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Cocaine, Demand, and Addiction: A Study of the Possible Convergence of Rational Theory and National Policy

A. Morgan Cloud, III

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A. Morgan Cloud, III, Cocaine, Demand, and Addiction: A Study of the Possible Convergence of Rational Theory and National Policy, 42 *Vanderbilt Law Review* 725 (1989)

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Cocaine, Demand, and Addiction: A Study of the Possible Convergence of Rational Theory and National Policy

*A. Morgan Cloud, III**

I.	SUPPLY, DEMAND, AND THE "WAR AGAINST DRUGS"	726
II.	COCAINE AND ADDICTION	736
	A. <i>Concepts Related to Addiction</i>	737
	B. <i>Defining Cocaine as an Addicting Substance</i>	740
	C. <i>Patterns of Consumption by Cocaine Addicts</i>	746
	D. <i>The Impact of Cocaine Addicts on Market Demand</i>	751
III.	ELASTICITY OF DEMAND AND COCAINE ADDICTION	757
	A. <i>Indirect Effects upon Demand: Price, Supply, and the Elasticity of Demand</i>	758
	B. <i>Affecting Demand Directly: Deterrence and Criminal Penalties</i>	767
IV.	LEGISLATING AGAINST SUPPLY AND DEMAND: THE ANTI-DRUG ADUSE ACT OF 1986	776
	A. <i>Law Enforcement and Demand Reduction</i>	776
	1. <i>Criminal Penalties and Consumer Demand</i>	777
	2. <i>Criminal Penalties and Supply</i>	779
	3. <i>Law Enforcement Funding Under the 1986 Act</i>	781
	B. <i>Funding for Treatment and Rehabilitation Programs: 1972-1986</i>	782
	C. <i>Drug Treatment, Rehabilitation, and Education Under the 1986 Act</i>	784
	1. <i>Funding for Treatment and Rehabilitation Programs</i>	784
	2. <i>Funding for Public Education and Research</i>	788

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3.	The Drug-Free Schools and Communities Act . . .	790
V.	THE RECOMMENDATIONS OF THE PRESIDENTIAL COMMISSION ON THE HUMAN IMMUNODEFICIENCY VIRUS EPIDEMIC	793
VI.	THE ANTI-DRUG ABUSE ACT OF 1988	802
A.	<i>Treatment, Rehabilitation, and Education in the 1988 Act</i>	803
1.	Treatment and Rehabilitation Programs	803
2.	Funding for Treatment and Rehabilitation Pro- grams	807
3.	Education Programs	809
B.	<i>Law Enforcement and "User Accountability"</i>	809
1.	Criminal Penalties and Consumer Demand	809
2.	Criminal Penalties and Supply	811
3.	Civil Sanctions and "User Accountability"	813
VII.	CONCLUSION	817

I. SUPPLY, DEMAND, AND THE "WAR AGAINST DRUGS"

As the "war against drugs" meanders through the century,¹ policy-makers continue to search for effective strategies for combatting the illegal drug industry.² For seventy-five years the dominant federal strategy has been to curtail supplies of prohibited substances.³ In its many permutations, this supply-side approach has included attempts to eradicate crops, to intercept drugs at the Nation's borders, and to arrest, prosecute, and punish commercial participants at every level of the production and distribution system.⁴

1. Federal government attempts to prohibit the possession, sale, and use of mind and mood altering substances are primarily a twentieth century phenomenon. See PRESIDENT'S COMMISSION ON ORGANIZED CRIME, REPORT TO THE PRESIDENT AND THE ATTORNEY GENERAL, AMERICA'S HABIT: DRUG ABUSE, DRUG TRAFFICKING, AND ORGANIZED CRIME 187-292 (March 1986) [hereinafter PRESIDENT'S COMMISSION] (presenting chronology of "milestones in the war on drugs"); see also H. HOGAN, FEDERAL LAWS RELATING TO THE CONTROL OF NARCOTICS AND OTHER DANGEROUS DRUGS, ENACTED 1961-1985: BRIEF SUMMARIES (Cong. Res. Serv. Rep. No. 86-12 GOV, Jan. 15, 1986) (stating that from 1961-1985 nearly 90 laws, treaties, and reorganization plans relating to controlling supplies of drugs were passed by Congress). See generally E. BRECHER & EDITORS OF CONSUMER REPORTS, LICIT AND ILLICIT DRUGS (1972) [hereinafter E. BRECHER]; D. MUSTO, THE AMERICAN DISEASE (1973).

2. See, e.g., H.R. REP. NO. 808, 99th Cong., 2d Sess. 3-4 (1986) [hereinafter H.R. REP. NO. 808] (discussing congressional, presidential, and public concern about the drug epidemic and the need to find solutions).

3. See, e.g., PRESIDENT'S COMMISSION, *supra* note 1, at 187 (stating that the "history of Federal drug policy . . . demonstrates that approaches to reduce supply have been the preferred and dominant Federal response over the last 75 years"); Reuter & Kleiman, *Risks and Prices: An Economic Analysis of Drug Enforcement*, 7 CRIME & JUST. 289, 290 (1986) (stating that "[t]he primary response to the problem has been, particularly since 1981, greatly to increase efforts at reducing the supply of [marijuana and cocaine]").

4. A summary of traditional supply-side efforts is found in PRESIDENT'S COMMISSION, *supra*

By any rational measure, the supply-side "war against drugs" has failed.⁵ Only ten to fifteen percent of the illicit drugs entering the country are intercepted⁶ and the most popular illegal substances, like cocaine, remain readily available to the American public.⁷

The failure of the supply-side strategy prompted Congress to turn its attention to the demand side of the illegal drug markets. Lawmakers have acknowledged that as long as consumer demand persists,⁸ the ille-

note 1, at 187-292. For a critical analysis of attempts to reduce supplies of cocaine, see Wisotsky, *Exposing the War on Cocaine: The Futility and Destructiveness of Prohibition*, 1983 Wis. L. Rev. 1305, 1348-64.

5. See H.R. REP. No. 808, *supra* note 2, at 3 (declaring that "drug abuse is no longer a problem for a few localities, rather it 'has spread like wildfire to become not only a tragic national menace but a threat to our domestic peace and security' "); H.R. REP. No. 794, 99th Cong., 2d Sess. 1-2 (1986) [hereinafter H.R. REP. No. 794] (proposing legislation to stem "the flow of drugs into the United States, which has increased to alarming rates over the past decade [and noting that the] Customs Service concedes that it is now only possible to apprehend a very small portion of the narcotics entering the United States"); 134 CONG. REC. H7082 (daily ed. Sept. 7, 1988) (statement of Rep. Moorhead) (declaring that "every major drug-producing nation increased production of drugs in 1986 and 1987" (*citing* DEPARTMENT OF STATE, THE INTERNATIONAL NARCOTICS CONTROL STRATEGY REPORT (1988))); PRESIDENT'S COMMISSION, *supra* note 1, at 16-21. See also Sciolino, *Drug Production Rising Worldwide, State Dept. Says*, N.Y. Times, Mar. 2, 1989, at A1, col. 3 (discussing latest State Department report that cocaine and marijuana production increased in 1988 over 1987 levels; estimating 7.2% increase in worldwide coca production).

6. H.R. REP. No. 808, *supra* note 2, at 3.

7. See generally Wisotsky, *supra* note 4. General explanations for this availability include the large number of domestic consumers of illegal drugs, the countless black market transactions conducted annually, the size of the country and its borders, finite law enforcement resources, and economic and cultural phenomena that encourage drug consumption by individuals. *Id.*; see also 134 CONG. REC. H7265 (daily ed. Sept. 8, 1988) (statement of Rep. Clay) (declaring that it is "easier to buy cocaine in the United States than to buy condoms"); NATIONAL NARCOTICS INTELLIGENCE CONSUMERS COMM., THE NNICC REPORT 1985-1986: THE SUPPLY OF ILLICIT DRUGS TO THE UNITED STATES FROM FOREIGN AND DOMESTIC SOURCES IN 1985 AND 1986, at 1 (June 1987) [hereinafter NNICC REPORT 1985-1986] (stating that "[i]n 1985 and 1986, cocaine was readily available throughout the United States"); NATIONAL NARCOTICS INTELLIGENCE CONSUMERS COMM., NARCOTICS INTELLIGENCE ESTIMATE: THE SUPPLY OF ILLICIT DRUGS TO THE UNITED STATES FROM FOREIGN AND DOMESTIC SOURCES IN 1984, at 25 (1984) [hereinafter NNICC ESTIMATE 1984] (noting that "by early 1984, cocaine was so plentiful that there were substantial wholesale price reductions in many U.S. cities"); *id.* at 23-35 (noting the steady increase of both the quantities of cocaine consumed domestically and the supplies available for export to the United States from producing countries during the early 1980s).

The *Narcotics Intelligence Estimate* is produced by the cooperative efforts of the agencies of the federal government that have responsibility for drug-related law enforcement, foreign and domestic policy matters, treatment, research, and intelligence. This report presumably presents the best collective estimates of the various agencies. These agencies comprise the NNICC, which was formed in 1978. The member agencies and departments are: the Coast Guard, Customs Service, Department of Defense, Drug Enforcement Administration, Federal Bureau of Investigation, Immigration and Naturalization Service, Internal Revenue Service, National Institute on Drug Abuse, Department of State, Department of the Treasury, and the White House Drug Abuse Policy Office. The Deputy Assistant Administrator for Intelligence of the Drug Enforcement Administration is the Chair of the group. In addition, the Central Intelligence Agency and the National Security Agency participate as "observers." See generally NNICC ESTIMATE 1984, *supra*.

8. See NATIONAL INST. ON DRUG ABUSE, 1985 NATIONAL HOUSEHOLD SURVEY OF DRUG ABUSE 5

gal drug industry will continue to supply the domestic markets from which traffickers collect annual revenues of 100 billion dollars or more.⁹

Congress has addressed the problem by enacting "comprehensive" legislation intended to reduce consumer demand for illegal drugs.¹⁰ The first of these statutes was the Anti-Drug Abuse Act of 1986 (1986 Act),¹¹ legislation that remains central to the federal government's antidrug program. The programs created by the 1986 Act failed to curtail either demand for or supplies of illegal drugs,¹² and on the eve of the 1988 elections Congress passed the Anti-Drug Abuse Act of 1988 (1988

(June 1988) [hereinafter 1985 NATIONAL HOUSEHOLD SURVEY] (estimating that 36.8 million people have used marijuana, cocaine or other illicit drugs at least once during the past year). The survey estimates that the number of people using drugs nonmedically in the preceding month to be: marijuana 18.2 million, cocaine 5.8 million, stimulants 2.7 million, analgesics 2.5 million, tranquilizers 2.2 million, sedatives 1.7 million, hallucinogens 1.0 million. *Id.* at 2. These totals probably underestimate actual drug use, because the survey excluded the homeless and people living in group quarters like jails, military installations, and dormitories. The methodology included personal interviews of household members, which also may have lead to underreporting. *Id.*

Various estimates suggest that illegal drugs are in great demand in the United States. *See* S. REP. NO. 333, 99th Cong., 2d Sess. 2 (1986) [hereinafter S. REP. NO. 333] (estimating that more than 20 million people in the United States use marijuana at least once a month, over 4 million use cocaine, and one-half million are heroin addicts); H.R. REP. NO. 808, *supra* note 2, at 3 (stating that drug abuse is a national problem, occurring at all income levels and among virtually all age groups, including schoolchildren; the Nation's children and young adults "show a level of involvement with illicit drugs greater than . . . in any other industrialized nation in the world"); NNICC REPORT 1985-1986, *supra* note 7, at 66 (noting that in 1981 there were approximately one-half million heroin addicts in the United States); PRESIDENT'S COMMISSION, *supra* note 1, at 16 (noting that five to six million Americans use cocaine at least once a month); Adams & Durell, *Cocaine: A Growing Public Health Problem*, in COCAINE: PHARMACOLOGY, EFFECTS, AND TREATMENT OF ABUSE 9, 10 (National Institute on Drug Abuse Research Monograph Series No. 50, 1984) [hereinafter PHARMACOLOGY] (estimating that the number of people who had tried cocaine increased from 5.4 million in 1974 to 21.6 million in 1982; the number of current users rose from 1.6 million in 1977 to 4.2 million in 1982).

9. *See* H.R. REP. NO. 846, 99th Cong., 2d Sess., pt. 1, at 3 (1986) (stating that drug trafficking in the United States produces revenues exceeding \$110 billion annually); H.R. REP. NO. 808, *supra* note 2, at 3 (noting that "Americans spend upwards of \$100 billion a year on illicit drugs"); PRESIDENT'S COMMISSION, *supra* note 1, at 5 n.2 (estimating that the illegal drug trade ranges from \$27 billion to \$110 billion annually).

10. *See, e.g.*, H.R. REP. NO. 808, *supra* note 2, at 3 (noting that "a successful campaign against drug abuse must address both supply and demand factors"); *id.* at 4 (arguing that "enhanced law enforcement efforts—interdiction, border control, customs inspection, etc.—must be accompanied by drug abuse education and prevention programs"); 132 CONG. REC. S16,917 (daily ed. Oct. 17, 1986) (statement of Sen. Biden) (stating that "if we are truly interested in reducing drug abuse in America, we must advance new initiatives on the demand side"). This approach is consistent with economic theory. *See, e.g.*, Ehrlich, *On the Usefulness of Controlling Individuals: An Economic Analysis of Rehabilitation, Incapacitation and Deterrence*, 71 AM. ECON. REV. 307, 308 (1981) (declaring that "a rigorous examination of the effectiveness of public intervention in the market for offenses requires an explicit consideration of both private supply and demand forces in determining the equilibrium volume of offenses at any given level of public intervention").

11. Anti-Drug Abuse Act of 1986, Pub. L. No. 99-570, 100 Stat. 3207 (1986) [hereinafter 1986 Act] (amending scattered titles of U.S.C.).

12. *See infra* notes 355-56 and accompanying text.

Act).¹³ This legislation builds upon the 1986 Act,¹⁴ but contains new devices intended to reduce consumer demand.¹⁵

This Article demonstrates why the demand reduction strategies enacted in the 1986 Act have failed to deprive cocaine traffickers of their domestic market. It also explains why some demand-side provisions of the 1988 Act will be ineffective, while other provisions of the 1988 Act are rationally designed to attain the fundamental goals of the national antidrug policy. These fundamental goals include eliminating the enormous profits earned by drug traffickers,¹⁶ dismantling the organized enterprises that market illegal drugs,¹⁷ and ameliorating the damage to

13. Anti-Drug Abuse Act of 1988, H.R. 5210, 100th Cong., 2d Sess. (1988) [hereinafter 1988 Act]. The 1988 Act was introduced as H.R. 5210, and was passed, as amended, by the Senate on October 14, 1988, *see* H.R. 5210, 100th Cong., 2d Sess., 134 CONG. REC. S16,079 (daily ed. Oct. 14, 1988), and the House of Representatives on October 21, 1988. 134 CONG. REC. H11,109-217 (daily ed. Oct. 21, 1988). It was signed into law by President Reagan on November 18, 1988. *See* 24 WEEKLY COMP. PRES. DOC. 1521 (Nov. 18, 1988).

14. *See* 134 CONG. REC. H7073 (daily ed. Sept. 7, 1988) (statement of Rep. Lloyd) (stating that this legislation "builds on the omnibus drug legislation we enacted in 1986"); *see also id.* at H7094 (statement of Rep. Mazzoli) (noting that the Judiciary Committee "expanded many of the programs started" in the 1986 Act); *id.* at H7078 (statement of Rep. St. Germain) (declaring that the 1988 Act makes improvements on money laundering provisions enacted in the 1986 Act); *id.* at H7079 (statement of Rep. Torres) (stating that the 1986 Act was a major step in the war on drugs, to which the 1988 Act adds needed resources and programs); *id.* at H7080 (statement of Rep. Wylie) (recommending that changes be made in the 1988 Act to build on the effectiveness of the 1986 Act); *id.* at H7082 (statement of Rep. Hawkins) (noting that Title II of the 1988 Act contains "extremely modest programs that are intended to build on" Title IV, Subtitle B of the 1986 Act).

15. *See* discussion *infra* Part VII.

16. *See, e.g.,* S. REP. NO. 433, 99th Cong., 2d Sess. 4 (1986) (noting that "[w]ithout money laundering, drug traffickers would literally drown in cash"); H.R. REP. NO. 845, 98th Cong., 2d Sess., pt. 1, at 2 (1984) [hereinafter H.R. REP. NO. 845] (noting "[o]ne of the single most important crime problems confronting this country is the vast increase in drug trafficking in recent years" and the huge fortunes drug dealers have been able to accumulate); 132 CONG. REC. S16,019 (daily ed. Oct. 14, 1986) (statement of Sen. Hatch) (declaring that the country's youth are being destroyed by drug traffickers making huge profits, who use that wealth to commit other crimes); PRESIDENT'S COMMISSION, *supra* note 1, at 6-7 (stating that drug trafficking generates almost 38% of all organized crime activities; marijuana, cocaine, and dangerous drug trafficking are the three primary activities of organized criminal groups).

17. Breaking the economic power of organized crime is a central goal of federal antidrug policy. *See, e.g.,* S. REP. NO. 224, 98th Cong., 1st Sess. 13-17 (1983) [hereinafter S. REP. NO. 224] (noting that Congress is searching for methods to dismantle the economic power base that drug trafficking provides for organized criminal enterprises); PRESIDENT'S COMMISSION, *supra* note 1, at 71-185.

The federal government has attempted to deprive organized criminal enterprises of their illicit profits, hoping to destroy the organizations in the process. A prominent example is found in the forfeiture provisions of the Racketeer Influenced and Corrupt Organizations Act (RICO), 18 U.S.C. §§ 1961-1968 (1982 & Supp. IV 1986), and the Continuing Criminal Enterprise Act (CCE), 21 U.S.C. §§ 848, 853 (1982 & Supp. IV 1986). The legislative histories of these statutes demonstrate Congress's intent to make organized criminal activity in general, and drug trafficking in particular, unprofitable. *See* S. REP. NO. 224, *supra*, at 17 (declaring that "conviction of individual racketeers and drug dealers would be of only limited effectiveness if the economic power bases of criminal organizations or enterprises were left intact"); S. REP. NO. 612, 91st Cong., 1st Sess. 79 (1969)

society resulting from the illegal drug industry.

While various strategies must be employed to address the complex problem of reducing domestic demand, any rational program must include measures designed to reduce the market demand for illegal drugs. Market demand is the aggregate quantity of a good demanded by consumers.¹⁸ Reducing market demand is essential because criminal enterprises will continue to earn the enormous profits that provide the financial incentive to engage in the drug marketing business as long as the quantities of illegal drugs purchased by domestic consumers remain at present levels. While these organizations remain active and wealthy, the corruption, violence, and international political conflicts they foster will persist.¹⁹ A rational program to destroy the economic power bases of the illegal drug industry, therefore, must attempt to reduce market demand for their illicit products. As will become apparent later in this Article, reducing the market demand also serves to lessen the harms caused by the illegal drug industry.

A rational program also should recognize that all illegal drugs are not equally harmful, and, therefore, should emphasize strategies to reduce market demand for the most destructive drugs. This Article focuses upon methods for reducing the market demand for cocaine because cocaine is the prohibited drug of paramount contemporary con-

[hereinafter S. REP. No. 612] (arguing that "an attack must be made on their source of economic power itself, and the attack must take place on all available fronts"); see also *Russello v. United States*, 464 U.S. 16, 28 (1983) (construing the RICO statute) (stating that "[t]he broader goal was to remove the profit from organized crime by separating the racketeer from his dishonest gains"). For a more complete discussion of recent forfeiture statutes, see Cloud, *Forfeiting Defense Attorneys Fees: Applying an Institutional Role Theory to Define Individual Constitutional Rights*, 1987 WIS. L. REV. 1, 15-26.

18. See E. MANSFIELD, *MICROECONOMICS THEORY AND APPLICATIONS* 110-11 (3d ed. 1979); P. SAMUELSON, *ECONOMICS* 405-06 (11th ed. 1980).

19. Society is harmed by the crimes that addicts commit to secure money to purchase drugs. See H.R. REP. No. 844, 99th Cong., 2d Sess. 3 (1986) [hereinafter H.R. REP. No. 844] (citing studies reporting that more than one-half of arrestees in New York County and Washington, D.C. tested positive for drugs); 132 CONG. REC. H6527 (daily ed. Sept. 10, 1986) (statement of Rep. Wright) (stating that more than one-half of property crimes and two-thirds of all crimes of a violent character are related to the sale and addictive use of narcotics); Kerr, *Crime Study Finds Recent Drug Use in Most Arrested*, N.Y. Times, Jan. 22, 1988, at A1, col. 1 (reporting on claimed link between drug use and other crimes). Society also is harmed by crimes of violence committed by drug traffickers, by the corruption of public officials who participate in drug-trafficking activities, and by lost worker productivity and medical care costs, which are estimated to total \$100 billion annually. The illegal drug industry even affects the United States' relationships with other nations, particularly countries in which traffickers are active in the production and transshipment of drugs intended for domestic markets. See H.R. REP. No. 846, *supra* note 9, at 4 (stating that the violence and corruption produced by drug trafficking threatens the stability of friendly nations and the United States' national security); 132 CONG. REC. S16,916-17 (daily ed. Oct. 17, 1986) (statement of Sen. Lugar) (noting that the 1986 Act contains mechanisms to persuade, or coerce, foreign nations into cooperating with the United States' antidrug activities).

cern in the "war" against the illegal drug industry.²⁰

Cocaine is the illegal drug of primary concern for legitimate reasons.²¹ On the supply side, cocaine exemplifies the failure of government efforts to exclude foreign drugs from the domestic market. Despite increases in government expenditures for crop eradication, interdiction, and law enforcement,²² even conservative estimates indicate that supplies of cocaine have doubled during this decade.²³ Supplies are so plentiful that the purity of cocaine sold to consumers has increased

20. Cocaine and other illegal drugs can be distinguished from substances like alcohol and tobacco, which are harmful but not the subject of national prohibition.

21. See, e.g., H.R. REP. No. 808, *supra* note 2, at 3 (noting that the most disturbing fact about widespread use of various drugs was that cocaine use had risen to a new high); S. REP. No. 333, *supra* note 8, at 3 (stating that the "[a]buse of cocaine and dependence it fosters has become a serious, well-publicized problem"); AMERICAN MEDICAL ASSOCIATION, DIRECTIONS IN HEALTH: A BRIEFING ON HEALTH POLICY FOR THE NEW ADMINISTRATION AND THE 101ST CONGRESS 27 (1988) [hereinafter AMA] (estimating that 12 million Americans used cocaine in 1985 and concluding that cocaine abuse increased "more than any other drug in the 1980's"); REPORT OF THE PRESIDENTIAL COMMISSION ON THE HUMAN IMMUNODEFICIENCY VIRUS EPIDEMIC 98 (June 1988) [hereinafter FINAL REPORT] (noting intravenous cocaine use increasing in United States); *id.* at 99 (recommending that National Institute on Drug Abuse research "should particularly emphasize strategies for the treatment of intravenous cocaine use"); *id.* at 102 (noting that more cocaine is entering the country each year, with its price declining and its use increasing); 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 5 (reporting increase from 4.2 million to 5.8 million current users of cocaine, defined as use in past month, during period 1982-1985); PRESIDENT'S COMMISSION, *supra* note 1, at 18-21 (noting a 4% decrease in marijuana consumption); Brinkley, *Experts See U.S. Cocaine Problem as Continuing*, N.Y. Times, Aug. 24, 1986, at A26, col. 1 (declaring that "cocaine has quickly grown from being barely a problem at the start of this decade to the illicit drug of greatest concern today"); see also NNICC REPORT 1985-1986, *supra* note 7, at 3 (noting that the quantity of cocaine consumed in the United States from 1982-1985 increased by nearly 133%); *id.* at 34 (stating that during the period 1981-1984 heroin consumption increased 55%, while retail purity of both heroin and cocaine increased during these time periods); *id.* at 49 (noting that marijuana consumption has remained stable); E. KLEBE, DRUG AND ALCOHOL ABUSE: PREVENTION, TREATMENT, AND EDUCATION 3 (Cong. Res. Serv. Rep. No. 86-1052 EPW, Dec. 18, 1986) (citing statistics indicating that high school seniors have exhibited a general decline or leveling off of use of all drugs except cocaine during the period 1975-1985; cocaine use by this group nearly doubled, from 9.0% to 17.3% during this period); but see Berke, *Student Survey Detects Decline in Use of Crack*, N.Y. Times, Mar. 1, 1989, at A8, col. 3 (reporting that cocaine use among high school seniors had declined for second consecutive year; study does not include the estimated 15% of the target age group who are school dropouts).

22. One attribute of the federal government's effort to restrict the flow of drugs has been a significant increase in the funds expended on the law enforcement effort, particularly in comparison to the resources devoted to reducing demand. See H.R. REP. No. 794, *supra* note 5, at 2-3; PRESIDENT'S COMMISSION, *supra* note 1, at 441-42; see also discussion *infra* Parts IV & VI (analyses of antidrug budgets under the 1986 and 1988 Acts); *infra* note 393 and accompanying text (72% of fiscal year 1989 antidrug budget devoted to supply side).

23. NNICC REPORT 1985-1986, *supra* note 7, at 26 (noting that cocaine consumption in the United States increased from 31.0 metric tons in 1982 to 72.3 metric tons in 1985, an increase of 133%); see NNICC ESTIMATE 1984, *supra* note 7, at 25 (noting that 40-65 metric tons of cocaine hydrochloride were available for export to United States in 1982, which increased to 71-137 metric tons by 1984); Brinkley, *supra* note 21, at 26 (estimating that national consumption of cocaine grew from 18 tons in 1976 to 100 tons in 1985).

in recent years, while the unit price has declined.²⁴ During the same time period, domestic consumption has increased dramatically²⁵ to epidemic levels,²⁶ making cocaine a primary source of income for organized criminal enterprises.²⁷ As a result, if the federal government's attempts to dismantle the illegal drug industry are to have any chance of success, then reducing market demand for cocaine is essential.²⁸

Reducing consumption of cocaine advances other national policy goals as well. Cocaine addicts often commit crimes to fund their consumption.²⁹ Cocaine abuse has become a leading cause of drug-related medical problems; each year more users require medical treatment, suffer overdoses, and occasionally even die as a result of their cocaine use, and cocaine injection has become a significant factor in the spread of the AIDS virus.³⁰ Achieving the Nation's antidrug policy goals requires that these trends be reversed.

In addition to these policy-based reasons, cocaine deserves special legislative attention because of public expectations about the "war against drugs." The federal laws studied in this Article, in large part, are the product of public and political concern about cocaine use³¹ and

24. The purity of retail cocaine increased from 35% in 1983 and 1984 to 55-65% in 1986. During the same period, the retail price for a gram of cocaine changed from \$100-125 in 1983 to \$80-120 in 1986. When the increase in purity is taken into account, the retail price of black market cocaine was substantially less in 1986 than in 1983. NNICC REPORT 1985-1986, *supra* note 7, at 28.

25. See *supra* note 23 and accompanying text.

26. Smith, *Cocaine-Alcohol Abuse: Epidemiological, Diagnostic and Treatment Considerations*, 18 J. PSYCHOACTIVE DRUGS 117, 121 (1986).

27. PRESIDENT'S COMMISSION, *supra* note 1, at 6-7; see *id.* at 5 n.2, 16 (a report prepared for Internal Revenue Service estimates that the cocaine industry produces 40% of all income from illegal drug sales).

28. See PRESIDENT'S COMMISSION, *supra* note 1, at 68-72.

29. See *infra* note 115 and accompanying text.

30. See, e.g., H.R. REP. No. 792, 99th Cong., 2d Sess., pt. 1, at 12-13 (1986). The House Report indicated that a National Institute on Drug Abuse review of reports of drug-related incidents by hospital emergency rooms and medical examiners or coroners in 26 metropolitan areas determined that for period 1982-1984, most drugs, including heroin, marijuana, and PCP, exhibited mixed trends, with increased incidents in some areas, decreases in others. *Id.* On the other hand, the "incidence of cocaine mentions in emergency rooms . . . showed the most striking increases over the three-year period." *Id.* at 13. It is significant that these increases preceded the emergence of crack cocaine in late 1985, which exacerbated this trend. *Id.*; see also FINAL REPORT, *supra* note 21, at 94-102 (intravenous cocaine use as a means of transmission of the AIDS virus); NNICC ESTIMATE 1984, *supra* note 7, at 23 (617 cocaine-related deaths in 1984, including homicides and those resulting from polydrug use, an increase of 77% over 1983); Isner, Estes, Thompson, Costanzo-Nordin, Subramanian, Miller, Katsas, Sweeney & Sturner, *Acute Cardiac Events Temporally Related to Cocaine Abuse*, 315 NEW ENG. J. MED. 1438 (1986) [hereinafter Isner] (documenting cocaine's ability to precipitate cardiovascular events); Vobejda, *Overall Illegal Drug Use Declining, Experts Say, But Cocaine-Related Deaths and Illnesses Have Tripled in Recent Years*, Wash. Post, Sept. 14, 1986, at A10, col. 1; *Cocaine-Use Emergencies Said to Triple in 5 Years*, Wall St. J., July 11, 1986, at 26, col. 1.

31. See 132 CONG. REC. S16,915 (daily ed. Oct. 17, 1986) (statement of Sen. Dole). Senator Dole noted, while commenting upon the 1986 Act, that "sometimes the American people speak,

the increasing popularity of the more dangerous methods of ingesting the drug,³² smoking and intravenous injection.³³

Media attention devoted to the cocaine epidemic in the months preceding passage of the 1986 Act surely colored public attitudes about both the nature of the Nation's drug problems and the goals of the government's response.³⁴ The appearance of "crack" cocaine in domestic markets in 1985 and 1986 increased public concern about drug use, in part because of its harmful effects, and in part because crack is marketed at prices so low—as little as five dollars per unit³⁵—that people of all ages and in all economic strata can afford it. Given the political and public relations history of the 1986 Act,³⁶ the general public can only

and Congress listens. That's the way it has been with antidrug legislation. The momentum behind this measure was enormous." *Id.*

32. Gold, Dackis, Pottash, Extein & Washton, *Cocaine Update: From Bench to Bedside*, 5 *ADVANCES IN ALCOHOL SUBSTANCE ABUSE* 35-36, 48 (1986) [hereinafter Gold] (noting increase on national level of cocaine-related deaths and emergency room visits, including some from intranasal use); Kleber, *Cocaine Abuse: Historical, Epidemiological, and Psychological Perspectives*, 49 *J. CLINICAL PSYCHIATRY* 3, 5 (Feb. Supp. 1988) (noting dramatic increase in cocaine use and related admissions to hospitals linked to increased smoking of freebase cocaine and its cheaper form, crack; intranasal ingestion has inherent limitations on amount used due to vasoconstriction of nasal mucosa and slower onset of drug effect; freebase smoking produces extremely rapid onset—10 to 15 seconds—and has no limitations); O'Brien, Childress, Arndt, McLellan, Woody & Maany, *Pharmacological and Behavioral Treatments of Cocaine Dependence: Controlled Studies*, 49 *J. CLINICAL PSYCHIATRY* 17 (Feb. Supp. 1988) [hereinafter O'Brien] (noting that the low price of crack cocaine is related to people seeking medical treatment); Smith, *supra* note 26, at 121-22 (reporting increases in cocaine-related hospital admissions, overdoses, and overdose deaths in cities around the country during early 1980s, with Los Angeles, Denver, and Miami reporting that in 1985 cocaine was the leading cause of such deaths); *see also infra* note 101 and accompanying text.

33. *But see* Gold, *supra* note 32, at 47 (noting that a survey of 500 callers to cocaine hotline revealed that while intranasal administration was the preferred method of 61% of callers, 21% preferred freebase smoking and 18% intravenous injection).

34. For a discussion of the political and publicity factors prompting passage of the 1986 Act, *see* Kerr, *Anatomy of an Issue: Drugs, the Evidence, the Reaction*, *N.Y. Times*, Nov. 17, 1986, at A1, col. 3. For a summary of the legislative history of the Act, *see* E. KLEBE, *supra* note 21, at 13-17. The news media published numerous articles in the months preceding passage of the 1986 Act. *See, e.g.*, Henry, *Reporting the Drug Problem, Have Journalists Overdosed on Print and TV Coverage?*, *TIME*, Oct. 6, 1986, at 73; Lamar, *Crack*, *TIME*, June 2, 1986, at 16; McCollum, *The Cruellest Thing Ever*, *SPORTS ILLUSTRATED*, June 30, 1986, at 20 (cover story reporting cocaine-induced death of basketball star Len Bias); *Crack: The Road Back*, *NEWSWEEK*, June 30, 1986, at 52; *Kids and Cocaine*, *NEWSWEEK*, March 17, 1986, at 58 (magazine cover story); *see also* Barron, *Use of Cocaine, but Not Other Drugs, Seen Rising*, *N.Y. Times*, Sept. 29, 1986, at B6, col. 1; Califano, *A National Attack on Addiction Is Long Overdue*, *N.Y. Times*, Sept. 23, 1986, at A35, col. 2; Malcolm, *Worried Citizens Are Joining Officials Around U.S. to Fight Spread of Crack*, *N.Y. Times*, Sept. 14, 1986, at A26, col. 2; Musto, *Lessons of the First Cocaine Epidemic*, *Wall St. J.*, June 11, 1986, at 30, col. 1. The extent of congressional activity in this area in the months preceding the 1986 elections is evident from the fact that 82 House and Senate Bills appear in the legislative history of the 1986 Act.

35. *See, e.g.*, O'Brien, *supra* note 32, at 17 (stating that in Philadelphia "five dollars will purchase enough crack to get 'high'").

36. *See, e.g.*, 134 *CONG. REC.* S14,014 (daily ed. Oct. 3, 1988) (statement of Sen. Specter) (discussing the impact of the well-publicized death of athlete Len Bias on passage of the 1986 Act).

assume that the Act's demand-side strategies were designed to emphasize programs to reduce the consumption of cocaine.

In drafting the 1986 Act, however, Congress developed programs unlikely to affect the market demand for cocaine. This demand is generated primarily by addicts, who number an estimated 2.5 to 3 million people yet who represent only a small percentage—perhaps only ten percent—of the Americans who have used cocaine.³⁷ Nonetheless, the population of addicts consumes as much as seventy-five percent of the cocaine used in the United States.³⁸ To curtail market demand for cocaine significantly, government strategies must alter the behaviors of this group.

