

programs; it inhibits drug users from seeking needed medical attention.

The most serious negative consequence threatened by decriminalization of drugs is a possible increase in use. Opponents of legalization argue that drug-prohibition laws succeed in deterring many people from trying drugs and reduce their availability. But while the lessons of Prohibition lend some support for worries about increased drug use following the repeal of drug laws, decriminalization of marijuana by about a dozen states in the 1970s did not lead to increases in marijuana consumption; in the Netherlands, which decriminalized pot during the 1970s, consumption has actually declined significantly. Culture seems more important than law in determining patterns of drug use. One may doubt that most Americans would inject cocaine or heroin into their veins even if given the chance to do so legally. And, finally, usage could double or triple without tipping the balance in favor of any escalation in the war on drugs, given the scale of the devastation from that war.

One last danger of the war on drugs, and in some ways the most troubling, is the threat that it poses to our civil rights. In a state of war, ordinary protections of civil liberties may give way to an all-out effort to combat the enemy. The same is true in the war on drugs. Wisotsky expresses concern about what he sees as two dangerous and related phenomena: "(1) the government's sustained attack, motivated by the imperatives of drug enforcement, on traditional protections afforded to criminal defendants under the Bill of Rights [such as more permissive use of illegally seized evidence, relaxation of search and seizure requirements, and draconian mandatory sentences], and (2) the gradual but perceptible rise of "Big

Brotherism" against the public at large in the form of drug testing, investigative detention, eavesdropping, surveillance, monitoring, and other intrusive enforcement methods." He concludes, "Since the early 1980s, the prevailing attitude, both within government and in the broader society, has been that the crackdown on drugs is so imperative that extraordinary measures are justified. The end has come to justify the means. The result is that Americans have significantly less freedom than they did only five or six years ago" — all in the waging of a war we cannot win.

Conclusion

Whatever the strength of any other arguments for the legalization of drugs, a sober cost-benefit analysis that pays heed to the terrible costs brought by our national war on drugs seems to support some degree of decriminalization. In the end, the best war on drugs may be to revive and overhaul our old war on poverty: to take the resources and energy marshaled in the war on drugs and direct them instead to programs designed to combat the entrenched hopelessness that makes drug use and abuse so tragically appealing.

The sources quoted in this article are: Ethan A. Nadelman, "The Case for Legalization," *The Public Interest*, vol. 92 (1988); Sue Rusche, testimony before the House Select Committee on Narcotics Abuse and Control, September 29, 1988; Robert Fullinwider, interview; Steven Wisotsky, testimony before the House Select Committee; David A. J. Richards, *Sex, Drugs, Death, and the Law* (Totowa, N.J.: Rowman and Littlefield, 1982); John Kaplan, "Taking Drugs Seriously," *The Public Interest*, vol. 92 (1988); Kurt Schmoke, testimony before the House Select Committee; and James Ostrowski, "Thinking about Drug Legalization," *Cato Institute Policy Analysis*, No. 121 (May 25, 1989).

Nuclear Waste Storage: Your Backyard or Mine?

Nearly forty years after the United States began producing nuclear waste as a by-product of generating nuclear power, we still have not succeeded in disposing of any of it. Thousands of metric tons of high-level radioactive waste now crowd temporary storage facilities near the reactors that produce them. For twenty-five years the problem was virtually ignored, leading former South Carolina governor Richard Riley to remark, "There is a basic law of nuclear waste often overlooked: all waste remains where it is first put."

