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Information Policy and Crime Control Strategies

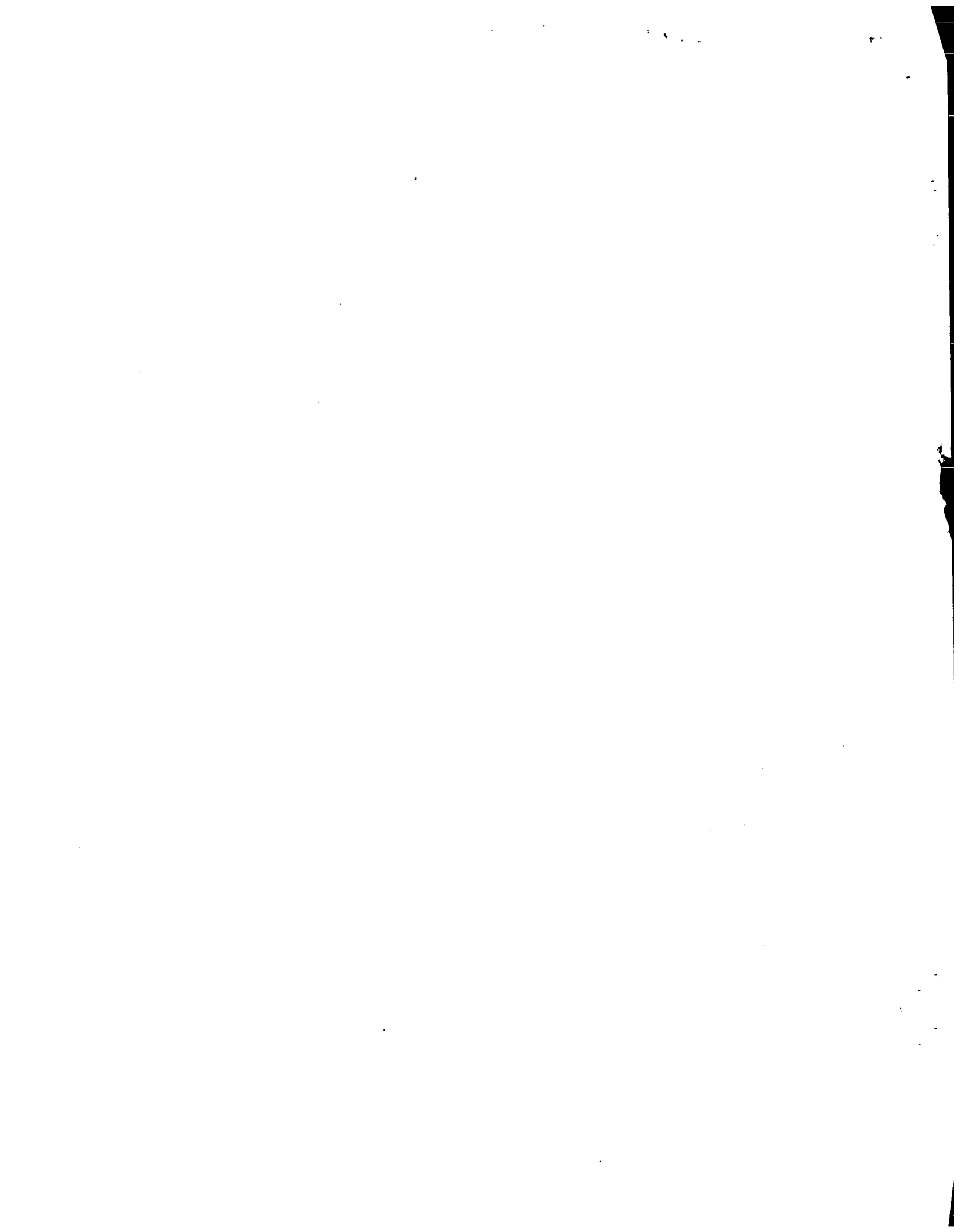
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Violent and Career Offender Programs

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I would like to focus here on an issue that is generating increasing attention and concern: the concept and use of "selective incapacitation" as a means of dealing with career offenders. I would like to start by providing some background on the motivations for the use of selective incapacitation, and then move into some of the technical and analytical issues associated with selective-incapacitation policies. That discussion will then provide a basis for addressing some of the information issues that are necessary for the development and use of a policy of selective incapacitation.