The 1986 Act has failed to do this. Despite congressional proclamations about its goals, this new statutory demand-side strategy was deficient both in resource allocation and in theoretical approach. The 1986 Act devoted most public resources to supply-side law enforcement activities aimed at drug traffickers, rather than to methods designed to reach addicts and other consumers. In fiscal year 1987, for example, the 1986 Act authorized more than three billion dollars in federal funds for antidrug law enforcement activities, but less than one-sixth of that amount was authorized for prevention, treatment, and education programs intended to reduce consumer demand.³⁹

Inadequate funding was not the only deficiency in these statutory programs. To the extent that Congress allocated resources to demand-side activities, most of the funds were devoted to programs insufficient to alter addict behavior. Federal demand reduction resources largely were aimed at other groups, particularly nonusers and recreational users. While these groups warrant attention, programs targeting them will not alter cocaine consumption by addicts.⁴⁰

The 1988 Act contains changes indicating that Congress has begun to grapple with the special role that addicts play in creating market demand for drugs like cocaine. For example, the statute augments federal support for state and local treatment programs, and attempts to ensure that these programs reach addicts.⁴¹ Nonetheless, even these new programs are likely to be insufficient. Although the new programs increased the federal funds devoted to demand-side pur-

37. PRESIDENT'S COMMISSION, *supra* note 1, at 16 (stating that 25 million Americans have tried cocaine, five to six million people use it at least once a month, and almost half of the regular users may be considered addicted); cf. A. WASHTON, M. GOLD & A. POTTASH, UPPER-INCOME COCAINE ABUSERS, ALCOHOL AND DRUG ABUSE IN THE AFFLUENT 51 (1984) [hereinafter A. WASHTON] (indicating that five to six million Americans use cocaine habitually).

38. See discussion *infra* Part II, subpart D.

39. For a more detailed discussion, see *infra* Part IV.

40. See *infra* Part II.

41. See *infra* Part VI.

poses—including education, prevention, and treatment—spending for these purposes still falls far short of independent projections of the sums necessary to reduce market demand among addicts.⁴² Despite the innovations contained in the 1988 Act, federal programs will fail to produce a significant reduction in current levels of addict demand for cocaine.

This analysis rests upon the assumption that cocaine is a drug with addicting properties. What is perhaps most surprising is that in recent decades both expert and lay opinion was that cocaine is *not* an addicting substance.⁴³ Only in recent years has a consensus about cocaine's addictive properties begun to emerge. This Article therefore examines current research in the fields of medicine and psychology, research which demonstrates that cocaine is an addicting substance for some users.

The fact that cocaine is addicting is significant for policymakers designing demand reduction programs because addicts persist in consuming cocaine despite the dire consequences associated with their behavior. The threat of criminal punishment does not deter addicted consumers, nor does the knowledge that cocaine threatens their careers, relationships, health, and even their lives.⁴⁴ In economic terms, addict demand is relatively inelastic.⁴⁵ As a result, reducing the market demand generated by the current addict population poses special problems for lawmakers, problems exceeding the reach of traditional antidrug legislative strategies.⁴⁶

42. See *infra* Parts V and VI.

43. See, e.g., A. WASHTON, *supra* note 37, 51 (indicating that cocaine is considered by most users to be safe and nonaddictive); Isner, *supra* note 30, at 1438 (stating that "there remains 'among many physicians . . . an entirely mistaken notion that coke taken by [the intranasal] route is safe'"); Kleber, *supra* note 32, at 4 (the myth of cocaine's safety is an important cause of the drug's increasing popularity in the 1970s and 1980s); Smith, *supra* note 26, at 121 (noting that in the 1960s and 1970s, cocaine consumers and some medical authorities erroneously described cocaine as a benign drug not producing overdose, death, toxic psychosis, or addiction); see also H.R. REP. No. 808, *supra* note 2, at 3 (stating that a recent survey of high school seniors revealed that more than one-third did not believe trying cocaine was dangerous); *infra* note 48 and accompanying text.

44. See discussion *infra* Parts II & III; see also NNICC ESTIMATE 1984, *supra* note 7, at 23 (finding 617 cocaine-related deaths, including homicides and those resulting from polydrug use, in 1984, a 77% increase over 1983).

45. See *infra* Part III.

46. A comprehensive demand reduction program should address both current and potential users. In the long term, demand is not reduced by removing current users from the marketplace, only to replace them with different consumers. Cf. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1216-17 (1985). Posner stated:

The effect of prevention in actually reducing crime depends on the elasticity of supply of offenders. If it is very high, then the principal effect of taking one criminal out of circulation is, by making room for another, to attract a person into crime from a lawful occupation or to cause a part-time criminal to allocate more of his time to crime. With regard to "business-

This Article explores these special problems with an interdisciplinary analysis utilizing medical, psychological, and economic theories. Part II examines the medical concepts of drug abuse, dependence, tolerance, and addiction, focusing on how they relate to the behavior of cocaine users. Part III then applies economic principles of the price elasticity of demand to the problem of reducing demand for cocaine. Parts IV and VI use the results of this interdisciplinary analysis to study the federal government's demand reduction programs and Part V compares these programs to the proposals made by the President's AIDS Commission for the creation of a comprehensive national treatment program to change the drug consuming behaviors of drug abusers.⁴⁷

This interdisciplinary analysis leads to the conclusion that despite the progress made in the 1988 Act, federal strategies will have a negligible effect upon the market demand for cocaine. Addicts will continue to consume cocaine in large quantities, and the illegal drug industry will continue to thrive.

The interdisciplinary analysis developed in the Article serves another function that may be of greater long-term import than its critique of the present laws. It constructs a method for evaluating the rationality of the demand reduction provisions of future antidrug legislation. Developing such methods is useful because passage of such legislation appears as certain as the coming of the next federal election.

II. COCAINE AND ADDICTION

Cocaine is addicting for some users. This fact presents policymakers with special problems because addicts continue to consume cocaine despite the possible catastrophic consequences of their behavior, including arrest; imprisonment; and loss of employment, families, friends, and physical health. Weaning addicts away from cocaine is difficult because they persist in consuming cocaine even after learning of these potential costs.

This information is important for those hoping to reduce domestic demand for cocaine, because government and clinical research data in-

like" crimes such as trafficking in drugs, the elasticity of supply of offenders may be quite high.

Id. (citation omitted).

Programs designed to deter nonusers from entering the drug consuming population, therefore, are consistent with national policy goals. Because addicts represent relatively inelastic demand, however, programs that may deter nonusers probably have little effect upon this group, which consumes most of the cocaine sold domestically. If society ignores addicts, the most significant consumers in the marketplace remain.

47. See discussion *infra* Part V.

dicates that cocaine addicts are the primary source of domestic market demand for the drug, and therefore are a population of special concern in any effort to reduce demand for the drug. The nature of cocaine addiction as well as the impact of the addict population upon demand are explored in the following sections.

A. Concepts Related to Addiction

Until quite recently, contemporary scientific and popular opinion commonly posited that cocaine was *not* an addicting substance.⁴⁸ This conclusion resulted in part from the elusive nature of addiction, a concept more complex than popular notions of a slavish physical compulsion to consume the drug.⁴⁹ The inherent difficulty of defining addiction

48. See *supra* note 43 and accompanying text; see also 1 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY 1003-15 (H. Kaplan & B. Sadock 4th ed. 1985), quoted in Kleber, *supra* note 32, at 4 (stating that "[i]f used moderately and occasionally, cocaine creates no serious problems"); 2 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY 1614-28 (H. Kaplan, A. Freedman & B. Sadock 3d ed. 1980), quoted in Kleber, *supra* note 32, at 4 (declaring that cocaine creates no serious problems when used not more than two or three times per week and that chronic cocaine abuse usually does not appear as a medical problem); Adams & Durell, *supra* note 8, in PHARMACOLOGY, *supra* note 8, at 9-10 (until recent years cocaine was considered safe and harmless).

Cocaine was not considered to be addicting, in part because "physical and psychological problems were rarely encountered by social users." Siegel, *New Patterns of Cocaine Use: Changing Doses and Routes*, in COCAINE USE IN AMERICA: EPIDEMIOLOGIC AND CLINICAL PERSPECTIVES 204, 210 (National Institute on Drug Abuse Research Monograph Series No. 61, 1985) [hereinafter CLINICAL PERSPECTIVES]; see Gawin & Kleber, *Issues in Cocaine-Abuse Treatment Research*, in COCAINE: CLINICAL AND BIOBEHAVIORAL ASPECTS 174, 174 (1987) [hereinafter COCAINE]. The standard diagnostic manual for mental health professionals, see, e.g., AMERICAN PSYCHIATRIC ASSOCIATION, DSM-III: DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (3d ed. 1980) [hereinafter DSM-III], does not list cocaine dependence as a diagnostic classification, because at the time it was written, "it was believed that the two cardinal manifestations of 'classic' drug dependence—either tolerance or withdrawal—were not brought about by chronic cocaine use." Gawin & Kleber, *supra*, in COCAINE, *supra*, at 174; see also *id.* at 175 (stating that during the 1970s users commonly shared the misperception that cocaine was a safe recreational drug).

The recent change in attitudes about the addictive potential of cocaine is highlighted by its treatment in the DSM-III-R. The revised edition of this manual recognizes that cocaine consumption can produce abuse, dependence, and addiction. AMERICAN PSYCHIATRIC ASSOCIATION, DSM-III-R: DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS 177-79 (3d ed. revised 1987).

49. See Jaffe, *Drug Addiction and Drug Abuse*, in GOODMAN AND GILMAN'S THE PHARMACOLOGICAL BASIS OF THERAPEUTICS 532, 532-33 (7th ed. 1985) [hereinafter GOODMAN AND GILMAN'S]. Physical dependence alone cannot explain the phenomenon of addiction. For example, studies of American servicemen who became addicted to heroin while serving in Vietnam report that a substantial percentage of this group voluntarily discontinued the use of heroin and did not continue as practicing addicts after returning to the United States. See, e.g., L. ROBINS, THE VIETNAM DRUG USER RETURNS: FINAL REPORT, SEPT. 1973 (1974); Robins, Davis & Goodwin, *Drug Use by U.S. Army Enlisted Men in Vietnam: A Follow-Up on Their Return Home*, 99 AM. J. EPIDEMIOLOGY 235 (1974); Robins, Davis & Nurco, *How Permanent Was Vietnam Drug Addiction?*, 64 AM. J. PUB. HEALTH 38 (Dec. Supp. 1974); Waldorf & Biernacki, *Natural Recovery from Heroin Addiction: A Review of the Incidence Literature*, 9 J. DRUG ISSUES 281 (1979).

One might extrapolate from these studies that addiction is, for some people, a social and cultural phenomenon, and that once the addict is removed from the environment in which addiction

may have contributed to the common misconception that cocaine is nonaddicting.

Because addiction encompasses a matrix of human behaviors as well as psychological, physiological, and chemical processes, analysis of the nature of addiction requires the use of several interrelated terms and concepts. These include drug abuse, compulsive drug use, tolerance, dependence, and addiction. The complexity of the definitional problem is apparent from the following discussion of the relevant terms.⁵⁰

Drug abuse is largely a social concept that varies over time and among cultures. It refers to the use of any drug in a manner deviating "from the approved medical or social patterns within a given culture." Because of this social dimension, the term "drug abuse" conveys social disapproval, and is "not necessarily descriptive of any particular pattern of drug use or of its potential adverse consequences."⁵¹

arose he simply may relinquish the behavior. This might lead to the conjecture that an overwhelming revulsion against drug use in United States society, resulting perhaps from public education, might induce many of the current generation of addicts to forego their behaviors. Drawing such analogies with the Vietnam veteran studies probably is unwarranted. The remarkable and unique experience of the American military in the Vietnam conflict may explain the contextual nature of the drug use by servicemen. Conversely, the current generation of domestic cocaine addicts has developed its behaviors within the context of American society. These addicts cannot leave their behaviors in a foreign country when they return home. Given the history of the use of intoxicants in the United States, it is unlikely that society will reject the use of all intoxicants. Thus, a climate congenial to some forms of drug use is likely to persist. *See, e.g.,* E. BRECHER, *supra* note 1, at 480-81. Finally, the impact of environment in promoting addiction suggests that the current prohibition system may encourage drug use by some people. By criminalizing drug use, society actually may be creating deviant subcultures that encourage addiction. *See id.* at 522-23.

50. There is even disagreement about the proper label. One recent government report concluded that the "terms 'drug addiction' and 'drug dependence' are scientifically equivalent," and that "both terms refer to the behavior of repetitively ingesting mood-altering substances by individuals." REPORT OF THE SURGEON GENERAL, U.S. DEP'T OF HEALTH AND HUMAN SERVICES, NICOTINE ADDICTION: THE HEALTH CONSEQUENCES OF SMOKING 7 (1988) [hereinafter SURGEON GENERAL'S REPORT]. The report then noted an increased use of the term drug dependence "in the scientific and medical literature as a more technical term, whereas the term 'drug addiction' continues to be used by [the National Institute on Drug Abuse] and other organizations when it is important to provide information at a more general level." *Id.* The authors of the report decided to use both terms synonymously. *Id.*; *see also* Byck, *Cocaine Use and Research: Three Histories*, in COCAINE, *supra* note 48, at 3, 15 (stating that "[c]onfusion over terminology, such as the use of the word[] 'addicting' . . . must be clarified").

51. Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 532. Substance abuse is not, of course, limited to drugs prohibited by law. Alcohol and tobacco are undoubtedly the most commonly abused substances in contemporary United States society. *See* 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 2 (reporting that the most current information available in June 1988 indicated the following numbers of people used intoxicants at least once in the month preceding the interviews: 113.1 million people used alcohol, 60.3 million used cigarettes, 18.2 million used marijuana, and 5.8 million used cocaine). Various commentators have discussed the abuse of other legal substances, including caffeine, prescription drugs, vitamin A, aspirin, oral contraceptives, antacids, diuretics, and laxatives. *See, e.g.,* C. EDWARDS, DRUG DEPENDENCE: SOCIAL REGULATION AND TREATMENT ALTERNATIVES 58-59 (1974).

Compulsive drug use, on the other hand, encompasses a broader range of issues including some of the consequences of drug use. As a result of drug use, "some individuals eventually develop a dependence on the drug."⁵² These individuals have a diminished flexibility in their subsequent behavior toward the particular drug. Compulsive users may continue to consume a drug in spite of "adverse social and medical consequences, and they behave as if the effects of the drugs are needed for continued well-being."⁵³ Although different individuals may experience varying intensities of need for the drug, compulsive users become preoccupied with procuring the drug, particularly when its availability is uncertain. Compulsive drug use overlaps with the related concepts of drug abuse and addiction. Like drug abuse, compulsive drug use has a social dimension. The user's intense reliance on the substance typically is deviant within cultural norms.⁵⁴ Like addiction, compulsive drug use has psychological and physiological dimensions. Compulsive drug use is frequently associated with tolerance for and dependence on the drug.

A person has developed tolerance when, after repeated administration, a given dose of a drug produces a decreased effect or, conversely, when increasingly larger doses must be administered to obtain the effects observed with the original dose.⁵⁵ Physical dependence describes the "altered physiological state (neuroadaptation) produced by the repeated administration of a drug, which necessitates the continued administration of the drug to prevent the appearance of a stereotypical syndrome, the *withdrawal or abstinence syndrome*,"⁵⁶ which will be characteristic for that drug.

Each of the preceding terms is conceptually related to the commonly accepted definitions of addiction, which traditionally incorporate some or all of these social, behavioral, physiological, and psychological concepts.⁵⁷ One commentator has suggested that virtually all definitions of addiction include one or more of the following five elements: The

52. Jaffe, *supra* note 49, in GOODMAN AND GILMAN's, *supra* note 49, at 532.

53. *Id.*

54. *Id.* Jaffe notes that "[s]ince intense reliance on the effects of self-administered drugs *per se* is generally a deviation from approved and expected patterns of use, the terms *compulsive drug use* and *compulsive abuse* are often interchangeable." *Id.* (emphasis in original). The terms "drug dependence" and "drug abuse," however, are different. *Id.*

55. *See id.* at 533. Tolerance involves a number of independent mechanisms. These include "innate tolerance" to the substance as well as "acquired" pharmacological tolerance. The latter includes pharmacodynamic tolerance, which probably is the form most consistent with the popularly understood meaning. It results from adaptive changes within affected systems, so the same concentration of the drug produces a reduced response. *Id.* at 534.

56. *Id.* at 533 (emphasis in original).

57. *See id.* at 533-34 (defining addiction as "a behavioral pattern of drug use, characterized by overwhelming involvement with the use of a drug (compulsive use), the securing of its supply, and a high tendency to relapse after withdrawal" (emphasis omitted)).

addiction (1) is central to the person's life, "taking compulsive precedence" over other more "normal" activities; (2) is associated with "identifiable intoxication or feelings of euphoria"; (3) produces a tendency in the user to increase the dosage levels, and in fact the user requires greater doses; (4) is associated with substances that modify one or more body functions; or (5) is "associated with a physical dependency" so that discontinuation or reduction of consumption results in an "abstinence syndrome."⁵⁸ Until very recently, researchers applying these criteria often concluded that cocaine use did not lead to addiction.

B. Defining Cocaine as an Addicting Substance

Cocaine is an addicting substance. While "few definitions require that all five elements be present,"⁵⁹ cocaine use can produce all of them in some users. For example, cocaine takes on compulsive precedence for some users, becoming central to their lives.⁶⁰ Cocaine also induces intoxication and euphoric effects. These effects are similar to those of the other central nervous system sympathomimetics, such as the amphetamines, with which cocaine is classified.⁶¹

These effects are linked to the pharmacological and physiological effects of the drug.⁶² Cocaine modifies certain body functions, another attribute typical of addicting substances. Cocaine is a psychomotor stimulant, yet also acts as a local anesthetic. A growing body of litera-

58. C. EDWARDS, *supra* note 51, at 54. All commentators do not agree on the relationship of all of these characteristics. Jaffe notes, for example, that the World Health Organization (WHO) definitions would classify any addict as drug dependent. Other common definitions do not treat the terms addiction and physical dependence as interchangeable. Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 533.

59. C. EDWARDS, *supra* note 51, at 54.

60. See Adams & Durell, *supra* note 8, in PHARMACOLOGY, *supra* note 8, at 10; Gawin & Kleber, *supra* note 48, in COCAINE, *supra* note 48, at 179-80; Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 553; cf. Siegel, *Changing Patterns of Cocaine Use: Longitudinal Observations, Consequences, and Treatment*, in PHARMACOLOGY, *supra* note 8, at 92, 97; Wise, *Neural Mechanisms of the Reinforcing Action of Cocaine*, in PHARMACOLOGY, *supra* note 8, at 15, 24.

61. See Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 550-51. The class of CNS sympathomimetics, including cocaine, may produce drug-induced mood elevation and reduce fatigue and the effects of sleep deprivation upon performance. Although the different drugs in this class do not have identical mechanisms, the similarities between the subjective, behavioral, pharmacological, and toxic effects of cocaine and amphetamines "are more striking than the differences." *Id.* When injected intravenously under clinical conditions, experienced subjects are unable to distinguish between the subjective effects of the two drugs. *Id.* at 550. For a discussion of the pharmacological, physiological, and metabolic effects of many of these drugs, see Weiner, *Norepinephrine, Epinephrine, and the Sympathomimetic Amines*, in GOODMAN AND GILMAN'S, *supra* note 49, at 145.

62. See Woods, Winger & France, *Reinforcing and Discriminative Stimulus Effects of Cocaine: Analysis of Pharmacological Mechanisms*, in COCAINE, *supra* note 48, at 21, 24-25; see also C. EDWARDS, *supra* note 51, at 64-75.

ture traces these effects to various neural and pharmacological mechanisms in the body.⁶³

Cocaine could be classified as an addicting substance because of its capacity to produce compulsive use, intoxication and euphoria, and physiological responses in users.⁶⁴ Indeed, some researchers have utilized this approach.⁶⁵ Disagreement exists, however, regarding cocaine's capacity to produce either dependence or tolerance.⁶⁶ Whether cocaine use can create physical dependence remains controversial for some researchers,⁶⁷ and other researchers have concluded that cocaine produces neither tolerance nor the withdrawal symptoms of dependence.⁶⁸

The theory that cocaine does not produce dependence may result in part from researchers' reliance upon the effects of opiates, like heroin and morphine, to define the responses and behaviors indicative of dependence.⁶⁹ Because cocaine produces a set of responses different from

63. See, e.g., Chitwood, *Patterns and Consequences of Cocaine Use*, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 111, 121-27; Gold, *supra* note 32, at 35; Jones, *The Pharmacology of Cocaine*, in *PHARMACOLOGY*, *supra* note 8, at 34; Siegel, *supra* note 60, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 97; Wise, *supra* note 60, in *PHARMACOLOGY*, *supra* note 8, at 15.

64. See, e.g., SURGEON GENERAL'S REPORT, *supra* note 50, at 7-8. This report defines both primary and additional criteria for drug addiction and dependence, conditions it describes as "scientifically equivalent." *Id.* The primary criteria are: "highly controlled or compulsive use" in which the user is "driven by strong, often irresistible urges"; the drug has psychoactive (mood altering) effects; and the drug acts as a reinforcer that can lead to future consumption. The report concludes that the "primary criteria listed above are sufficient to define drug dependence." *Id.* at 7. Applying this definition, cocaine undoubtedly produces addiction in some users.

The "additional criteria" apparently are of lesser significance, but "are often used to help characterize drug dependence." *Id.* at 8. Both tolerance and dependence are classified as additional criteria which addicting substances "often produce." *Id.* at 7. Thus, the Surgeon General's report apparently rejects the notion that tolerance and dependence are essential elements of the definition of addiction.

65. See, e.g., *id.* at 7-8; Clayton, *Cocaine Use in the United States: In a Blizzard or Just Being Snowed?*, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 8, 10 (stating that "[t]here is also evidence that persons who abuse cocaine develop tolerance, undergo withdrawal symptoms, and meet other criteria commonly used to describe addiction" (citations omitted)); Jaffe, *supra* note 49, in *GOODMAN AND GILMAN'S*, *supra* note 49, at 553 (noting that "[i]n terms of the compulsion to continue use, the degree to which a drug pervades the life of a user, and the tendency to relapse following withdrawal, some compulsive users of amphetamine or cocaine are addicts"); Wesson & Smith, *Cocaine: Treatment Perspectives*, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 193, 200 ("[w]e define addiction as compulsion to use the drug, loss of control over the amount used, and continued use in spite of adverse consequences. Using this definition, cocaine is unquestionably addicting").

66. See, e.g., Jaffe, *supra* note 49, in *GOODMAN AND GILMAN'S*, *supra* note 49, at 553 (stating that "[v]ery little is known of the natural history of cocaine dependence").

67. See Wesson & Smith, *supra* note 65, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 199.

68. See Jones, *supra* note 63, in *PHARMACOLOGY*, *supra* note 8, at 46; see also *DSM-III*, *supra* note 48, at 166 (concluding that cocaine can only be associated with abuse, not dependence, because "physiological dependence has not been demonstrated"); *id.* at 173 (stating that "[o]nly transitory withdrawal symptoms occur after cessation of or reduction in prolonged use").

69. See Murray, *An Overview of Cocaine Use and Abuse*, 59 *PSYCHOLOGICAL REP.* 243, 255 (1986) (stating that "[w]hether cocaine is addictive in the same sense as the opiates is argued");

those associated with opiate use, this narrow approach to defining dependence according to an opiate model may have misled researchers. To be more specific, because the chronic users' reactions to the cessation of cocaine use do not "cause major, grossly observable, physiological disruption that necessitates the gradual withdrawal of the drug, there was, at one time, reluctance to accept the withdrawal syndrome as evidence of physical dependence on cocaine or amphetamine-like drugs."⁷⁰

In recent years researchers have escaped the opiate-based definitional straitjacket and have been more likely to conclude that cocaine does produce dependence in some users. Researchers have identified a number of cocaine withdrawal reactions,⁷¹ including: (1) apathy, depression, and exhaustion following short, high dosage binges;⁷² (2) agitated depression, lethargy, insomnia, and irritability following chronic high dose usage;⁷³ (3) "a marked psychological depression" upon discontinuance;⁷⁴ and (4) a craving for cocaine, "prolonged sleep, general fatigue, lassitude, hyperphagia, . . . depression," and suppression of REM sleep after abrupt cessation of chronic administration.⁷⁵ One commentator concludes that "[a]s clinical observations accumulate, the existence of a true withdrawal syndrome following cocaine use seems compelling."⁷⁶ Cocaine apparently does produce dependence in some users.

Whether cocaine produces tolerance, a term that describes both the tendency of the user to increase the dosage levels and the user's actual need for greater doses, is less certain.⁷⁷ While some researchers have

Wise, *supra* note 60, in PHARMACOLOGY, *supra* note 8, at 15, 24.

70. Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 554.

71. See Gawin & Kleber, *Abstinence Symptomatology and Psychiatric Diagnosis in Cocaine Abusers, Clinical Observations*, 43 ARCHIVES GEN. PSYCHIATRY 107 (1986) (defining a cyclical pattern of cocaine dependency behaviors).

72. Wesson & Smith, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 199; see also Wise, *supra* note 60, in PHARMACOLOGY, *supra* note 8, at 25 (stating that "it is clear that its [cocaine's] habit-forming property, and thus its abuse liability, is independent of a classic physical dependence syndrome").

73. Wesson & Smith, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 199.

74. Cohen, *Reinforcement and Rapid Delivery Systems: Understanding Adverse Consequences of Cocaine*, in CLINICAL PERSPECTIVES, *supra* note 48, at 151, 152.

75. Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 554.

76. Jones, *supra* note 63, in PHARMACOLOGY, *supra* note 8, at 47 (citing as withdrawal characteristics depression, social withdrawal, craving, tremor, muscle pain, eating disturbance, electroencephalographic changes, and changes in sleep patterns); see also Gawin, *Chronic Neuropharmacology of Cocaine: Progress In Pharmacotherapy*, 49 J. CLINICAL PSYCHIATRY 11 (Feb. Supp. 1988); Wesson & Smith, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 200.

77. Some authorities equate addiction and dependence, which may de-emphasize the importance of tolerance. For example, the World Health Organization (WHO) replaced the term "drug addiction" with the following definition for "drug dependence":

A state, psychic and sometimes also physical, resulting from the interaction between a living

concluded that "[t]olerance develops with the frequent use of large doses" of cocaine,⁷⁸ the available information suggests a more complex set of physiological and psychological responses.

Cocaine users may develop tolerance to the subjective psychological effects of cocaine.⁷⁹ Conversely, consumption of cocaine over long intervals may produce physiological sensitization, or reverse tolerance to many of the drug's effects.⁸⁰ One result is that continued use may produce a variety of toxic effects, including toxic psychosis and death resulting from convulsions and cardiac arrhythmias.⁸¹

Nevertheless, common consumption patterns indicate that chronic users experience tolerance to some of the effects of cocaine. This conclusion seems to be supported by the fact that the "history of coca and cocaine has been a history of increasing doses, increasingly effective routes of administration, and increasing incidence of dependency and toxicity."⁸² The capacity, and compulsion, of some users to consume larger doses by more efficient means of administration,⁸³ even to the point of toxicity or death, suggests that compulsive cocaine users experience some form of tolerance.

Cocaine apparently can induce each of the social, behavioral, physiological, and psychological consequences associated with addiction.⁸⁴

organism and a drug, characterized by behavioral and other responses that always include a compulsion to take the drug on a continuous or periodic basis in order to experience its psychic effects, and sometimes to avoid the discomfort of its absence. Tolerance may or may not be present. A person may be dependent on more than one drug.

6 UNITED NATIONS WORLD HEALTH ORGANIZATION, TECHNICAL REPORT SER. NO. 407, WHO EXPERT COMMITTEE ON DRUG DEPENDENCE, SIXTEENTH REPORT (1969), *quoted in* C. EDWARDS, *supra* note 51, at 77-78; *see also* SURGEON GENERAL'S REPORT, *supra* note 50, at 7-8.

78. Cohen, *supra* note 74, in CLINICAL PERSPECTIVES, *supra* note 48, at 152.

79. *See* Fischman, *Behavioral Pharmacology of Cocaine*, 49 J. CLINICAL PSYCHIATRY 7 (Feb. Supp. 1988).

80. Post, Weiss, Pert & Uhde, *Chronic Cocaine Administration: Sensitization and Kindling Effects*, in COCAINE, *supra* note 48, at 109, 109.

81. *See* Isner, *supra* note 30, at 1438; Wesson & Smith, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 198; *see also* Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 552-53. Jaffe notes that the subjective euphoric effects of cocaine may be accompanied by various forms of "toxicity." *Id.* This "toxic syndrome" refers to perceptual side effects, acute postbinge paranoid psychosis, euphoria, hypertalkativeness, irritability, and stereotypical movement disorders. *But see id.* at 553 (noting that tolerance to the convulsant and cardiorespiratory effects of the drug has been reported).

82. Siegel, *supra* note 48, in PHARMACOLOGY, *supra* note 8, at 215-16.

83. *See supra* notes 30, 32, 43, 48, and accompanying text.

84. *See* Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 553. In the terminology of addiction, cocaine use can produce:

progressive social and occupational deterioration, punctuated by periods of hospitalization for toxic psychosis. In terms of the compulsion to continue use, the degree to which a drug pervades the life of the user, and the tendency to relapse following withdrawal, some compulsive users of amphetamine or cocaine are addicts. The risk of developing patterns of compulsive use is not limited to those who use drugs intravenously or smoke cocaine as the base. Severe

Cocaine's properties as a powerful self-reinforcer increase its capacity to produce these effects. Reinforcers are those consequences of drug use that "strengthen a behavior pattern."⁸⁵ Some drugs are powerful reinforcers, even when the user is not physically dependent,⁸⁶ so the properties of the drugs induce self-administration when supplies are available.

Drugs may act as positive reinforcers of drug-taking behavior by inducing pleasurable effects, or as negative reinforcers by terminating some aversive or unpleasant situation, for example, by alleviating pain or anxiety.⁸⁷ Cocaine provides both positive and negative reinforcement, making it a potent reinforcer.

The results of numerous experimental research projects confirm cocaine's power as a self-reinforcer. One study reported that monkeys consistently chose cocaine instead of food over an eight-day period.⁸⁸ Other studies indicate that cocaine is self-administered by every species of animal tested, in a variety of environmental settings and regardless of the method of delivery,⁸⁹ in patterns similar to those exhibited by humans.⁹⁰

The impact of a drug as a self-reinforcer logically is greater when the user develops physical dependence because administration of the drug alleviates the discomfort or distress associated with withdrawal. As a result, drugs like cocaine, which can induce euphoria and also relieve the distress resulting from dependence and withdrawal, are among the most powerful self-reinforcers.⁹¹ Experimental research studying self-administration of various drugs supports the hypothesis that cocaine is among the most powerful self-reinforcing drugs,⁹² even when compared

dependence with psychological, physical, and vocational impairment is also seen among those who use cocaine intranasally. It is not clear whether the dependence syndromes caused by amphetamine or cocaine are as persistent as that produced by opioids.

Id.

85. *Id.* at 538.

86. *Id.* at 534.

87. *See id.* at 534, 538-39.

88. *See id.* at 552.

89. *See* Cohen, *supra* note 74, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 151-52 (general survey of various studies of the reinforcing effects of cocaine on animals and humans); Johanson, *Assessment of the Dependence Potential of Cocaine in Animals*, in *PHARMACOLOGY*, *supra* note 8, at 54, 56-58.

90. *See, e.g.*, Fischman, *supra* note 79.

91. *See, e.g.*, Jaffe, *supra* note 49, in *GOODMAN AND GILMAN'S*, *supra* note 49, at 538-39; *see also* Cohen, *supra* note 74, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 153 (stating that "[i]f we were to design deliberately a chemical that would lock people into perpetual usage, it would probably resemble the neurophysiological properties of cocaine").

92. *See* Clayton, *supra* note 65, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 10 (noting that "[t]here is substantial evidence about how powerfully reinforcing cocaine is" (citations omitted)); Kozel & Adams, *Cocaine Use in America: Summary of Discussions and Recommendations*, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 221, 223 (stating that "[c]ocaine once again was singled out as the most reinforcing drug for conditioning animals in laboratory experimentation"); Woods,

with morphine, heroin, and the other opiates.⁹³

Research confirming cocaine's power as a self-reinforcer is consistent with the emerging consensus that cocaine is an addicting substance. The tendency of some cocaine users to develop compulsive use, dependence, and other symptoms of addiction is frequently reported and widely accepted. Recent scholarly literature abounds with evidence that cocaine users become addicts.⁹⁴ Indeed, defining cocaine as an addicting substance appears to be the prevailing view among contemporary researchers and clinicians.⁹⁵

Recognition that cocaine is an addicting substance has emerged in recent years for a number of reasons.⁹⁶ The well-documented increase in the number of cocaine users⁹⁷ has produced a new and larger information base, derived from clinical experience as well as from laboratory research, providing more information about the effects of the drug.⁹⁸ Changing patterns of use may have accelerated this process. Intravenous injection and smoking are increasingly popular modes of consump-

Winger & France, *supra* note 62, in COCAINE, *supra* note 48, at 21-65.

93. See Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 534. Jaffe noted for example:

[A]nimals will press a lever more than four thousand times to get a single injection of cocaine, and when given free access, they immediately begin self-administering high daily doses that may produce severe toxic effects and induce self-mutilating behavior. . . . If saline solution is substituted for cocaine or amphetamine, there is a burst of rapid lever pressing for several hours, then abruptly all responding ceases and is not resumed. In contrast, animals self-administering morphine gradually raise the daily dose over a period of weeks, then self-administer the drug at a steady rate that avoids both gross toxicity and withdrawal symptoms. When saline solution is substituted for morphine, however, the animal continues to press the lever (except during the peak of withdrawal) and does so at a slow but steady rate over a period of weeks.

Id. (citations omitted). Experimental research with human subjects seems to confirm the results of animal research demonstrating that cocaine is a powerful self-reinforcer. See, e.g., Gawin & Kleber, *supra* note 71, at 110 (correlating human behavior with clinically observed animal behaviors surrounding cocaine use); Woods, Winger & France, *supra* note 62, in COCAINE, *supra* note 48, at 43-44.

94. See, e.g., Byck, *supra* note 50, in COCAINE, *supra* note 48, at 12 (describing cocaine negatively as "a psychosis-producing, addicting . . . hard drug").

95. See, e.g., Kozel & Adams, *supra* note 92, in CLINICAL PERSPECTIVES, *supra* note 48, at 222 (stating that "cocaine has been characterized as powerfully addictive since it was acknowledged that compulsive drug-seeking behavior may be a more important criteria for addiction than the physical withdrawal assumed by the opiate model").

96. Some researchers apparently remain concerned about using concepts like dependence, traditionally applied to opioids and other narcotics, to classify cocaine. See, e.g., Gawin & Kleber, *supra* note 48, in COCAINE, *supra* note 48, at 174.

97. See, e.g., PRESIDENT'S COMMISSION, *supra* note 1, at 23-24 (noting cocaine use spreading geographically and to different socioeconomic groups; increase in adolescent use of cocaine especially alarming).

98. See Byck, *supra* note 50, in COCAINE, *supra* note 48, at 13; Gawin & Kleber, *supra* note 48, in COCAINE, *supra* note 48, at 174-75.

tion.⁹⁹ These methods probably cause more destructive effects than do eating or nasal inhalation of cocaine.¹⁰⁰ The increasing use of the more dangerous consumption methods may have produced the larger information base about the drug's harmful side effects that has come to the attention of clinicians and researchers.¹⁰¹ One result is that scientific and lay opinion now generally recognize cocaine's addicting properties.