The issue became politically salient around 1975, and after much debate, Congress passed the Nuclear Waste

Policy Act in 1982. The NWPA called for a site to be opened in a Western state by 1993 and a second site in the East by 2003; it also provided for extensive public involvement in the site selection process and even allowed local authorities a veto power over the selection of a site. However, the reasonable provisions of this law soon came unhinged. Thus, in 1986, President Reagan selected three candidate sites — in Washington, Nevada, and Texas — from those already studied by the Department of Energy, and he canceled plans to find a second site in the East. After further political maneuvering, the House of Representatives was left to

select one site from the president's list. It may be a coincidence that the Speaker of the House at the time was from Texas and the majority leader from Washington, but the Yucca Mountain site in Nevada was chosen. Nevada was offered \$10 million per year in compensation (rising to \$20 million per year after the site opened), on condition that it forgo the right to disapprove the site.

Nevada actually received an amount greater than that from the federal government, and it used these funds to conduct technical research on the characteristics of the site as well as research on the attendant social and economic impacts. The risks involved include eventual leaks, which might contaminate water supplies, and accidents while transporting wastes to the site. But Nevada's research also suggested that areas surrounding the site, including perhaps Las Vegas, would be economically stigmatized by a nuclear waste repository. Opposition to the site increased, and many Nevadans no doubt felt that they had not been treated equitably by decision-makers in Washington. Nevada spent some of its federal funds on lobbyists, hoping to persuade Congress to accept a different site. This annoyed some senators, who in 1986 reduced the federal funds given to the state. Then Nevada passed a referendum attempting to ban the site from the state, and the Senate responded by cutting federal funds to Nevada further in 1989, greatly hampering the state's ability to conduct its research. It is now certain that a waste site will not open in Nevada before the turn of the century, and it is far from clear that one will ever open there. Could this situation have been avoided?

When it comes to the siting of a nuclear waste repository, it is fairly easy to find reasons why somebody else's backyard is geographically, technologically, politically, and morally preferable to one's own. Nobody is thrilled at the prospect of a nuclear waste dump in his neighborhood; few communities would consider one a source of civic pride. But the wastes must be disposed of somehow and somewhere. In an ideal world, we could parcel out the risks of nuclear waste storage equally, so that we would each face the same chance of possible harm. But in our world, these risks must be distributed unequally. Those who live near the chosen sites are going to bear the risks, and if any harms eventuate, they will suffer the harms as well. How, then, should we decide: your backyard or mine?

Finding a Fair Procedure

In situations where we cannot distribute risks or harms *equally*, we can at least try to distribute them *fairly*. The procedures we use to assign such harms and risks will make a great deal of difference to how we feel about the ultimate distribution of outcomes. We might think it fair, even if unequal.

We can make a distinction between two different ways of appraising decision-making procedures. We can judge them on their tendency to produce the best outcome, where we have some independent way of

assessing outcomes. Or we can judge them on their intrinsic merits: with intrinsically valuable procedures, whatever outcome results is *ipso facto* the best.

What are we looking for in a procedure for selecting a nuclear waste site? The political and social issues have become so dominant that no one seriously maintains that the site should be picked solely for its geological properties. A purely scientific procedure thus appears to be unsatisfactory, even if it identifies the "best" site in terms of the sheer physical safety of storage. The risks involved in transporting wastes, along with other problems, rule out selecting a densely populated site, even if its geological features are ideal. Nor would it be socially acceptable to pick a site in a sparsely populated area, if the state in which this is located does not appear to benefit proportionately to other states from nuclear power. (Salt domes in Mississippi were eliminated from consideration for this reason.)

The reasons for not picking a site solely on grounds of geological fitness are generally described as matters of equity, even though a criterion of geological fitness would not obviously rely on any morally suspect consideration that discriminates against any particular population. If determining the site by geological criteria is unsatisfactory, therefore, this indicates that the procedures for site selection must be evaluated in part on their intrinsic merits, on their fairness, not simply on their instrumental value for picking an ideal physical location. Perhaps it shows something about the special nature of nuclear wastes that the procedure for picking a safe site must also satisfy political and democratic criteria. But the selection process cannot be evaluated strictly on intrinsic grounds of equity, either. We would not accept pure democracy here, e.g., by using a random selection process which gives everyone an equal chance of avoiding proximity to a site, or by giving everyone an equal voice in opposing the site, which would in effect place it in the most sparsely populated area, regardless of geological suitability.