The necessity for efficient use of prison capacity

The current imbalance between prison population and prison capacity in the United States represents the primary motivation for finding means of using the limited capacity more efficiently. As is well known, U.S. prisons are full. At the end of 1982, there were more than 400,000 persons in state and federal prisons, and an additional 200,000 in local jails. For prison alone, that represents one prisoner per 700 persons in the United States. That incarceration rate is quite large--larger than all the countries of Western Europe and smaller only than the Soviet Union and South Africa. If one focuses on the population group that has the greatest risk of imprisonment--black males in their twenties--the incarceration rate increases astonishingly; about one of every thirty

such men is in a state or federal prison on any given day.¹

This congestion of prisons represents a major concern to state governments generally and, in particular, to the managers of correctional institutions. The congestion leads to erosion of management control, transfer of control to the inmates, and unacceptable increase in the risk of riot.

Of course, one possible response to the congestion problem is to provide additional capacity. But that additional capacity is quite expensive; construction costs about \$50-75,000 per cell and operation costs about \$10-15,000 per inmate per year. These are costs that state governments are extremely reluctant to undertake at a time when their budgets are severely stressed, largely in response to the transfer of an increasing share of social services from the federal budget to the state budgets. This is occurring in the face of growing taxpayer resistance to increasing tax revenues, as demonstrated, for example, by California's adoption of Proposition 13. In recent years, voters in Michigan and New York explicitly rejected bond issues to provide additional prison capacity, even in the face of demands for increased punishment of offenders and, in the case of Michigan, voter elimination of good time procedures for early release of prisoners.

Any decision on construction should also take account of the anticipated pattern of growth of prison populations. This pattern can be expected to be strongly affected by the changing demographic mix associated with the post-war "baby boom," those people born in the 15 year interval from

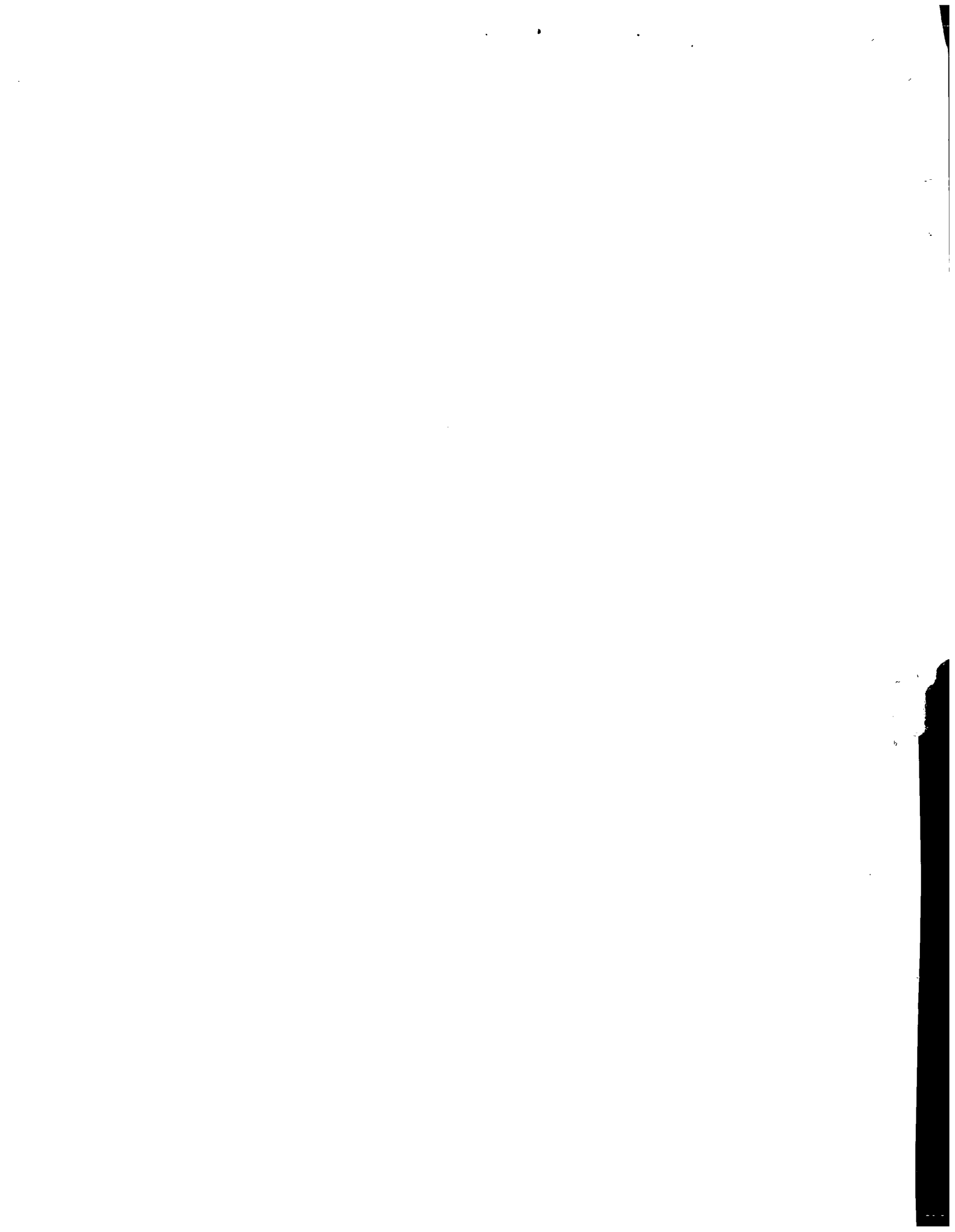
¹ For the details of this estimate, see Blumstein, Alfred, "On the Racial Disproportionality of United States Prison Populations," *Journal of Criminal Law and Criminology*, Vol. 73, No. 3 (Fall, 1982), pp. 301-322.