C. *Patterns of Consumption By Cocaine Addicts*

Determining that cocaine is an addicting substance for some users does not end the inquiry. Indeed, this determination only leads to other issues, including the policy implications resulting from the addiction of some cocaine users and the impact of this group's consumption patterns on market demand for the drug.

Consumption of cocaine seems to fall into general patterns, ranging from the occasional use of small amounts to the regular use of much greater quantities.¹⁰² Most individuals initiate cocaine consumption at parties or other social settings,¹⁰³ and most cocaine users are recreational or occasional users.¹⁰⁴ These individuals are able to use cocaine

99. See 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 5-7.

100. Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 112 (reviewing several studies both supporting and disagreeing with theory that various routes of administration differ in adverse consequences produced).

101. *Id.* at 121, 124-25; Siegel, *supra* note 48, in CLINICAL PERSPECTIVES, *supra* note 48, at 216; Smith, *supra* note 26, at 117 (noting that introduction of free-base smoking method in late 1970s was a major contributing factor to escalation of cocaine abuse indicators—a trend exacerbated by use of new and destructive rapid delivery methods, including crack cocaine); cf. Gawin & Kleber, *supra* note 48, in COCAINE, *supra* note 48, at 175 (indicating that studies establish that cocaine abuse can develop with any mode of administration; the clinical consensus is that intravenous users and free-base smokers are more likely to develop significant distress, but no epidemiologic studies confirm that the need for treatment is linked to method of consumption).

102. See Siegel, *supra* note 48, in CLINICAL PERSPECTIVES, *supra* note 48, at 208-09 (defining five patterns of nonmedical cocaine use: experimental, social-recreational, circumstantial-situational, intensified, and compulsive use). Siegel's definition of compulsive cocaine use is consistent with typical definitions of addiction. His definition is characterized by high-frequency and high-intensity use of relatively lengthy duration, a preoccupation to obtain and use the drug, euphoria, tolerance, and some degree of dependency that produces physical discomfort when use is discontinued. *Id.* at 209; see *infra* notes 142-45 and accompanying text.

103. See Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 114; see also Kandel, Murphy & Karus, *Cocaine Use in Young Adulthood: Patterns of Use and Psychosocial Correlates*, in CLINICAL PERSPECTIVES, *supra* note 48, at 76, 98-106 (presenting research data concerning the family, social, and peer contexts of cocaine use among young adults).

104. Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 552; see also O'Malley, Johnston & Bachman, *Cocaine Use Among American Adolescents and Young Adults*, in CLINICAL PERSPECTIVES, *supra* note 48, at 50, 74 (stating that "[i]n fact, most of those who used [cocaine] in high school do not show a cross-time progression to heavier use in the 3 to 4 years following graduation, which suggests that dependence either develops rather slowly or develops with relatively low frequency among moderate and light users"); Siegel, *supra* note 48, in CLINICAL PERSPECTIVES, *supra* note 48, at 210.

and then abstain.¹⁰⁵

Some users, however, progress from occasional or recreational use to abuse, dependence, and addiction.¹⁰⁶ As an individual progresses to compulsive use, he consumes greater quantities of the drug, more frequently, and often changes to more potent forms of ingestion.¹⁰⁷

Because different variables define consumption patterns, studies measuring cocaine consumption typically examine the frequency of use, method of ingestion, and quantity consumed in order to classify behavior patterns.¹⁰⁸ Frequency of use is a primary defining criterion of consumption patterns. The population of addicts is a minority of users, yet addicts consume cocaine more frequently than do other consumers. A 1982 study of young adults revealed that 28.2 percent of the sample population had ever used cocaine. About one-quarter of this group had used cocaine one to two times, one-third had used it three to ten times, another one-third (9.1 percent) had used it eleven to ninety-nine times, and just under ten percent of the users had consumed cocaine more than one hundred times.¹⁰⁹

When these data are considered together with longitudinal studies reporting on cocaine use over time, it appears that some people consume cocaine once or twice, then never again.¹¹⁰ Others use it occasionally over long periods of time without demonstrating abuse, dependence, or addiction. A smaller number of users, however, pro-

105. Different studies present varying data concerning the extent of cocaine use. See generally CLINICAL PERSPECTIVES, *supra* note 48. For example, a 1982 survey revealed that while a substantial minority of the males born between 1948 and 1964 had used cocaine, a smaller percentage of each group reported use during the past year, and a much smaller group reported any use during the past month. See Clayton, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 11; see also Abelson & Miller, *A Decade of Trends in Cocaine Use in the Household Population*, in CLINICAL PERSPECTIVES, *supra* note 48, at 35, 44 (stating that "[t]urning to patterns of cocaine consumption, first, the cocaine user is an *occasional* user. . . . [a]t least as compared to marijuana, cocaine appears to be a drug of occasional use" (emphasis in original)).

106. Clayton, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 10, 31.

107. For a description of intranasal ("snorting"), intravenous ("injection"), and smoking ("free base") methods of ingestion, see Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 552. Jaffe notes that "[w]hen smoked, absorption of the free base from the lung is rapid and efficient." *Id.* (citation omitted). One study of a small sample of adolescent cocaine users revealed that 85% were intranasal ingesters, and the remaining 15% were divided almost equally between free-base smokers and intravenous injectors. All the users in the latter two groups had initiated cocaine use by "snorting." Gold, Washton & Dackis, *Cocaine Abuse: Neurochemistry, Phenomenology, and Treatment*, in CLINICAL PERSPECTIVES, *supra* note 48, at 130, 139; see also Siegel, *supra* note 48, in CLINICAL PERSPECTIVES, *supra* note 48, at 209-13. *But see* 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 6 (1985 data fail to reflect extent of smoking, because "crack" did not appear nationally until late in that year).

108. See, e.g., Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 118-27.

109. Abelson & Miller, *supra* note 105, in CLINICAL PERSPECTIVES, *supra* note 48, at 44.

110. Cf. Murray, *supra* note 69, at 256 (stating that "[t]he greatest number (80%) of those who try cocaine do not become compulsive users").

gresses to regular, compulsive use.¹¹¹

The method of ingestion may affect this progression. Smoking cocaine (and perhaps injection) produces physiologic changes that may lead to addiction more rapidly than other methods of consumption. Smoking and injecting also may increase the self-reinforcing effects of the drug, effects which motivate users to consume greater quantities. The shift to these more potent forms of ingestion thus is related to more frequent cocaine consumption and concomitant increases in the quantity consumed.¹¹²

The quantity of the drug consumed is another important variable used to define behavior patterns. Once again, many users exhibit a quantitative progression. The available data suggest that cocaine consumers "initiate at a low level of use and progress to higher levels in subsequent years."¹¹³ This progression to more frequent use of larger quantities, often by more potent forms of ingestion, leads some users to addiction.

Once a user reaches levels and patterns of consumption consistent with addiction, the drug takes precedence in his decisionmaking. An addict will continue to use cocaine in spite of adverse consequences, and will choose to consume cocaine rather than avoid the harmful consequences of his behavior. A growing body of data supports this analysis. For example, a nationwide study of callers to a cocaine helpline revealed that "[o]ver 90% reported adverse physical, psychological and social/financial consequences associated with their cocaine use."¹¹⁴

The adverse consequences reported included the loss of jobs (twenty-five percent), spouses (twenty-five percent), friends (forty-four percent), and all monetary resources (thirty-four percent), as well as automobile accidents (eleven percent), fighting and violent arguments (fifty-nine percent), and attempted suicide (nine percent). The respondents reported negative psychological effects and a variety of physical effects, ranging from sleep problems to seizure and loss of consciousness. A substantial percentage of the sample reported engaging in crim-

111. See also Kandel, Murphy & Karus, *supra* note 103, in CLINICAL PERSPECTIVES, *supra* note 48, at 80.

112. See, e.g., 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 5 (noting that "[b]ecause of the rapid and short duration of effects, smoking freebase is dangerous and results in the rapid development of drug dependency"); *id.* at 7 (reporting a direct relationship between high frequency of cocaine consumption and snoking).

113. Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 118. For purposes of this analysis, low-level use is defined as ingestion not more frequently than weekly of a quantity less than one gram per occasion. High-level use is defined as primarily daily intravenous ingestion of more than one gram of cocaine per occasion. *Id.*

114. Gold, Washton & Dackis, *supra* note 107, in CLINICAL PERSPECTIVES, *supra* note 48, at 136.

inal behavior to finance their cocaine purchases, including dealing cocaine (thirty-six percent) and stealing from their families, friends, or workplaces (twenty percent).¹¹⁵

What is most striking about this self-defined population of addicts is how many reported conscious awareness of their plight. Two-thirds of the sample reported that they felt addicted to cocaine, three-quarters reported having lost control over cocaine use, and eighty-three percent stated that "they were unable to refuse cocaine when it was available."¹¹⁶ The researchers concluded that "despite repeated attempts to stop cocaine use," the addicts were "unable to stay away from cocaine for as long as 1 month."¹¹⁷

Addicts' inability to abstain from cocaine use, particularly over a lengthy period of time, inhibits the development of successful strategies for dealing with this population. Because many cocaine users exhibit cycles of use and abstinence it is difficult to measure the long-term effects of specific antidrug programs. Addicted cocaine users, as well as social consumers, may exhibit periods of binging, interrupted by periods of abstinence, rather than uninterrupted daily use.¹¹⁸ Cocaine addicts voluntarily may stop their use, only to relapse—perhaps repeatedly.¹¹⁹ This pattern makes it difficult for planners to assess the

115. *Id.* at 136-37. Not surprisingly, heavy use was more frequently associated with adverse physical or health consequences. See Chitwood, *supra* note 63, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 121-27.

116. Gold, Washton & Dackis, *supra* note 107, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 136. Similar results were found in studies of use by specific age groups or in geographical areas. *Id.* at 138-43; see also Siegel, *supra* note 60, in *PHARMACOLOGY*, *supra* note 8, at 100-06.

117. Gold, Washton & Dackis, *supra* note 107, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 136. *But cf.* Chitwood, *supra* note 63, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 117. The Chitwood study indicates that a majority of users voluntarily stop using cocaine for periods of one month or longer. *Id.* The methodology reported makes it difficult to determine how many of the sample population of cocaine users might fit the definition of addiction. The respondents in the study emphasized the negative consequences associated with cocaine use and social pressure by family or friends as the primary reasons for stopping use. Only 12% reported stopping temporarily because the price of the drug was too high. *Id.*

118. See Siegel, *supra* note 60, in *PHARMACOLOGY*, *supra* note 8, at 100-04. Siegel's longitudinal study reported that "all users had episodes of decreased use or abstinence interposed between periods of use in their normal patterns. Thus, users reported abstaining from cocaine for periods ranging from a few days to several months." *Id.* Variations of this pattern were reported for both social users and compulsive users. Abstinence occurred not only when cocaine was unavailable, but also during periods when the drug was available to abstaining users. *Id.* *But cf.* O'Brien, *supra* note 32, at 17 (noting that short-term abstinence is not meaningful because of the proclivity of cocaine dependent users to relapse after detoxification and treatment).

119. See, e.g., Chitwood, *supra* note 63, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 117. Two-thirds of the respondents in one study reported voluntary cessation of cocaine use for one month or longer on at least one occasion. *Id.* Approximately 40% reported stopping voluntarily on at least three occasions. *Id.* The reasons given for stopping included health concerns, pressure by family and friends, and the high purchase price of cocaine. *Id.* The respondents were 160 individuals over the age of 18 years selected from a population of cocaine users. Cessation of cocaine use

success of any method designed to reduce consumption, because a cessation of consumption by any user may be only temporary.¹²⁰

Economic theory provides an even more troubling insight into the difficulty of altering addict behavior. In economic terms, addict demand for cocaine is relatively price inelastic.¹²¹ When faced with dire consequences, including economic, family, social, and medical catastrophes, cocaine addicts are likely to continue to consume the drug, even when they are subjectively aware of the pernicious effects of their behavior.¹²² As a result, many typical methods of social control are incapable of altering their behavior.

For example, the threat of criminal sanctions sufficient to deter most individuals from consuming cocaine will fail to dissuade addicts. Reducing demand among that population will require methods other than enforcement of the criminal laws. Similarly, education programs that teach the general public about the dangers of cocaine have merit, but they are unlikely to affect consumption by the addict population. Addicts who are aware of the harmful consequences of their behavior will continue to consume the drug because knowledge of the harmful consequences of cocaine use alone is an insufficient incentive to change their behavior. Inducing addicts to stop their drug use will require types of intervention other than enforcement of the criminal laws and general public education.

was temporary, because the respondents had returned to cocaine use. *Id.*

120. *Id.* A number of cocaine and heroin addicts voluntarily discontinue use. It is characteristic of drug dependence that some people discontinue drug use on their own. See SURGEON GENERAL'S REPORT, *supra* note 50, at 255 (stating that "[d]ata averaged across 10 studies show that approximately 30 percent of opioid-dependent persons spontaneously remit"). *But see id.* at 256. This report suggests that so-called "spontaneous remitters" are those "who have . . . learned to deliver effective treatments to themselves or for whom environmental circumstances have fortuitously changed in such a way as to provide a therapeutic situation," and that the individuals most likely to quit using tobacco and opioids without formal treatment tend to have shorter histories of drug use and/or be at lower levels of dependence. *Id.*

The relevance of this analysis to cocaine addicts is unclear. For example, cocaine addicts may be unable to stop consumption in spite of the "loss of pleasurable, and the upsurge of unpleasurable effects." Cohen, *supra* note 74, in CLINICAL PERSPECTIVES, *supra* note 48, at 156. Another complicating factor is that cocaine users tend to consume multiple legal and illegal drugs. See, e.g., Abelson & Miller, *supra* note 105, in CLINICAL PERSPECTIVES, *supra* note 48, at 45; Clayton, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 21; Wesson & Smith, *supra* note 65, in CLINICAL PERSPECTIVES, *supra* note 48, at 196. This polydrug use complicates the process of identifying the particular consequences of cocaine consumption. See Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 117.

121. See discussion *infra* Part III.

122. Of course, if an addict is able to quit, he is unlikely to call a cocaine hotline. To the extent this is true, the sample of callers may not be representative of the entire population of past and present addicts. On the other hand, the sample may be more representative of the population of addicts continuing to create demand. Cf. Washton, *Nonpharmacologic Treatment of Cocaine Abuse*, 9 PSYCHIATRIC CLINICS N. AM. 563, 563 (1986) (declaring that cocaine abusers generally seek treatment "only when drug-related problems reach crisis levels").

Recognizing that law enforcement and general public education will not alter the addict's behavior is an important first step in devising rational programs to reduce market demand for cocaine. The importance of altering addict behavior is revealed by data indicating that addicts have a disproportionate impact on the market demand for cocaine.

D. The Impact of Cocaine Addicts on Market Demand

A small percentage of the total population of cocaine users becomes addicted to the drug. Nonetheless, this relatively small group of addicts consumes most of the cocaine used in this country. These two conclusions derive from the data available from government, clinical, and field research. If these data are correct, government programs intended to combat the illegal drug industry by reducing market demand for cocaine should emphasize strategies to change the drug using behaviors of this addict population. The following discussion examines the available data to explore the validity of these hypotheses.

An objective analysis of the patterns of drug use in this country must acknowledge the qualitative limits of the present quantitative data, limits resulting from the criminalization of the drug industry. The illegal drug market is conducted in secret. Participants attempt to shield, not reveal, the existence, nature, and extent of their activities.¹²³ As a result it is difficult to determine critical facts about the drug consuming population, including the actual number of people who use illegal substances, the exact quantities they consume, or the amount of money they spend to purchase the substances. Knowledge of critical facts about supplies is similarly limited. One cannot know the actual quantities produced, imported, and distributed, nor the actual revenues received by the distributors at all levels.

As a result, quantitative analyses must be based upon estimates generated by government agencies, clinicians, and medical researchers.¹²⁴ There are a number of reasons to question the validity of the

123. This problem should not be underestimated for illegal behavior, because even legal—but unpopular—behavior may yield inaccurate research data. See SURGEON GENERAL'S REPORT, *supra* note 50, at 567-68 (stating that "[r]espondents' sensitivity to social stigma associated with smoking is cited as a major reason why persons might underreport their smoking status").

124. In analyzing the available data concerning the production, distribution, and consumption of cocaine, it is important to remember that accurate information is difficult to obtain from people involved in the cocaine industry precisely because their activities are illegal. As a result, most information concerning the production and distribution of cocaine and other prohibited substances consists of estimates. See, e.g., NNICC ESTIMATE 1984, *supra* note 7, at i (noting that "[s]ince production and distribution of illicit drugs are, by definition, illegal, there are little reliable data upon which to base estimates of the quantities of drugs involved. . . . [i]t is believed, however, that [the estimates] are sufficiently accurate that the general trends portrayed can be considered to be reliable").

available data. Methodological questions about the techniques and assumptions used to calculate the nature of the illegal drug industry persist.¹²⁵ Some questions concern the objectivity of those producing the data—government agencies and medical researchers may benefit from overestimating the problem of drug use in this country.¹²⁶

Despite these concerns, analyses based upon these estimates are useful for two reasons. First, these estimates are the best source of data about the illegal drug industry available at the present time, and serve as the only basis for discussion of quantitative issues. Second, these estimates apparently are the basis for important policy decisions by the legislative and executive branches of government.¹²⁷ Whatever the shortcomings of the data, Congress has enacted legislation and allocated resources based upon these estimates.¹²⁸ It is therefore important to study this body of data to determine whether the government actions are rational responses to the information.

In the face of legitimate concerns regarding the reliability of present data, it is reassuring to discover that the available sources present a generally consistent picture of the role addicts play in generating the market demand for cocaine. The quantitative information produced by government agencies, by clinicians, and by medical researchers suggests that the majority of users consume cocaine only occasionally, recreationally, sporadically, or experimentally. Because of these circumscribed consumption patterns, this numerical majority of social and recreational users generates a disproportionately small percentage of the demand for the drug. The smaller group of users who are addicts consumes cocaine more frequently and in greater amounts than other users. As a result, addicts create the greatest individual and collective demand for the drug.

The data reported by government agencies, clinicians, and researchers support the hypothesis that addicts comprise a small minority of the population of users, yet generate most of the market demand for cocaine. For example, one report by the National Narcotics Intelligence

125. See Reuter, *The (Continued) Vitality of Mythical Numbers*, 75 PUB. INTEREST 135 (1984) (discussing the unreliability of the government estimates of the numbers of drug users, the extent of their criminal activities, and the size of the illegal drug market).

126. See *id.* at 144-47 (postulating reasons why government agencies and other interested parties may be satisfied with inaccurate data concerning the nature and extent of the illegal drug industry).

127. See, e.g., H.R. REP. NO. 844, *supra* note 19, at 3-4; H.R. REP. NO. 808, *supra* note 2, at 3-4; H.R. REP. NO. 792, *supra* note 30, at 11-13.

128. See, e.g., H.R. REP. NO. 844, *supra* note 19, at 33-34 (relying on National Institute on Justice funded study); H.R. REP. NO. 792, *supra* note 30, at 11-13 (relying on estimates by NIDA and the Drug Abuse Warning Network (DAWN)); S. REP. NO. 333, *supra* note 8, at 2. See generally PRESIDENT'S COMMISSION, *supra* note 1.

Consumers Committee (NNICC) estimates that fifteen percent of "regular users" consumes seventy-six percent of the cocaine imported to the United States.¹²⁹ The NNICC report classifies cocaine users into four groups. The smallest group consists of "heavy users," who comprise only 6.9 percent of the population of cocaine users, yet consume 63 percent of the cocaine used domestically. Another group of high level "regular users" comprise only 8.1 percent of the population of cocaine users, yet consume 13 percent of the drug. Although not classified according to standard definitions of addiction, these two groups appear to consist of addicts. Their consumption patterns are consistent with addiction,¹³⁰ and the estimated population of these two groups parallels other federal estimates of the number of cocaine addicts in the Nation.¹³¹

Conversely, those who use cocaine least frequently constitute the largest population of users, yet consume the smallest quantities.¹³² The largest group contains people who have used cocaine in the past year but not in the last month. These individuals comprise fifty-five percent of the population of "regular" users but consume only six percent of the drug.¹³³ A fourth group consumes cocaine one to four times per month.

129. See NATIONAL NARCOTICS INTELLIGENCE CONSUMERS COMM., THE SUPPLY OF DRUGS TO THE U.S. ILLICIT MARKET FROM FOREIGN AND DOMESTIC SOURCES IN 1981, at 107 (1983) [hereinafter NNICC REPORT 1981], cited in S. WISOTSKY, BREAKING THE IMPASSE IN THE WAR ON DRUGS 15 (1986).

130. *Id.* The report defined heavy use to be consuming cocaine at a 0.45 purity level on five or more days per month. *Id.* The high-level regular users also consume cocaine on five or more days per month. *Id.* This latter group was distinguished from heavy users by the average number of administrations (three instead of four) and by a lower purity (0.30 rather than 0.45) of the drug consumed. *Id.* These definitional criteria make it difficult to determine how often these individuals actually consume cocaine, but other studies, discussed *infra*, suggest that these heavy and high-level regular users may administer as frequently as daily.

131. The number of heavy and high-level regular users reported in 1981 is consistent with later estimates of the number of cocaine addicts. The NNICC REPORT 1981, *supra* note 129, cited in S. WISOTSKY, *supra* note 129, estimated a 1981 population of 2.25 million users in these two groups (1.03 million heavy users and 1.22 million high-level regular users). *Id.* In 1985, the federal government estimated the domestic population of cocaine addicts to be 2.5 to 3 million people. PRESIDENT'S COMMISSION, *supra* note 1, at 16 (citing *The Cocaine Abuse Problem in the U.S.: Special Hearing Before the House Select Comm. on Narcotics Abuse and Control*, 99th Cong., 1st Sess. (1985) (prepared statement of Dr. Arnold M. Washton) (stating that there are five to six million regular cocaine users, of whom "almost half may be considered addicted"). The apparent increase in the number of addicts from 1981 to 1985 is consistent with the increase in the population of cocaine users during the same period. See 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 5 (reporting increase from 4.2 million to 5.8 million current users of cocaine (use in past month) during period 1982-1985).

132. Government estimates of the percentage of demand created by each group of users were derived from a simple formula: Number of annual users multiplied by the amount consumed at 100% per session multiplied by the average number of sessions per person per year equals total metric tons. The figures plugged into this formula were based upon estimates of the number of users, consumption patterns, and the total tonnage of cocaine imported and consumed. See NNICC REPORT 1981, *supra* note 129, in S. WISOTSKY, *supra* note 129.

133. *Id.* The two remaining groups were estimated to administer cocaine at the same level of

This fourth group represents thirty percent of the total population of cocaine users, but uses only eighteen percent of the drug.¹³⁴ Thus, eighty-five percent of the population of cocaine users consume only occasionally, and probably recreationally, and account for only twenty-four percent of the drug used in the Nation.

These government estimates are consistent with data generated by clinicians and medical researchers. For example, a study of south Florida cocaine users over eighteen years of age¹³⁵ categorized the subjects based upon the method and frequency of ingestion, and the quantity consumed. Analysis of these factors produced the following three-tier classification of cocaine consumption: (1) low-level use—primarily intranasal ingestion no more than weekly of less than one gram per occasion; (2) medium-level use—usually intranasal ingestion more than weekly of more than one gram per occasion or intravenous ingestion up to once a week of less than one gram per occasion; and (3) high-level use—primarily intravenous ingestion daily of more than one gram per occasion. The third group, individuals who inject at least one gram of cocaine daily, appears to conform to standard definitions of addiction.

Analysis of the data reported in this study again suggests that the minority population of addicts creates most of the demand for cocaine.¹³⁶ The actual quantities consumed by these three groups is difficult to calculate, because the study used estimated ranges for both the number of administrations and the quantities consumed. Nevertheless, the data are sufficient to permit some general analysis. For purposes of clarity, the discussion of these data will focus upon the patterns of consumption in the first year of use reported by this sample population and will assume a population of one hundred users.¹³⁷

purity (.30) as high-level regular users. The larger groups, however, consume cocaine with less frequency than the higher level users. *Id.*

134. *Id.*

135. Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 118.

136. *Id.* at 117-19. Only 4% of the population of self-reported cocaine users was classified as high-level users during all periods of time measured by the study. *Id.* Another 37% reported that they had reached that level of consumption at some point in their cocaine careers. *Id.* Slightly more than one-quarter (27%) reported high-level use during the past three months. *Id.* A majority of the users (59%) never reached the high level of use. *Id.* The fact that a large percentage of those who reported high-level use reported this behavior during the past three months and not during the first year of use suggests the common progression from recreational use to addiction. *See supra* notes 103-08 and accompanying text. These data also suggest that the following analysis actually underestimates the demand created by addicts because it is based upon reports of consumption during the first year of use, while most who become addicts do so after that period of time.

137. *See* Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 118-19. This study classified use into three time periods: The first year of use, the period of highest use, and use during the past three months. The resulting data suggest that most cocaine users never reach the level of "high use," that only a small minority consume at that level throughout their cocaine careers, but that a larger minority progresses from irregular use to high-level use. *Id.* For example,

During the first year of use seven of the one hundred users would inject at least one gram of cocaine daily. This group of addicts would thus consume at least forty-nine grams of cocaine per week,¹³⁸ and even more if these individuals injected quantities larger than one gram daily.

The twenty-four people classified as medium-level users would consume more than one gram per week if they ingested intranasally, but less than a gram each if injecting intravenously. Assuming an average of a gram per week, the medium-level users would consume twenty-four grams per week, or less than one-half the total for the seven addicts.¹³⁹

Sixty-nine people were low-level users, consuming "less than one gram" per week. The study does not specify how much less. Assuming, however, that a low-level user consumed one-half gram per week, the total consumed by this group would be 34.5 grams.¹⁴⁰ Obviously a change in that quantitative assumption would alter the total. The consumption of one-quarter gram each would produce group consumption of only seventeen grams per week. Regardless of the assumption chosen, the seven addicts obviously would consume more cocaine than the sixty-nine low-level users.

While less dramatic and less specific than the NNICC figures, these estimates suggest that the seven percent of the population of users classifiable as addicts generates a large proportion—probably more than one-half—of the demand for cocaine.¹⁴¹ Although this type of data analysis is unsatisfactory if we are seeking mathematical proof, it is instructive for present purposes. This analysis lends credence to government estimates that 6.9 percent of the cocaine abusers consume 63 percent (and together with 8.1 percent of the users consume 76 percent) of the drug domestically, and supports the premise that a small minority of cocaine addicts generates most of the market demand for the drug.

only 7% of this population of cocaine users reported a high level of use during the initial year of consumption, and that same group inevitably reported a high level of use during their heaviest period of use. *Id.* Yet only 4% of that group reported a high level of use during the past three months. *Id.* On the other hand, 24% reported a medium level of use during the first year, but of that group 16% reported a high level of use during the period of heaviest use and 11% reported a high level of use during the past three months. *Id.* The largest group, 69%, reported a low level of use during the initial year. *Id.* Of this group, 18% reported a high level of use during the period of heaviest use, and 12% during the past three months. *Id.*

138. *Id.* (using the formula $C = U \times Q \times N$, where C is the total consumed, U is the number of users, Q is the quantity consumed each day, and N is the number of administrations of that quantity per week, assuming only one gram used daily).

139. *Id.* (using the formula $C = U \times Q \times N$, described *supra* note 138, assuming one gram used weekly).

140. *Id.* (using the formula $C = U \times Q \times N$, described *supra* note 138).

141. These calculations probably underestimate the demand created by addicts because most people who reach this condition do so after the first year of use. *See supra* note 136 and accompanying text.

Other research data are consistent with this hypothesis. For example, another study, which examined cocaine use over time,¹⁴² classified cocaine users either as social-recreational users (one gram per week), as circumstantial-situation users (two grams per week), as intensified users (three grams per week), or as compulsive users.¹⁴³ The latter two groups comprised approximately ten percent of the population, yet apparently produced the greatest quantitative demand for cocaine.

Members of the latter two groups, intensified and compulsive users, should be considered addicts. Four percent (four of ninety-nine) of the subject population became intensified cocaine users, whose consumption was characterized by long-term use at least once a day. This group reported engaging in repeated runs of several months duration and did not return to social patterns of use. This behavior differed from social-recreational users who described even their periods of intensified use as short-term "runs or binges."¹⁴⁴ Another group of five individuals, or five percent of the test group, were engaged in "compulsive use."¹⁴⁵ This consisted of high frequency and high intensity levels of use of long duration, producing dependence.

The behavior of the compulsive and intensified users is consistent with the standard definitions of addiction. Because both groups ingested cocaine on a daily basis over long periods of time and also engaged in repeated "runs" of several months duration, they consumed more cocaine than did the more moderate social and situational users. These data indicate that an addicted minority of users, ranging from four percent to ten percent, uses larger quantities of cocaine more frequently than do nonaddicted users, and thus generates a majority of the domestic demand for the drug.

The data from these various studies support the basic premise of this Article. Although the studies use different methodologies, examine different populations, and produce different numbers, each provides data leading to the same conclusions.¹⁴⁶ All the studies indicate that a minority of the population of cocaine users, in the range of seven per-

142. See Siegel, *supra* note 60, in PHARMACOLOGY, *supra* note 8, at 98-108.

143. *Id.* at 106.

144. *Id.* at 101.

145. *Id.* The study defined compulsive use as:

[C]haracterized by high frequency and high intensity levels of relatively long duration, producing some degree of dependence. The dependence is such that the individual user does not discontinue such use without experiencing physiological discomfort or psychological disruption. The five compulsive users found here were all cocaine free base smokers. Use tended to occur in episodes of continuous smoking for periods of several hours to 96 hours.

Id.

146. See also Abelson & Miller, *supra* note 105, in CLINICAL PERSPECTIVES, *supra* note 48, at 44-45.

cent to fifteen percent, generates most, perhaps sixty-six percent to seventy-five percent, of the market demand for the drug. While the studies do not always use the standard definitions of addiction to define their subject groups, the various classifying criteria employed indicate that the individuals comprising this minority population are addicts.¹⁴⁷

These results have important policy implications. They demonstrate that a rational program to reduce market demand for cocaine must include strategies and methods designed to change the behavior of the addict population. Efforts to reduce or deter cocaine consumption among nonaddicts may be useful, particularly in developing a long-term demand-reduction strategy, but market demand for cocaine will remain at high levels in the foreseeable future if lawmakers continue to ignore the group that consumes most of the drug.

Unfortunately, the medical and psychological theories discussed in this Article indicate that current legislative approaches are insufficient to alter the behavior of significant numbers of addicts. It is interesting and instructive to note that the relevant principles of economics lead to the same conclusion.

III. ELASTICITY OF DEMAND AND COCAINE ADDICTION

Like any other market system, the market in illegal drugs is an appropriate subject for economic analysis¹⁴⁸ and economic theory helps to explain why current government efforts will fail to reduce demand for cocaine among the population of addicts.¹⁴⁹ Economic analysis is particularly appropriate because recent legislation attempts to utilize the anticipated economic effects, both direct and indirect, of the prohibition system to reduce demand for illegal drugs.

Imposing criminal penalties for the possession and use of small quantities of illegal drugs exemplifies legislative attempts to affect consumer demand directly. The indirect approach includes efforts to increase the costs of production and distribution, and to curtail supplies, both of which should raise market prices, in turn reducing demand for illegal drugs. Economic theories concerning the price elasticity of de-

147. Cf. PRESIDENT'S COMMISSION, *supra* note 1, at 16 (estimating that almost one-half of the five to six million regular cocaine users are addicts).

148. An economist might define market transactions involving prohibited drugs as "[v]oluntary exchanges incidental to activities that the state has outlawed." Posner, *supra* note 46, at 1200. Economists likely agree that these are "explicit markets for voluntary exchanges in all illicit goods and services . . . expected to obey all the fundamental laws of demand theory." Ehrlich, *supra* note 10, at 309.

149. Of particular interest to those persons wishing to reduce demand for crimes is the fundamental assumption that actors in the criminal justice system, such as victims, law enforcers, and potential offenders including the "buyers of illegal goods and services . . . all behave according to the fundamental rules of maximizing behavior." Ehrlich, *supra* note 10, at 308.

mand clarify why neither approach will induce cocaine addicts to change their consumption patterns. Each of these issues is discussed in the following sections.

A. *Indirect Effects Upon Demand: Price, Supply, and the Elasticity of Demand*

A basic assumption of microeconomic market theory is that the "quantity of a good that people will buy at any one time depends on price."¹⁵⁰ An inverse relationship generally exists between price and demand. More goods are purchased at a lower price, less at a higher one.¹⁵¹

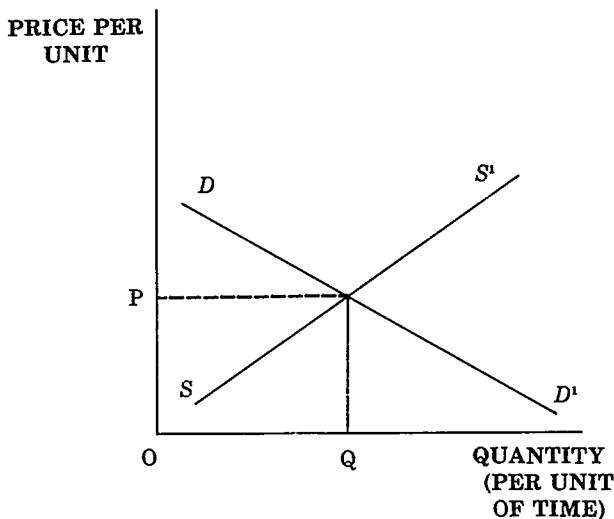
The Nation's antidrug efforts utilize this principle by attempting to force producers and distributors to increase the prices charged for illegal drugs. Efforts to enforce the criminal laws generally are intended to raise the input costs of producers and distributors, and to curtail supplies. If all other variables remain constant, both of these methods should force the price of illegal drugs higher, in turn reducing demand.

The additional input costs resulting from prohibition for producers

150. P. SAMUELSON, *supra* note 18, at 53.

151. *Id.* at 54-55. The "law of downward-sloping demand" describes this relationship in the demand curve. *Id.* Conversely, the supply curve typically slopes upward and to the right. For any given commodity, the equilibrium price is the intersection of the supply and demand curves. *Id.* at 57-58. This point is presented graphically in Figure 1, where DD' is the demand curve, SS' is the supply curve, and OP is the equilibrium price.

FIGURE 1



and distributors of illegal drugs include the costs of hiring employees, buying new equipment, paying bribes to government officials, and other expenditures incurred to avoid detection.¹⁵² Prohibition adds another cost as well. Drug producers and distributors presumably require compensation for the risks associated with engaging in illegal behavior. Prohibition thus creates a crime "tax." If this cost is passed on to consumers, prices will increase, assuming all other variables remain constant. This seems to occur in the illegal drug industry.¹⁵³

These price increases are unlikely to affect addicts' behavior, however, because the demand for cocaine among this population is relatively inelastic. This means that addicts' demand for cocaine is relatively insensitive to changes in the drug's price.