We have not yet found a procedure that is ideally equitable, reasonable, and socially acceptable.

Geology, demography, and democracy are all relevant to the process of site selection. The procedure will have to be justified on scientific, political, and moral grounds. It is not obvious in advance that these criteria are simultaneously satisfiable. We have not yet found a procedure that is ideally equitable, reasonable, and socially acceptable.

Compensation for Risks

A fair procedure is one possible way to satisfy equity demands where harms, and the risk of harm, cannot



Aerial view of the Yucca Mountain study site

be distributed equally. Compensation provides an alternative possibility for realizing equity. Given the difficulties of determining a fair procedure for siting a nuclear waste repository, the possibility of offering compensation for those risks takes on major importance, for when harms are offset by benefits this mitigates the need to distribute the risk of harm fairly.

How does a benefit compensate for a harm? The benefit must do two things: first, it must at least equal the harm in amount; and, second, it must *offset* the harm, so that the affected party is restored to something like a status quo ante. Attempts to compensate may fail if either condition is not met.

Some losses are so great that no amount of benefits can restore the balance. Death is one such loss, for the victim certainly, and perhaps also for the victim's family and loved ones. Other harms, especially mass disasters that create losses on a vast scale, may similarly exceed an individual's, a firm's, or even a society's ability to compensate. This is an important problem for many of today's risky technologies, and certainly for nuclear power.

Other losses may be difficult to compensate not because of the amount of harm suffered but because of the nature of the harm. Benefits do not necessarily "fall short," but they are inappropriate in a different way: they fail to offset the harm. The money offered might easily equal or exceed the economic value of, for example, a family heirloom, but its loss would not thus be offset.

These considerations are relevant to the selection of a nuclear waste repository site, for the choice may have profound impacts on local communities and their ways of life. The populations of these communities must bear some increased risk to their health and lives which the expected economic benefits of disposal activity might not be able to compensate. These people may also face

fear and stigmatization, which we might have to compensate in different ways.

The economic impacts themselves might not be completely positive. Small rural towns, for example, may be converted to larger urban centers. The local economies may thrive, but the population's sense of its own identity — how people see themselves and their communities — may be altered forever. If it is necessary to compensate communities or individuals for siting a nuclear waste repository in their midst, then we need to ask what kind of values are threatened and whether the benefits in the compensatory package offered offset the nature as well as the level of the losses.

One way we might proceed in figuring out the appropriate kind and degree of compensation is to offer the affected parties some package of risks, harms, and benefits, and see if they accept it. Their consent determines whether compensation has been made, we might argue, for they will consent only if they regard our offer as making them ultimately better off.

While this method is frequently adequate, it can fail for several reasons. People may simply refuse to consent, especially if they see their losses as important and irreplaceable. Requiring explicit consent from all affected citizens may thus give each a veto power over public policy. Or the affected parties, such as future generations, may not be able to consent, yet it may be necessary nonetheless to impose risks or losses on them. If the parties lack the relevant information, or if they cannot process it rationally, as may well be the case with complex technological risks, then their consent can fail to be fully informed.

People may also be taken advantage of in ways we would consider morally unacceptable. It is generally beneficial to offer jobs to the unemployed, but people in need might accept an employment package even if the job was unnecessarily risky or other parts of the

package were extremely harmful. Consent does not justify obvious exploitation. A depressed community will naturally have a greater incentive to bid for hazardous land uses if these bring needed benefits, but we must be wary of exploiting its needs.

