically reliable, they are usually open to multiple interpretations. Expert consensus on the effects of high-profile policy interventions is rare, even when the accumulated body of research is large. And the vehemence of the opposition to harm reduction suggests that attitudes toward these interventions are based on something more than purely instrumental beliefs about the effectiveness of alternative drug policies.

Attitudes toward the death penalty are instructive in this regard. Attitude research indicates that many citizens overtly endorse a *deterrence* rationale for the death penalty, believing that “it will prevent crimes.” Yet most do not change their views when asked how they would feel if there were unequivocal evidence that execution provided no marginal deterrence above and beyond life imprisonment. The evidence suggests that ostensibly instrumental views are actually masking deeper retributive motives (Ellsworth & Gross, 1994). As a result, support for capital punishment is relatively impervious to research findings (Lord, Ross, & Lepper, 1979).

The nonconsequentialist grounds for opposing harm reduction are more complex than the consequentialist grounds. There are a number of distinct psychological processes that might play a role in shaping these views.<sup>2</sup>

<sup>2</sup> Note that these psychological accounts by themselves do not constitute evidence for or against the wisdom of opposition to harm reduction, nor are they meant to imply that such views are somehow pathological.

## **The Need for Predictability and Control**

Harmonious social relations require a minimal level of predictability because we must routinely relinquish control to other people—automobile drivers, surgeons, airline pilots, our children's teachers, and so on. The notion that others are using drugs can be threatening because it suggests that they've lost some self-control. Although harm reduction can minimize the consequences of diminished control, it may be more reassuring to believe that others are completely abstinent. When we are unable to control aversive stimuli, any signal that helps us to anticipate danger will significantly reduce our anxiety (Miller, 1980). Perhaps the belief that others are abstinent from drugs works like a "safety signal" to free us from worrying about their conduct.

Our fears about others are augmented by a robust bias in risk perceptions. Most people—adults as well as adolescents—perceive themselves to be less vulnerable than the average person to risks of injury or harm (e.g., Weinstein & Klein, 1995). An apparent corollary is that most of us believe we are surrounded by people less cautious or skillful than ourselves. We may think we can control our own use of intoxicants (most of us feel that way about alcohol), but we find it harder to believe that others will do the same. Indeed, this might explain why a sizable minority of regular cannabis users opposes the complete legalization of that drug (Erickson, 1989).

## **Aversion to Making Value Trade-Offs**

Our attitudes toward public policy involve more than simple judgments about effectiveness and outcomes. They are symbolic expressions of our core values. Unfortunately, most difficult social problems bring core values into conflict. Drug problems are no exception; they bring personal liberty into conflict with public safety, compassion into conflict with moral accountability. Contemplating harm reduction brings these conflicts into strong relief. According to Tetlock's *value pluralism model*, acknowledging such conflicts is psychologically aversive, and so many people avoid explicit trade-off reasoning, preferring simpler mental strategies (Tetlock, Peterson, & Lerner, 1996). The easiest is to deny that there is a conflict, by ignoring one value or the other. If that doesn't work, we may adopt a simple "lexicographic" ranking. Many of us engage in complex multidimensional trade-off reasoning only when we can't avoid it, as when the conflicting values are each too salient to dismiss or ignore.

In a recent content analysis of op-ed essays debating the reform of drug laws, my colleagues and I found that legalizers and decriminalizers (all of whom were harm-reduction advocates, though the converse is not necessarily true) used significantly more complex arguments than prohibitionists (MacCoun, Kahan, Gillespie, & Rhee, 1993). The reform advocates were less likely to view the drug problem in terms of a simple good-bad dichotomy; they identified multiple dimensions to the problem and were more likely to acknowledge trade-offs and coun-

terarguments to their own position. It may be hard to persuade others to acknowledge the full complexity of harm-reduction logic unless the values that support it become more salient in drug policy discourse.

## **The Propriety of Helping Drug Users**

Of course, there is little basis for value conflict if one feels that drug users *should* suffer harm when they use drugs. There are a number of reasons why some people might hold this view. One is authoritarianism, a complex trait defined as a chronic tendency to cope with anxiety by expressing hostility toward outgroup members; intolerance of unconventional behavior; and submissive, unquestioning support of authority figures. Authoritarianism is strongly correlated with support for punitive drug policies (Peterson, Doty, & Winter, 1993). Indeed, several items from the Right Wing Authoritarianism Scale—a leading research instrument for measuring this trait—seem to equate authoritarianism with opposition to harm-reduction interventions almost by definition (Christie, 1991). According to Item 7, "The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order." Item 12 states, "Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it's best to use a firm, tough hand when dealing with them." And authoritarians are more likely to disagree with Item 19: "The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these."

But scoring high in authoritarianism is probably not a prerequisite for hostility toward drug users. There is a general antagonism to hard drug users among U.S. citizens, partly stemming from the strong association between drugs and street violence in American cities. It is much easier to see harshness as the appropriate response in the United States than in Europe, where drug use is more likely to be perceived as a health problem. Race and social distance may play a role here as well; arguably, Americans were more tolerant of drug users in the 1970s, when the mass media's prototypical drug user was an Anglo-American student in a college dorm instead of a young African American man on a city street corner (Kirp & Bayer, 1993). As a result, Americans have supported (or at least tolerated) sentencing policies that tend to disproportionately burden minority and poor offenders relative to those who are Anglo-American or middle class (Tonry, 1995).