The relationship between price and demand for a commodity can be presented in a market demand curve, which is a graphic presentation of the quantity of a commodity that would be purchased at each price.¹⁵⁴ Of course, the market for any good has both a demand side and a supply side,¹⁵⁵ and each can be presented in a market curve. The point at which the curves intersect is the equilibrium price.¹⁵⁶ Figure 2 shows how an increase in price can reduce demand. In Figure 2, *DD'* is the demand curve for the commodity in question, which we will assume

152. See E. MANSFIELD, *supra* note 18, at 29. The level of input prices is a factor influencing shape and position of market supply curves: "The supply curve for a commodity is affected by the prices of the resources (labor, capital, and land) used to produce it." *Id.*

153. Most of this crime tariff apparently is passed on to consumers. As a result, the Nation's supply-side efforts may have made the illegal drug market financially more attractive to the most unscrupulous drug traffickers without producing a significant demand reduction, particularly among addicts whose demand is price inelastic. See Kleiman, *Data and Analysis Requirements for Policy Toward Drug Enforcement and Organized Crime* 16-17 (Nov. 1985), in PRESIDENT'S COMMISSION, *supra* note 1, at app. G (stating that "[w]here demand is inelastic, increasing enforcement will increase the money at stake and thus make markets more able to support organized crime").

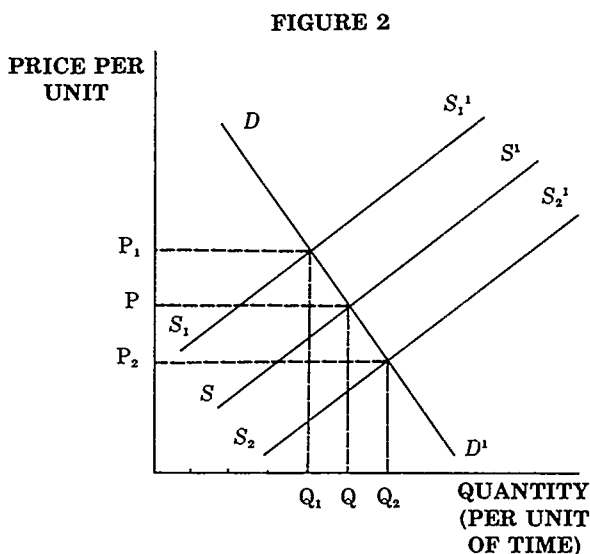
Economic theories of supply and demand suggest reasons for this effect. See, e.g., Ehrlich, *supra* note 10, at 319. So-called "victimless" crimes like the sale of illicit drugs exhibit high elasticity of supply because "these criminal enterprises share many of the characteristics of business endeavors in legitimate markets." *Id.* Conversely, because the consumers of these industries "may have relatively inelastic demands, any law enforcement crackdown on these businesses would mainly hike the prices of the commodities involved without affecting markedly the volume of transactions." *Id.*; see also S. Wisotsky, *supra* note 129, at 34-35 (discussing the crime tariff); Cloud, *supra* note 17, at 16 (discussing the crime tariff created by prohibition systems).

154. See, e.g., E. MANSFIELD, *supra* note 18, at 20. The market demand curve is a plot of the market demand schedule on a graph.

155. See *supra* note 151 (Figure 1 presents supply and demand curves); see also E. MANSFIELD, *supra* note 18, at 20-21, 26-28.

156. The equilibrium price is the price at which the quantity demanded equals the quantity supplied. Equilibrium exists when there is no tendency for change; so, the equilibrium price is one where the price can be maintained. Economists assume that the actual price will move toward the equilibrium price, and that the actual price will approximate the equilibrium price. See E. MANSFIELD, *supra* note 18, at 31-33.

is cocaine. SS' is the initial supply curve for the industry. The price per unit initially is P , the price associated with the intersection of the demand and supply curves. At this price Q units are demanded.



By enforcing the prohibition laws, society attempts to raise producer input costs and to curtail supplies sufficiently in order to shift the supply curve for the drug upward, producing a price increase when all other factors remain constant. Assume the cost of one of the inputs increases, resulting in a shift upward in the supply curve to S_1S_1' . The equilibrium price increases to P_1 . At this price only Q_1 units are demanded.¹⁵⁷

By causing a shift in the supply curve, the market price of cocaine is raised when other variables remain unchanged. This result does not end the inquiry, however, for when demand is inelastic, it is affected less by changes in price. This has significant policy implications. Even if cocaine prices are raised by increasing input costs and curtailing supplies, addict demand is affected only slightly, for it is relatively inelastic.

157. Figure 2 illustrates movements along the same demand curve, reflecting a change in the quantity demanded resulting from a price change. This change differs from a shift of the entire curve in question, which is more accurately described as a change in demand. Rather than lead to movements along the same curve, an increase in demand shifts the entire demand curve to the right. This might result, for example, from population growth or a technological change that creates new uses for a good. See P. SAMUELSON, *supra* note 18, at 364.

Economists use price elasticity of demand to measure the sensitivity or the responsiveness of the quantity of a good demanded to changes in price. Price elasticity of demand is defined as the percentage change in the quantity demanded that results from a one percent change in price.¹⁵⁸ For some goods a small change in price produces a large change in the quantity demanded. For others a large price change produces only a small change in the quantity demanded.¹⁵⁹

Demand can be elastic, inelastic, or of unitary elasticity.¹⁶⁰ When demand is elastic a price decrease leads to an increase in the total expenditure for the commodity because the percentage increase in the quantity consumed is greater than the percentage reduction in price. This occurs because demand is elastic where the price elasticity of demand exceeds one.¹⁶¹ On the other hand, if the price is increased, the

158. Thus,

$$n = \frac{-dq}{dp} \cdot \frac{p}{q}$$

where n is the price elasticity of demand, q is the quantity demanded, and p is the price per unit. See E. MANSFIELD, *supra* note 18, at 87.

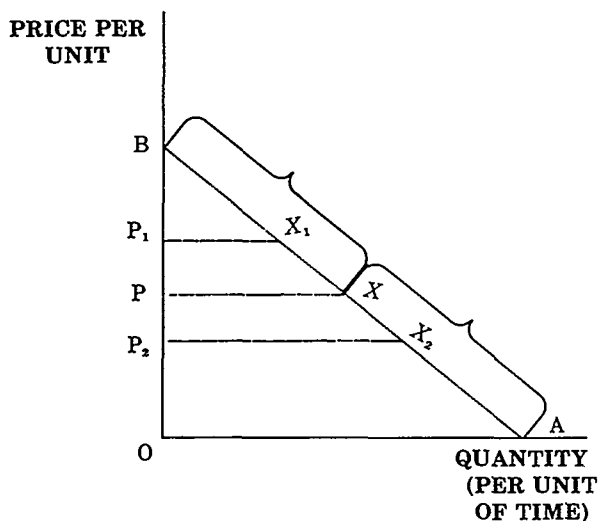
159. See *id.* at 24; P. SAMUELSON, *supra* note 18, at 360-61.

160. Unitary elasticity of demand exists when a percentage reduction in price produces the same compensating percentage rise in quantity demanded, so that total revenue remains unchanged.

161. Demand is elastic where the price elasticity of demand exceeds one. This is presented in Figure 3 where n is the price elasticity of demand and BA is the demand curve. Thus,

$$n = \frac{XA}{XB}$$

FIGURE 3



percentage decrease in the quantity consumed is greater than the percentage price increase, which leads to a reduction in the total amount of consumer expenditures for the good.¹⁶²

Demand is inelastic where the price elasticity of demand is less than one. A one percent rise in price produces less than a one percent fall in the quantity demanded. When demand is inelastic, a price decrease leads to a reduction in the consumers' expenditures for the commodity because the percentage increase in the quantity consumed is less than the percentage reduction in price.¹⁶³ Conversely, demand is inelastic when a percentage increase in price produces so small a percentage decrease in the quantity demanded that total revenue increases.¹⁶⁴

The available clinical and research data suggest that the demand for cocaine is relatively elastic among the great majority of consumers

It is apparent that where the price is higher than OP , n is greater than one. At any point XI on curve BA corresponding to a price exceeding OP , such as price OP_1 , the distance from XI to A is greater than the distance to B . Therefore, XIA divided by XIB must be greater than one. The opposite is true for any price OP_2 below OP , so there the price elasticity is less than one. Demand is inelastic where the price elasticity of demand is less than one.

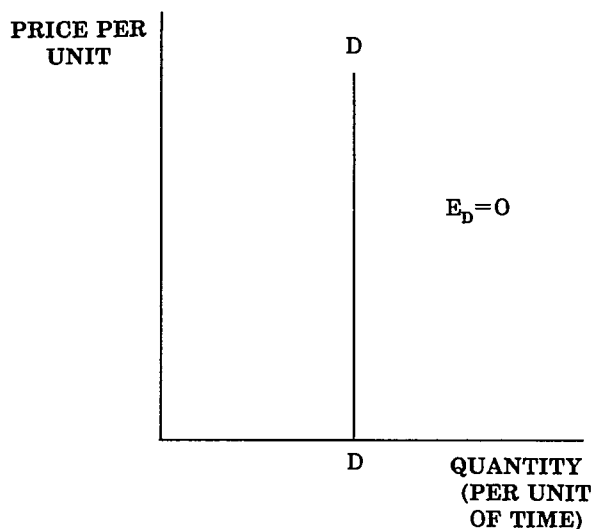
At price OP , XA divided by $XB = 1$, which describes unitary elasticity. At this point, neither increases nor decreases in price affect the amount spent on the good.

162. See E. MANSFIELD, *supra* note 18, at 114.

163. See *id.* at 88; P. SAMUELSON, *supra* note 18, at 358.

164. If demand were perfectly inelastic, price increases would have no impact on the quantity demanded. Pure inelastic demand can be represented by a vertical curve. See Figure 4.

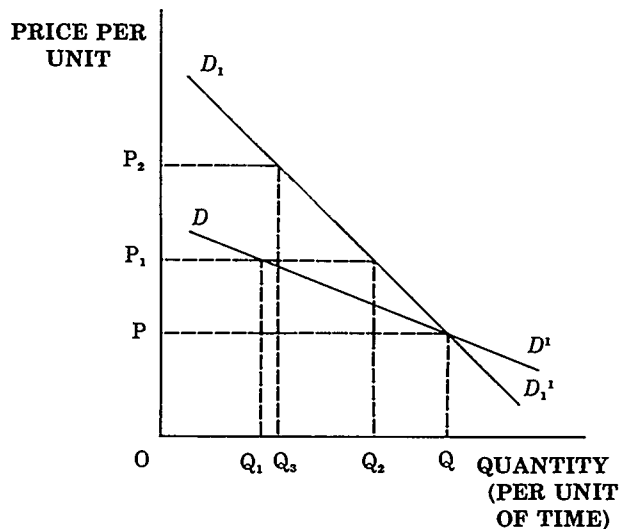
FIGURE 4



who are occasional or recreational users.¹⁶⁵ These users will be more sensitive than addicts to changes in price caused by enforcement of the prohibition laws. Price increases will reduce the quantity demanded, while price decreases should have the opposite effect.

On the other hand, those consumers who are addicts represent inelastic demand.¹⁶⁶ Addicts are less likely than nonaddicts to be responsive to changes in price in setting their demand for cocaine. This conclusion follows from the available clinical and research information.¹⁶⁷ Addicts will continue to consume the drug despite marginal increases in the cost per unit. As a result, increases in unit price will have less effect upon the demand generated by addicts than by nonaddicts. This relationship is represented in Figure 5.

FIGURE 5



For the purposes of this Article, it suffices to represent price elasticity of demand by changes in the slope of demand curves in Figure 5. For this reason, the Article refers to the lower slope as elastic demand, and the greater slope as inelastic.¹⁶⁸ Thus in Figure 5, DD' represents

165. See *supra* Part II, subparts C & D.

166. See, e.g., Kleiman, *supra* note 153, at 18, in PRESIDENT'S COMMISSION, *supra* note 1, at app. G. "Unfortunately, it appears that the demand for marijuana and cocaine is relatively inelastic." *Id.*

167. See *supra* Part II.

168. In general, the slope of a demand curve and the price elasticity of demand are not the same. This difference is apparent in Figure 4, where elastic, inelastic, and unitary elasticity of

the demand curve of nonaddicted consumers whose demand is more price elastic. Demand curve $DID I'$ represents addict demand, which is more price inelastic. The effect of the difference in price sensitivity is obvious.

At price P , quantity Q is demanded on both curves. When the price is increased to P_1 , however, demand among the nonaddict consumers represented by DD' falls to Q_1 . But raising the price to P_1 has little effect on demand curve $DID I'$, where Q_2 units still are demanded. Finally, when the price is raised to P_2 , no units are demanded on curve DD' , while Q_3 units are still demanded on curve $DID I'$, where demand is more inelastic.

A substantial price increase fails to produce a comparable decrease in the quantity demanded on curve $DID I'$ precisely because this demand is relatively price inelastic. When this analysis is applied to the prohibition of cocaine and other addicting drugs, it appears that society will receive little demand reduction benefit even if it were to expend the resources necessary to raise prices—unless society also can make the demand generated by addicts more price elastic.¹⁶⁹

The demand for cocaine among the population of addicts is not perfectly price inelastic. If the street price of cocaine were raised ten thousandfold, from the common unit price of one hundred dollars per gram to one million dollars per gram,¹⁷⁰ the quantity of cocaine demanded would fall off dramatically. Substitute substances undoubtedly would be selected as replacements.¹⁷¹

In reality, however, society lacks the capacity to produce such an

demand appear on straight line curve DD' . Slope and elasticity differ because the slope of the demand curve depends on absolute changes in price and quantity, while elasticity depends upon relative changes. See E. MANSFIELD, *supra* note 18, at 25; P. SAMUELSON, *supra* note 18, at 360-61. The difference also is apparent from formulas used to calculate slope and elasticity. The slope of a demand curve is dP/dQD . See E. MANSFIELD, *supra* note 18, at 25 n.6. A different formula for the price elasticity of demand is presented *supra* note 161. In the cases of perfectly vertical (perfect inelasticity) or perfectly horizontal (infinite elasticity) curves, however, inelasticity and elasticity can be inferred from the slope of the curves. P. SAMUELSON, *supra* note 18, at 360. As will become apparent, demand for cocaine is neither.

169. See *infra* notes 222-23 and accompanying text.

170. See NNICC REPORT 1985-1986, *supra* note 7, at 26; S. WISOTSKY, *supra* note 129, at 14; Crowley, *Clinical Issues in Cocaine Abuse*, in COCAINE, *supra* note 48, at 193, 199.

171. See Chitwood, *supra* note 63, in CLINICAL PERSPECTIVES, *supra* note 48, at 117; Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 550-51; Siegel, *supra* note 48, in CLINICAL PERSPECTIVES, *supra* note 48, at 103; see also NNICC REPORT 1985-1986, *supra* note 7, at 54-55. The increase in cocaine use corresponded with a decreased availability of amphetamines. A government crackdown on manufacturing of amphetamines and "look alike" in the early 1980s may have encouraged drug users to turn to cocaine. This finding suggests one of the fundamental flaws in the traditional approach to reducing demand for drugs. By increasing costs for one substance, society channels consumers to other intoxicants. Consumers adapt to price increases for one good by purchasing a substitute. See P. SAMUELSON, *supra* note 18, at 407.

increase in unit price. This becomes apparent when recent efforts to curtail supplies are analyzed. Despite substantial increases in the public sector resources committed to the supply side of the "war against drugs,"¹⁷² the street price of cocaine has fallen in recent years.¹⁷³ In fact, a "long-run equilibrium" price¹⁷⁴ may have been reached for cocaine, a price at which one hundred metric tons or more of cocaine are retailed and consumed annually in this country. The government simply has been unable to increase producer input costs or curtail supplies enough to produce any price increase, let alone one sufficient to reduce demand among addicts.¹⁷⁵

Indeed, the opposite seems to have occurred. Supplies of cocaine apparently have increased, producing a downward shift in the supply

172. Increases in supplies and decreases in prices have occurred despite the adoption of increasingly sophisticated and expensive law enforcement programs designed to eradicate supplies and exclude them from the country. These programs have included international treaties and joint governmental crop eradication efforts, aggressive law enforcement intended to drive suppliers out of business, and extensive interdiction efforts designed to catch imported materials at the borders. Historical restrictions on the use of the military in law enforcement have been jettisoned—and the armed forces themselves have been conscripted in the effort to defend the Nation's borders against the labors of drug importers. The Posse Comitatus Act traditionally proscribed the use of the military to enforce civilian laws, and violators have been subject to criminal penalties. See 18 U.S.C. § 1385 (1982). In 1981, Congress amended the Posse Comitatus Act to permit the military to play an increased role in drug interdictions. See 10 U.S.C. §§ 371-378 (1982). In subsequent years, Congress has expanded the military's new role in drug law enforcement. See The Defense Drug Interdiction Assistance Act, Pub. L. No. 99-570, §§ 3051-3059, 100 Stat. 3207, 3207-74 to 3207-79 (1986) (amending 10 U.S.C. §§ 371-379 (1982 & Supp. IV 1986)); National Defense Authorization Act for Fiscal Years 1988 and 1989, Pub. L. No. 100-180, § 1243(a), 101 Stat. 1163 (1987) (codified at 10 U.S.C. § 380 (Supp. IV 1986)).

173. See *supra* note 24 and accompanying text. The data demonstrate that the common street price for cocaine has fluctuated around the price of \$100 per gram throughout this decade. Annual inflation throughout this period, coupled with an apparent increase in the average purity of retail level cocaine, have produced a decline in the actual price during the past half decade. Introduction of "crack" into the marketplace, which is sold in small, inexpensive units, has also made cocaine available at even lower prices. See French, *Drug Abuse Trends in Newark, N.J.* II-129, in NATIONAL INSTITUTE ON DRUG ABUSE, A NATIONAL AND INTERNATIONAL PERSPECTIVE (June 1985) [hereinafter NIDA PERSPECTIVE] (noting that purity is high and "prices for small quantities are dropping"); Goss & Ruttenger, *Metro Atlanta Drug Abuse Report* II-3, in NIDA PERSPECTIVE, *supra*. "Cocaine is much cheaper . . . than it was a year ago. The street level purity has risen." *San Diego County Drug Use Indicators Report* II-155, in NIDA PERSPECTIVE, *supra* (stating that "[c]ocaine is plentiful and stabilized"). But see Poklis, *Drug Abuse Trends in St. Louis, Increased Cocaine and Phencyclidine Abuse*, in NIDA PERSPECTIVE, *supra* (noting that "[w]hile the price of cocaine has dropped . . . the quality of cocaine has also declined").

174. This is the "normal" price, as distinguished from a momentary or short-run equilibrium price. See *supra* note 156 and accompanying text; see also P. SAMUELSON, *supra* note 18, at 362-64; cf. Becker & Murphy, *A Theory of Rational Addiction*, 96 J. POL. ECON. 675 (1988) (positing that permanent changes in prices of addictive goods may have little short-term effect on consumption, but may have a great effect in the long run).

175. The problem is exacerbated by the introduction of new and less expensive consumption methods to the market. See O'Brien, *supra* note 32, at 17. "The low price [of crack] puts this addictive drug within the reach of everyone." *Id.* Even if law enforcement efforts succeeded at doubling the market price, the drug would remain readily available to all segments of society.

curve, accompanied by a predictable decrease in the unit price to the individual consumer.¹⁷⁶ This process is presented in Figure 2, assuming the original supply curve SS' shifts to S_2S_2' .

Nor do the future prospects for reducing supplies appear more promising, given the unmatched economic performance of coca as a cash crop in the producing nations,¹⁷⁷ the geographic proximity of the United States to those countries, the almost infinite number of possible points of entry into the country,¹⁷⁸ and the profitability of cocaine for domestic distributors.¹⁷⁹ The United States simply may be incapable of reducing supplies or raising input costs sufficiently to raise the street price beyond present levels.

Even if the government were able to reverse these trends and reduce supplies sufficiently to raise the price, perhaps back to 1983 levels, such marginal increases in unit price would have little effect on addict demand.¹⁸⁰ Medical theory and clinical experience suggest that addicts

176. A supply increase helps explain the decline in prices despite annual increases in the quantities of cocaine seized. See BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS—1986, at 326, Table 4.28 (K. Jamieson & T. Flanagan eds. 1987) [hereinafter 1986 SOURCEBOOK] (Drug Enforcement Administration removed only 512 pounds of cocaine from the domestic market in 1976, a figure which has increased each year, and 59,699 pounds were seized in 1986).

177. See, e.g., H.R. REP. NO. 794, *supra* note 5, at 2 (noting that foreign countries are reluctant to crack down on drug smugglers for economic reasons; illegal drug exports represent a substantial portion of their domestic economies); 134 CONG. REC. S14,015 (daily ed. Oct. 3, 1988) (statement of Sen. Specter) (stating that more than 50% of the agricultural exports of Mexico, Bolivia, Peru, and Columbia are illegal drugs); S. WISORSKY, *supra* note 129, at 53-60. This also applies to marijuana. See PRESIDENT'S COMMISSION, *supra* note 1, at 422 & n.177.

178. See PRESIDENT'S COMMISSION, *supra* note 1, at 85-92. Ironically, interdiction efforts at the Nation's border may have spurred foreign production of cocaine and domestic production of marijuana. As law enforcement efforts at the border have improved, it has become more difficult to import marijuana in bulk quantities. As a result, foreign producers have turned to cocaine, which can be profitably imported in much smaller quantities. The continuing domestic demand for marijuana, combined with the reduction of foreign grown supplies, in turn may have encouraged expansion of the domestic marijuana industry. At the present time marijuana has become a major "cash crop" for United States producers. See *id.* at 149-51.

179. See *id.* at 71 (stating that "[d]rug trafficking is the most widespread and lucrative organized crime operation in the United States . . . generating an annual income estimated to be as high as \$110 billion"); see also H.R. REP. NO. 1199, 98th Cong., 2d Sess. 8 (1985) [hereinafter H.R. REP. NO. 1199] (stating that "[t]he drug trafficking industry is a multi-billion-dollar-a-year business").

180. The threat of arrest and imprisonment is a "cost" to be considered by rational consumers. An increase in the severity of penalties, or an increase in the likelihood of apprehension, should affect demand among casual or recreational cocaine users. This group generates "elastic" demand which should be responsive to marginal increases in consumption costs, whether those changes consist of a higher unit price of the drug or an increase in the threat and severity of punishment for illegal drug use and possession.

Conversely, the addict population represents relatively "inelastic" demand. The very nature of addiction makes these consumers less responsive to market forces. One result is that a marginal increase in the unit price—or other costs of consumption—has minimal impact upon addict behavior. A graphic example is the continuing practice among addicts of using "shared needles" in the

will pursue and consume cocaine regardless of disastrous financial consequences, as long as supplies remain available. A growing body of information indicates that cocaine addicts will go to extremes to finance their addictive behaviors, including committing crimes to obtain sufficient funds.¹⁸¹ A realistic appraisal of the current situation leads to the conclusion that society cannot expect to reduce demand among addicts by increasing the unit price of cocaine. Lawmakers are unlikely to achieve any greater success by imposing criminal sanctions for possession and use of illegal drugs.

B. *Affecting Demand Directly: Deterrence and Criminal Penalties*

Federal law prohibits the possession and use of even small amounts of cocaine.¹⁸² Although rarely imposed in the federal judicial system, the threat of criminal punishment is an element of the federal demand-side effort. In fact, the 1986 Act increases the penalties for possession of drugs for personal use, an action which theoretically should augment the deterrent value of the criminal laws.¹⁸³ Economic theory, however, demonstrates why this approach is unlikely to reduce demand among addicts.

The threat, and the imposition, of criminal sanctions like imprisonment are costs of engaging in criminal behavior.¹⁸⁴ This is one foundation of the theory that criminal sanctions deter prohibited conduct. Proponents of deterrence theory often presume that people engage in a cost-benefit analysis before they act. Deterrence theory posits that an individual will engage in proscribed conduct as long as the "perception of the possibility that he . . . will suffer a sanction" is less than the "expected private benefit" provided by that conduct.¹⁸⁵

face of overwhelming evidence that this practice carries the risk of contracting Acquired Immune Deficiency Syndrome (AIDS). See Ehrlich, *supra* note 10, at 319 (noting that "supply elasticities of 'victimless' crimes, like sale of illicit drugs, . . . [are] likely to be very high," while consumer demand may be "relatively inelastic").

181. See Gold, Washton & Dackis, *supra* note 107, in CLINICAL PERSPECTIVES, *supra* note 48, at 142 (even middle-class cocaine users resorted to crime); see also S. WISOTSKY, *supra* note 129, at 142-54.

182. See, e.g., 1986 Act, *supra* note 11, § 1003, 100 Stat. at 3207-5 to 3207-6 (amending 21 U.S.C. § 841 (Supp. IV 1986)). See *infra* notes 227-33 and 401-04 and accompanying text.

183. *Id.*

184. See, e.g., Ehrlich, *supra* note 10, at 308 (analyzing the "expected direct or opportunity cost due to the criminal sanction imposed" in the context of the "probability of apprehension and punishment"). Other potential costs include the social obloquy which attaches to use of illegal drugs among many, perhaps most, social groups, and the health risks attendant to cocaine use.

185. See Shavell, *Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232, 1235 (1985). Shavell stated that:

Whether or not a party will actually commit an act—as distinct from whether or not it is socially desirable that he do so—depends on his perception of the possibility that he will suffer a sanction, either monetary or nonmonetary. A party will commit an act if, and only if,

Recent actions by the federal government undoubtedly are intended to raise the perceived costs of consuming illegal drugs. By allocating greater resources to law enforcement,¹⁸⁶ by increasing the penalties for personal use and possession,¹⁸⁷ and by publicizing law enforcement efforts aimed at individual drug users,¹⁸⁸ the government has attempted to persuade consumers that the costs of using illegal drugs have increased, because the risk and the severity of punishment is greater than in the past. Nevertheless, it appears that the enforcement of punitive criminal laws is unlikely to deter consumers, particularly addicts. Economic theory again is helpful in understanding this result.

Attempting to deter criminal behavior with the threat of punishment is consistent with the basic premise of microeconomic theory that individuals act as "rational utility-maximizing agents"¹⁸⁹ who calculate both the expected gains and the expected losses when deciding whether

the expected sanction would be less than the expected private benefits. If he decides not to commit an act, he will be said to be deterred.

Id.; see also *id.* at 1235 n.10 (listing imprisonment as the primary nonmonetary sanction, together with loss of reputation, social stigma, and the death penalty). One possible criticism of the "classical" economic analysis in this area is the emphasis commonly placed upon deterrence as the justification for criminal sanctions. See Ehrlich, *supra* note 10, at 307. The criminal law serves other goals, including rehabilitation, incapacitation, and retribution. See, e.g., H. HART, PUNISHMENT AND RESPONSIBILITY 1-27 (1968); Ehrlich, *supra* note 10, at 311-19 (analyzing the probable success of various goals of punishment, including deterrence, rehabilitation, and incapacitation).

186. See *infra* notes 240-43, 393, and accompanying text. Imposing nonmonetary sanctions, like imprisonment, for criminal behavior forces society to bear other financial burdens. These include the costs of apprehending criminals (e.g. salaries for police, costs for equipment), maintaining a judicial system (salaries for judges and court personnel, overhead costs of operating courthouses), incarceration (salaries for prison employees, overhead associated with running jails and prisons), and supervising parolees and probationers (salaries of probation and parole officers, costs of maintaining records). See Shavell, *supra* note 185, at 1235-36. Enforcing the criminal laws relating to the illegal drug industry costs billions of dollars annually. See *infra* notes 240-43, 393, and accompanying text. See Kerr, *Drug Tests Rising as Way to Reduce Prison Crowding*, N.Y. Times, Jan. 19, 1988, at A1, col. 6 (stating that building new cells costs \$50,000-\$75,000 per cell).

187. See *infra* Part IV, subpart A(1) & Part VI, subpart B. Increasing the level of nonmonetary sanctions, such as increasing terms of imprisonment, raises the costs of imposing sanctions. Larger prison populations create numerous costs. These costs include the costs of caring for more prisoners, and the costs of building and maintaining additional prisons. Economic principles predict precisely that result. See Shavell, *supra* note 185, at 1243-44 (noting that "[a]s the level of sanctions rises, more undesirable acts will be deterred, but the social cost of imposing sanctions in a given instance becomes greater, as does the problem of discouraging socially desirable acts").

188. See, e.g., *Long Arm of Law Seizing Vehicles from Bikes to Boats in Drug War*, Atlanta Const., May 12, 1988, at 2A, col. 4 (reporting that Coast Guard officers were instructed to arrest people and to seize and sell their boats when recreational quantities of drugs were found on board as part of the so-called "zero tolerance" program implemented by the customs service); *U.S. Seizing Boats If Passengers Found Carrying Any Trace of Drugs*, Atlanta Const., May 1, 1988, at 6A, col. 1 (quoting Transportation Secretary James Burnley: "It's going to take draconian measures like this to control the demand side"); Lubasch, *2 Apartments in Projects Are Seized in Drug Cases*, N.Y. Times, Apr. 26, 1988, at A1, col. 1; *Gangsters' Goods*, Wash. Post, Mar. 13, 1988, at C6, col. 1 (seizing assets providing money for state and federal programs).

189. D. PYLE, THE ECONOMICS OF CRIME AND LAW ENFORCEMENT 6 (1983).

to engage in criminal activity.¹⁹⁰ The outcome of this calculation depends in large part on the individual's subjectively held views, including his attitudes concerning risk.¹⁹¹ In evaluating the prospects of deterring addicts from consuming cocaine, one must consider addicts' subjective calculations of both the utility of their conduct and the likelihood of detection and punishment.

Increasing the perceived threat of criminal sanctions will deter some nonusers and recreational users because they will calculate that the hazards associated with illegal behavior now outweigh the expected benefits.¹⁹² On the other hand, raising consumer costs by increasing sanctions, including the threat of imprisonment, will fail to change the behavior of cocaine addicts for the same reason that an increase in the pecuniary price per unit will not reduce their demand: it is relatively inelastic. This conclusion applies whether or not one considers addicts to be "rational" decisionmakers.

Because the drug becomes central to the addict's life, "taking 'compulsive' precedence over other, more 'normal' activities,"¹⁹³ addicts attribute great value to this behavior and will choose to consume cocaine in the face of possible adverse consequences that would deter others.¹⁹⁴ Addicts driven by the compulsion to obtain and consume cocaine simply may not engage in what nonaddicts would consider a rational calculation of costs and benefits.¹⁹⁵

Conversely, even if one assumes that addicts act as rational, utility-

190. See, e.g., Posner, *supra* note 46, at 1205 (stating that "[i]n discussing what criminal penalties are optimal to deter such transfers, I shall assume that most potential criminals are sufficiently rational to be deterrable—an assumption that has the support of an extensive literature").

191. See Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 176-79 (1968); see also D. PYLE, *supra* note 189, at 10, 12-13.

192. See Shavell, *supra* note 185, at 1236-38, 1238 n.23 (proposing the use of monetary sanctions, but recognizing that monetary sanctions may fail to deter some criminal conduct, while non-monetary sanctions, particularly the threat of arrest and imprisonment, may deter some actors).

193. See C. EDWARDS, *supra* note 51, at 54.

194. Addicts will persist in their consumption in spite of other costs as well, including damage to the addicts' health, careers, and relationships. See PRESIDENT'S COMMISSION, *supra* note 1, at 24-25; Jaffe, *supra* note 49, in GOODMAN AND GILMAN'S, *supra* note 49, at 553-54; Siegel, *supra* note 60, at 101-03 (discussing the adverse consequences of heavy cocaine use).

195. Deterrence theory assumes that the decisionmaker accurately perceives the probability of detection, arrest, and imprisonment. See, e.g., Shavell, *supra* note 185, at 1236 n.15. This assumption may be erroneous. See *id.* at 1242 n.38. Shavell stated that "[w]hile I have assumed that the party accurately perceives this probability, in a more realistic model he might not. In such a model, the courts would have to determine what was the party's own assessment of the probability of apprehension to know whether he could have been deterred." *Id.*; see D. PYLE, *supra* note 189, at 6 (arguing that the perceptions of criminals "of the costs and benefits arising from criminal activity may be different from that of law-abiding individuals"); see also Shavell, *supra* note 185, at 1235 n.11 (disclaiming the "easily-caricatured view that in reality individuals are all the time weighing the threat of sanctions against the benefits of contemplated acts").

maximizing decisionmakers,¹⁹⁶ the threat of legal sanctions still is unlikely to deter this population. If addicts do engage in rational decision-making, then they are likely to attribute so much value to consuming cocaine that the perceived costs will be outweighed by the benefits of consumption.¹⁹⁷

The available medical and psychological evidence demonstrates that cocaine addicts place great weight on the benefits of consumption, because it provides both immediate pleasure and relief from discomfort to a degree not experienced by other users.¹⁹⁸ The immediate "utility" associated with cocaine use¹⁹⁹ will outweigh the remote threat of the criminal sanction.²⁰⁰ As a "rational" decisionmaker the addict will attribute substantial benefit to continued consumption of cocaine when weighed against both the utility derived from consuming other goods and against the threat of punishment; thus the addict will continue to allocate resources to the drug.²⁰¹ This means that deterring addicts

196. Deterrence theory generally assumes a utilitarian method of decisionmaking. See generally C. BECCARIA, AN ESSAY ON CRIMES AND PUNISHMENTS (H. Paolucci trans. 1963); J. BENTHAM, *Principles of Penal Law*, in 1 WORKS OF JEREMY BENTHAM 365 (J. Bowring ed. 1843); J. BENTHAM, *An Introduction to the Principles of Morals and Legislation*, in 1 WORKS OF JEREMY BENTHAM 1, 86-91 (J. Bowring ed. 1843); Becker & Murphy, *supra* note 174.

197. See Shavell, *supra* note 185, at 1237. The deterrence effect of sanctions is influenced in part by the "level of the private benefits a party will derive from an undesirable act. The larger these benefits, the higher the monetary sanction necessary to deter. . . ." *Id.* This analysis refers to monetary sanctions, but the same calculus should apply to nonmonetary sanctions as well. Thus, even if addicts do not make what most individuals would consider a normal evaluation of the relative costs and benefits when deciding to buy and use cocaine, their behavior may be "rational." See *infra* notes 200-11 and accompanying text.