Compensation packages must be designed in cooperation with affected communities, but local acceptance of an offer may not be sufficient to determine that fair and adequate compensation has been made. We have to evaluate the package directly and the conditions under which it is found acceptable. We need, therefore, to determine independently whether the consent is informed and free and whether the benefits are appropriate. If we are imposing particular health risks, for example, compensation might aim explicitly at reducing the overall level of health risks in other ways, through providing subsidized health plans, building hospitals and health care centers, and so on. Similar benefits are generally more likely to offset a harm than dissimilar benefits. But determining what counts as fair and adequate compensation may prove to be as thorny and intractable as determining what counts as a fair procedure for assigning risk.

Intergenerational Equity

Intergenerational equity is clearly one of the most important moral issues involved in selecting a permanent repository site for nuclear wastes. We seem to have a moral consensus that the costs of nuclear power should be borne by the generations that benefit most directly from it and that we do have a moral responsibility to protect future generations.

These concerns bear on a key decision regarding storage of nuclear wastes. We can store the wastes in a retrievable manner, or we can store them "permanently." Permanent storage generally has higher expected costs to our generation than retrievable storage, but although retrievable storage is probably less expensive today, it imposes some maintenance costs on future generations. The consensus we are assuming about our intergenerational duties might forbid this intergenerational transfer of costs, and in fact permanent storage appears to be the policy with the greatest current political support.

But retrievable storage also reduces an important risk to future generations, for if something does go wrong with a site, and radioactive material begins to escape into the biosphere, it will be far less costly to correct this problem if the wastes are stored retrievably. So the choice is between an alternative that is more expensive today and imposes a very high-cost risk on the future, or one that is less expensive today, imposing some maintenance costs on future generations but also eliminating the extremely costly risk.

Two normative considerations seem to be relevant. The first is an issue of fairness. It seems only fair that the present generation should be required to bear the higher costs, since we are the ones receiving the benefits. It is far from clear, however, how the benefits and their distribution should be measured. This issue

arises in justice between generations and also among different populations in the same generation.

Should the benefits of nuclear power be seen as restricted to the less expensive electricity directly generated from nuclear power? Or should we also include these more widely shared benefits: the lower indirect costs of electricity that result from the contribution of nuclear power to the nation's energy supply; the lower costs of products made from this cheaper electricity, which may be purchased far from the site of the original power plant; whatever technological insights gained from developing nuclear power which may prove beneficial, especially to future generations, and so on? It is far from easy to draw boundaries, either geographical or temporal, around the beneficiaries of this, or indeed any other, technology. The farther those benefits extend in time and space, the weaker the moral case for allocating the costs narrowly.

The second consideration is one of rationality. We can try to reach a decision here by asking what a reasonable individual living some time in the future would want for herself and would want us to decide if we were deciding on her behalf. It might seem more reasonable to bear some certain, fairly modest, costs in order to reduce the chance of a far more costly accident. This, at any rate, is the standard justification for buying insurance. Arguing from either the fairness of allocating costs or the rationality of paying to avoid risks, normative considerations would seem to favor retrievable storage, contrary to prevailing popular beliefs.

Conclusion

Nuclear power seems to be enjoying some resurgence in popularity today, in the wake of concerns about the consequences of burning fossil fuels on global warming. This new awareness, however, does not address any of the problems that have plagued nuclear power in the past; at best, some people are beginning to think it may be less unacceptable than the alternatives. But this gives us greater reason to find socially acceptable solutions to nuclear power's traditional problems, beginning with disposing of the radioactive wastes we have already produced. We need to formulate — and then stick to — fair procedures for selecting a site; we must be willing to bear the costs of disposal, which will include carefully designed compensation packages to adversely affected communities; and, I have argued, we should rethink the wisdom of "permanent" disposal and seriously consider monitored retrievable storage instead. That would reduce the costs of accidents in the future and — who knows? — we may yet find a socially beneficial use for all that radioactive material. If nuclear power can regain popularity after decades of mismanagement and Chernobyl-like accidents, then anything is possible.

— Douglas MacLean

This article was based on research Douglas MacLean conducted while he was a consultant to the Equity Task Force of the Nevada Nuclear Waste Project office.