1947 to 1962. Some projections² suggest that prison populations should be increasing through the period of the 1980's, reaching a peak in about 1990 and declining thereafter. Those projections were made using data from Pennsylvania, but the demographic situation is very similar in most of the Northeast and Midwest, so that projection should apply more broadly. The projection recognizes that the peak prison age is about 25; after the tail of the baby boom passes this peak age, prison populations should decline.

An interesting finding in this projection is the observation that the crime rate was expected to peak in about 1980, ten years earlier than the prison peak. This shift occurs because the peak crime ages are 16-18, but juveniles are not ordinarily sent to prison, nor are first-time adult offenders for most offenses.

This projection of a peak in crime rate in 1980 was made with some degree of trepidation in 1978, at a time when reported crime rates had been rising fairly steadily continuously for two decades. It does turn out, however, that crime rates, both in Pennsylvania and the United States as a whole, did reach a peak in 1980, with a slight decline in 1981 (for all crimes other than robbery) and with a larger decrease in the first half of 1982. The 1982 decrease occurred for all crime types. Furthermore, the decrease was larger in the property crimes, whose age-specific rates do decline faster with age than the violent-crime rates. Also, the decline was larger in the Northeast and the Midwest with their stable and aging populations, and less in the South and the West, which are more subject to immigration.

² See Blumstein, Alfred with Jacqueline Cohen and Harold D. Miller, "Demographically Disaggregated Projections of Prison Populations," (1980), *Journal of Criminal Justice*, Vol. 8, No. 1, Jan-Feb., pp. 1-25.



This projection that prison populations will continue to grow through the 1980's, but reach a peak in 1990, and decline thereafter, raises some serious questions about the appropriateness of a construction strategy as a response to the current prison overcrowding problem. There is a significant time lag from a decision to build additional capacity until its actual availability. That period requires time to appropriate the money, to locate a site that is acceptable to the neighbors, to design the facility, and to construct it. That time could take from about 4 to 10 years. Thus, in view of those time lags, it is reasonable to anticipate that additional capacity would become available after it is no longer needed to respond to current pressures.

Thus one should look to other means of dealing with prison congestion, particularly for the short run. Those other means could include finding alternatives to incarceration for marginal offenders; finding means of shortening the time served through use of "good time" or earlier parole release; adopting a prison "safety valve" like that used in Michigan, which makes use of temporary facilities--such as the largely vacated state mental hospitals--that could serve as minimum security institutions for the next few years. All of these represent reasonable strategies for getting through this period of the 1980's with their severe prison congestion problem.

