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# Incapacitating Criminals: Recent Research Findings

by Jacqueline Cohen

During the past two decades, there has been growing interest in incapacitation as a strategy for controlling crime. The logic is simple: an offender who is locked up cannot commit crimes in the community.

Increased attention given in recent years to incapacitation as a crime control strategy, and as a purpose of sentencing, stems from a number of factors:

- confidence has waned in the ability of correctional programs to rehabilitate offenders
- public attitudes toward crime and criminals have become more punitive
- prisons throughout the United States are crowded, having reached an all-time peak population of 431,829 on June 30, 1983
- recent research efforts suggest that it may be possible to identify and incarcerate high-rate offenders, thereby promising an eventual ability to reduce crime without crowding the prisons.

Researchers and public policy advocates distinguish between *collective incapacitation* and *selective incapacitation*. Under *collective* strategies, all persons convicted of a designated offense, say robbery or any second felony conviction, would receive the same sentence, say 5 years. Research has shown that the reduction in crime that would result from such policies is limited and that prison

populations would increase dramatically if such policies were systematically pursued.

*Selective* strategies would involve individualized sentences based on

predictions that particular offenders would commit serious offenses at a high rate if not incarcerated. A recent RAND Corporation report (Greenwood, with Abrahamse 1982) concludes that use of such predictions could reduce crime

### From the Director

Few issues facing criminal justice are more urgent than safeguarding the public from those who make a career of crime. The pros and cons of various strategies for incapacitating criminals—incarcerating them so they cannot commit additional crimes while behind bars—have been the subject of much debate in recent years. Both those who study criminal justice and those who are responsible for its day-to-day operations are searching for reliable information about what approach offers the best possibilities of reducing crime and protecting the public from the serious criminals who prey upon innocent victims.

This research brief contains a succinct review of the key findings of research on the effects of various incapacitation strategies. It reviews what we have learned to date on this critical subject and notes some of the thorny methodological problems that confront research efforts to devise more effective policies.

This brief is based on an article published in *Crime and Justice: An Annual Review of Research*, a book series supported by the National Institute of Justice. *Crime and Justice* articles are commissioned from leading scholars. Each is asked to summarize what we know about a significant topic and what gaps in our understanding remain. Only the best of the commissioned essays are published, and from these a few are selected to serve as the basis for research briefs.

*Crime and Justice* essays deal with complex topics and provide often provocative analyses of difficult issues. The views and conclusions summarized here are, of course, those of the writer, and do not represent the official view of the National Institute of Justice. The Institute is publishing this brief on incapacitation research in the hope that it will inform the continuing debate about one of the most critical issues facing criminal justice today.

James K. Stewart  
Director

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with little or no increase in prison populations. However, other major researchers assert that the Greenwood work has serious limitations and that the best available prediction methods are simply not good enough to serve as the basis of a system of selective incapacitation.

The first section of this brief summarizes research findings on collective incapacitation, noting particularly their crime reduction prospects, and the likely impacts of such policies on prison populations. The second section discusses recent research on selective incapacitation, noting ethical objections that have been raised to the *concept* of selective incapacitation and empirical criticisms that have been made of that work. The third section discusses recent "criminal careers" research that could serve as the basis for an alternative collective incapacitation approach.

## Collective Incapacitation

**Existing Imprisonment Policies—Crime Reduction.** Offenders who are imprisoned are unable to commit crimes in the free community. Thus, all imprisonment is incapacitative and should result in the commission of fewer crimes. Table 1 summarizes estimates, from the major published research, of the crime reduction effects of existing imprisonment policies.

The studies in Table 1 are vulnerable to a number of methodological criticisms, including, pre eminently, their dependence on assumptions about the average rates at which crimes are

This research brief is a summary of an essay on incapacitation research by Jacqueline Cohen of Carnegie-Mellon University that appeared in Volume 5 of *Crime and Justice: An Annual Review of Research*. *Crime and Justice* is an annual collection of state-of-the-art essays on criminological research supported by the National Institute of Justice, edited by Michael Tonry and Norval Morris, and published by the University of Chicago Press.

TABLE 1.  
Alternative Estimates of the Collective Incapacitative Effect of Current Imprisonment Policies

Study	Data Base	Crime Rate Per Year Assumptions	Crime Reduction
Clarke (1974)	Juvenile index arrests in Philadelphia	Age-specific arrest rates (.287 to .385 arrests per year)	1%-4% of all (adult and juvenile) reported index crimes
Greenberg (1975)	Index offenses nationally in 1965	.5 to 3.33 crimes per year	1.2%-8% of reported and unreported index crimes
Fhrlich (1974)	Index offenses nationally in 1960	One reported crime per year	9.5% of reported index crimes
Shinnar and Shinnar (1975)	Homicide, rape, robbery, aggravated assault and burglary in New York State in 1970 ("safety crimes")	Ten reported crimes per year	25% of reported "safety" crimes
Peterson and Braiker, with Polich (1980)	California prison inmates in 1976	Crime-specific individual rates at .815 armed robberies per year; 3.89 burglaries per year; .82 auto thefts per year	22% of reported and unreported armed robberies; 6% of reported and unreported burglaries; 7% of reported and unreported auto thefts

Source: Cohen 1983, Table 1.