198. See *supra* Part II, subpart A, & Part II, subparts B & C.

199. There appears to be an interesting analogy between medical theories about addiction and the economic theory of diminishing marginal utility. Although analysis of individual economic activity is beyond the scope of the present Article, it is worth a brief mention. When an individual consumes a good, he derives a certain amount of satisfaction, or utility. As he consumes more units of the good his total utility increases because each added unit supplies additional utility, but in decreasing amounts. As a result, as the amount consumed increases the marginal utility of the good (or the extra utility added by the last unit) tends to decrease. See P. SAMUELSON, *supra* note 18, at 408-09. This may help explain why addicts will calculate the satisfaction—or utility—of consuming cocaine differently from nonaddicts. As increasing units of cocaine are consumed, the declining utility per unit consumed will lead a rational consumer to shift resource allocation to other items in order to maximize his total utility. For the nonaddict, this point will be reached earlier than for the addict, for example, when the negative side effects of cocaine consumption appear. By virtue of his addiction, however, the addict will continue to experience a high degree of utility for each successive unit consumed and will continue to demand cocaine beyond the point at which nonaddicts would shift resources to other goods.

200. See Shavell, *supra* note 185, at 1237 (referring to monetary sanctions, but the same calculus obviously applies to nonmonetary sanctions as well). The deterrent effect of sanctions depends in part upon the "probability that a party will escape being sanctioned. The greater this probability, the higher is the monetary sanction required to deter." *Id.*; see also Becker, *supra* note 191, at 177-79 (analyzing deterrent effect of probability of punishment and degree of punishment).

201. See Becker, *supra* note 191, at 176. Becker stated:

The approach taken here follows the economists' usual analysis of choice and assumes that a

would require extraordinary punishments because "the higher the expected private benefits, the higher is the expected sanction needed to accomplish deterrence where deterrence is possible."²⁰²

Cocaine users acting as rational decisionmakers are unlikely to be deterred by the threat of arrest and punishment for yet another reason. Criminal sanctions are unlikely to be imposed on any individual for drug use and possession.²⁰³ The odds of an individual cocaine user being arrested, prosecuted, and convicted are minimal. Millions of people consume cocaine annually in this country, and an estimated five to six million people use cocaine each month.²⁰⁴ More than thirty-six million people use cocaine, marijuana, heroin, and other prohibited drugs each year.²⁰⁵ Yet only a small fraction of these users is arrested or convicted.

In 1985 only 811,400 arrests were reported for all drug abuse violations. This total includes federal, state, and local arrests for all drugs and all drug-related crimes.²⁰⁶ Total arrests increased to 937,400 by 1987,²⁰⁷ but this is only about 2.5 percent of the estimated number of illegal drug users. The impact of these arrest totals on individual users is even less than these numbers suggest, because these figures include the arrests of drug marketers, and most arrests are for trafficking, not possession.²⁰⁸

The chances of individual cocaine users being convicted—or even prosecuted—in federal court are particularly remote. In 1984, for example, only 9191 individuals were charged in United States District Courts with drug law violations of all kinds.²⁰⁹ Of this group, 7459 were found

person commits an offense if the expected utility to him exceeds the utility he could get by using his time and other resources at other activities. Some persons become "criminals," therefore, not because their basic motivation differs from that of other persons, but because their benefits and costs differ.

Id.

202. See Shavell, *supra* note 185, at 1244. Deterrence of addicts will require extraordinary punishments because

the higher the expected private benefits, the higher will be the optimal sanction—unless the benefits are so large that deterrence is probably not possible. This is because the higher the expected private benefits, the higher is the expected sanction needed to accomplish deterrence where deterrence is possible.

Id. The benefits could be so great that deterrence would be impossible. *Id.*

203. As a result, the threat of arrest and punishment is less likely to deter users of nonaddicting substances, like marijuana.

204. See PRESIDENT'S COMMISSION, *supra* note 1, at 16.

205. See *supra* notes 8, 21, and accompanying text.

206. See 1986 SOURCEBOOK, *supra* note 176, at 291; see also ANNUAL REPORT OF THE ORGANIZED CRIME DRUG ENFORCEMENT TASK FORCE PROGRAM 71-72 (March 1984).

207. FEDERAL BUREAU OF INVESTIGATION, U.S. DEPT. OF JUSTICE, CRIME IN THE UNITED STATES, UNIFORM CRIME REPORTS FOR THE UNITED STATES, 1987, at 164 (1987).

208. See *infra* notes 209-15 and accompanying text.

209. 1986 SOURCEBOOK, *supra* note 176, at 344-45. In 1985 a total of 6693 cases alleging narcotics violations were filed in United States District Courts. The Justice Department report does

guilty and 1732 were found not guilty.²¹⁰ Convictions for simple drug possession occur even less frequently. While total federal convictions for drug offenses increased to 12,285 in 1986, only 1225 people were convicted of simple possession.²¹¹

The infrequency of federal prosecutions for personal possession results in part from Justice Department policy decisions to pursue commercial distributors rather than consumers. This suggests that increasing the penalties for these offenses, as Congress did in the 1986 Act,²¹² was largely a symbolic exercise.²¹³

Surprisingly, individual users are at little more risk of being punished in the state criminal justice systems. While most drug cases are prosecuted in state rather than federal courts, most illegal drug users are not arrested, and even fewer are prosecuted and convicted in the state judicial systems. In 1986 state prisons held an estimated population of 450,416 prisoners.²¹⁴ Only 2.9 percent of the inmates, about 13,062 people, were imprisoned for possession of drugs.²¹⁵ This total is less than .04 percent of the estimated 36.8 million Americans who use illegal drugs annually. Obviously individual users face little risk of imprisonment.

This extremely low risk is significant because, assuming other variables remain constant, the individual's perception of the likelihood of apprehension and punishment is a primary component of the cost-benefit calculation presumed in economic theory.²¹⁶ If addicts act as rational, utility-maximizing decisionmakers, then the perceived costs of

not specify the number of cases involving cocaine. It uses the following categories: 3569 cases involved narcotics, 2220 marijuana, and 904 controlled substances. *Id.* at 343.

210. *Id.* at 344-45.

211. BUREAU OF JUSTICE STATISTICS, U.S. DEPT. OF JUSTICE, SPECIAL REPORT, DRUG LAW VIOLATORS, 1980-86: FEDERAL OFFENSES AND OFFENDERS 4, Table 5 (June 1988). The figures presented in this table demonstrate the confusion produced by federal government statistics concerning the war on drugs. In Table 5, the Bureau of Justice Statistics reported 9175 federal convictions for drug offenses in 1984, a 23% increase over the conviction figures for the same year reported by the same agency in its 1986 SOURCEBOOK, *supra* note 176.

212. *See infra* note 213.

213. *See, e.g.*, H.R. REP. NO. 845, *supra* note 16, at 12. While the Judiciary Committee "intends to send a signal that it disapproves of drug use of any kind, it is clear that the Department of Justice does not investigate or prosecute simple possession cases as a general rule." *Id.* Therefore, mandatory minimum sentences generally only affect arrests made in federal maritime and territorial jurisdictions.

214. BUREAU OF JUSTICE STATISTICS, U.S. DEPT. OF JUSTICE, SPECIAL REPORT, PROFILE OF STATE PRISON INMATES, 1986, at 3, Table 1 (C. Innes Jan. 1988).

215. *Id.* at 3, Table 3. The report indicates that of this total, 5464 were "first timers." *Id.* at 4, Tables 5 & 7.

216. *See Becker, supra* note 191, at 176. "An increase in a person's probability of conviction or punishment if convicted would generally decrease . . . the number of offenses he commits. In addition, a common generalization . . . is that a change in the probability has a greater effect on the number of offenses than a change in punishment. . . ." *Id.*

possible criminal sanction for drug use and possession logically will appear low, particularly when balanced against the addicts' perception of the immediate benefits of drug consumption.

Merely increasing the severity of criminal sanctions, therefore, is unlikely to deter addicts when the odds of apprehension are remote. "A party could not possibly be deterred from committing an act if his expected private benefits exceed the disutility of the highest conceivable expected sanction—the highest conceivable sanction (perhaps the death penalty) discounted by the probability of its imposition."²¹⁷

The fact that addicts acting as rational decisionmakers will perceive the threat of criminal sanctions as remote costs does not necessarily mean that society should give up its attempts at achieving deterrence by using criminal penalties.²¹⁸ It does demonstrate, however, that while increases in criminal penalties for drug possession may alter the calculation of costs and benefits by some individual consumers, thus producing additional deterrence,²¹⁹ these efforts are unlikely to reduce demand among the addict population. This conclusion is consistent with reports describing the failure of earlier attempts to constrain the use of addicting substances by increasing criminal sanctions.²²⁰

217. Shavell, *supra* note 185, at 1241 (emphasis in original) (citation omitted).

218. See Becker, *supra* note 191, at 177 (stating that "an increase in law-ahidingness due, say, to 'education' would reduce the incentive to enter illegal activities").

219. See Shavell, *supra* note 185, at 1245. "The relationship between the probability of apprehending parties and the optimal sanction is, one would expect, that the lower the probability, the higher the optimal sanction. This would likely be required to maintain the expected sanction needed for proper deterrence." *Id.*

220. See JOINT COMMITTEE ON N.Y. DRUG LAW EVALUATION, ASS'N OF THE BAR OF THE CITY OF N.Y., *THE NATION'S TOUGHEST DRUG LAW: EVALUATING THE NEW YORK EXPERIENCE 3-7* (1977) (reporting that "draconian" increases in criminal penalties failed to eliminate use of heroin in New York). One might argue that society simply has not made the penalties severe enough. For example, society might impose the death penalty for simple possession of cocaine. Experience teaches, however, that even extreme sanctions fail to abolish consumption of intoxicants—even those far less powerful than cocaine. See, e.g., E. ROBINSON, *THE EARLY HISTORY OF COFFEE HOUSE IN ENGLAND 19-30* (1903) (discussing failed attempts to eliminate coffee consumption in Arab societies); accord E. BRECHER, *supra* note 1, at 196-97.

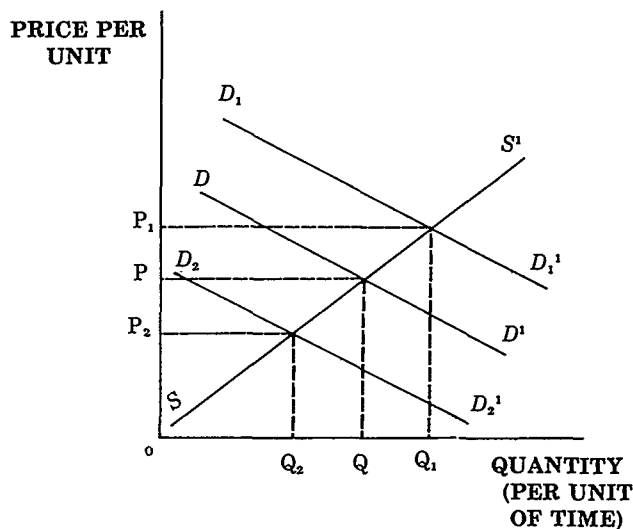
The Constitution also limits society's freedom to impose sanctions. See, e.g., *Solem v. Helm*, 463 U.S. 277 (1983) (striking down sentence of life without parole for recidivist with seven felony convictions); *Coker v. Georgia*, 433 U.S. 584 (1977) (holding imposition of death penalty for the crime of rape precluded as cruel and unusual punishment by proportionality principles applied under the eighth and fourteenth amendments). *But cf.* *Rummel v. Estelle*, 445 U.S. 263 (1980) (upholding mandatory life sentence imposed on recidivist with three felony convictions). One would assume that the eighth and fourteenth amendments also forbid the death penalty for those convicted of possession of illegal drugs. *Cf.* *Terrebonne v. Butler*, 848 F.2d 500 (8th Cir. 1988) (*en banc*) (sentence of life imprisonment without parole imposed by Louisiana law for selling heroin found not to constitute cruel and unusual punishment).

Imposing the ultimate sanction for penultimate crimes may have undesirable effects. By imposing the most extreme sanctions for drug law violations, society loses the capacity to deter more destructive behaviors associated with drug crimes. If possession, use, or sale of drugs could be

One logical implication of this analysis is that society cannot rely on enforcement of the criminal laws to reduce demand among practicing addicts. A primary alternative strategy is to provide appropriate medical and psychological treatment designed to help addicts stop using cocaine. A treatment program that succeeded at removing large numbers of addicts from the population of users would be an optimal method of achieving the goals of the Nation's antidrug policies.

For example, significantly reducing the number of addicts actively using cocaine would have greater impact on the market demand for cocaine than would deterring equivalent, or even larger, numbers of nonaddicts, because individual addicts consume proportionally more of the drug, and because collectively they are the dominant domestic source of demand for cocaine. In economic terms, reducing the number of practicing addicts should shift the demand curve for cocaine downward. The effect of such a shift is represented in Figure 6.

FIGURE 6



In Figure 6, DD' represents the original demand curve and SS' the original supply curve. Assuming that a change in consumer tastes

punished by death, then the criminal law would provide no incentive for anyone guilty of those crimes to desist from killing others, including witnesses and police officers, because no greater penalty could be imposed for murder. See Shavell, *supra* note 185, at 1246 (noting that one problem of the low probability of apprehension is that optimal sanctions must be high to accomplish deterrence, "but that would undermine marginal deterrence because the sanctions for acts of differing severity would be similar").

causes cocaine to become less favored, the entire demand curve might shift to D_2D_2' . One result of this shift is that less cocaine is demanded at every price when the demand curve is D_2D_2' than when it is DD' .²²¹ One obvious benefit of this shift is that total revenues to cocaine traffickers should fall.²²²

Assuming that all other variables (including the supply of consumers) remain constant, programs successfully removing addicts from the consuming population would have another important benefit. By decreasing the number of addicts actively using cocaine, the composition of the drug consuming population would change. Nonaddicts then would comprise a larger percentage of cocaine consumers, and would generate a greater proportion of the total demand for the drug than is currently the situation.

Because nonaddicts' demand for cocaine is more price elastic than addicts' demand, the remaining population of users collectively would be more sensitive to increases in the price and other costs associated with cocaine use than the present cocaine-consuming population. Traditional law enforcement programs would then become more effective at reducing demand. This result is portrayed in Figure 5, assuming that current demand is represented by demand curve D_1D_1' . By reducing the number of addicted users, all other factors remaining constant, the demand curve might shift to DD' , where demand is more price elastic.

This analysis suggests that demand-side programs should emphasize strategies designed to shift the entire demand curve downward by

221. Figure 6 suggests another possibility. If recent law enforcement efforts had succeeded in shifting the demand curve for cocaine to the left, this success might explain the decline in the retail price of cocaine during the past decade. Figure 6 demonstrates that suppliers would have to reduce the price of the good to maintain sales if the demand curve shifted from DD' to D_2D_2' . For example, OQ quantity is demanded at price OP on curve DD' . The price must be reduced to OP_3 to generate the same demand on curve D_2D_2' . Similarly, the equilibrium price on the original curve is OP , but it falls to OP_2 for curve D_2D_2' .

Available data suggest that more consumers, not fewer, have entered the cocaine market. A decline in price therefore must be explained by other factors, which might include decreased input prices (unlikely given the increased law enforcement activities) or larger supplies (the more likely explanation). Otherwise, the increase in consumer activity favoring cocaine should produce a price increase (all other factors remaining constant) of the sort reflected by the shift in the demand curve from DD' to D_1D_1' in Figure 6.

222. The long-term effects might be different because market forces are not static. If all other factors remain unchanged, a reduction in demand should produce a price decrease, which in turn could lead to an increase in demand as new consumers choose to purchase the good and the remaining consumers purchase more. As a result, a price decline may produce a consequential increase in demand. This result emphasizes how difficult it is to reduce demand in the drug marketplace. It also demonstrates that merely removing present consumers, like addicts, from the user population may fail to reduce the supply of drug users, because of the possible elasticity of supply of these criminals. See, e.g., Ehrlich, *supra* note 10, at 314-15, 319. Thus a comprehensive demand reduction program also must deter potential users from entering the consuming population. See *infra* Part IV, subpart C.

removing cocaine addicts from the user population. This approach is more likely to advance the Nation's antidrug policies than are government attempts to raise the costs of consuming cocaine. Providing treatment and rehabilitation for addicts appears to be the most hopeful method of pursuing this goal.²²³ The extent to which the need to provide treatment and rehabilitation for addicts has been recognized and adopted in federal law is explored in Parts IV and VI of this Article.

IV. LEGISLATING AGAINST SUPPLY AND DEMAND: THE ANTI-DRUG ABUSE ACT OF 1986

The Anti-Drug Abuse Act of 1986²²⁴ was Congress's first "comprehensive" legislative attack on the illegal drug industry.²²⁵ The 1986 Act contains fifteen titles encompassing almost every aspect of federal efforts to prevent and control drug abuse,²²⁶ by addressing both the supply and the demand sides of the illegal drug market. Analysis of the 1986 Act demonstrates, however, that Congress adopted programs and methods that are unlikely to reduce the market demand for cocaine, particularly among the addict population.

A. Law Enforcement and Demand Reduction

Criminal penalties for use and simple possession of illegal drugs²²⁷ theoretically reduce demand by deterring people from these behaviors. By increasing the penalties in the 1986 Act for drug use and possession,

223. See *infra* Part V; see also *Health Chief: Revamp War Against Drugs*, Atlanta Const., Apr. 30, 1988, at 3A, col. 1 (reporting that Health and Human Services Secretary Otis Bowen had advised President Reagan that government was not winning the war against drugs, and that there was a need to rethink approaches, including the use of treatment programs).

224. 1986 Act, *supra* note 11. The 1986 Act was signed into law by President Reagan on October 27, 1986, only days before the November elections.

225. See, e.g., 134 CONG. REC. H7074 (daily ed. Sept. 7, 1988) (statement of Rep. Rangel) (noting that the 1986 Act is the first comprehensive legislation in the area).

226. H. HOGAN, E. KLEBE, R. PERL & K. RONHOVDE, *DRUG CONTROL: HIGHLIGHTS OF P.L. 99-570: ANTI DRUG ABUSE ACT OF 1986*, at 2 (Cong. Res. Serv. Rep. No. 86-968 GOV, Oct. 31, 1986) (unnumbered pagination). Most of the 1986 Act's Titles and Subtitles are devoted to supply-side activities or other law enforcement purposes beyond the scope of this Article.

227. The primary federal laws are located in 21 U.S.C. § 801-970 (1982 & Supp. IV 1986). Of particular significance is 21 U.S.C. § 812(c) (1982 & Supp. IV 1986), which establishes "schedules of controlled substances." It is a crime to "intentionally manufacture, distribute, dispense, or possess" a Schedule II controlled substance, 21 U.S.C. § 841 (a)(1) (1982), and "knowingly or intentionally to possess a controlled substance" without a legal prescription, 21 U.S.C. § 844(a) (Supp. IV 1986).

Coca leaves and the typical derivatives or chemical equivalents are classified as Schedule II substances. 21 U.S.C. § 812(c) sched. II (a)(4) (1982 & Supp. IV 1986). Schedule II substances are defined as drugs or other substances with a "high potential for abuse," but which also have a "currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions." Schedule II substances also are those for which "[a]buse of the drug . . . may lead to severe psychological or physical dependence." 21 U.S.C. § 812(b)(2) (1982).

as well as for trafficking, Congress ostensibly augmented the deterrent effect of these laws.²²⁸ The utility of these penalties is explored in the following sections.

1. Criminal Penalties and Consumer Demand

The 1986 Act enacted mandatory minimum penalties which increased punishments for offenders convicted of simple possession of controlled substances. The severity of the punishment is linked to the number of times a person has been convicted. First-time offenders convicted of simple possession now face a minimum fine of not less than one thousand dollars and not more than five thousand dollars. They also may be sentenced to a prison term not to exceed one year.²²⁹ Individuals with one prior, final federal or state drug-related conviction must be fined an amount not less than twenty-five hundred dollars nor more than ten thousand dollars, and must be sentenced to a mandatory minimum fifteen-day term of imprisonment, with the maximum sentence not to exceed two years. Individuals with two or more prior, final drug-related convictions must be fined not less than five thousand dollars but not more than twenty-five thousand dollars, and must be sentenced to a minimum of ninety days imprisonment, with the maximum sentence not to exceed three years.²³⁰

228. See Moore, *Drug Policy and Organized Crime* 5-10 (Jan. 1986), in PRESIDENT'S COMMISSION, *supra* note 1, at app. G. Professor Moore posits that because drug laws attack both supply and demand, they compose a comprehensive drug policy. Moore suggests that these laws rely on three different mechanisms: The moral force of the law, general deterrence, and imprisonment to achieve incapacitation. Nevertheless, he acknowledges that "*the drug laws are imperfectly effective*. They leave behind a residual market, composed of drug dealers and users, who failed to get the message that they should abandon their drug activities." *Id.* at 8 (emphasis in original).

Although true for some actors, this analysis misses the essential problem created by addiction. The addict may well "get the message" conveyed both by the antidrug laws (and by his subjective experience) that consuming drugs exposes him to severe legal, social, and economic harm. Nonetheless, an addict likely will disregard these risks and continue consuming the substance precisely because of the addiction.

229. Section 1052 of the 1986 Act, in imposing these penalties, amends § 404 of the Controlled Substances Act, 21 U.S.C. § 844(a) (Supp. IV 1986).

230. 1986 Act, *supra* note 11, § 1052, 100 Stat. at 3207-8 to 3207-9 (amending 21 U.S.C. § 844(a) (Supp. IV 1986)). The penalties enacted in the 1986 Act may have been increased by the new federal Sentencing Guidelines promulgated by the United States Sentencing Commission pursuant to the Sentencing Reform Act of 1984, Title II of the Comprehensive Crime Control Act of 1984, Pub. L. No. 98-473, §§ 201-2304, 98 Stat. 1976, 1976-2194 (codified at 28 U.S.C. §§ 991-98 (Supp. IV 1986)). Pursuant to 28 U.S.C. § 994(a)(1) (Supp. IV 1986) the Commission promulgated sentencing guidelines that went into effect November 1, 1987. The Supreme Court has affirmed the constitutionality of the sentencing guidelines. *United States v. Mistretta*, 108 S. Ct. 2818 (1988).

Debate continues about the effect the Sentencing Guidelines will have upon the penalties prescribed in the 1986 Act. One commentator has concluded that the Sentencing Commission "added substantial increases of its own for drug crimes." A. VON HIRSCH, *FEDERAL SENTENCING GUIDELINES: THE UNITED STATES AND CANADIAN SCHEMES COMPARED* 7 (Center for Research in Crime and Justice, New York University School of Law No. IV, 1988); see also D. FREED, C. SMITH, F. ZIMRING, M.

The threat created by these penalties undoubtedly deters some nonusers and recreational users from consuming cocaine and other drugs. Even so, it is fanciful to believe that the increased penalties enacted in the 1986 Act will have a substantial effect upon consumer demand. Federal and state laws long have prohibited possession of cocaine and other drugs and have imposed criminal penalties for violation of these laws.²³¹ The threat of these criminal sanctions has been insufficient to deter the present population of users, and there is little apparent reason to believe this will change in the future, particularly in light of the remote chance that an individual user will be apprehended and punished.

It is even more difficult to imagine that these penalties will deter the subpopulation of addicts. The medical, psychological, and economic theories discussed earlier reveal that addicts will persist in their drug use in the face of the threat of criminal sanctions, and may even commit other crimes to finance their consumption. Only a much more extreme increase in cost is likely to deter addicts from consumption.

This reality is demonstrated poignantly by the particular sanctions imposed by the 1986 Act. If an addict is wealthy, the fines are de minimis. If he is poor, they are irrelevant. The threat of a prison sentence may be a greater deterrent, but the chances of an individual user being arrested, prosecuted, convicted, and imprisoned are remote, and are likely to have less impact on addicts than the benefits from drug use.²³² The increased penalties in the 1986 Act will do little to persuade addicts to forsake cocaine.

It appears that the prison avoidance provisions rather than the criminal penalty provisions of the statute actually contain its most rational mechanisms for reducing addict demand. The 1986 Act allows

LASKER, R. SCHOEN, H. MORRIS, M. TONRY, B. WEDGWOOD, J. SWEET & D. MILLER, PRELIMINARY REPORT ASSESSING THE GUIDELINES OF THE UNITED STATES SENTENCING COMMISSION 26 (Oct. 22, 1987) (unpublished report) (source on file with the Author) (concluding that Sentencing Guidelines will increase average drug sentences 20% over those imposed under the 1986 Act). The Sentencing Commission contends that the 1986 Act is the primary cause of increases in drug sentences. See UNITED STATES GENERAL ACCOUNTING OFFICE (GAO) REPORT TO CONGRESS: SENTENCING GUIDELINES POTENTIAL IMPACT ON THE FEDERAL CRIMINAL JUSTICE SYSTEM 15-16 (Sept. 1987) (reporting that the Sentencing Commission asserts that the numerical increase in prosecutions and mandatory minimum sentences required by the 1986 Act are more significant than the Guidelines as factors contributing to future prison population increases).

231. See 21 U.S.C. § 844 (Supp. IV 1986); see also FLA. STAT. ANN. § 893.13(f) (West 1976); MASS. GEN. LAWS ANN. ch. 94C, § 34 (West 1984).

232. Illegal drugs undoubtedly remain readily available in the Nation's jails and prisons. Imprisonment does not necessarily mean that the addict is deprived of drugs, or that the demand generated by this user is eliminated. Congress has recognized this and has enacted new penalties for drug trafficking in prison. 1988 Act, *supra* note 13, H.R. 5210, § 6468, 100th Cong., 2d Sess., 134 CONG. REC. H11,167-68 (daily ed. Oct. 21, 1988) (amending 18 U.S.C. § 1791(b) (1982)).

federal judges to place first-time drug offenders on probation without entering a judgment of guilt. The court may discharge offenders who successfully complete their terms of probation (or even earlier) and dismiss the proceedings against them.²³³

These prison avoidance measures provide the opportunity to utilize the criminal justice system to identify drug users and to divert them into treatment programs that might help deter them from future consumption. Successful completion of a treatment program, followed by a supervised period of abstinence, would be logical probation requirements for drug offenders. If such direct incentives were to succeed at converting addicts to nonusers, this approach would affect the demand curve for cocaine by removing high-level consumers from the population of users. Nevertheless, individual drug consumers are prosecuted so rarely under federal law that even the rational application of these devices will affect few people.

2. Criminal Penalties and Supply

The penalty enhancement provisions of the 1986 Act are not restricted to demand-side purposes. The most severe penalties are applied to the supply side, where the 1986 Act increases substantially the penalties for drug trafficking offenses.²³⁴ This is noteworthy because increases in penalties inevitably produce concomitant expenditures of resources for law enforcement and incarceration, resources that otherwise could be devoted to demand reduction.

Title I of the 1986 Act imposes three levels of penalties for drug trafficking. The most severe category of sentences requires a mandatory minimum term of imprisonment of ten years to life for first time offenders and a term of twenty years to life for individuals with prior, final drug-related felony convictions, whether state, federal, or foreign. In addition, substantial fines may be imposed on convicted offenders. Penalties are imposed for drug trafficking offenses involving specific controlled substances, including cocaine in its various forms.²³⁵

233. 1986 Act, *supra* note 11, § 1052, 100 Stat. 3207-8 to 3207-9 (amending 21 U.S.C. § 844(b)(1)-(2) (Supp. VI 1986)). A defendant may receive this probation only once. The Justice Department must keep records to ensure that individuals do not receive probation more than once.

234. The criminal penalty provisions of the 1986 Act generally are located in §§ 1001-1991 of Title I. Title I amends various provisions of the United States Code. For example, the 1986 Act amends the penalty provisions of the Controlled Substances Act, 21 U.S.C. §§ 841, 845, 848, 856 (Supp. IV 1986); the Controlled Substances Import and Export Act, 21 U.S.C. § 960 (Supp. IV 1986); and the Comprehensive Drug Abuse Prevention Act of 1978, 21 U.S.C. § 881(f) (Supp. IV 1986). The 1986 Act amends Title 18 of the United States Code by adding 18 U.S.C. §§ 1956-1957 (Supp. IV 1986) and 18 U.S.C. § 924(e)(1)-(2) (Supp. IV 1986).

235. See 21 U.S.C. §§ 841(b)(1)(A), 960(b)(1) (Supp. IV 1986). Permissible fines for first-time offenders are not to exceed the greater of those authorized under Title 18 of the United States

The intermediate category of penalties covers crimes involving lesser quantities of the same controlled substances. The statute imposes mandatory minimum sentences of five to forty years for first-time offenders, and ten years to life for repeat offenders. Again, substantial fines may be imposed.²³⁶

The least onerous category involves drug trafficking offenses of yet smaller quantities of controlled substances. Individuals with no prior, final drug-related convictions may be imprisoned for up to twenty years, with mandatory parole (now called supervised release) of at least three years. Repeat offenders may be sentenced to a maximum term of thirty years, with a minimum of six years of supervised release time. Substantial fines also may be imposed.²³⁷

By enacting these penalties for drug traffickers,²³⁸ Congress attempted to affect the supply side of the drug market. The legislative history of the statute reports that Congress intended to deter and punish "drug kingpins."²³⁹ Unless these penalties cause prices to rise, however, they will do little to reduce demand. While it is possible that the occasional defendant punished under these sections will be a user or even an addict whose consumption might be reduced by arrest, the millions of individual drug users in the Nation remain unaffected by penalties directed against large-scale traffickers.

These increased penalties may fail to reduce supplies as well. They

Code, or \$4 million for an individual and \$10 million for a defendant other than an individual. These amounts are doubled (to \$8 million and \$20 million) for repeat offenders. *See also* 21 U.S.C. §§ 960(a)(1)-(3) (Supp. IV 1986) (correlating penalties for importing and exporting controlled substances and manufacturing for import to the United States with the quantity of the substance); *see also* W. WELD, C. SAPHOS, M. ZELDIN, H. HARBIN, G. SCHNEIDER & T. HOLLENHORST, HANDBOOK ON THE ANTI-DRUG ABUSE ACT OF 1986, at 3-4 (U.S. Dept. of Justice, Criminal Div., 1987) [hereinafter 1986 ACT HANDBOOK] (discussing the alternative fine provisions existing under federal law). More severe sentences are required for drug trafficking offenders when death or serious bodily injury results. *See* 1986 ACT HANDBOOK, *supra*, at 3-7.

236. *See* 21 U.S.C. § 841(b)(1)(B) (Supp. IV 1986) (fines for first offenses of up to \$2 million for individuals and \$5 million for those other than individuals; penalties doubled for subsequent offenses); *Id.* § 960(b)(2) (Supp. IV 1986) (imposing the same fines).

237. *See id.* § 841(b)(1)(C) (Supp. IV 1986) (fines for first offenses of up to \$1 million for individuals and \$5 million for those other than individuals; doubled for subsequent offenses); *Id.* § 960(b)(3) (Supp. IV 1986) (imposing same penalties).

238. Comparison with previous penalties for drug trafficking highlights the increases in sentences enacted under the 1986 Act. For example, § 1002(2) of the 1986 Act amended the Controlled Substances Act, increasing the maximum penalties for first-time drug trafficking offenses from \$250,000 to \$4 million for individuals, and to \$10 million for those other than individuals. *Id.* § 841(b)(1)(A) (Supp. IV 1986). The maximum penalties for subsequent offenses were increased from \$500,000 to \$8 million for individuals, and to \$20 million for those other than individuals. *See generally* 1986 ACT HANDBOOK, *supra* note 235, at 3-30 (discussing penalties imposed by the 1986 Act and related statutes).

239. *See, e.g.*, 132 CONG. REC. S14,301 (daily ed. Sept. 30, 1986) (statement of Sen. Byrd); *Id.* at S14,001 (daily ed. Sept. 27, 1986) (statement of Sen. D'Amato); *Id.* at S13,779 (daily ed. Sept. 26, 1986) (statement of Sen. Dole).

have been in effect since November 1986, yet, by all reports, supplies of cocaine and the other regulated substances remain plentiful. Indeed, the acknowledged failure of earlier supply-side efforts prompted Congress to address the demand side of the drug markets in the 1986 and 1988 Acts. The historic failure of supply-side programs makes it all the more puzzling that in the 1986 Act Congress allocated most financial resources to this failed law enforcement effort.

3. Law Enforcement Funding Under the 1986 Act

In an era of budget deficits and self-imposed legislative restraints on federal government spending,²⁴⁰ Congress has not been stingy in funding enforcement of the antidrug laws. In fact, Congress has authorized the expenditure of unprecedented amounts for the enforcement of the antidrug laws. Once again, the 1986 Act provides a touchstone for analysis.

In the 1986 Act, Congress initially authorized the annual expenditure of 3.175 billion dollars for antidrug law enforcement purposes. This authorization was an increase of 1.297 billion dollars (forty-one percent) over the authorization for the same expenditures for fiscal year 1986.²⁴¹ This total included funding authorization for the activities of a variety of government agencies.

Indeed, the number of recipients of funds under the 1986 Act demonstrates the remarkable extent to which various branches of government are now involved in this law enforcement effort and receive funds for that purpose. For example, the 1986 Act's Justice Department authorization includes funds for the Drug Enforcement Administration, the Federal Bureau of Investigation, the Criminal Division, the Tax Division, United States Attorneys, United States Marshals, prisons, support of prisoners, the Immigration and Naturalization Service, the Office of Justice Programs, INTERPOL, and the President's Commission on Organized Crime.

The authorization for the Treasury Department includes funds for the Customs Service, the Internal Revenue Service, the Bureau of Alcohol, Tobacco and Firearms, the Secret Service, and Puerto Rico. Other departments and agencies receiving funds for law enforcement purposes include the Department of Transportation, the Department of State, the Department of Agriculture, the Department of the Interior, the

240. See, e.g., Balanced Budget and Emergency Deficit Control Act of 1985, 2 U.S.C. §§ 901-922 (Supp. IV 1986).

241. H. HOGAN, DRUG ABUSE PREVENTION AND CONTROL: BUDGET AUTHORITY FOR FEDERAL PROGRAMS, FY 1986-FY 1988, at 1-4 (Cong. Res. Serv. Rep. No. 87-220 GOV, Mar. 16, 1987).

Food and Drug Administration, and the Department of Defense.²⁴²

It is naive to assume that merely allocating more money will produce a decline in demand for illegal drugs. It is nevertheless instructive to compare Congress's funding of these supply-oriented law enforcement activities with funds allocated for demand-side programs when evaluating the federal commitment to these demand reduction programs. It is noteworthy that the funds earmarked for demand reduction programs under the 1986 Act were only a fraction of the more than three billion dollars authorized annually for law enforcement.²⁴³

B. *Funding for Treatment and Rehabilitation Programs: 1972-1986*

In light of government pronouncements about the new demand-side strategy enacted in the 1986 Act,²⁴⁴ it is surprising to learn that these statutory methods are based upon pre-existing federal programs.²⁴⁵ Twenty years ago Congress passed the Alcoholic and Narcotic Rehabilitation Act,²⁴⁶ which authorized special grants to support the building and staffing of community mental health centers in order to "provide incentives for localities to initiate and develop new services for alcoholics and alcohol and drug abusers."²⁴⁷

In subsequent years Congress revised the structure of this initial program. In the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970²⁴⁸ and in the Drug Abuse Office and Treatment Act of 1972,²⁴⁹ Congress established a system of project and formula grants designed to support state and local treatment and rehabilitation efforts, and created two agencies to administer the grant programs as well as to oversee research, training, and education activities. In 1974 Congress placed these two agencies, the

242. *Id.* These totals do not include the "amount of the Judiciary Branch's base budget that is spent on the processing of drug law offenders" because those data are unavailable. *Id.* at 8 n.11.