One other approach, which is the theme I want to pursue here, is to find ways to use the limited prison capacity more efficiently by maximizing its incapacitative effort. That might be done by consciously seeking to allocate the limited prison cells to the most serious offenders, those "career criminals" who are most likely to commit the largest number of the most serious crimes in the future. This approach of "selective incapacitation" inherently involves making some predictions about the future criminality of individual

offenders and tries to assign to prison for the longest time those offenders who represent the most serious threat in the future.

Selective incapacitation

The principle of selective incapacitation suggests the desirability of identifying the "marginal offenders," those of least concern, and moving those out of prison (either by diversion or by shortening their time served) and, identifying the "career criminals," those of most concern, and assuring that they do go into prison, perhaps for a longer time than otherwise would be the case. This strategy is focused on maximizing the incapacitation effectiveness of imprisonment. The incapacitation effect refers to the crimes averted by isolating within prison and away from the rest of society those individuals who would otherwise be committing crimes on the street.

In considering incapacitation, it is important to recognize that many offenders engage in crimes that will not be averted if those individuals are incarcerated. We know, for example, that locking up drug dealers is not likely to avert their drug sales; there is a labor market that recruits replacements for those drug dealers, and so the incapacitation effect on drug crimes is small, even if those individuals are incarcerated. On the other hand, a pathological rapist does engage in individual crime and incapacitation can be expected to avert his crimes. For burglars, the situation is more subtle. If they are operating on their own, incarceration might well avert their crime, but if they work for a fence, then the fence can nullify the incapacitation effect by recruiting replacements.

Whatever the sentencing policy, even if there is no consideration of offender future criminality, there is a "general" incapacitation effect. This effect is positive as long as some of the individuals in prison would have committed non-replaced crime on the outside.

The concept of "selective incapacitation" tries to improve on that by taking account of the differential criminality among the different offenders, and selectively imprisoning those who are predicted to be the worse, and reducing the sentence for those who are predicted to be the least serious in the future.

Any such policy invokes the notion of an individual "criminal career" and the parameters that characterize that criminal career. The parameter of greatest significance is the individual crime rate, i.e., the number of crimes per year committed by an active offender on the outside. This parameter has come to be designated by the Greek letter lambda (λ), a designation that derives from the literature on stochastic processes, where λ is used to designate the rate at which some sporadic or random event occurs. In this context, an offender's crimes are viewed as such events which occur at a rate of λ crimes per year.

Knowledge of this parameter, including its distribution across offenders and its variation across time or age for a particular offender, is a question of fundamental interest to criminology, comparable in importance to the speed of light in physics. It is thus striking that it was not addressed in the literature until the 1970's.

Part of the reason so little is known about λ is that it is extremely difficult to measure. If one could find a representative set of cooperative offenders who would keep careful logs of their criminal activity, then one might be able to develop accurate estimates of λ . In the absence of such cooperation, there are two approaches to estimating λ . One is through the use of self reports--asking criminals how many crimes they commit in a given period. The other involves looking at arrest histories, computing an individual arrest rate, and then dividing that rate by an appropriate measure related to the probability of arrest to calculate the individual crime rate. Both of these approaches have

important sources of error, and the errors in each approach are very different. When the two approaches present consistent results, then it may well be that the magnitude of the respective errors is not excessive.

One important finding about individual crime rates is a recognition of considerable skewness in the individual distributions, that is, the great bulk of offenders have very low crime rates and a relatively small number have very high rates. Finding this skewness is an important motivator for consideration of selective incapacitation. If one could only identify those relatively few individuals with the high crime rate, they are the ones who are the prime candidates for incapacitation.

That problem of identifying those candidates represents a challenge even more difficult than that associated with discerning the distribution across offenders. The problem here is compounded by the fact that the Fifth Amendment (at a minimum) precludes use of self-reported rates of offending as a basis for making incarceration decisions. The court is restricted, therefore, in the information it may use. At a minimum, it may use information that is a matter of official record such as prior conviction history.

The fundamental task, however, is one of estimating an individual's future propensity to commit crime. And that must be done with variables that are legally and ethically legitimate, and that have strong predictive power. And those variables must be reliably recorded and readily available to the prosecutor and the judge for their respective roles in the sentencing process.

Unless one can specify in advance the profiles of the individuals who will display the high criminality, then the knowledge of the existence of the high skewness in individual criminality is of little predictive or policy relevance. Ideally, one would like those profiles to reflect detailed patterns of behavior accompanied by insightful theory

that helps to explain the relationships reflected in the patterns and why the individuals with those patterns do end up at the high end of criminal activity. Once those patterns have been identified from retrospective analysis of criminal activity, then there has to be empirical verification of their validity in a prospective sample.