In all the analyses above, the index offenses used were defined by the FBI to include homicide, rape, robbery, aggravated assault, burglary, larceny and auto theft.

TABLE 2  
Estimates of the Collective Incapacitative Effect of Alternative Imprisonment Policies

Study	Data Base	Alternative Sentencing Policy: Five-year Mandatory Prison Terms	Target Offense	Estimated Incapacitated Effect: Reduction in Target Offense
Van Dine et al. (1977, 1979)	Arrestees in Franklin County, Ohio, during 1975	After any felony conviction as an adult	Murder, rape, robbery, and aggravated assault	17.4%
		After repeat felony convictions as an adult	Same	6
Petersilia and Greenwood (1978)	Convictions in Denver District Court, between 1968 and 1970	After any felony convictions as an adult	Murder, kidnapping, rape, robbery, and aggravated assault	31
		"	Burglary	42
		After repeat felony convictions as an adult	Violent offenses	16
Cohen (1982)	Arrestees in Washington, D.C. during 1973	After any conviction for a "criterion" offense as an adult	"Criterion" offenses (index offenses other than larceny)	13.7
		After repeat conviction for a "criterion" offense as an adult	Same	3.8

Source: Cohen 1983, Table 3.

committed. In general, the larger the assumed average crime rate, the greater the estimated incapacitative effect. For example, much of the difference in the crime reduction estimates in the Greenberg (1 to 8 percent) and Shinnar and Shinnar (25 percent) studies results from Greenberg's assumption of an individual annual crime rate ranging from .5 to 3.3 crimes per year and the Shinnars' assumption of 10 crimes per year.

#### Hypothetical Collective

**Incapacitation Policies.** A different method is used to estimate the crime reduction that *would have been* achieved if collective incapacitation policies had been in effect in prior years. By checking the past criminal records of persons currently convicted of crimes, it is possible to determine which current offenders would have been imprisoned under, say, a mandatory 5-year sentencing policy for all violent felonies, and to conclude that the current offense would not have been committed.

Table 2 summarizes the findings of the major published research on the likely crime reduction effects of various hypothetical sentencing policies.

The most striking finding is that incapacitation does not appear to achieve large reductions in crime. Whether prevailing imprisonment policies (Table 1) are considered, or the alternative of 5-year prison terms after any conviction for a serious offense (Table 2), the estimated crime reduction effect is in the 10-20 percent range. This is not insubstantial, representing from 131,000 to 262,000 reported violent index offenses in the United States during 1980. Nonetheless, incapacitation does not make the dent in crime that might have been expected from a "lock-em-up" strategy.

In part, this is because incapacitation policies can prevent only the subsequent crimes of convicted offenders who are eligible for incarceration. Many people charged with crimes, however, have not been convicted before. In Cohen's District of Columbia study (1982), for example, 76 percent of adult arrestees

TABLE 3

Impact on Prison Populations of Mandatory Five-Year Prison Terms After Conviction

Study	Jurisdiction	Target Offenses	Expected Increase in Prison Population for Target Offenses (%)
Petersilia and Greenwood (1978)	Denver, Colorado, 1968-70	Any felony convictions	450
Van Dine et al. (1979)	Franklin County, Ohio, 1973	Any felony convictions	523
Cohen (1982)	Washington, D.C., 1973	Convictions for any index offense other than larceny	310

Source: Cohen 1983, Table 4.

had not previously been convicted of the offenses studied. Thus, at most, only 24 percent of the current adult arrests could have been prevented by imposing lengthy prison terms at the time of the earlier conviction.

**Collective Incapacitation—Impact on Prison Populations.** Although the effects of collective incapacitation on crime reduction are low, the effects on prison populations are likely to be substantial. Table 3 shows the probable impact on prison populations of 5-year mandatory prison sentences for selected offenses for several of the jurisdictions shown in Table 2. Prison populations would be doubled, tripled, or even more dramatically increased.

Thus, the research demonstrates that broadly based collective incapacitation policies involving lengthy prison sentences for serious crimes are not feasible.

As an alternative, there have been many proposals for "selective" incapacitation policies in which long-term incarceration is reserved for offenders believed most likely to commit serious crimes at a high rate in the future.