But irrespective of race and class, the mere fact that someone uses drugs will often be sufficient to categorize them as "the other," particularly if we don't already know them. Citizens with a friend or family member who is an addict may embrace micro harm reduction, whatever its aggregate consequences, but those who don't know any addicts may prefer a strategy of isolation and containment.

Even in the absence of malice, many people may feel that addicts should suffer the consequences of their

actions. Addiction is widely viewed as a voluntary state, regardless of many experts' views to the contrary (Weiner, Perry, & Magnusson, 1988). Many Americans, especially conservatives, are unwilling to extend help to actors who are responsible for their own suffering; such actors are seen as undeserving (Skitka & Tetlock, 1993). The retributive view that bad acts require punishment is deeply rooted in the Judeo-Christian tradition, particularly in Protestant fundamentalist traditions. In light of the possibility that opposition to harm reduction traces back to our nation's strong Puritan and Calvinist roots, it is quite ironic that the Dutch and the Swiss have championed such an approach in Europe.

### **Disgust and Impurity**

A final ground for opposing harm reduction might be the vague, spontaneous, and nonrational sense that drug use defiles the purity of the body and hence that anything that comes in contact with drug users becomes disgusting through a process of contagion. Stated so bluntly, this may sound utterly implausible; such concepts are quite alien to Western moral discourse. Nevertheless, this kind of thinking is quite explicit in other cultures, and anthropologists argue that it often lurks below the surface of our own moral judgments (Douglas, 1966; Haidt, Koller, & Dias, 1993). I know of no direct evidence that such reactions influence attitudes toward drug policy, but the hypothesis is testable in principle and worthy of further investigation.

### **Conclusion**

In this article, I have tried to take a frank look at the arguments against harm reduction, and I have suggested that, like most policy interventions, the approach has potential pitfalls. Not every harm-reduction intervention will be successful, and some might even increase aggregate harm. We are still woefully ignorant about the complex interplay between formal drug policies and informal social and self-control factors (MacCoun, 1993). Still, the evidence to date on harm reduction is encouraging (as the success of needle exchange programs makes clear), and I believe that we have much to gain by integrating harm-reduction interventions and goals into our national drug control strategy. I conclude by offering five hypotheses about how harm reduction might be more successful—successful both in reducing aggregate harm and in attracting and retaining a viable level of political support.

1. Harm-reduction interventions should have the greatest political viability when they can demonstrate a reduction in average harm—especially harms that affect nonusers—without increasing drug use levels. Interventions that lead to increases in drug use are likely to encounter stiff opposition, even if they yield demonstrable net reductions in aggregate harm. Thus, harm-reduction interventions need to be rigorously evaluated with respect to four types of outcome: effects on targeted harms, “side effects” on untargeted harms (especially harms to nonusers), effects on participants' subsequent use levels, and effects on local nonparticipants' use levels.

2. Because the compensatory behavioral mechanism is triggered by perceived changes in risk, harm-reduction efforts seem least likely to increase drug use when those harms being reduced were already significantly underestimated, discounted, or ignored by users and potential users (see Wilde, 1982). At one extreme, if perceptions of risk are serious enough, few people will use the drug in the first place. (Witness the almost complete disappearance of abstinence after its dangers became apparent in the late 19th century.) At the other extreme, those who are either ignorant of, or indifferent to, a drug's risks, seem unlikely to escalate their use when an intervention lowers those risks.
3. Similarly, interventions involving safe-use information or risk-reducing paraphernalia should be less likely to increase total use, and hence be more politically viable, when they are highly salient for heavy users but largely invisible to potential initiates to drug use. Maintenance interventions, which provide drugs or drug substitutes for addicts, should be less likely to encourage use if the program has few barriers to entry for heavy users but high barriers to entry for casual users. (The risk of these targeting strategies is that new initiates may fail to obtain the benefits of the interventions.)
4. Reducing users' consumption levels should generally provide harm reduction, an important strategy for achieving use reduction when heavy users refuse to become abstinent.
5. Whenever feasible, harm-reduction interventions should be coupled with credible primary and secondary prevention efforts, as well as low-threshold access to treatment.

This last point is a truism among many harm-reduction providers. Still, a few in the harm-reduction movement are uncomfortable with the notion that harm-reduction programs should urge users to stop their drug use. Some take that position on libertarian grounds, but others associate traditional use-reduction efforts with dishonesty (“reefer madness”), hypocrisy (“what about alcohol and tobacco?”), or an apparent willingness to jeopardize user health (e.g., the U.S. decision to spray Mexican marijuana crops with paraquat in the 1970s). But harm-reduction advocates who categorically reject the opposition risk undermining their own cause. Americans who oppose harm reduction are unlikely to be change their views until they feel their fears have been taken seriously.

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