On the other hand, the kind of identification that is least satisfying is that which derives simply from finding variables which correlate well with individual criminality, or, equivalently, variables that have large regression coefficients in a simple regression equation with reported crime rate or arrest rate as the dependent variable. Thus, the fundamental task is one of identifying the variables that distinguish the high-rate and low-rate offenders in ways that can be used prospectively. There is a strong correlation among many variables that are related to criminality; where the information is to be used in deciding on individual punishment, one wants to be sure that one is invoking the relevant variables rather than spurious correlates.

The most important work on measuring individual criminality is that of Jan and Marcia Chaiken³ and of Peter Greenwood⁴ at the Rand Corporation. Their work is based on interviews with prisoners in California, Texas, and Michigan. Their work is retrospective in that their estimates have been derived from data, but not yet tested on a new sample of data. They also are derived from highly selected

³ Chaiken, Jan M. and Marcia R., "Varieties of Criminal Behavior," Rand Corp. Report No. R-2814-NIJ, August, 1982.

⁴ Greenwood, Peter, "Selective Incapacitation," Rand Corp. Report No. R-2815-NIJ, August, 1982.

populations--state prisoners--individuals who had survived all filters to reach the last stage of the criminal justice system. It remains to be seen whether the patterns that distinguish among prisoners are also applicable to the larger group of offenders who are convicted, and whom a judge must sentence. Also, "shrinkage" (i.e., reduction in the quality of the fit) inevitably occurs whenever statistical estimates are applied to new data, and the magnitude of that "shrinkage" has yet to be determined.

Some policy concerns

As we consider translating findings on patterns of individual offending into a policy instrument that will be used for selective incapacitation, a number of interrelated policy and technical questions must be addressed. The most central policy questions involve the basic philosophical and legal challenges to the legitimacy of incarcerating--and therefore punishing--an individual for crimes he might commit in the future. This would be the dominant issue if selective incapacitation were proposed for anyone other than convicted offenders. Any candidate for selective incapacitation, however, is already vulnerable to punishment because he has already been convicted of an offense that warrants imprisonment. Furthermore, it is reasonable to require that no punishment should be imposed that is more severe than the reasonable range that is normally imposed for the convicted offense. Within those limitations, the punishment imposed might well take account of the risk an offender poses; any sentencing judge will acknowledge--in private if not in public--that such considerations do enter his sentencing decisions.

The intensity of the concern over adjusting an individual's sentence to reflect consideration of his future crimes is particularly surprising when contrasted to the

much more readily accepted principle of general deterrence. Under the deterrence principle, individuals are punished in order to avert other people's future crimes. Certainly, in contrast, the principle of incapacitation--and even selective incapacitation if the prediction can be good enough--and the concern over his future crimes seems not at all unreasonable.

Thus, it seems reasonable to conclude that if a very effective discrimination instrument were available, and if it were applied only to convicted offenders, and if the imposed punishment were no more severe than could reasonably be applied for that offense, then most of the legal and philosophical objections to selective incapacitation can be accommodated. The crucial technical question, however, relates to the potential effectiveness of the instrument.

A central question in considering that instrument is the set of variables used to provide the discrimination. One view holds that the only information beyond the current conviction offense that can legitimately be used to decide on punishment is information on the offender's prior convictions. If that restriction is maintained, then the benefits of selective incapacitation are likely to be small even though positive. Convictions are sufficiently infrequent and sufficiently loosely related to aggregate patterns of offending that their information content is relatively marginal. The common practice of invoking a wide variety of other information in presentence investigation reports reflects the acceptability heretofore of using such information in sentencing, and, by implication, the inadequacy of restricting consideration to only conviction records.

As the scope of the variables to be considered in identifying the candidates for incarceration is expanded, then the degree of objection also increases. One extension involves considering various degrees of intervention by the criminal justice system short of conviction (say, arrests or indictments).

The extreme of this range of other variables could extend to an inherently unacceptable variable like race. Even if race is precluded as an explicit variable, it might be introduced implicitly by using other socioeconomic status variables (like income or educational attainment) which are correlated with race. These raise serious questions of legitimacy that will have to be addressed if such variables are found to be predictive.