243. *See id.* at 5. The Reagan Administration was less generous than was Congress in its proposed expenditures for law enforcement funds. *See* H. HOGAN, FEDERAL DRUG CONTROL: PRESIDENT'S BUDGET REQUEST FOR FISCAL YEAR 1988, at 5-8 (Cong. Res. Serv. Rep. No. 87-479 GOV, June 1, 1987). The President's fiscal year 1988 budget contained a \$900 million reduction from fiscal year 1987, but his fiscal year 1989 budget contained a 13% increase over the enacted fiscal year 1988 amounts. *Id.* at 5.

244. *See supra* notes 10, 34, and accompanying text; *see also infra* notes 355-56.

245. For discussions of these earlier programs, see PRESIDENT'S COMMISSION, *supra* note 1, at 224-58.

246. The ANRA was enacted as Title III of the Act of Oct. 15, 1968, Pub. L. No. 90-574, 82 Stat. 1006 (codified at 42 U.S.C. §§ 2688e-2688r (1970)) (some sections were repealed and some transferred by the Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97-35, 95 Stat. 357).

247. E. KLEBE, *supra* note 21, at 4.

248. Pub. L. No. 91-616, 84 Stat. 1848 (codified as amended at 42 U.S.C. § 290 aa-1 (Supp. IV 1986)).

249. Pub. L. No. 92-255, 86 Stat. 65 (codified as amended at 42 U.S.C. § 290 aa-2 (Supp. IV 1986)).

National Institute on Drug Abuse (NIDA) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA), under the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) of the Public Health Service.²⁵⁰

In 1981 Congress consolidated the various grant programs into the Alcohol, Drug Abuse, and Mental Health Services Block Grant program,²⁵¹ and directed ADAMHA to disburse funds earmarked for drug and alcohol abuse programs to the states according to statutory formulas.²⁵² For example, at least thirty-five percent of the funds had to be used for drug abuse programs, and at least thirty-five percent for alcohol abuse programs.²⁵³ In recent years the states have used the alcohol and drug abuse block grants to support inpatient and outpatient detoxification and counseling programs, prevention programs including classes in the schools and training for teachers, and community outpatient programs for families and youths.²⁵⁴

After rapid growth during the 1970s, federal spending for these projects declined during the 1980s. Between fiscal year 1972 and fiscal year 1979 the appropriations for these grants increased from 69.3 million dollars to 336.5 million dollars. By fiscal year 1981, however, total funding had declined to 262.8 million dollars. In fiscal year 1982, the first year in which ADAMHA administered the new block grant program,²⁵⁵ the funding was reduced again to approximately 224 million dollars. By fiscal year 1986 the total grant funds expended by the states had increased, but only to 235 million dollars²⁵⁶—less than two-thirds of the budget for fiscal year 1979.

From 1980 to 1985 the functional level of federal support for alcohol and drug abuse treatment programs actually declined more than these nominal figures suggest. One analyst has concluded that when the

250. The National Institute of Mental Health also was incorporated into the ADAMHA, which acts as the primary agency of the Department of Health and Human Services for issues involving mental health and substance abuse. See Act of May 14, 1974, Pub. L. No. 93-282, §§ 201-204, 88 Stat. 125, 134-36 (1974) (codified as amended at 42 U.S.C. § 290 aa (Supp. IV 1986)).

251. This consolidation was accomplished by Title IX of the Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97-35, § 901, 95 Stat. 357, 535 (codified at 42 U.S.C. § 300x-4(c)(6)(A) (1982 & Supp. 1986)). This Act also continued a substance abuse education program operated by the Department of Education which was originated in the Drug Abuse Education Act of 1970, Pub. L. No. 91-527, 84 Stat. 1385 (codified at 21 U.S.C. §§ 1001-1007 (1982)). The purpose was to train teachers about the nature and effects of drugs and alcohol.

252. Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97-35, § 901, 95 Stat. 357, 535 (codified at 42 U.S.C. § 300x-4(c)(6)(A) (1982 & Supp. IV 1986)) (statute requires the equal division of funds between services for mental health and substance abuse programs).

253. *Id.* § 901, 95 Stat. at 548 (codified at 42 U.S.C. § 300x-4(c)(7) (1982 & Supp. IV 1986)).

254. E. KLEBE, *supra* note 21, at 5.

255. See *supra* notes 250-52 and accompanying text.

256. See E. KLEBE, *supra* note 21, at 5-9. These sums represent about one-half of the block grant funds disbursed to the states by ADAMHA during those years. *Id.*

funding levels are calculated in terms of "1985 constant dollars, the level of Federal funding for alcohol and drug abuse prevention and treatment programs is less than half of the level of funding provided 10 years ago."²⁵⁷

Budgets for prevention and treatment programs were cut despite an increased demand for these services in the states during the same period of time. The result has been an apparent decline in the states' ability to meet the need for drug and alcohol abuse treatment and prevention.²⁵⁸ Separate surveys of public and private treatment agencies conducted in 1985 and 1986 found that funding to support treatment and prevention services was the major need of state and local agencies.²⁵⁹

Congress adopted the demand reduction provisions of the 1986 Act within the context of this prior legislative and funding history. The following section explores the extent to which Congress succeeded in addressing state and local needs for increased support for treatment and prevention services.

C. *Drug Treatment, Rehabilitation, and Education Under the 1986 Act*

Congress expressly established "comprehensive" demand-side strategies in the 1986 Act. Although most of the statute's provisions emphasized traditional supply-side activities, Congress devoted one title of the 1986 Act, Title IV, to "Demand Reduction"²⁶⁰ by means other than law enforcement.

1. Funding for Treatment and Rehabilitation Programs

Title IV is divided into subtitles devoted to "Treatment and Rehabilitation"²⁶¹ and to achieving "Drug-Free Schools and Communi-

257. *Id.* at 8.

258. *See id.* at 9-10. A 1984 survey of state alcohol and drug abuse agencies found that 27 of the 30 states which responded reported increased demand for prevention and treatment services. Of these, 17 states had to start waiting lists for services and 7 were forced to terminate state support for local programs or terminated the programs. *Id.* at 9. Some agencies responding to the survey did report increased funding support from the states or from client fees.

259. In 1985, the Reagan Administration offered Congress anecdotal information supporting its claims that the available services had not changed significantly since the period of time preceding the block grant legislation. *Id.* at 10. Even if this information is correct, the demand for those services has increased, at least for cocaine. The number of people using the drug has increased, while the methods of consumption have become more dangerous. This combination creates a greater need for prevention, treatment, and rehabilitation.

260. *See* 1986 Act, *supra* note 11, §§ 4001-4304, 100 Stat. 3207-103 to 3207-154 (amending scattered titles of the U.S.C.).

261. Subtitle A of Title IV of the 1986 Act is entitled Treatment and Rehabilitation. *Id.* §§ 4001-4022, 100 Stat. at 3207-103 to 3207-125 (amending scattered sections of 21 & 42 U.S.C.).

ties."²⁶² Neither subtitle enacts programs sufficient to alter the behavior of the Nation's population of cocaine addicts, in part because of Congress's funding decisions. One decision was to allocate most funds to supply-side activities rather than to demand reduction programs.

The spending limits authorized in the 1986 Act emphasize this funding disparity. Despite increases over prior years, the funds authorized for all demand-side programs in the 1986 Act were only a fraction of those earmarked for the law enforcement effort. Congress authorized 227 million dollars for drug abuse treatment, prevention, and education in fiscal year 1986. For fiscal year 1987, total appropriations for these purposes were increased to 455 million dollars.²⁶³ While this was a substantial increase, it still constituted less than one-sixth of the more than three billion dollars authorized for antidrug law enforcement during the same year.²⁶⁴

In fact, these figures overestimate the extent of federal financial support for demand reduction programs aimed at illegal drugs like cocaine. The 1986 Act lumped spending for alcohol and drug abuse programs together, and did not require that specific amounts be earmarked for illegal drug programs.²⁶⁵

In addition, the statutory methods of distributing funds for treatment and rehabilitation programs were not rationally designed to maximize the impact of these funds on demand for drugs. For fiscal year 1987 Congress authorized 241 million dollars to support such programs.²⁶⁶ Of the total authorization, approximately three-quarters (76.5

262. Subtitle B of Title IV is entitled the Drug-Free Schools and Communities Act of 1986. *Id.* §§ 4101-4144, 100 Stat. at 3207-125 to 3207-136 (codified at 20 U.S.C. §§ 4601-4602, 4611-4612, 4622-4626, 4641-4645, 4661-4664 (Supp. IV 1986)), *repealed by* Augustus F. Hawkins—Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, Pub. L. No. 100-297, § 1003, 102 Stat. 130, 293. The repealed Act was replaced by Pub. L. No. 100-297, §§ 5101-5192, 102 Stat. 130, 252-65 (1988) (to be codified at 20 U.S.C. §§ 3171-3232 (Supp. IV 1986)).

263. *See* H. HOGAN, *supra* note 241, at 6.

264. *See id.* at 4 (total federal expenditures for law enforcement of \$3.048 billion per year); *id.* at 6 (total annual federal expenditures for demand reduction programs of \$455 million).

265. *See, e.g., id.* at 8 n.13 (reaching this conclusion "[s]ince there is no specification of the distribution of the block grant increase (i.e., whether for prevention or treatment), and since the Office of Substance Abuse is also concerned with alcohol abuse"). In fact, some of these funds cannot be expended on illegal drug programs. The statute creates programs limited to the problem of alcohol abuse that require the expenditure of federal resources. For example, Title IV mandates a study to review available research knowledge concerning alternative approaches for treatment of alcoholism and alcohol abuse, assessing the comparative costs and effectiveness of these alternatives, reviewing the financing alternatives available to the public for treatment, and making recommendations for "research, planning, administration, and reimbursement" for treatment and rehabilitation of alcoholics and alcohol abusers. 1986 Act, *supra* note 11, § 4022(a), 100 Stat. at 3207-124, *reprinted in* 42 U.S.C. § 290bb n. (Supp. IV 1986).

266. 1986 Act, *supra* note 11, § 4002, 100 Stat. at 3207-103 (adding 42 U.S.C. § 300y(a) (Supp. IV 1986)); *see also* E. KLEBE, *supra* note 21, at 20. The 1986 Act also designates certain funds for alcohol abuse and alcoholism research, investigations, experiments, studies, and for drug

percent) was available for the allotments to the states,²⁶⁷ and the remainder was distributed to various federal agencies. The statute allocated 4.5 percent to the Administrator of Veterans' Affairs for outpatient treatment, rehabilitation, and counseling,²⁶⁸ and eighteen percent to ADAMHA to establish the Office for Substance Abuse Prevention and for grants for programs focusing upon high-risk youth.²⁶⁹ One percent was earmarked for use in developing and evaluating the effectiveness of drug and alcohol abuse treatment programs.²⁷⁰

Obviously Congress intended to use most of the funds to support state programs. This is a rational approach because drug use creates demand in separate localities. State and local governments are more likely than the federal government to design and operate programs addressing local problems effectively. On the other hand, funding local programs will be effective only when the funds are allocated by methods maximizing their impact. The 1986 Act did not disburse the limited funds available to support state and local treatment and rehabilitation programs according to formulas designed to achieve that rational goal. The statutory formulas distribute only fifty-five percent of these funds on the basis of need,²⁷¹ nearly one-half of the funds (forty-five percent) are allotted to the states solely on the basis of population.²⁷²

A need-based approach for fund distribution is preferable because it permits most resources to be disbursed to the states with the greatest

abuse research, investigations, and projects. See 1986 Act, *supra* note 11, § 4010, 100 Stat. at 3207-115 (amending 42 U.S.C. § 290bb-2, 290cc-2 (Supp. IV 1986)). The 1986 Act also amends numerous sections of the Public Health Service Act to adopt and revise alcohol and drug abuse programs. 42 U.S.C. §§ 201 to 300cc-15 (Supp. IV 1986).

267. Six percent is to be added to the amounts already allotted for ADM block grants to the states, and 70.5% is available for distribution on the basis of need (55% of the subtotal) and population (45% of the subtotal). No state is to receive less than \$50,000 for its population-based allotment. 1986 Act, *supra* note 11, § 4002, 100 Stat. at 3207-103 to 3207-104 (adding 42 U.S.C. § 300y(a)-(b) (Supp. IV 1986)).

268. Funds transferred to the Administrator of Veterans' Affairs may not be used for inpatient purposes, but can be used for outpatient treatment, rehabilitation, and counseling of veterans with alcohol or drug abuse dependence or disabilities. See *id.* § 4002, 100 Stat. at 3207-104 to 3207-106 (adding 42 U.S.C. §§ 300y(a), 300y-1 (Supp. IV 1986)).

269. See *id.* § 4002, 100 Stat. at 3207-104 (adding 42 U.S.C. § 300y(a) (Supp. IV 1986)); *id.* § 4005, 100 Stat. at 3207-112 to 3207-113 (adding 42 U.S.C. 290aa-6 to 290aa-8 (Supp. IV 1986)); see also *id.* § 4005, 100 Stat. at 3207-112 (adding 42 U.S.C. § 490aa-6(d), (Supp. IV 1986) (stating that of this 18%, \$20 million shall go to carrying out the purposes of 42 U.S.C. § 290aa-8)).

270. ADAMHA is the recipient of these funds. *Id.* § 4002, 100 Stat. at 3207-106 (adding 42 U.S.C. § 300y-2 (Supp. IV 1986)).

271. *Id.* § 4002, 100 Stat. at 3207-104 (adding 42 U.S.C. § 300y(b)(3) (Supp. IV 1986)).

272. *Id.* § 4002, 100 Stat. at 3207-104 (adding 42 U.S.C. § 300y(b)(2) (Supp. IV 1986)) (authorizing these funds to be allotted in "an amount which bears the same ratio to the total amount . . . as the population of such State bears to the population of all States, except that no such allotment shall be less than \$50,000").

incidence of alcohol²⁷³ and drug abuse problems, and with the greatest need for federal support of programs dealing with these problems.²⁷⁴

A population-based approach, on the other hand, seems designed to produce political capital for elected government officials rather than to maximize the effectiveness of the funds.²⁷⁵ A population-based method allows elected politicians to claim that they have enacted a truly "national" program, and it permits all members of Congress to assure their constituents that their states are getting their proportionate share of these federal funds. This approach, however, guarantees that nearly one-half of the federal funds distributed to the states for treatment and rehabilitation will be allocated without regard to local need, and perhaps without regard for the quality or effectiveness of the state programs receiving support.²⁷⁶

The 1986 Act also undermined the effectiveness of the federal demand-side strategy prohibiting use of grants to support inpatient hospital services.²⁷⁷ Although inpatient treatment is a component of many programs for treating drug abusers including cocaine addicts,²⁷⁸ the congressional proscription applies even when inpatient services are appropriate or necessary.

Congress may have had legitimate reasons for excluding inpatient treatment from the funding scheme, such as ensuring that the states would not use federal funds to replace state and local financial commit-

273. Legislative concern about alcohol abuse is rational, because alcohol probably is "the most abused drug in America." *Id.* § 4017(a)(1), 100 Stat. at 3207-120; *see also id.* § 4019(a)(1), 100 Stat. at 3207-122 (stating that "the abuse of alcohol and the use of drugs has become a societal problem of epidemic proportions"). The Senate found that alcohol abuse costs the economy nearly \$120 billion annually and that over 12 million adults have one or more symptoms of alcoholism. *Id.* § 4017(a)(2), (4), 100 Stat. at 3207-121. The Senate also found that "it is necessary to undertake a serious national effort to educate the American people of the serious consequences of alcohol abuse." *Id.* § 4017(a)(9), 100 Stat. at 3207-121. One method proposed for accomplishing this purpose was to place "carefully drafted warning labels on the containers of alcoholic beverages concerning serious health consequences resulting from the abuse of alcohol." *Id.* § 4017(a)(10), 100 Stat. at 3207-121.

274. Need is to be determined according to statutory criteria, including local demand for programs and the ability of each state to support them. *See id.* § 4002, 100 Stat. at 3207-107 (adding 42 U.S.C. § 300y(b)(3) (Supp. IV 1986)).

275. *See* 132 CONG. REC. S16,501 (daily ed. Oct. 15, 1986) (statement of Sen. Moynihan). The Senate version of the 1986 Act allocated 75% of treatment funds on basis of need, and only 25% based on population. *Id.* The House of Representatives proposed 100% allocation based on a state's population between ages 15 and 65 years as weighted by per capita income. *Id.* The ultimate formula resulted from a compromise "ensuring that each State will receive at least some of the funds." *Id.*

276. The statute does provide that one percent of the total amount appropriated for any fiscal year shall be used to develop and evaluate alcohol and drug abuse treatment programs "to determine the most effective forms of treatment." 1986 Act, *supra* note 11, § 4002, 100 Stat. at 3207-106 (adding 42 U.S.C. § 300y-2 (Supp. IV 1986)).

277. *See id.* § 4002, 100 Stat. at 3207-104 (adding 42 U.S.C. § 300y(c)(3)(A) (Supp. IV 1986)).

278. *See infra* notes 344-45 and accompanying text.

ments to drug and alcohol abuse programs;²⁷⁹ but this total prohibition is legislative overkill. Congress could prevent states from substituting federal funds for local funds without proscribing all use of these funds for inpatient treatment programs.²⁸⁰ For example, Congress could require, as a prerequisite to receiving federal grant funds, that states and localities not decrease local support for these programs below pre-grant levels.²⁸¹

The 1986 Act also expends resources for programs bearing at most an attenuated relationship to the goal of reducing demand for drugs. These incidental provisions authorize expenditures for programs dealing with public health emergencies, suicide, mental health among the elderly, the manufacture of infant formulas, and the treatment of animals used in research.²⁸² While perhaps meritorious, these measures can do little or nothing to affect demand for cocaine and other illegal drugs, particularly among addicts.

2. Funding for Public Education and Research

In addition to funding state treatment programs, Title IV directs the Administrator of ADAMHA²⁸³ to take certain actions, including educating the public concerning the "health hazards of alcoholism, alcohol

279. To apply for these funds, a state must submit an application supplying information about its proposed programs, including "assurances that payments made to the State . . . will supplement and not supplant any State or local expenditures for the treatment and rehabilitation of alcohol abuse and drug abuse that would have been made in the absence of such payments." 1986 Act, *supra* note 11, § 4002, 100 Stat. at 3207-105 (adding 42 U.S.C. § 300y(d)(5) (Supp. IV 1986)).

280. *See id.* § 4002, 100 Stat. at 3207-105 (adding 42 U.S.C. § 300y(e) (Supp. IV 1986)). Prohibiting the states from using these funds to provide inpatient hospital services or to purchase land and construct treatment facilities (other than minor remodeling) seems unlikely to further a rational demand reduction program to reduce demand among addicts who may require such treatment. *See infra* Part V.

281. *See infra* notes 366-67 and accompanying text.

282. These provisions of Title IV are unrelated to the statute's demand reduction goals. For example, the statute authorizes grants and other expenditures for research and for disseminating information concerning public health emergencies. 1986 Act, *supra* note 11, § 4006, 100 Stat. at 3207-114 (adding U.S.C. § 490aa-9 (Supp. IV 1987)). The statute also mandates the development and publication of information concerning the causes of suicide, particularly among people younger than 21 years of age. *Id.* § 4011, 100 Stat. at 3207-115 (adding 42 U.S.C. § 290aa-3(h) (Supp. IV 1986)). Other provisions concern: Programs for training and research concerning the mental health needs of the elderly, *id.* § 4012, 100 Stat. at 3207-116 (amending 42 U.S.C. § 290aa-3(c) (Supp. IV 1986)); standards and testing for quality control for manufacturers of infant formulas, *id.* § 4014, 100 Stat. at 3207-116 to 3207-120 (amending 21 U.S.C. § 350a (Supp. IV 1986)); research concerning the use of alkyl nitrates, *id.* § 4015, 100 Stat. at 3207-120; development of guidelines for the proper care and treatment of animals used in research, *id.* § 4020, 100 Stat. at 3207-122 to 3207-125 (adding 42 U.S.C. § 290aa-10 (Supp. IV 1986)); and grants for research on mental illness, *id.* § 4021, 100 Stat. at 3207-125 (amending 42 U.S.C. § 290aa-3(i) (Supp. IV 1986)).

283. *See* 42 U.S.C. § 490aa (Supp. IV 1986) (amended by 1986 Act, *supra* note 11, § 4003, 100 Stat. at 3207-106).

abuse, and drug abuse.”²⁸⁴ The statute authorizes administrative action to promote research, discussion, and analysis of the problems of drug and alcohol abuse, including the employment of experts as consultants and advisors to make recommendations for legislative and administrative action.²⁸⁵

The 1986 Act also established the Office for Substance Abuse Prevention and directed it to undertake a variety of research and education activities. These activities include sponsoring regional workshops on the prevention of drug and alcohol abuse; coordinating the findings of research in the area; developing effective drug and alcohol abuse prevention literature;²⁸⁶ distributing prevention materials among states and localities and in the schools;²⁸⁷ supporting the development of model, innovative, community-based programs intended to discourage alcohol and drug abuse among young people;²⁸⁸ and preparing documentary films and public service announcements for the electronic media to educate the public about the dangers of alcohol and drug use.²⁸⁹

These programs emphasize research and public education rather than funding for the delivery of treatment services to the present population of drug addicts. These research and public education activities may be an essential element of comprehensive demand reduction efforts. They may provide long-term benefits by producing new and effective methods for treating drug abusers. By educating the public, they may deter recreational users and nonusers from future drug use. But, none of these activities is likely to persuade cocaine addicts to forsake their drug consuming behaviors in the near future. As a result, this legislation will have little impact on the market demand created by the existing population of addicts.

284. 1986 Act, *supra* note 11, § 4003, 100 Stat. at 3207-106 (amending 42 U.S.C. § 290aa(h) (Supp. IV 1986)). The Administrator is directed to take other related actions, such as making grants to schools to support training of individuals to identify and treat alcohol and drug abuse. *Id.* § 4003, 100 Stat. at 3207-107 (amending 42 U.S.C. § 290aa(g) (Supp. IV 1986)).

285. *See id.* § 4003, 100 Stat. at 3207-107 (amending 42 U.S.C. § 290aa(i) (Supp. IV 1986)).

286. This literature is to include “literature on the adverse effects of cocaine free base (known as ‘crack’).” *Id.* § 4005, 100 Stat. at 3207-112 (adding 42 U.S.C. § 290aa-6(b)(3) (Supp. IV 1986)).

287. *Id.* § 4005, 100 Stat. at 3207-112 (adding 42 U.S.C. § 490aa-7 (Supp. IV 1986)). The Secretary of Health and Human Services, through the Director of the Office for Substance Abuse Prevention, is directed to “establish a clearinghouse for alcohol and drug abuse information to assure the widespread dissemination” of information to the states, local government, educational institutions, treatment and rehabilitation networks, and the general public. *Id.*

288. The 1986 Act defines categories of “high risk youth” and directs the Secretary, through the Director of the Office of Substance Abuse Prevention, to make grants for projects to “demonstrate effective models for the prevention, treatment, and rehabilitation” of drug and alcohol abuse among this population. *Id.* § 4005, 100 Stat. at 3207-115 (adding 42 U.S.C. § 290aa-8(a) (Supp. IV 1986)).

289. *Id.* § 4005, 100 Stat. at 3207-112 (adding 42 U.S.C. § 290aa-6(b)(9) (Supp. IV 1986)).

3. The Drug-Free Schools and Communities Act

Subtitle B of Title IV of the 1986 Act is the Drug-Free Schools and Communities Act of 1986, which contains Congress's plan for drug abuse education and prevention in the schools.²⁹⁰ Congress found that drug and alcohol abuse are widespread in the Nation's schools and "constitute a grave threat [to the students'] physical and mental well-being."²⁹¹ The Act attempted to correct this problem by financing "programs of drug abuse education and prevention (coordinated with related community efforts and resources)."²⁹²

The 1986 Act authorizes the expenditure of 200 million dollars in fiscal year 1987 and 250 million dollars in both fiscal year 1988 and fiscal year 1989 for these purposes. The Secretary of Education is authorized to distribute these funds within statutory limits. Although small percentages of the funds are earmarked for other purposes,²⁹³ more than eighty percent of the money is reserved for distribution to the states. Funds are allotted to each state according to its population, and no state is to be allotted less than 0.5 percent of these funds.²⁹⁴

The population-based formulas for allocating funds for programs in

290. *See id.* §§ 4101-4144, 100 Stat. at 3207-126 to 3207-136 (codified in 20 U.S.C. §§ 4601-4602, 4611-4612, 4622-4626, 4641-4645, 4661-4664 (Supp. IV 1986)).

291. *Id.* § 4102, 100 Stat. at 3207-125 (codified at 20 U.S.C. § 4601(3) (Supp. IV 1986)).

292. *See id.* § 4103, 100 Stat. at 3207-125 (codified at 20 U.S.C. § 4602 (Supp. IV 1986)). To fulfill this statutory purpose, funds are allocated to the states for grants to local and intermediate education agencies to establish, operate, and improve local programs of drug abuse prevention, intervention, rehabilitation referral, and education in elementary and secondary schools; for grants to and contracts with community-based organizations for similar programs for school dropouts and other high-risk youth; and for development, training, technical assistance, and coordination activities. Funds also are authorized for distribution to institutions of higher education to establish, implement, and expand programs of drug abuse education and prevention (including rehabilitation referral programs) for students enrolled in colleges and universities, and for teacher training programs in drug abuse education and prevention conducted in cooperation with state and local education agencies. *Id.*

293. *See id.* § 4112(a), 100 Stat. at 3207-126 (codified at 20 U.S.C. § 4612(a) (Supp. IV 1986)) (reserving 1% of these funds for need-based grants to Guam, American Samoa, the Virgin Islands, the Trust Territory of the Pacific Island, and the Northern Mariana Islands); *id.* § 4133, 100 Stat. at 3207-133 to 3207-134 (codified at 20 U.S.C. § 4612(a)(2) (Supp. IV 1986)) (reserving 1% for programs for Indian youth); *id.* § 4134, 100 Stat. at 3207-134 to 3207-135 (codified at 20 U.S.C. § 4612(a)(3) (Supp. IV 1986)) (reserving 0.2% for programs for Hawaiian natives); *id.* § 4131, 100 Stat. at 3207-131 to 3207-132 (codified at 20 U.S.C. § 4612(a)(4) (Supp. IV 1986)) (reserving 8% for programs with institutions of higher education); *id.* § 4231, 100 Stat. at 3207-132 to 3207-133 (codified at 20 U.S.C. § 4612(a)(5) (Supp. IV 1986)) (reserving 3.5% for federal education activities); *id.* § 4135, 100 Stat. at 3207-135 (codified at 20 U.S.C. § 4612(a)(6) (Supp. IV 1986)) (reserving 4.5% to maintain five regional centers to perform various training, educational and related activities).

294. *Id.* § 4112(b)(1), 100 Stat. at 3207-126 (codified at 20 U.S.C. § 4612(b)(1) (Supp. IV 1986)). Each state is entitled to an allotment bearing "the same ratio to the amount of such remainder as the school-age population of the State bears to the school-age population of all States." *Id.*

the schools employed in subtitle B are subject to the same criticisms directed at similar methods of funding the prevention and rehabilitation programs under subtitle A of Title IV. There is, for example, no necessary relationship between the number of students in a state and local levels of drug abuse. Patterns of drug consumption among children vary throughout the country. Once again, election-year politics may have dictated the statutory formulas for allocating these funds.²⁹⁵

On the other hand, a population-based formula has greater merit when used to fund programs for educating students throughout the Nation than when it is applied to programs intended to reduce demand among the general population. In the latter situation, population size alone may not determine demand. In contrast, the number of students in a state bears a direct relationship to the cost of educating this population.²⁹⁶

Subtitle B devotes funds to a variety of programs, including those developing school curricula and counseling that "clearly and consistently teach that illicit drug use is wrong and harmful."²⁹⁷ It provides support for education and training programs for teachers, educational personnel, and others in the community, for programs aimed at athletes and "on-site efforts in schools . . . to enable law enforcement officials to take necessary action in cases of drug possession and supplying of drugs and alcohol to the student population."²⁹⁸

Despite their legitimate and important educational goals, these programs will have a negligible effect on the market demand created by cocaine addicts. Even if these programs are effective at teaching school-

295. Electoral politics unquestionably influences government policies in the "war against drugs." See, e.g., *House Votes to Fight Drugs with Military*, Atlanta Const., May 6, 1988, at 3A, col. 1. Representative Les Aspin, Chairman of the Armed Services Committee, referring to a measure ordering the President to use the military to end drug smuggling, is quoted as saying: "Of course it will pass easily. In an election year, it won't even be close. Drugs is an issue." *Id.* Members of the House of Representatives passed the measure by a 385 to 23 margin. *Id.*

296. The statutory formulas for distribution of these funds are consistent with a program intended to educate all school-age children. Each state is required to use 70% of the funds it receives under subtitle B for the following purposes: At least 90% of these funds (thus 63% of the total) must be used for grants to "local and intermediate educational agencies and consortia" based solely on the relative numbers of children in the school-age population in the areas. See 1986 Act, *supra* note 11, § 4124, 100 Stat. at 3207-128 to 3207-129 (codified at 20 U.S.C. § 4624 (Supp. IV 1986)).

297. *Id.* § 4124(a)(1), 100 Stat. at 3207-129 (codified at 20 U.S.C. § 4625(a)(1) (Supp. IV 1986)).

298. *Id.* § 4125(a), 100 Stat. at 3207-129 to 3207-130 (codified at 20 U.S.C. § 4625(a) (Supp. IV 1986)). The statute also provides that subtitle B funds shall be distributed to the states for support of public and private nonprofit community organizations to develop and implement local education, training, prevention, early intervention, rehabilitation referral, counseling, and public information programs. *Id.* § 4122(a), 100 Stat. at 3207-127 (codified at 20 U.S.C. § 4622(a) (Supp. IV 1986)).

children about the dangers of drugs, and the statute does little to assure even that,²⁹⁹ these lessons will reach few addicts, because most addicts (indeed most cocaine users) are older than eighteen years.³⁰⁰ To the extent that there is a population of addicted schoolchildren,³⁰¹ the clinical and research data discussed earlier reveal that education alone is unlikely to induce them to discontinue use. More intrusive intervention in the form of treatment may be the only way to reduce demand among this group. Subtitle B addresses this problem only indirectly. For example, subtitle B funds cannot be used for treatment of drug abuse. These funds may be used only to support referral programs for drug abuse treatment and rehabilitation, and school-based drug abuse prevention and early intervention programs, other than for treatment.³⁰²

Congress apparently decided to use these demand reduction funds to educate children in an attempt to prevent future drug use, rather

299. Program effectiveness is not assured by the Act. Subtitle B allocated 70% of these funds to the states based on population rather than local need or program effectiveness. The application procedures for subtitle B grants do not require applicants to meet any specific standards establishing the need for programs, yet funding is for a three-year period. The primary quality control mechanism appears to be that applicants must make various assurances in their grant applications about future conduct by the states and localities, including assurances that the state will establish annual evaluations of the effectiveness of programs assisted under the statute. *See id.* § 4123, 100 Stat. at 3207-128, § 4126, 100 Stat. at 3207-130 (codified at 20 U.S.C. §§ 4623, 4126 (Supp. IV 1986)). The statute sets no standards for measuring the effectiveness of programs nor does it require that funds be withdrawn from ineffective programs. This leaves Congress open to the criticism that in drafting subtitle B its members were more concerned with electoral politics than with assuring that long-range demand reduction programs actually achieve their goals.

Concerns about the effectiveness of the expenditure of these funds are highlighted by the fact that at least part of the remaining 30% of subtitle B funds are to be distributed according to need-based criteria. At least one-half of these funds must be used for "innovative community-based programs" providing services for "high-risk youth." *Id.* § 4122(b)(1), 100 Stat. at 3207-127 (codified at 20 U.S.C. § 4622(b)(1) (Supp. IV 1986)). This group includes individuals under the age of 21 years who have been or are at high risk of becoming drug or alcohol abusers, are school dropouts, have become pregnant, are economically disadvantaged, are children of drug or alcohol abusers, are victims of abuse, have committed a violent or delinquent act, have experienced mental health problems, have attempted suicide, or have experienced long-term physical pain due to injury. *Id.* § 4122(b)(2), 100 Stat. at 3207-128 (codified at 20 U.S.C. § 4622(b)(2) (Supp. IV 1986)).

300. Most heavy users are in their mid- to late twenties and early thirties. *See, e.g.,* Abelson & Miller, *supra* note 105, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 36; Adams & Durell, *supra* note 8, in *PHARMACOLOGY*, *supra* note 8, at 11; Clayton, *supra* note 65, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 11. Most cocaine users are over 18 years of age. *See* 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 3.

301. The possibility of cocaine abuse and addiction among schoolchildren should remain a concern. *See* Gold, Washton & Dackis, *supra* note 107, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 138 (asserting that drug and alcohol abuse is one of the most serious hazards affecting youth, and that cocaine and stimulant abuse is increasing faster than abuse of other drugs, with three percent of high school seniors reporting daily use in the preceding month). Some data suggest that young people may be more likely than adults to smoke cocaine, one of the most dangerous consumption modes. *See, e.g.,* 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 6.

302. *See* 1986 Act, *supra* note 11, § 4122(a), 100 Stat. at 3207-127 (codified at 20 U.S.C. § 4622(a) (Supp. IV 1986)).

than to support school-based intervention programs and treatment of existing problems. Educating children about the dangers of cocaine and other drugs obviously is important. This should not obscure the fact that subtitle B programs, which consume about half of the 1986 Act's demand-side funds, will not significantly decrease current demand for cocaine. Nor can the inartful allocation of subtitle A funds for treatment and prevention programs have any significant impact on market demand. The actual results are consistent with this analysis. More than two years after passage of the 1986 Act, market demand for cocaine persists at epidemic levels.³⁰³

This does not mean that reducing demand in the near future is impossible. It suggests, however, that this goal requires methods very different from those enacted in the 1986 Act. One proposal for accomplishing this goal is discussed in Part V.

V. THE RECOMMENDATIONS OF THE PRESIDENTIAL COMMISSION ON THE HUMAN IMMUNODEFICIENCY VIRUS EPIDEMIC

The Presidential Commission on the Human Immunodeficiency Virus Epidemic (AIDS Commission) has proposed a comprehensive national program to reduce intravenous and other drug abuse. The AIDS Commission examined this problem because intravenous drug abuse plays a central role in the transmission of the human immunodeficiency virus (HIV), commonly referred to as acquired immune deficiency syndrome or AIDS.³⁰⁴ The AIDS Commission concluded that the ability of the United States to control the HIV epidemic depends greatly on the ability to control intravenous drug abuse,³⁰⁵ and recommended methods for accomplishing that goal.