#### Selective Incapacitation

It is frequently observed that a small number of offenders commits a disproportionately large number of offenses. If prison resources can be effectively targeted to high-rate offenders, it should be possible to achieve current, or improved, levels of crime control with reduced numbers in prison. The key to such a policy rests on an ability to identify high-rate offenders prospectively, and at relatively early stages in their careers.

Recent selective incapacitation research has stimulated considerable controversy. Some of the debate has focused on ethical implications of selective incapacitation and some has focused on limitations of the existing research.

**Ethical Concerns.** A key element of selective incapacitation is that some offenders would be imprisoned for a longer period than others convicted of the same offense, because of predictions about their *future* criminality. Reactions to selective incapacitation proposals are influenced by differing views about the purposes of criminal punishments. Proponents argue that persons convicted of crimes can justly receive any lawful

sentence (unless, perhaps, it is so disproportionately severe as to be unjust), and that holding some offenders longer than others for predictive reasons raises no significant ethical problems. Moreover, proponents point out that existing sentencing is implicitly incapacitative: presumably, most judges and other officials base their decisions in part on their beliefs about an offender's future dangerousness. From this perspective, selective incapacitation policies are preferable to existing practice because predictions of future crime would no longer be ad hoc and idiosyncratic, but would be based upon the best available scientific evidence.

Some critics argue against selective incapacitation in principle: punishment should be *deserved* and two persons who have committed the same offense deserve equal punishment. If selective incapacitation means that one person will be held longer than another because of predictions of future crimes, it is unjust.

Other critics—including people who in principle do not object to unequal punishments—offer other objections:

1. It is *unfair* to punish people for crimes they have not yet committed, and might not commit if released.
2. It is unjust to incarcerate (or further incarcerate) people on the basis of predictions of future crime because those predictions are too often *wrong*—typically two out of three persons so identified are “false positives,” people who would not have committed future crimes even if released.
3. Many of the variables in prediction formulas (see Table 4 showing the RAND variables) raise other policy or ethical questions. For example, several of the RAND variables involve juvenile records, which many believe should not be admissible in relation to adult prosecutions. For another example, the RAND formula includes employment information, which many would exclude from consideration at sentencing, along with education and similar factors, as class-based variables that, in effect, discriminate against the poor.

TABLE 4  
Variables Used in Scale to Distinguish  
Inmates by Individual Crime Rates

1. Prior conviction for same charge
2. Incarcerated more than 50 percent of preceding two years
3. Convicted before age sixteen
4. Served time in state juvenile facility
5. Drug use in preceding two years
6. Drug use as a juvenile
7. Employed less than 50 percent of preceding two years

SOURCE.—Greenwood, with Abrahamse (1982, p. 50)

4. Many prediction variables, like education, employment, and residential stability, are associated with race: some minorities are on average less well educated and less stably employed than the white majority. Building such variables into sentencing standards, while not intended to punish minorities more severely, would have that effect.

These ethical and policy disputes must be confronted in jurisdictions considering adoption of selective incapacitation policies.

**Empirical Problems in Prediction.** Efforts at predicting future crimes have not been very successful. In a recent review of efforts to predict violence, John Monahan (1981) reports that the best predictions have false-positive rates of over 60 percent; of every three individuals predicted to be violent in the future, two were *not* observed to be violent.

Greenwood's selective incapacitation research focused on inmates currently convicted for robbery or burglary. The inmates were divided into low-, medium-, and high-rate offenders for robbery and burglary on the basis of armed robberies and burglaries they admitted committing during the time they were free in the 2 years preceding the current incarceration. Using one variable at a time, a variety of other characteristics were then examined for their association with individual crime

rates. Seven variables (see Table 4) were selected to form a simple additive scale for distinguishing offenders. Using this scale as a basis for imposing long prison terms for predicted high-rate offenders, Greenwood estimated that the number of robberies by adults in California could be reduced by 20 percent with only 2.5 percent increase in total prison population.

These results are an important illustration of the *potential* of selective incapacitation policies. The research, however, has a number of serious methodological and practical shortcomings:

1. The analysis was entirely *retrospective*, starting with known high-rate offenders and looking only at their past admitted crimes. There is no way to judge the scale's accuracy in prospectively identifying high-rate offenders.
  2. The scale lacks *internal validation*. It is unknown how it would work if applied to another group of apparently comparable high-rate imprisoned offenders.
  3. The scale lacks *external validation*. Since the research involved only *incarcerated* offenders, it is unknown how useful it would be for judges having to decide *whether* to incarcerate.
  4. The scale relies heavily on self-reported information. At sentencing, one could not confidently rely on information provided by the offender.
  5. The Greenwood scale correctly identified 45 percent of the high-rate offenders, the true positives. In other words, the false positive rate was 55 percent, close to that found by Monahan to characterize violence predictions generally.
- Other more technical, but important, criticisms are set out in the full version of the Cohen (1983) article. Given the crucial issues of low predictive accuracy and the tentativeness of the estimated impacts characterizing this research, there is as yet no sound basis for implementing selective incapacitation policies.