It is important, however, that the prediction questions be addressed with respect to the relevant populations. Socioeconomic variables correlated with race are associated with participation in criminal activity, but they only distinguish between criminals and non-criminals. That is not the relevant comparison, however. All candidates for selective incapacitation are convicted, and so have already passed through that filter. The distinction between the more and the less serious criminals is not likely to invoke the same characteristics that distinguish criminals from non-criminals. Blumstein and Graddy⁵ have shown, for example, that race is an important factor influencing the chance of a city male ever being arrested for an index crime (i.e., prevalence), but it is not an important factor associated with recidivism--and recidivism of those convicted is the relevant consideration in selective incapacitation.

One of the fundamental concerns that pervades all decisions in the criminal justice system is the avoidance of "false positives," i.e., subjecting someone to punishment when that is not warranted. This concern is reflected in the requirement for conviction of "guilty beyond a reasonable doubt," and in the principle that "better a hundred

⁵Blumstein, Alfred and Graddy, Elizabeth, "Prevalence and Recidivism in Index Arrests: A Feedback Model," *Law & Society Review*, Vol. 16, No. 2 (1981-82), pp. 265-290.

guilty men go free than one innocent man be punished." Thus, in seeking to identify the serious offenders, it is particularly important to indicate also how many individuals who are not serious offenders also satisfy the discrimination pattern. To the extent that serious offending patterns are rare, and have a low base rate, then this false positive rate will become undesirably large. Here again, however, the concern for the false positive problem would be more intense if the candidates for selective incapacitation were not convicted (if they were candidates for pre-trial preventive detention, for example).

As the results of research on criminal careers identify improved selection criteria for candidates for incarceration, those criteria must be compared to those used in current practice. One would want to compare the variables used by the best practitioners and test the outcomes under a decision rule that derives from the research compared to the judgments of the best practitioners. In particular, one would want to compare the performance of career criminal units in prosecutors' offices--and especially the more successful ones--in identifying the "career criminals" who should be prime candidates for incarceration.

It can reasonably be anticipated that the results of the selective incapacitation research will serve much more for marginal than for significant improvement in crime control. The benefits of that improvement must still be weighed against the many policy, legal, and ethical problems raised by such approaches. Most likely, no good sentencing rules or formulas will emerge; rather, as the insights emerge on the important variables, they will serve simply to heighten the awareness of judges and prosecutors to those variables, and--perhaps more valuable--direct their attention away from those they currently think are important but are not.

Prevalence and incidence

As we do move into variables that are to be used for predictions, it is crucial that we maintain a clear distinction between the variables associated with prevalence and those associated with incidence. When we talk about crime rates, or crimes per capita, that crime rate is a product of two terms. One is the criminals per capita, or prevalence; the other is the crimes per criminal, or incidence. Prevalence is the number of criminals per capita, or how many criminals there are within a population group. Incidence refers to the number of crimes committed per criminal per year, and that is λ , the individual crime rate.

It is important that we distinguish the factors that are associated with prevalence and the factors that are associated with incidence. Prevalence refers to which groups are over- or under-represented in a criminal population--the criminal population within which selective incapacitation is to be applied. Incidence is the relevant variable to think about in deciding on selective incapacitation. Age-specific arrest rate may help to illustrate the issue. That rate reflects a mixture of the propensity to be criminals at any age and rate of crimes committed by a criminal of a particular age. Age-specific arrest rates are quite low by age 30, and that recognition has impelled some people to suggest 30-year-olds should not be imprisoned because they are about to terminate their criminal careers. But that is not the relevant consideration with respect to subsequent criminality. We have been doing some research lately looking at the variable that is relevant, the mean residual career length, or how much longer on the average a person of a particular age is going to continue his criminal activity, if we know that he is currently active. In the early twenties, residual career length is relatively low. And as we weed out the "weak of heart," and are

left with the relatively few "career criminals" by age 30, the mean residual career length goes up, and, indeed, the mean residual career length reaches its maximum in the thirties. A person who is a criminal in his thirties is likely to continue to be a criminal. Then, there is a wear-out process going on beyond the forties, and the residual career length comes down.