These recommendations differ from the approach that Congress took in the 1986 Act in several significant ways. The most important difference is that the AIDS Commission specifically targeted the popu-

303. See 134 CONG. REC. H7082 (daily ed. Sept. 7, 1988) (statement of Rep. Moorhead) (declaring that more than 150 tons of cocaine entered the United States in 1986, and demand has increased since then).

304. See FINAL REPORT, *supra* note 21, at 94. The AIDS Commission reported the following information about the impact of intravenous drug abuse on the AIDS epidemic: Intravenous drug abusers comprise 25% of the AIDS cases in the United States, and this group constitutes a substantial vector for infection, spreading the disease through sharing needles and other drug paraphernalia, through sexual contact with others, and perinatally to their children. See *id.* Seventy percent of those with heterosexually transmitted AIDS also report engaging in sex with an intravenous drug abuser. Seventy percent of the children with perinatally transmitted AIDS are the children of intravenous drug users or their sex partners. *Id.* The AIDS Commission suggested that the term "HIV infection" is a more correct definition of the problem than is the term "AIDS." *Id.* at xvii.

305. *Id.*

lation of drug abusers in its proposals to reduce drug consumption.³⁰⁶ The AIDS Commission's emphasis on this critical population distinguished its program from the demand reduction mechanisms contained in the 1986 Act, which were directed in large part at the general public, including schoolchildren, nonusers, and recreational consumers.

In contrast, the AIDS Commission offered a program designed to wean drug abusers away from drug consuming behaviors. This focus makes the AIDS Commission's proposals relevant to the search for solutions to the problem of reducing addict demand for cocaine. Although the Commission's recommendations focused upon intravenous injection, they also provide a model for addressing broader problems of drug abuse and addiction. The Commission's analysis and recommendations considered these broader issues as well as intravenous injection because the abuses of illegal drugs and alcohol in all their manifestations are facilitators in spreading HIV infection, both by depressing the immune system and by impairing judgment, which may lead to sexual transmission of the virus.³⁰⁷ The applicability of the Commission's recommendations to types of drug abuse other than intravenous injection is confirmed by passages in the Commission's final report discussing the need to treat the entire population of drug abusers, of whom only about twenty percent are intravenous injectors.³⁰⁸

Despite its focus upon drug abuse, particularly intravenous injection, the Commission never systematically identified the particular drugs at which its recommendations were aimed, although cocaine obviously was a drug of primary concern. The AIDS Commission concluded that intravenous cocaine use is increasing in the United States,³⁰⁹ and recommended that National Institute on Drug Abuse research place particular emphasis on the treatment of intravenous cocaine use.³¹⁰ The Commission's concern is consistent with other reports indicating that cocaine injection is now among the most prevalent types of intravenous drug use.³¹¹ Because cocaine's effects are short-lived, intravenous users

306. *Id.* at 94-104. The AIDS Commission discussed the problem of reducing demand for drugs among the general population, but focused upon the population of drug abusers, particularly intravenous drug users. *See id.* at 94-95.

307. *Id.* at 95, xviii.

308. *Id.* at 95 (noting that "it is imperative to curb *drug abuse, especially intravenous drug abuse*, by means of treatment in order to slow the HIV epidemic" (emphasis added)); *see infra* notes 315-16 and accompanying text.

309. FINAL REPORT, *supra* note 21, at 98.

310. *Id.* at 98.

311. Most government reports estimate that the Nation has approximately 500,000 heroin addicts. *See* S. REP. No. 333, *supra* note 8, at 2; NNICC REPORT 1985-1986, *supra* note 7, at 66. Assuming that all inject heroin intravenously, this population is approximately equivalent to the number of cocaine injectors. More than 21 million people have tried cocaine, Adams & Durell, *supra* note 8, in PHARMACOLOGY, *supra* note 8, at 10, 5 to 6 million people use cocaine each month,

inject the drug frequently, placing them at a particularly high risk of contracting the human immunodeficiency virus. This heightened risk makes cocaine injectors a group of logical concern to the AIDS Commission.³¹²

As a result of these concerns, the AIDS Commission's recommendations for reducing consumption by drug abusers provide a useful model for comparison with Congress's demand reduction programs. Because the general population of drug abusers targeted by the AIDS Commission includes the addicts who create most of the demand for cocaine, these recommendations are of particular interest to an analysis of programs seeking to curtail demand among cocaine addicts.

The AIDS Commission's central recommendation for altering the behaviors of drug abusers was that society must create a national system providing treatment on demand for intravenous drug abusers. The AIDS Commission concluded that a comprehensive, long-term national program providing outreach, intervention, education, and treatment services to this population is necessary.³¹³

The AIDS Commission recognized that implementing such a program would require a reorientation in the government's approach to combatting illegal drug use. While acknowledging the need for a comprehensive antidrug program, including public education and enforcement of the criminal laws,³¹⁴ the AIDS Commission determined that these mechanisms would not deter the population of drug abusers. It concluded that drug abuse must be treated as a public health issue as well as a legal problem.

The AIDS Commission concluded that the Nation has a population

and 2.5 to 3 million are cocaine addicts, PRESIDENT'S COMMISSION, *supra* note 1, at 16; *see also* 1985 NATIONAL HOUSEHOLD SURVEY, *supra* note 8, at 5. The 1985 National Household Survey concludes that 8% of cocaine users take cocaine intravenously. *Id.* at 5, 6. If that percentage is based upon the 5 to 6 million people using cocaine during the previous month, then between 400,000 and 500,000 people inject cocaine, or about the same number estimated to be heroin addicts. Combining these estimates of cocaine and heroin injectors produces a total consistent with government estimates of the number of intravenous drug users in the Nation. *See infra* notes 315-16 and accompanying text. It is interesting to note that smoking crack cocaine may be supplanting intravenous heroin injection in some areas. *See Kerr, Cocaine Use Up Among Methadone Patients*, N.Y. Times, Oct. 12, 1986, at A43, col. 1 (reporting that 35% of people in methadone maintenance programs use cocaine); *Kerr, Growth in Heroin Use Ending As City Users Turn to Crack*, N.Y. Times, Sept. 13, 1986, at B1, col. 1 (reporting that heroin use is no longer spreading in New York City, as young people turn to crack instead).

312. *See* Millman, *Evaluation and Clinical Management of Cocaine Abusers*, 49 J. CLINICAL PSYCHIATRY 27, 30 (Feb. Supp. 1988) (stating that intravenous cocaine abusers are particularly at risk of contracting HIV because they may inject "at 10- to 30-minute intervals for as long as the drug supply lasts, and because judgment during a run is frequently impaired, sharing of needles is likely").

313. FINAL REPORT, *supra* note 21, at 95.

314. *Id.* at 99-104.

of 6.5 million people who use drugs in ways that significantly impair their health and ability to function, which includes 1.2 to 1.3 million intravenous drug abusers.³¹⁵ The Commission also determined that the Nation has insufficient resources to treat this population. At any given time, only about 250,000 drug abusers, of whom about 148,000 are intravenous drug users, are in treatment.³¹⁶

A nationwide shortage of treatment capacity is one reason that drug abusers are not rehabilitated. The AIDS Commission noted that three-quarters of the cities in the United States report waiting lists for treatment ranging in length up to six months, time periods when drug abusers continue to use drugs intravenously "several times each day."³¹⁷

The Commission concluded that remedial action sufficient to correct this shortage is essential, and requires both increased support for existing programs and expansion of the Nation's treatment infrastructure. Even with funding increases the present treatment infrastructure can support only a twenty percent increase in capacity, an increase insufficient to accommodate the present population of drug abusers. To enlarge the Nation's treatment capability beyond this level requires expenditures to incorporate "treatment models which have been demonstrated to be cost effective"³¹⁸ and to design and implement new treatment modes.³¹⁹

Such an expansion would require that federal as well as state and local resources be spent on the "bricks and mortar" to construct new treatment facilities.³²⁰ The AIDS Commission criticized existing constraints on the use of federal funds for construction, expansion, and renovation of treatment facilities.³²¹ These constraints appear in the 1986 Act.³²² The AIDS Commission also stressed the need to implement aggressive outreach programs designed to identify drug abusers and channel them into appropriate treatment settings.³²³

It is not surprising that the AIDS Commission's proposals for

315. *Id.* at 96.

316. *Id.*

317. *Id.* See also Kolbert, *Treating Drug Addicts: Who Should Pay For It?*, N.Y. Times, Feb. 27, 1989, at A14, col. 5 (officials estimate that in New York State at least 3000 drug abusers are on waiting lists for treatment programs).

318. FINAL REPORT, *supra* note 21, at 96.

319. *Id.* at 96-99.

320. *Id.* at 96.

321. *Id.* at 97.

322. See *supra* notes 277-80 and accompanying text.

323. FINAL REPORT, *supra* note 21, at 98-102 (emphasizing the need to identify and target the population of drug abusers, as well as societal groups particularly at high risk, including: Ethnic minority populations that have experienced a disproportionately high incidence of the HIV epidemic; intravenous drug abusers who are women of childbearing age, who are pregnant, or who are mothers; and the sexual partners of high-risk individuals).

spending federal funds for building and operating additional treatment programs and facilities require increases in the allocation of public resources.³²⁴ What is surprising is that the AIDS Commission's most specific funding analyses appeared in its Interim Report. The AIDS Commission's Final Report downplayed the long-range financial implications of its recommendations and failed to put a total price tag on its proposed program of treatment on demand. In contrast, the Commission's Interim Report,³²⁵ issued only three months earlier, was much more explicit about the cost of the same ten-year plan for treating drug abusers.

In the Interim Report the AIDS Commission estimated that its recommendations for a nationwide treatment program would require an additional 15.1 billion dollars more than current spending over a period of ten years, or 1.5 billion dollars per year more.³²⁶ The Commission recommended that this increased funding for treatment be divided equally between the federal government and state and local governments.³²⁷

The AIDS Commission also concluded that expenditures for research and education must be increased for the next ten years. The Commission determined that outreach education directed at drug abusers requires 1.265 billion dollars (126.5 million dollars per year) above current funding.³²⁸ In addition, necessary research concerning drug abuse requires 180 million dollars more than current levels (18 million dollars per year),³²⁹ and drug abuse education and other prevention programs need an additional 300 million dollars (30 million dollars per year).³³⁰

The total price tag is 16.845 billion dollars more than current spending levels. Despite the magnitude of this total, the AIDS Commission concluded that its recommendations for outreach, education, and treatment on demand³³¹ are cost effective when compared with the ex-

324. See *supra* notes 277-80 and accompanying text (the 1986 Act prohibits use of allocated funds for these purposes).

325. PRESIDENTIAL COMMISSION ON THE HUMAN IMMUNODEFICIENCY VIRUS EPIDEMIC, INTERIM REPORT (Mar. 15, 1988) [hereinafter INTERIM REPORT].

326. *Id.* at 6. In its *Final Report*, the AIDS Commission merely provided an appended table containing estimates of the "low end" start up costs of funding for its recommendations. It concluded that a treatment program for drug abuse would cost \$1.6745 billion in the first year, an increase of \$924.5 million over the "Total Federal dollars" appropriated for fiscal year 1988. It also recommended state funding of \$750 million. FINAL REPORT, *supra* note 21, at 171.

327. INTERIM REPORT, *supra* note 325, at 6. The same recommendation is made in its *Final Report*. See, e.g., FINAL REPORT, *supra* note 21, at 95-96.

328. INTERIM REPORT, *supra* note 325, at 16.

329. *Id.* at 12.

330. *Id.* at 14.

331. *Id.* at 6.

pense of either treating new AIDS patients or incarcerating convicted drug users.³³² Temporarily alleviating the health effects of HIV infection can cost 100,000 dollars per person, and "imprisonment costs an average of \$14,500 per person per year."³³³ When these costs are combined with the other societal costs resulting from abuse of illegal drugs,³³⁴ the "investment necessary to provide for intravenous drug abuse 'treatment on demand' is sound public policy."³³⁵

One assumption implicit in this conclusion is that treatment programs can be effective. The AIDS Commission addressed the issue of the effectiveness of the treatment in several ways. Some proposals related to funding formulas and quality control of treatment programs. It recommended that funds be distributed on the basis of need and eschewed the population-based formulas utilized in the 1986 Act.³³⁶ It recommended that money be targeted for areas with the largest numbers of drug abusers, and that disbursements of funds to high need areas be expedited.³³⁷ The Commission also emphasized the importance of ensuring the quality of programs receiving funds.³³⁸

Although these proposals are intended to enhance the quality and effectiveness of treatment programs, they do not answer the harder question: Does treatment work? The AIDS Commission's proposals assume that treatment programs can induce addicts and other drug abus-

332. An antidrug policy based upon providing treatment for individual addicts would be expensive. Whether an addict is offered outpatient psychotherapy, inpatient hospitalization, or some combination of both, the costs of a long-term treatment program are obviously substantial. This has been noted in reference to the general theory of rehabilitation of convicted offenders. *See, e.g., Ehrlich, supra* note 10, at 314 (noting that "rehabilitation may be quite costly to achieve"). Of course, imposing sanctions other than fines (imprisonment, parole, probation) also involves substantial costs. *See supra* note 230, *infra* notes 333-35 and accompanying text. Increasing penalties also increases those costs. *See U.S. SENTENCING COMM'N, SUPPLEMENTARY REPORT ON THE INITIAL SENTENCING GUIDELINES AND POLICY STATEMENTS 71-73* (June 18, 1987) (projecting that the federal prison population will increase from 71%-88% over a five-year period, in large part because of new harsher federal penalties for drug offenses). The thesis of this Article is not that a theory based upon a treatment model is inexpensive. It is, rather, that this approach is the most likely to reduce demand among the current population of addicts, who generate a large proportion of the demand for cocaine.

333. FINAL REPORT, *supra* note 21, at 95.

334. *See U.S. DEP'T OF JUSTICE, NAT'L INST. OF JUSTICE, PROBING THE LINKS BETWEEN DRUGS AND CRIME 3* (Feb. 1985) (citing studies that "clearly confirm one of the major assumptions of drug treatment—that reducing the level of drug usage can reduce the level of criminal activity, even among relatively hard-core drug users").

335. FINAL REPORT, *supra* note 21, at 95 (estimating that drug abuse costs the Nation \$60 billion annually).

336. *Id.* at 97; *cf. supra* notes 271-76, 294-96 accompanying text.

337. FINAL REPORT, *supra* note 21, at 96-97.

338. *See id.* at 98. The *Final Report* stated that "[q]uality assurance in drug abuse treatment programs needs to be re-examined." *Id.* The AIDS Commission recommended developing quality standards, re-examining state licensing procedures for drug treatment programs, and federally funded studies to develop quality control mechanisms. *Id.*

ers to abstain from their drug-consuming behaviors³³⁹ and to resist relapsing over long periods of time. This assumption can be disputed, and reasonable concerns about the viability of treatment as a method of reducing the market demand for cocaine can only be intensified by the well-documented recidivist tendencies of cocaine addicts.³⁴⁰

The complexity of addiction, which involves physiological, psychological, and environmental components, and which may vary from individual to individual,³⁴¹ precludes a comparative analysis of various treatment modes for cocaine addiction in this Article.³⁴² These factors also suggest that reasonable people can differ about the likely success of any treatment mode for particular individuals.

Despite the existence of legitimate concerns about the viability of a program to reduce demand by treating addicts,³⁴³ a growing body of information suggests that cocaine addicts, and other drug abusers, can be treated successfully in appropriate settings.³⁴⁴ In recent years, clinicians have reported successes at treating cocaine addicts with a variety of methods designed to detoxify them and prevent relapse. These methods include inpatient hospital treatment, individual psychotherapy,

339. See, e.g., Millman, *supra* note 312, at 31 (asserting that the primary goal of treatment should be abstinence).

340. See Washton, *Preventing Relapse to Cocaine*, 49 J. CLINICAL PSYCHIATRY 34 (Feb. Supp. 1988). "Most cocaine addicts find it easy to stop using the drug in the short term but very difficult to avoid using it in the long term." *Id.*

341. See Gawin & Kleher, *supra* note 71, at 107 (reporting clinical observations concerning diagnosis of psychiatric symptoms and conditions produced by cocaine use); Khantzian, *The Self-Medication Hypothesis of Addictive Disorders: Focus on Heroin and Cocaine Dependence*, 142 AM. J. PSYCHIATRY 1259 (1985) (reporting that predisposition to addiction is linked to related psychiatric disorders); Millman, *supra* note 312, at 27. "The development of an individualized cocaine abuse treatment plan requires a thorough assessment of the interaction of psychological, social, and pharmacologic factors." *Id.*

342. But see SURGEON GENERAL'S REPORT, *supra* note 50, ch. V; see also *infra* notes 343-45 and accompanying text.

343. See, e.g., FINAL REPORT, *supra* note 21, at 98-99. Unlike heroin, no pharmacological treatment for intravenous cocaine use exists; insufficient effort has been made to develop innovative treatment modes for drug abusers; data from the drug-abusing community are insufficient. See also Siegel, *supra* note 60, in CLINICAL PERSPECTIVES, *supra* note 48, at 104-05, 108 (observing that most subjects in a study of recreational cocaine users initiated self-control strategies, including self-imposed restrictions on the quantity of cocaine purchased or carried as well as periods of abstinence, leading the Author to conclude that many social users are capable of controlling use with no escalation).

344. The complexity of the problem is apparent from the recommendations made by the AIDS Commission. These recommendations include: (1) designing programs to address multiple dimensions of the client's life in addition to the drug-abusing behavior, including educational, vocational, and family difficulties; (2) creating programs that will be available to drug abusers at "unusual" hours, and in imaginative locations, like storefronts and mobile units; (3) involving political and community leadership in the process; (4) adding an additional 59,000 people to serve as drug abuse workers; and (5) persuading the criminal justice system to adopt new programs, such as diverting drug abusers into treatment. FINAL REPORT, *supra* note 21, at 97-98; see *infra* note 345 and accompanying text (discussing reports about treatment programs for cocaine addicts).

group therapy, and pharmacological intervention.³⁴⁵ Recently both the Surgeon General³⁴⁶ and the AIDS Commission³⁴⁷ have noted the successful use of various methods to treat addiction in general.³⁴⁸

345. See E. KLEBE, *supra* note 21, at 12. "Evaluations of treatment modes indicate that a variety of existing approaches to treatment have been effective in achieving reductions in drug and alcohol use and associated problem behaviors. There is little evidence that any one type of treatment is superior to others." *Id.*; see Gawin, *supra* note 76, at 15 (asserting that there are multiple, positive clinical reports that pharmacological intervention facilitates abstinence by cocaine abusers); Gold, *supra* note 26, at 54-56 (summarizing goals and methods of inpatient and outpatient treatment programs); Gold, Washton & Dackis, *supra* note 107, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 146 (summarizing outpatient treatment program incorporating behavioral, cognitive, educational, and self-control techniques for reducing relapse); Millman, *supra* note 312, at 29 (reporting that the increase in cocaine abuse in the past 10 years was paralleled by a remarkable increase in the number of treatment programs, and reviewing a number of treatment methods); Murray, *supra* note 69, at 254 (asserting that "[c]ocaine abuse can be treated effectively in appropriate settings"); O'Brien, *supra* note 32, at 17-22 (providing a review of comprehensive rehabilitation methods, including response conditioning and drug therapies); Smith, *supra* note 26, at 125 (reporting various techniques used to treat cocaine withdrawal symptoms); Washton, *supra* note 122, at 566. "In our experience, an optimal treatment plan for most patients includes the combination of individual therapy with participation in a cocaine recovery group led by a professional therapist." *Id.*; Washton, *supra* note 340, at 38 (concluding that after detoxification an effective treatment program for cocaine addiction must include education, counseling, and other techniques to assist in preventing relapse); Wesson & Smith, *supra* note 65, in *CLINICAL PERSPECTIVES*, *supra* note 48, at 201 (reporting that "[c]ocaine recovery support groups . . . have proven effective for many patients"). See also Kleber & Gawin, *Cocaine Abuse: A Review of Current and Experimental Treatments*, in *PHARMACOLOGY*, *supra* note 8, at 111, 117-22. The rate of patient relapse is high for cocaine abusers who seek treatment, but researchers report success with a substantial percentage of the patients treated with hospitalization, psychotherapy, and a "contract" approach. *Id.* Depending upon the therapeutic methods used, long-term success for 25%-50% of the patients studied has been reported. The other patients relapsed. The authors concluded that the success rates of pharmacotherapies are largely unknown, and that "[s]ingle focus approaches are generally ineffective in drug abuse treatment . . . [so] [i]ntegration of various approaches based on the needs of the patients seems indicated instead." *Id.* at 122. *But cf. id.* at 111 (noting that "[s]cientific evaluation of cocaine abuse treatment has been surprisingly sparse and no consensus exists regarding optimal treatment strategies").

346. See SURGEON GENERAL'S REPORT, *supra* note 50, at v. "Like other addictions, tobacco use can be effectively treated. A wide variety of behavioral interventions have been used for many years. . . ." *Id.* at ch. V (discussing different treatment modes and theories for various addicting substances).

347. See FINAL REPORT, *supra* note 21, at 95. "Current treatment modes for intravenous drug abusers, including methadone maintenance and drug-free residential communities, reduce illicit drug use, improve employment among addicts, reduce crime rates, and improve social functioning." *Id.* Cf. H.R. REP. NO. 844, *supra* note 19, at 4 (treating addicts can dramatically reduce drug-related criminality, and once treated, the average addict's criminality "can be reduced by 84 percent").

348. The Nation's experience with tobacco suggests that the combination of effective therapies and a comprehensive public education program can succeed at reducing the use of addicting substances. Comparing tobacco and cocaine for these purposes may be problematic, because the manufacture, sale, possession, and use of tobacco is generally legal in this country. As a result, adult tobacco users develop and maintain consumption behaviors permitted by law. Cocaine users, on the other hand, consume the drug despite legal prohibition. The latter group, therefore, may be less sensitive to societal norms.

Nonetheless, the national experience with tobacco cannot be ignored. Although tobacco is now

These reports support the view that a national treatment program for addicts and other drug abusers may prove to be effective at reducing demand for cocaine and other addictive drugs. While this conclusion can be disputed, the failure of traditional supply-side strategies and the limitations of the 1986 Act's demand reduction programs suggest that new approaches are necessary.³⁴⁹

Despite the obvious need for new government antidrug strategies, it is not surprising that the advisory Presidential AIDS Commission and not Congress first proposed this comprehensive treatment program for combatting drug abuse. The AIDS Commission addressed the issue of drug abuse within the context of a separate but related public health crisis, the AIDS epidemic. As a result, the Commission likely was more predisposed than Congress to favor a treatment model, a collective predisposition perhaps influenced by the professional backgrounds of individual members of the Commission.³⁵⁰ The private citizens serving on the AIDS Commission were independent of the political pressures facing members of Congress. As a result, the Commission members were free to consider and recommend approaches—even expensive ones—beyond the constraints of legislative history and electoral politics.

Historical and political constraints have predisposed Congress to emphasize programs consistent with the traditional law enforcement model of drug control. These forces have led Congress to support the well-publicized, well-entrenched, and politically popular law enforcement apparatus that has flourished in the "war on drugs." It was pre-

recognized to be a powerfully addicting substance, see SURGEON GENERAL'S REPORT, *supra* note 50, at i, iv, tobacco use has declined in this country during the past 25 years, *id.* at 569. "Between 1965 and 1985, smoking prevalence decreased in all age, sex, and race categories with the exception of women aged 65 years and older." *Id.* at 582. In addition, "[a]n estimated 32.7 percent of men and 28.3 percent of women smoked cigarettes regularly in 1985," a decrease from 36.7% and 30.4% respectively since 1976. This decline undoubtedly results in large part from public education about the dangers of tobacco use. *Id.* at 9-13. The dangers of HIV infection may motivate some addicts to desist from drug use.

349. Areas of agreement do exist between the AIDS Commission's recommendations and the 1986 Act. Both emphasize the importance of enforcing the laws criminalizing drug trafficking, possession, and use. Both stress the need to expand public education and to encourage the expansion of local treatment programs. Both recognize the need to get drug abusers into treatment programs, and even to utilize some of the same remedial devices to accomplish that goal, such as using the criminal justice system to identify drug abusers and to provide incentives for them to complete treatment successfully. See FINAL REPORT, *supra* note 21, at 98. Both acknowledge the need to train additional personnel to staff these programs and both support funding for research. See *id.* at 98-99. Nevertheless, differences appear even on the issue of basic research. For example, the AIDS Commission suggests research should emphasize the development of strategies for treating intravenous cocaine use, *id.* at 99, while similar programs in the 1986 Act are not as focused.

350. The thirteen members of the Commission included five medical doctors and one nurse. Two other members had doctorate degrees.

dictable that when Congress first developed a new "demand reduction" approach, it would emphasize popular causes, such as educating school children about the dangers of drugs, rather than funding expensive treatment programs for drug addicts, one of society's least popular groups and one whose behaviors are especially difficult to change.

The AIDS Commission took a different approach and the timing of its recommendations was fortuitous. Coming only a few months before the 1988 election, the AIDS Commission Report provided Congress with a legitimate opportunity to try a different, and perhaps more effective, approach to combatting drug abuse. The existence of this public health crisis provided legislators with a justification for trying new methods of dealing with the old problem of illegal drug abuse. The relationship of drug use to the spread of the AIDS epidemic allowed Congress to treat drug abuse and addiction as medical as well as legal problems.

Indeed, because drug abuse is an important factor in the spread of the AIDS epidemic, elected representatives will have trouble justifying blind adherence to old theories and methods that do not reduce addict demand for cocaine and other drugs. It will be harder still to justify failing to try new approaches—such as providing treatment for addicts—that might hold more promise of success. The AIDS epidemic may provide the impetus to generate new legislative approaches in the "war on drugs."

Part of this prediction has come to pass. In the months following publication of the AIDS Commission's Final Report, Congress enacted another election year antidrug statute. In some important areas the 1988 antidrug statute responded to the AIDS Commission's recommendations. This latest congressional effort is discussed in Part VI.

VI. THE ANTI-DRUG ABUSE ACT OF 1988

Performing what has become a standard election year ritual, Congress passed "comprehensive" antidrug legislation in 1988.³⁵¹ The Anti-Drug Abuse Act of 1988 (1988 Act)³⁵² builds upon the 1986 Act,³⁵³ and like its predecessor addresses both supply-side and demand-side issues. Although much of the legislation simply reworks old ideas, some of the demand-oriented measures reveal new approaches. Nowhere is this more evident than in the area of treatment and rehabilitation, in which

351. See 134 CONG. REC. S17,305 (daily ed. Oct. 21, 1988) (statement of Sen. Chiles).

352. 1988 Act, *supra* note 13, 134 CONG. REC. at H11,109-217 (daily ed. Oct. 21, 1988).

353. See *supra* note 260 and accompanying text. Congress also attempted to increase the effectiveness of its antidrug programs by creating an Office of National Drug Control Policy, headed by a Director (the so-called "drug czar") responsible for coordinating federal antidrug efforts. 1988 Act § 1001-12 134 CONG. REC. at H11, 110-13 (daily ed. Oct. 21, 1988).

congressional aspirations reach beyond any prior legislation.

The 1988 Act alters the demand-side strategy adopted in the 1986 Act in two fundamental ways. First, it acknowledges the need to implement a nationwide program providing treatment on request for addicts and other drug abusers, and it enacts measures consistent with that goal. Second, it adopts "user accountability" measures intended to deter individual consumers by imposing civil sanctions for simple possession of drugs and by depriving convicted drug users of certain federal benefits.³⁵⁴ In most other areas, the 1988 Act merely adds to existing programs. The capacity of these measures to reduce market demand for cocaine is discussed in the concluding sections of the Article.

A. Treatment, Rehabilitation, and Education in the 1988 Act

By 1988, many members of Congress were willing to acknowledge publicly the failure of past methods³⁵⁵ and the need to adopt innovative programs designed to reduce consumer demand for illegal drugs.³⁵⁶ This awareness led Congress to enact new programs providing treatment for addicts and other substance abusers, and produced a new willingness to allocate proportionally more of the antidrug budget to demand-side endeavors.³⁵⁷

1. Treatment and Rehabilitation Programs

The 1988 Act demonstrated Congress's growing awareness that a rational strategy to achieve the Nation's drug policy goals must include a comprehensive treatment program.³⁵⁸ Title II, the Comprehensive Al-

354. See 134 CONG. REC. H7896 (daily ed. Sept. 22, 1988) (statement of Rep. McCollum).

355. See *id.* at H7897 (statement of Rep. Lungren) (stating that society must change the culture of America to resolve the drug problem, which requires new approaches because traditional methods have not worked); *id.* at H7939 (statement of Rep. Stark) (stating that the Nation is losing the war on drugs and current policies exacerbate the crisis); *id.* at H7290 (daily ed. Sept. 8, 1988) (statement of Rep. Hughes) (noting that it is clear that efforts so far have failed, and it is "time to break some traditions").

356. *Id.* at H7076 (daily ed. Sept. 7, 1988) (statement of Rep. McCollum) (stating that the United States must reduce domestic demand to win the war on drugs); *accord id.* at H7077 (statements of Rep. Jeffords and Rep. Hoyer); *id.* at H7081 (statement of Rep. Wortley); *id.* at H7084 (statement of Rep. Fascell); *id.* at H7092 (statement of Rep. Rodino) (arguing that insufficient funds have been devoted to education and rehabilitation); *id.* at H7936 (daily ed. Sept. 22, 1988) (statement of Rep. Bennett) (asserting that education is the most effective way to deal with drug menace); *id.* at H7937 (statement of Rep. Marlenee) (noting that without treatment and rehabilitation the war on drugs "rings hollow"); *id.* at H7938 (statement of Rep. Vento) (observing that the drug problem must be fought with prevention, education, and treatment).

357. See, e.g., H.R. 5210, § 6001, 100th Cong., 2d Sess., 134 CONG. REC. S14,089 (daily ed. Oct. 3, 1988) (Senate bill stating the will of Congress that 60% of the supplemental appropriations for fiscal year 1989 shall be used for drug prevention, treatment, and education programs, and only 40% for law enforcement purposes); see also *supra* note 13.

358. The Bush Administration also has acknowledged the importance of demand-side efforts.

cohol Abuse, Drug Abuse, and Mental Health Amendments Act of 1988,³⁵⁹ contains the seeds of a program to provide treatment for the Nation's population of addicts.

The AIDS Commission's recommendations obviously influenced this legislation. Title II not only focuses on the relationship between drug abuse and the AIDS epidemic, but also addresses the broader problem of altering the drug consuming behaviors of addicts and other drug abusers by adopting measures recommended in the Commission's Final Report.

For example, preventing the transmission of AIDS "by ensuring that treatment services for intravenous drug abuse are available"³⁶⁰ is the first stated statutory purpose for Title II programs. Another purpose is to increase the availability of treatment services so "treatment on request may be provided to all individuals desiring to rid themselves of their substance abuse problem."³⁶¹ Yet another goal of Title II is to assist state and local efforts to provide treatment to reduce the incidence of substance abuse.³⁶² These statutory goals mirror the AIDS Commission's proposals, and both the congressional debate³⁶³ and the legislative findings contained in earlier drafts of the statute reflect the influence of that group's recommendations.³⁶⁴

One result is that the 1988 Act revises the ADAMHA block grants for alcohol, drug abuse, and mental health services to emphasize treatment aimed at addicts and other drug abusers.³⁶⁵ For fiscal year 1989 Congress permitted states to expend grant monies only for substance abuse programs,³⁶⁶ and commanded that at least fifty percent of the

See, e.g., Boyd, *Bush, Citing Cost, Says Drug War Will Focus Largely on Education*, N.Y. Times, Jan. 26, 1989, at A1, col. 3.

359. 1988 Act, *supra* note 13, H.R. 5210, §§ 2011-2017, 100th Cong., 2d Sess., 134 CONG. REC. H11,114 (daily ed. Oct. 21, 1988).

360. *Id.* § 2012(1).

361. *Id.* § 2012(5) (emphasis added).

362. *Id.* § 2012(3).

363. See, e.g., 134 CONG. REC. H7076 (daily ed. Sept. 7, 1988) (statement of Rep. Gilman) (stating that H.R. 5210 would authorize treatment for drug abuse "as recommended by the President's AIDS Commission").

364. For example, § 3002 of the Senate draft of H.R. 5210, as passed by the Senate contained the following findings: Only a small fraction of the Nation's substance abusers requiring treatment receive it; treatment facilities are operating above full capacity, forcing many drug abusers to wait long periods of time for treatment; drug abuse and the lack of adequate treatment programs are a threat to the Nation's young people; and treatment for substance abuse is cost effective. Section 3004(b) of the same draft stated the "sense of Congress" that alcoholism and drug dependencies are treatable diseases, that public and private sector treatment can provide successful means of recovery, and that these ideas are essential elements of programs to solve the Nation's drug problem. S.2852, § 3002, 100th Cong., 2d Sess., 134 CONG. REC. S14163 (daily ed. Oct. 3, 1988).

365. 1988 Act, *supra* note 13, §§ 2021-2041, 134 CONG. REC. H11,114-18 (daily ed. Oct. 21, 1988) (amending 42 U.S.C. § 300x (Supp. IV 1986)).

366. *Id.* § 2023(i)(1)(A), 134 CONG. REC. at H11,115.

funds must be used to support treatment of intravenous drug abuse.³⁶⁷ The 1988 Act also encourages states to use grant funds to develop, implement, and operate programs to treat intravenous drug abusers, giving priority to programs treating individuals infected with the AIDS virus.

The 1988 Act also adopts a number of measures that mirror the AIDS Commission's recommendations for increasing the effectiveness of treatment programs. It authorizes the states to use grant funds for outreach activities designed to bring drug abusers into treatment.³⁶⁸ It requires states to target funds for substance abuse programs in areas with the "highest prevalence of substance abuse or the greatest need for treatment services."³⁶⁹ Need is determined by considering the demand for services in relation to existing treatment capacity, the prevalence of drug-related criminal activities, and the incidence of communicable diseases spread through intravenous drug use in the area.³⁷⁰

The 1988 Act also attempts to reduce the lengthy waiting periods for many treatment programs, which was another recommendation of the AIDS Commission. Government agencies are directed to gather data about the length of time between requests for treatment and the delivery of those services.³⁷¹ In a related provision, the Act authorizes grants to help reduce waiting periods for patients seeking substance abuse treatment from public and nonprofit private agencies. To be eligible, the agency must demonstrate that the waiting period for its services exceeds one month and that the agency already is delivering treatment services successfully.³⁷²

Congress adopted other measures intended to improve the quality of treatment programs as well. The National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse were ordered to evaluate alcohol and drug abuse treatment programs in order to ascertain the quality and appropriateness of various forms of treatment.³⁷³ The Veterans Administration was required to evaluate its inpatient and outpatient treatment programs to determine their medi-

367. *Id.* § 2023(i)(1)(B). A waiver of the latter requirement is permitted when the state demonstrates that the incidence of intravenous drug abuse does not require this level of funding. *Id.* § 2023(i)(2).