## Criminal Career Incapacitation

A different approach to incapacitation, based on criminal career patterns, may avoid some of the problems associated with selective incapacitation. This approach relies on recent empirical research on criminal careers. (See, e.g., Blumstein and Cohen 1979; Blumstein and Graddy 1982; Chaiken and Chaiken 1982; Peterson and Braiker, with Polich 1980.) The key variables include empirical estimates of average individual arrest and crime rates and the average lengths of criminal careers. Efforts are also made to identify variations in criminal careers associated with the nature of the current crime and with prior criminal record.

The goal is to identify classes of offenders who, on average, would remain active at high rates. In Blumstein and Cohen's analysis (1979; also see Cohen 1982) of criminal career patterns for arrestees in Washington, D.C., convicted robbery and burglary defendants emerged as prime candidates for incapacitation. They commit these offenses, on average, at relatively high rates, and have relatively short careers. Short prison terms for these offenders have the potential to avert large portions of their expected careers and thereby to reduce robbery and burglary rates.

Figure 1 illustrates the different crime reductions achievable, based on Cohen's District of Columbia data, for prison terms of different lengths. When relatively short terms after any conviction are considered, focusing on robbery convictions offers relatively larger crime reduction benefits than targeting on other offenses.

Minimum 2-year terms imposed on all adult defendants convicted of robbery would result in an 8 percent reduction in robberies by adults, while increasing the total prison population by 7 percent.

Like Greenwood's selective incapacitation research, this alternative approach is at an early stage. However, if it can be perfected, it may avoid

FIGURE 1

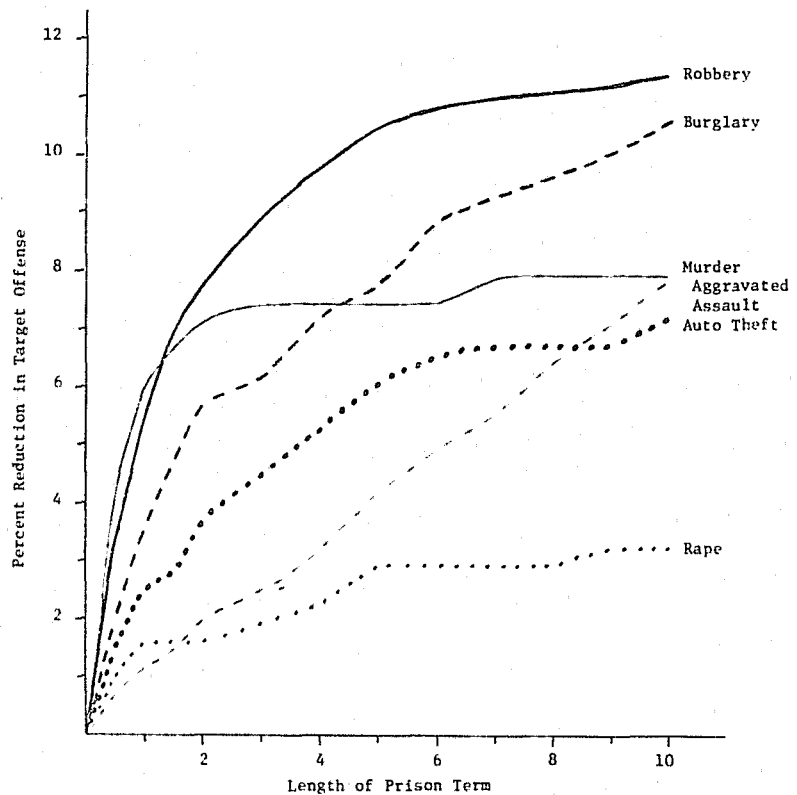


Fig. 1. Expected crime reduction from prison terms of varying length (in years) imposed after any conviction for different target offenses.

Source: Cohen 1983, Figure 6.

some of the ethical pitfalls of selective incapacitation. Being based solely on present and past criminal records, it is less susceptible to attack for reliance on controversial personal variables, and since sentencing policies would apply uniformly to groups of similar offenders—a form of targeted collective incapacitation—objections of unjust, unequal punishment have less force.

## Conclusion

Collective incapacitation policies have only modest impacts on crime but can cause enormous increases in prison populations. Selective incapacitation strategies offer the possibility of achieving greater reductions in crime at considerably smaller costs in prison resources, but their success depends critically on the ability to identify high-rate offenders early in their careers and prospectively. As yet, this has not been accomplished. Recent criminal careers research suggests the possibility of a promising alternative incapacitation strategy.

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