Similar considerations apply to the issue of race. Race is clearly an important discriminator associated with involvement in crime and non-involvement in crime. We know that arrest rates for blacks are appreciably higher than arrest rates for whites. However, the incidence of crime among black criminals (who are a small subset of the black population) and among white criminals (who are an even smaller subset of the white population) is likely to be similar. Thus, it is important that we focus on the incidence variables that distinguish future criminality of those who are in the relevant class--those who have been convicted of a particular offense. And the incidence must be distinguished from the prevalence. Much of what we know about crime with respect to age or race derives from the correlates of crime rate or the correlates of arrest rate, and those correlates combine incidence and prevalence. Our task in selective incapacitation is separating them.

Implications for information systems

One of the more striking observations regarding the reports by Greenwood and by the Chaikens--both of whom based their analyses on identical survey data--is the major difference in their public presentations. Greenwood has identified seven variables that he suggests do discriminate to a reasonable degree between the high- and low- λ persons in his prisoner sample (and so, he suggests, may discriminate in a conviction sample). Four of Greenwood's variables (juvenile and adult convictions and incarcerations) are matters of official record that were report-

ed by the prisoners in their self-reports. The Chaikens also found that self-reported convictions did provide some discrimination, but they also found that the information that was available from the official records themselves provided extremely poor discrimination.

Thus, while accurately recorded record variables may provide some helpful selectivity, these results suggest that the errors in the recording processes--particularly errors in recording and retention of matters of record--probably militate against fair and effective use of such information until there is significant improvement in the quality of the recorded information. And one would expect that the records of individuals serving time in prisons would be better than the records of a more representative population. Most of them had pre-sentence investigation reports, and there was sufficient time and sufficient incentive to warrant collecting as complete and accurate a criminal history as administrative records systems could reasonably provide. As one moves to convicted defendants or even to arrested persons about whom prosecutors must make charging decisions, one can expect the record quality to degrade appreciably.

As long as decisions are made privately by a judge or a prosecutor, the legal environment puts negligible stress on the quality of the information used by the decision-maker or on the considerations that enter his decision. And certainly interviews with these officials make clear that considerations of selective incapacitation enter their decisions. As the sentencing system shifts to make those decisions on identifying the "career criminals" explicit, however, by means such as a scoring system of weighted predictor variables, then the burden of demonstrable validity becomes much more severe. The correctness of the information used to calculate such a score becomes subject to legal challenge, and the validity of the score as a discriminator must be justified.

It is entirely conceivable that all such scoring systems will be precluded. There are some who will argue that the only legitimate variable is the offense of which the defendant has been convicted. Even that variable, however, contains information that has predictive qualities. People convicted of robbery can have different predicted future crime propensity than people convicted of burglary. To the extent that one does predict higher subsequent criminality for robbers, then a sentencing policy might augment the retributive component of the robbery sentence by an additional predictive component. That would push robbery sentences up, and in return it would bring burglary sentences down in our example.

It is also important that the information system provide its information in time. This is of particular concern for the police or the prosecutor, where the information needed to make initial career-criminal decisions should be available for a bail hearing or a preliminary hearing. It is important that the prosecutor be able to know early in the charging process whether the individual charged with a robbery or a burglary does or does not have a serious criminal record. It is astonishing, in this year when electronic mail carries trivial chit-chat across the nation through computerized networks, that police departments must wait several weeks to receive an offender's rap sheet through the mails. Fingerprints can readily be sent by facsimile transmission and the rap sheet returned electronically. Certainly the networks and the technology are readily available for such communication, and such use seems to be eminently reasonable.

Summary

In reviewing the potential for selective incapacitation, there do appear to be strong reasons for jurisdictions to consider such formal policies for sentencing decisions, building on their use in parole decisionmaking for at least a decade. The state of knowledge for identifying the career criminals who are the prime candidates for selective incapacitation is still at a primitive level, however. There has been no valid prospective study that identifies valid and appropriate variables that distinguish among convicted persons the few serious career criminals from the many lower-risk individuals. Thus, considerable retrospective research and prospective validation is still required before such a capability is sufficiently developed to be demonstrably better than the judgments of the judges and prosecutors who make such decisions currently. Even when well developed, that research is not likely to provide a sentencing formula, but rather to call attention to appropriate variables and away from inappropriate variables that may be taken into account currently. Even when such capability does become available, information bases on prior criminal record of much better quality than currently available will be required on a timely basis.