368. *Id.* § 2025, 134 CONG. REC. at H11,116 (amending 42 U.S.C. § 300x-3(c) (Supp. IV 1986)).

369. *Id.* § 2034 134 CONG. REC. at H11,116 (amending 42 U.S.C. § 300x-4(c) (Supp. IV 1986)).

370. *Id.*

371. *Id.*

372. *Id.* § 2053, 134 CONG. REC. at H11,118-19 (amending 42 U.S.C. § 290aa (Supp. IV 1986)); see also *id.* § 2034, 134 CONG. REC. at H11,116 (amending 42 U.S.C. § 300x-4(c) (Supp. IV 1986)) (requiring states receiving block grants to agree to attempt to provide treatment for intravenous drug abusers within seven days after it is requested).

373. *Id.* § 2039, 134 CONG. REC. at H11,117 (amending 42 U.S.C. § 300x (Supp. IV 1986)).

cal advantages and cost effectiveness, including the rates of readmission and rates of successful rehabilitation.³⁷⁴ Similar evaluation was required for drug abuse education programs.³⁷⁵

The 1988 Act also requires annual collection of the data needed to develop a national treatment program and to conduct a comparative evaluation of the availability and effectiveness of different treatment modes. This data includes the number of people seeking and receiving treatment, the percentage of people completing treatment, the treatment methods utilized, and the number of patients who return for subsequent treatment.³⁷⁶ Under the 1988 Act, agencies also must gather data concerning the incidence and prevalence of mental illness and substance abuse, the number and variety of treatment programs, the size and demographic characteristics of their patient populations, the type of care patients receive, and the costs of various types of treatment modalities.³⁷⁷

As the AIDS Commission noted, treating more people requires additional facilities, and Congress responded to the existing shortages in treatment capacity in several ways. The 1988 Act removes a spending restriction imposed by the 1986 Act by permitting states to use grant monies to construct new treatment facilities³⁷⁸ if they demonstrate that existing facilities cannot provide adequate treatment.³⁷⁹ The 1988 Act also authorizes the use of military facilities to house nonviolent people receiving drug treatment, and establishes mechanisms to assist the states in utilizing these facilities.³⁸⁰ It also requires states receiving grants to establish programs to provide group homes for those recovering from alcohol and drug abuse.³⁸¹

If fully implemented these diverse measures could serve as the foundation for a national treatment program designed to remove large numbers of addicts from the drug using population. Achieving this result would require expending resources exceeding those previously committed to these goals. Congress recognized this problem and authorized substantial increases in spending for treatment programs in the 1988 Act. The actual appropriations, however, are only a fraction of the authorized funding levels, and the initial spending outlays do not meet present requirements.

374. *Id.* § 2501, 134 CONG. REC. at H11,125.

375. *Id.* § 3522, 134 CONG. REC. at H11,133.

376. *Id.*

377. *Id.* § 2052, 134 CONG. REC. at H11,118 (amending 42 U.S.C. § 290aa (Supp. IV 1986)).

378. *Id.* § 2024, 134 CONG. REC. at H11,115-16 (amending 42 U.S.C. § 300x-1a(b) (Supp. IV 1986)).

379. *Id.*

380. *Id.* § 2074, 134 CONG. REC. at H11,121 (amending 42 U.S.C. § 290aa (Supp. IV 1986)).

381. *Id.* § 2036, 134 CONG. REC. at H11,117 (amending 42 U.S.C. § 300x (Supp. IV 1986)).

2. Funding for Treatment and Rehabilitation Programs

When faced with the reality of funding its antidrug legislation, Congress allowed its election-year promises to exceed actual appropriations for antidrug spending.³⁸² Regular appropriations for fiscal year 1989, which were adopted before passage of the 1988 Act, totalled 4.27 billion dollars.³⁸³ Proponents of the 1988 Act proclaimed that the statute would add about 2.5 billion dollars to that total. In fact, the conference bill worked out before passage of the final version of the 1988 Act authorized a supplemental increase of 2.69 billion dollars over the regular appropriation.³⁸⁴

This funding increase was slashed in the final bill. Congress ultimately authorized a supplemental appropriation of less than one billion dollars, and total supplemental outlays of only about 500 million dollars, less than one-fifth of the amount authorized in the conference bill.³⁸⁵ Budgetary constraints imposed by the Gramm-Rudman-Hollings Act required these cuts, and Congress acceded to those limits.³⁸⁶

After these cuts in supplemental funding, the actual outlays for fiscal year 1989 fell far below the 1.5 billion dollars authorized on the face of the 1988 Act for grants for drug and alcohol abuse and mental health treatment programs.³⁸⁷ Total outlays for ADAMHA grants for fiscal year 1989 were only 882 million dollars, and even this figure exaggerates the federal commitment of new funds to treatment programs for that year. Almost one-third of the this total for fiscal year 1989 were unexpended outlays carried forward from prior years. As a result, new outlays for fiscal year 1989 apparently totalled only 629 million

382. See, e.g., 134 CONG. REC. S14,015 (daily ed. Oct. 3, 1988) (statement of Sen. Specter); *id.* at E3249 (daily ed. Oct. 5, 1988) (statement of Rep. Gilman); *id.* at H7076 (daily ed. Sept. 7, 1988) (statement of Rep. Gilman).

383. 1988 Act, *supra* note 13, Title X, 134 CONG. REC. H11,216 (daily ed. Oct. 21, 1988). The federal budget authority for all antidrug programs has fluctuated under the 1986 Act. Total authorizations were increased from about \$3.5 billion in fiscal year 1986 to about \$4 billion for fiscal year 1987, then reduced to about \$3 billion for fiscal year 1988. See H. HOGAN, *supra* note 241, at 4.

384. See CONGRESSIONAL BUDGET OFFICE, 1989 DATA FOR ACCOUNTS IN THE CONFERENCE DRUG BILL 25, 28 (Nov. 4, 1988) [hereinafter 1989 SUPPLEMENTAL BUDGET] (unpublished report) (source on file with Author).

385. The actual amounts of the supplemental authorizations and appropriations are unclear. Cf. 134 CONG. REC. H11,238 (daily ed. Oct. 21, 1988) (displaying supplemental authorization of appropriations of about \$961 million and supplemental outlays of about \$479 million); 1989 SUPPLEMENTAL BUDGET, *supra* note 384, at 25, 28 (totals of \$989 million and \$504 million respectively).

386. See 134 CONG. REC. H7940 (daily ed. Sept. 22, 1988) (statement of Rep. Frenzel) (stating that the bill is mostly an unfulfilled election year promise that "will never be financed" because the "budget will not permit" it); *id.* (statement of Rep. Gilman) (concluding that Congress still has not determined how to fund the war on drugs).

387. 1988 Act, *supra* note 13, H.R. 5210, § 2021, 134 CONG. REC. H11,114 (daily ed. Oct. 21, 1988) (amending 42 U.S.C. § 300x (Supp. IV 1986)).

dollars.³⁸⁸

While this is a substantial increase over funding for treatment programs under the 1986 Act, actual spending for drug treatment will be less than the appropriation suggests. Some of the funds are earmarked for other purposes,³⁸⁹ and for fiscal year 1989 only one-half are restricted to programs treating drug abuse.³⁹⁰ The remaining funds apparently can be used for alcohol abuse and qualified mental health services as well. As a result, federal support for drug treatment programs is something less than the total outlays for all treatment programs for fiscal year 1989. While it is impossible to predict precisely how much money will be spent on drug treatment, some calculations are possible.

One-half of the funds appropriated in the 1988 Act must be used to carry out programs treating intravenous drug abuse.³⁹¹ Assuming that all grant funds will be spent (which has not occurred in prior years) and ignoring the fact that some of the outlays were designated for other purposes, at most 441 million dollars is reserved for drug abuse treatment. This total amount is far less than the 750 million dollar annual increase in federal spending that the AIDS Commission concluded was needed.³⁹² In fact, even if the entire appropriation of 882 million dollars were spent on treating drug abusers, it still would fall short of that recommended total.

Finally, despite these spending increases, Congress devoted less than thirty percent of the total antidrug budget to all demand-side activities. Federal antidrug outlays for fiscal year 1989 are about 5.3 billion dollars. About 3.8 billion dollars, or seventy-two percent, is allocated to law enforcement, while only 1.5 billion dollars, or twenty-eight percent, is devoted to demand-side endeavors.³⁹³

388. As previously noted, the actual amounts of the supplemental authorizations and appropriations are unclear. See CONGRESSIONAL BUDGET OFFICE, 1989 REQUEST AND APPROPRIATIONS (Oct. 7, 1988) [hereinafter 1989 REGULAR APPROPRIATIONS] (\$713 million authorized but \$724 million in total outlays); 1989 SUPPLEMENTAL BUDGET, *supra* note 384, at 15 (\$1.083 billion authorized in supplemental budget, but only \$240 million appropriated).

389. See, e.g., 1988 Act, *supra* note 13, H.R. 5270, § 2056(a), 134 CONG. REC. H11,119 (daily ed. Oct. 21, 1988) (amending 42 U.S.C. § 290bb-2(a) (Supp. IV 1986)) (funds reserved for research concerning alcohol abuse and alcoholism); *id.* § 2057, 134 CONG. REC. at H11,119-20 (amending 42 U.S.C. § 290aa (Supp. IV 1986)) (grants for mental health research); *id.* §§ 2201-2219, 134 CONG. REC. at H11,121-23 (amending scattered sections of 25 U.S.C.) (programs for Indian alcohol and substance abuse prevention and treatment); *id.* §§ 2301-2312, 134 CONG. REC. at H11,123-25 (programs for Native Hawaiian health care); *id.* § 2021, at H11,114 (amending 42 U.S.C. § 300x (Supp. IV 1986)) (5%-15% reserved for related research services).

390. *Id.* § 2023, 134 CONG. REC. at H11,115.

391. *Id.*

392. See *supra* notes 326-27 and accompanying text (recommending annual increase in federal spending of 750 to 924.5 million dollars, along with a 750 million dollar annual increase in state funding for these purposes).

393. See 1989 REGULAR APPROPRIATIONS, *supra* note 388, at 11-12; 1989 SUPPLEMENTAL

Despite these fiscal shortcomings, the treatment-oriented provisions of the 1988 Act represent a significant, if limited, movement in the direction of establishing a national program sufficient to provide treatment on request for drug abusers. If the process is continued in future legislation, a rational strategy for reducing market demand for cocaine may result.

3. Education Programs

The 1988 Act's drug and alcohol education programs generally build upon the 1986 Act. Additional funds are authorized for education programs in the schools.³⁹⁴ The Act also identifies groups at high risk of substance abuse to whom education efforts should be addressed. High risk groups include participants in supplemental food programs,³⁹⁵ high risk youth,³⁹⁶ school dropouts, runaway and homeless youth,³⁹⁷ and families of drug and alcohol abusers.³⁹⁸ It also expands programs for teacher training³⁹⁹ and establishes programs for community-based volunteer demonstration projects.⁴⁰⁰

These education measures merely expand upon existing programs. If they are successful they should produce long-term benefits by persuading some people to avoid illegal drug use, but these measures will not reduce market demand for cocaine by deterring addicts. Neither will the new "user accountability" provisions.

B. Law Enforcement and "User Accountability"

The 1988 Act contains both criminal and civil penalties aimed at users. These penalties will prove to be inconsequential and will not reduce market demand for cocaine or other illicit drugs.

1. Criminal Penalties and Consumer Demand

In 1988 Congress generally left the criminal penalties enacted in the 1986 Act in place. The 1988 Act, however, does enact new penalties

BUDGET, *supra* note 384, at 25-28. Budget authority for antidrug programs exceeds outlays. *See, e.g.,* C. DOYLE, H. HOGAN, E. KLEBE & R. PERL, ANTI-DRUG ABUSE ACT OF 1988: HIGHLIGHTS OF ENACTED BILL at 1 (Cong. Res. Serv. Rep. No. 88-707 GOV, Nov. 16, 1988).

394. 1988 Act, *supra* note 13, H.R. 5210, § 3301, 134 CONG. REC. H11,130 (daily ed. Oct. 21, 1988) (amending 20 U.S.C. § 3181 (Supp. IV 1986)).

395. *Id.* § 3201, 134 CONG. REC. at H11,129-30 (amending 42 U.S.C. § 1786 (1982 & Supp. IV 1986)).

396. *Id.* § 3303, 134 CONG. REC. at H11,130 (amending 20 U.S.C. § 3192 (Supp. IV 1986)).

397. *Id.* §§ 3511-3512, 134 CONG. REC. at H11,132-33.

398. *Id.* § 3306, 134 CONG. REC. at H11,130 (amending 20 U.S.C. § 3195(a) (Supp. IV 1986)).

399. *Id.* § 3308, 134 CONG. REC. at H11,130-31.

400. *Id.* §§ 3401-3402, 134 CONG. REC. at H11,131.

for "serious crack possession offenses."⁴⁰¹ Imprisonment for not less than five nor more than twenty years, or a fine, or both, is required for all convictions involving specified quantities of any mixture or substance containing "cocaine base."⁴⁰² The 1988 Act increases the possible criminal fines for personal possession of other controlled substances as well by eliminating the ceilings on these fines established in the 1986 Act.⁴⁰³

Congress added other measures aimed at specific user groups as well. It made possession of controlled substances a violation of the terms of probation, parole, or supervised release, for felonies, misdemeanors, and infractions, and required revocation of release for violation of that condition.⁴⁰⁴ The 1988 Act also establishes a demonstration program in eight judicial districts to implement drug testing for parolees, probationers, and arrestees convicted of felonies. Each convicted person must submit to periodic drug tests at least once every sixty days to ensure that he refrains from illegal use of controlled substances.⁴⁰⁵ Obviously the demonstration drug testing program, as enacted, will apply to few individuals and will have little noticeable effect on market demand for cocaine. Whether such a plan can be implemented nationally on a scale sufficient to reduce market demand measurably and still comport with the United States Constitution remains to be seen.

These additions to the sanctions for personal possession and use will have little effect upon market demand for cocaine. Use and possession of cocaine and its derivatives already is a crime, punishable by fines and imprisonment. Surely refraining from use and possession of illegal drugs already is a universal condition of probation, parole, and supervised release. These analogous measures have failed to eliminate demand for cocaine in the past, nor will they in the future. In sum, the 1988 additions to the penal sanctions directed at individual users will not reduce the market demand for cocaine. New congressional initiatives directed at traffickers will be no more effective.

401. *Id.* § 6371, 134 CONG. REC. at H11,166 (amending 21 U.S.C. § 844(a) (Supp. IV 1986)).

402. *Id.* The triggering quantity decreases with additional convictions. For a first conviction the amount must exceed five grams, but only three grams is necessary when the individual has a prior conviction for possession of such a mixture or substance, and it must exceed only one gram when the individual has two or more of such prior convictions. *Id.*

403. *Id.* § 6480, 134 CONG. REC. at H11,169 (amending 21 U.S.C. § 844(a) (Supp. IV 1986)).

404. *Id.* § 7303, 134 CONG. REC. at H11,193 (amending 18 U.S.C. § 3563(a) (Supp. IV 1986)). For some individuals a violation leads to a sentence of not less than one-third of the original sentence.

405. *Id.* § 7304, 134 CONG. REC. at H11,193-94. Release from the program is possible if the individual passes all drug tests for at least one year.

2. Criminal Penalties and Supply

In 1988 Congress retained the 1986 Act's essential structure of criminal penalties for trafficking offenses, but it did enact some new punishments and defined new drug-related crimes. None of these measures will keep cocaine out of the hands of addicts and other users. None of these measures will raise the unit price of cocaine sufficiently to deter addicts or others from purchasing the drug. A brief survey of these measures demonstrates that they are but extensions of prior legislation including the 1986 Act, which has failed to achieve these goals.

The most controversial new punishment is the death penalty for homicides related to drug trafficking.⁴⁰⁶ Congress also established lesser penalties. Those convicted three times of felony drug trafficking offenses are subject to a sentence of mandatory life imprisonment without release.⁴⁰⁷ The Act also increases the penalties for using weapons in connection with drug trafficking,⁴⁰⁸ for offenses involving children,⁴⁰⁹ for participating in continuing criminal enterprises,⁴¹⁰ and for committing drug offenses in federal prisons.⁴¹¹ It adds penalties for importing drugs by aircraft and other vessels,⁴¹² for endangering human life while illegally manufacturing a controlled substance,⁴¹³ and for conduct involving certain chemicals and equipment used in the manufacturing of illicit drugs.⁴¹⁴

In addition to enacting these penalties, the 1988 Act also establishes new programs to help fund state and local law enforcement ef-

406. See *id.* § 7001, 134 CONG. REC. at H11,171-73 (amending 21 U.S.C. § 848(e) (Supp. IV 1986)) (authorizing the death penalty for anyone who intentionally or with reckless indifference to human life kills or participates substantially in a killing when engaging in or working in furtherance of a continuing criminal enterprise, or who kills a law enforcement officer during commission or in furtherance of, or while attempting to escape punishment, of a felony drug violation, and establishing rules and procedures for imposition of the death penalty).

One criticism of this new death penalty is that it may prove counterproductive to law enforcement goals. See 134 CONG. REC. H7275 (daily ed. Sept. 8, 1988) (statement of Rep. Rangel) (quoting a letter from the Justice Department's chief prosecuting attorney in the Southern District of Florida arguing that other countries will not extradite drug traffickers to United States if they may receive the death penalty).

407. 1988 Act, *supra* note 13, H.R. 5210, § 6452, 134 CONG. REC. H11,166 (daily ed. Oct. 21, 1988) (amending 21 U.S.C. § 841(b)(1)(a) (Supp. IV 1986)).

408. *Id.* § 6460, 134 CONG. REC. at H11,167 (amending 18 U.S.C. § 924(c)(1) (Supp. IV 1986)).

409. *Id.* § 6454, 134 CONG. REC. at H11,166.

410. *Id.* § 6481, 134 CONG. REC. at H11,169 (amending 21 U.S.C. § 848(a) (Supp. IV 1986)).

411. *Id.* § 6468, 134 CONG. REC. at H11,167-68 (amending 18 U.S.C. § 1791(b) (Supp. IV 1986)).

412. *Id.* § 6453, 134 CONG. REC. at H11,166.

413. *Id.* § 6301, 134 CONG. REC. at H11,166 (adding 21 U.S.C. § 858 (Supp. IV 1986)).

414. *Id.* §§ 6051-6061, 134 CONG. REC. at H11,149-51 (amending scattered sections of 21 U.S.C.).

forts. It creates the Bureau of Justice Assistance to funnel grant funds to antidrug programs,⁴¹⁵ especially those bolstering criminal law enforcement such as multijurisdictional projects.⁴¹⁶ The 1986 Act also authorizes federal grant support for programs aimed at juvenile gang members. Although these provision are labeled as "prevention and treatment programs relating to juvenile gangs,"⁴¹⁷ they generally target the supply-side activities of juvenile drug traffickers and support the criminal justice system in dealing with that population.⁴¹⁸

Title IV, the International Narcotics Control Act of 1988,⁴¹⁹ calls for new multinational antidrug programs, an international drug force, international drug conferences, and a regional training center for antidrug activities.⁴²⁰ Title IV authorizes expenditures to assist international narcotics control activities, to purchase herbicides for aerial eradication of coca fields, and to provide military assistance for foreign antidrug efforts.⁴²¹ Countries failing to take adequate steps to halt drug production or trafficking are threatened with losing United States "security assistance" funds, which will be reallocated to cooperating countries.⁴²²

Ultimately these measures merely repeat the traditional government response to failures on the supply side of the "war against drugs." Congress once again escalated its commitment to failed measures by legislating harsher penalties, by committing more money to enforcing the prohibition laws, and by pursuing international initiatives to destroy crops and prevent drugs from entering the country.

There is little reason to think that these supply-side endeavors will be more successful than earlier variations on the same themes. Supplies

415. *Id.* § 6091, 134 CONG. REC. at H11,153-56 (amending 42 U.S.C. §§ 3741-3766 (Supp. IV 1986)).

416. *Id.* Emphasis is placed upon supply-side activities. Grant purposes include support for: Enforcing state and local antidrug laws; additional personnel, equipment, training, technical assistance, and information systems; multijurisdictional task forces; investigations of money laundering of illegal drug trafficking proceeds; programs to improve drug control technology, such as drug testing; and support for undercover buy programs aimed at the street retailer. Not less than 10% of the grant monies are reserved for funding street sales enforcement programs. The grants also can be used for limited demand-side activities, including education programs in which officers participate; rehabilitation, training, and education in prisons; and identifying and meeting the treatment needs of drug-dependent offenders. *Id.*

417. *Id.* § 7267, 134 CONG. REC. at H11,189-90 (amending 42 U.S.C. §§ 5671-5672 (1982 & Supp. IV 1986)).

418. *Id.* The statute contains measures with demand-side effects, such as including the provision of treatment for juveniles who are members of youth gangs, but most of its provisions address issues related to drug trafficking.

419. *Id.* §§ 4001-4804, 134 CONG. REC. at H11,134-44.

420. *Id.* §§ 4101-4106, 134 CONG. REC. at H11,134-35.

421. *Id.* §§ 4201-4205, 134 CONG. REC. at H11,135-36.

422. *Id.* §§ 4206-4408, 134 CONG. REC. at H11,136-44.

of cocaine will remain plentiful, and prices will not rise sufficiently to reduce market demand. Congress was more creative on the demand side, where it attempted to design innovative civil sanctions to deter domestic drug consumption by addicts and recreational drug users.

3. Civil Sanctions and "User Accountability"

By 1988 Congress was no longer content to rely on criminal penalties, education, and treatment to deter individuals from consuming illegal drugs. Congress enacted new "user accountability" measures intended to penalize those possessing illegal drugs. Two of the "user accountability" measures are of particular interest: (1) new civil fines for personal possession of small quantities of illegal drugs; and (2) a ban prohibiting those convicted of drug possession from receiving certain federal benefits.⁴²³

These civil sanctions hold little promise of reducing market demand for cocaine. The existing criminal penalties for personal possession of drugs create "user accountability." Yet each year millions of people remain undeterred by the threat of arrest, imprisonment, and criminal fines. It is difficult to imagine that the threat of civil fines or the loss of benefits will weigh more heavily in the user's decisionmaking balance. Nonetheless, the primary measures merit analysis.

One new "user accountability" measure is the civil penalty for possession of small amounts of controlled substances.⁴²⁴ Any person found in possession of "a personal use amount," who has not been convicted of a prior drug-related offense,⁴²⁵ can be subject to a civil penalty not exceeding 10,000 dollars for each violation.⁴²⁶

This device appears to be designed to facilitate the imposition of sanctions by allowing the executive branch to act administratively, thereby avoiding the criminal justice system. The statute grants expansive authority to the Attorney General, including the power to impose the civil fines, in some cases without a hearing. The 1988 Act imposes few limits on the Attorney General's decision to penalize. It provides

423. Title V of the 1988 Act is entitled "User Accountability." Title V contains many, but not all, of these measures. For example, the new civil fines are enacted under Title VI. Nevertheless, it is clear from the Act's legislative history that this fine was considered a user accountability measure by the bill's proponents. *See, e.g.*, 134 CONG. REC. H7076 (daily ed. Sept. 7, 1988) (statement of Rep. McCollum); *id.* at H7081 (statement of Rep. Wortley). *See also* 1988 Act, *supra* note 13, Title V, Subtitle D, the Drug-Free Workplace Act of 1988, and Title IX, Subtitle A, the Drunk Driving Prevention Act of 1988.

424. 1988 Act, *supra* note 13, H.R. 5270, § 6486, 134 Cong. Rec. H11,170 (daily ed. Oct. 21, 1988).

425. *Id.* § 6486(c).

426. *Id.* § 6486(a) (directing the Attorney General to determine the quantity of controlled substances that are for "personal use" for purposes of imposing civil fines).

only that civil penalties may not be assessed on an individual more than twice,⁴²⁷ and that the income and assets of the individual are irrelevant to the determination of whether to prosecute criminally or to assess a civil penalty. Although income and net assets "shall be considered" in determining the amount of the civil penalty,⁴²⁸ the 1988 Act does not specify how they are to be considered.⁴²⁹

The person charged with possession must be given written notice and the opportunity to request a hearing under the Administrative Procedure Act,⁴³⁰ but absent such a request⁴³¹ the Attorney General may simply enter an order assessing the fine.⁴³² If the individual does not request a hearing, the civil penalty is final and the Attorney General may commence a civil action in United States District Court to recover the amount assessed, together with interest.⁴³³ If a civil fine is assessed after an administrative hearing, the determination is final unless the person brings a civil action in United States District Court.⁴³⁴ The proceeding in that court is a *de novo* review of the law, the facts, and the penalty. The 1988 Act engrafts rights typically held by defendants in criminal cases onto this civil action. The fined individual has the rights to counsel, to a jury trial, and to confront witnesses. The government apparently must meet the burden of proof applied in criminal cases, for the "facts of the violation shall be proved beyond a reasonable doubt."⁴³⁵

These special rules for "civil" trials following administrative hearings raise some of the most troubling questions about the civil fines. For example, the statute does not specify whether indigents are entitled to

427. *Id.* § 6486(d).

428. *Id.* § 6486(b).

429. A five-year statute of limitations does apply. The statute begins to run on the date the individual allegedly violates the Controlled Substances Act, 21 U.S.C. § 841(b)(1)(A) (Supp. IV 1986). The statute incorporates incentives for fined individuals to remain drug free. After three years, and upon application by a fined person, the Attorney General must dismiss the civil fine proceedings and expunge the records if the individual has paid the assessment and has satisfied certain conditions specified in the statute, such as not having been convicted of any drug offenses. 1988 Act, *supra* note 13, H.R. 5210, § 6486(j), 134 CONG. REC. H11,170 (daily ed. Oct. 21, 1988). Other conditions for this relief include: This was the individual's first such civil penalty, the individual has paid the assessment, and has complied with any conditions imposed by the Attorney General, including submitting to and passing a drug test. After expungement, the individual can fail to disclose the civil penalty proceedings in response to an inquiry made for any purpose, and records are kept only to ensure that an individual cannot obtain this relief more than once. *Id.*

430. 5 U.S.C. § 554 (1982).

431. The request for a hearing must be made within 30 days of the date the notice is issued. 1988 Act, *supra* note 13, H.R. 5270, § 6486(e), 134 CONG. REC. H11,170 (daily ed. Oct. 21, 1988).

432. *Id.* § 6486(f).

433. Interest begins accruing 30 days after the order is issued by the Attorney General. *Id.* § 6486(h).

434. The penalty apparently is final if the individual does not seek judicial review. *Id.*

435. *Id.* § 6486(g).

have counsel appointed to represent them in this "civil action." The sixth amendment may not apply because the actions are technically civil proceedings. Even if the amendment applies, appointed counsel may not be required either because these fines do not rise to the level of "petty offenses," or because imprisonment is not a possible sanction. As a result, the effect, if not the purpose of this statute, may be to ensure that indigents are unrepresented by counsel.⁴³⁶ The constitutionality of the civil fine proceedings inevitably will be challenged on these and other grounds.⁴³⁷

Other "user accountability" measures are likely to be challenged on the basis of rationality, rather than constitutionality. The most obvious example is the provision denying federal benefits to individuals convicted of drug possession or trafficking offenses.⁴³⁸ The court may declare any person convicted of federal or state drug trafficking offenses ineligible for "any or all" federal benefits for up to five years for the first conviction, for up to ten years for a second conviction, and permanently for a third or subsequent conviction.⁴³⁹ The court may impose the same penalty of ineligibility on any person convicted of any state or federal offense for possession of a controlled substance, but for shorter periods: up to one year for the first conviction and up to five years for any subsequent conviction.⁴⁴⁰ Those people convicted of possessory offenses also may be required to complete a drug treatment program that includes mandatory drug testing.⁴⁴¹

Despite the broad statutory language, drug convictions cannot trigger the loss of "any or all" federal benefits. Ineligibility can be imposed only for grants, contracts, loans, and professional or commercial licenses provided by a United States agency or by federal funds. A longer list of benefits is exempted. The exempted categories include any retirement, welfare, Social Security, health, disability, and veterans' benefits, as

436. See *Scott v. Illinois*, 440 U.S. 368 (1979); *Argersinger v. Hamlin*, 407 U.S. 25 (1972); *Gideon v. Wainwright*, 372 U.S. 335 (1963).

437. Drawing the constitutional line between criminal and civil actions can be difficult. See, e.g., *Sedima, S.P.R.L. v. Imrex Co.*, 741 F.2d 482, 500 n.49 (2d Cir. 1984), *rev'd*, 473 U.S. 479, 492-93 (1985).

438. 1988 Act, *supra* note 13, H.R. 5270, § 5301, 134 CONG. REC. H11,148 (daily ed. Oct. 21, 1988). The Act also provides that drug-related criminal activity on or near public housing premises while a person is a tenant in public housing "shall be cause for termination of the tenancy." Termination is authorized when the criminal act was committed by the tenant, a member of the tenant's household, or "a guest or other person under the tenant's control." *Id.* § 5101, 134 CONG. REC. at H11,145 (amending 42 U.S.C. § 1437d(1) (Supp. IV 1986)).

439. *Id.* § 5301(a)(1)(A)-(C), 134 CONG. REC. at H11,148.

440. *Id.* § 5301(b)(1)(A), (B).

441. *Id.* § 5301(b)(1)(A)(ii). The court may require the person to perform community service as well. *Id.* § 5301(b)(1)(A)(iii).

well as public housing or similar benefits.⁴⁴²

The impact of these provisions is unpredictable. Neither the statute nor the legislative history establishes how many people receive the covered benefits, or estimates the number of benefit recipients who may be drug users or traffickers. Although Congress may not even have identified the groups at whom these measures were aimed,⁴⁴³ they were not rationally designed to reach the population of addicts creating most of the market demand for cocaine.

Educational loans for students provide a useful example.⁴⁴⁴ Congress did not find that addicts receive these benefits. In fact, Congress did not establish that addicts or other drug users even know about federal educational benefits, let alone take advantage of them.⁴⁴⁵ There is simply no evidence in the legislative record indicating that this program will deter drug use by anyone, let alone addicts. Even assuming that addicts receive student loans, depriving them of these funds might prove to be counterproductive. Completing their educations may be essential if those addicts are to succeed at changing their drug consuming behaviors.⁴⁴⁶ Depriving them of educational or other opportunities may drive them toward deviant behavior, rather than propel them away from it, particularly during the periods when the benefits are denied.⁴⁴⁷

Congress apparently recognized the self-defeating nature of depriving addicts of these benefits, because it added an escape clause for this group. People convicted of drug offenses can retain eligibility for benefits by declaring that they are addicts if reasonable evidence substantiates their claims. To retain eligibility the addict also must submit to a long-term treatment program for addiction.⁴⁴⁸

Employing the threat of the loss of federal benefits to attempt to channel addicts into treatment is a rational strategy. Nevertheless, this

442. *Id.* § 5301(d)(1)(A), (B). Also exempted are any other benefits for which payments or services are required for eligibility.

443. See 134 CONG. REC. H7298 (daily ed. Sept. 8, 1988) (statement of Rep. Hughes) (referring to those receiving educational benefits and to "zombies walking around who have substance-abuse problems . . . [who] are out stealing most of the time to try . . . to pay for their habit").

444. See *id.* at H7291 (statement of Rep. Coleman) (noting that the measure apparently is aimed at students).

445. *Id.* (statement of Rep. Cardin).

446. See, e.g., FINAL REPORT, *supra* note 21, at 97. The *Final Report* stated that "[d]rug addiction is a disease of the whole person involving multiple areas of function. To be effective, any treatment approaches must ultimately address many dimensions . . . of the client's life [e.g., educational and vocational deficiencies and family problems]. . . ." *Id.*; see also *supra* notes 344-45 and accompanying text.

447. See 134 CONG. REC. H7294 (daily ed. Sept. 8, 1988) (statement of Rep. Rangel).

448. Despite improvements in the 1988 Act, the Nation still lacks the treatment capacity to assure that all who submit to treatment under these provisions will receive it. See *id.* at H7289-90 (statement of Rep. Rangel).

measure will not deter addicts. People willing to risk the existing criminal penalties will not be dissuaded by the possible loss of government benefits predicated upon such a conviction. In addition, because only a small percentage of drug users are convicted each year, few recipients of federal benefits will even meet this threshold requirement.

The user accountability measures in the 1988 Act may affect an occasional individual, but they will have little effect on market demand for illegal drugs, particularly among addicts who will persist in their behaviors despite the possible imposition of criminal or civil sanctions. History has demonstrated that when Congress relies on flawed methods such as these user accountability measures, the illegal drug industry will continue to flourish and society will continue to suffer.

VII. CONCLUSION

The lesson of this study is that the existing federal legislative programs will not reduce the market demand for cocaine. The government continues to devote most federal resources to supply-side law enforcement methods that have a negligible effect on addicts, the people who consume most of the drug. On the demand side, insufficient resources have been devoted to treatment programs that may alter the behaviors of cocaine addicts.

Altering the behavior of addicts is an essential element of any rational program attempting to attack the illegal drug industry by reducing market demand. Yet medical, psychological, and economic theories demonstrate that addicts will not be deterred by the law enforcement, education, and treatment programs enacted in the 1986 and 1988 antidrug statutes.

Addict demand is relatively inelastic, making this group insensitive to many of the effects of the prohibition system. Addicts will continue to purchase cocaine despite increases in price produced by enforcement of the criminal laws. They will continue to consume the drug despite the threat of criminal and civil sanctions and despite the catastrophic consequences often associated with this behavior. A rational demand reduction program must take these facts into account, or it will fail as addicts continue to purchase and consume tons of cocaine each year.

Policymakers have begun to recognize that rational demand reduction programs must address the problems created by the addict population. The President's AIDS Commission has proposed a comprehensive, national, long-term program that provides a treatment-based model for curtailing consumption by the critical population of drug abusers and addicts, recommendations reflected in a number of provisions of the 1988 Act. To the limited extent that Congress implemented these proposals, it demonstrated that national policy and rational means of

achieving those public goals can converge.

Whether they will converge successfully remains to be seen. In many important areas the 1988 Act merely tinkered with existing legislation by increasing criminal penalties and by spending most resources on traditional law enforcement activities. The continued failure of these supply-side activities seems inevitable.

On the demand side, the resources devoted to treatment programs in the 1986 and 1988 Anti-Drug Acts remain insufficient to provide long-term treatment for enough addicts to alter the market demand for cocaine. At the same time, some of the new demand-side mechanisms will prove to be counterproductive. For example, if the government succeeds in denying education benefits to those people convicted of drug offenses, the result may be to channel drug users into additional criminal activities, rather than into socially approved behavior. Neither the civil nor criminal sanctions enacted by Congress will eliminate addict demand for cocaine.

To succeed at reducing market demand for cocaine, policymakers must do something different. They must design and fund programs that can remove large numbers of addicts from the population of cocaine users. Unless this goal is accomplished, the "war on drugs" will remain unwon, and unwinnable.