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The Ohio State University

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THE DANGEROUS CRIMINAL AND INCAPACITATION POLICIES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Thomas Gabor, B.A., M.A.

The Ohio State University

1983

Reading Committee:
Dr. Simon Dinitz
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Adviser
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DEDICATION

To My Mother, Elizabeth
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This writer is indebted to many persons and agencies for advice, making information available, providing financial assistance and facilities to conduct this research. Following are those most instrumental in this regard.

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INTRODUCTION

From time immemorial, persons and groups have been designated as dangerous and subjected to measures aiming to formalize this status. The recurrence of the notion of danger in so many forms and societies through history introduces the question of whether the meaning of dangerousness in a given context is as predictable as is the propensity of people to impose such a label. Paradoxically, the belief tends to exist within every sociocultural context that the prevailing definitions of dangerous people and behavior are objectively established on the basis of absolute moral standards.

American society today is no different. Within the realm of criminal justice, there is some consensus that the dangerous person is one who commits predatory acts against the person. Very influential, but perhaps more in the minority, are those who believe that the status of dangerous should extend to persons habitually contravening the law, even if such violations are non-violent. There are many other views, including the one that definitions of danger are based on the frame of reference of society's most powerful interest groups, who conveniently overlook the hazards to which they expose the public.
Notwithstanding this last view, criminal justice policy, in 20th Century America, has been concerned with the suppression of traditional street crime. This suppression has, at times, been brutal, as demonstrated by the use of such measures as the indeterminate sentence and the confinement of persons under less than humane conditions. On other occasions, perpetrators of street crime faced attempts by a frequently paternalistic state to modify their behavior through refined medical or quasi-medical techniques ranging from psychotherapy to psychosurgery.

The main thrust of policy statements in relation to the dangerous, over the past ten years, has not been in the direction of retribution, nor of offender reform or redemption. Rather, the principal objective has become the quarantine or incapacitation of offenders. This position has been based largely on evidence dispassionately weighed on a criminological balance sheet. Indeed, many of those at the forefront of this research have not been criminologists but statisticians, operations researchers, economists, and even systems engineers.

This study examines the implications of the issue of dangerousness for American penal policy. Special attention is given to the utility of incapacitation. A thorough examination of the problem of danger requires more than merely an empirical analysis. The issue must be placed in an historical and sociological context to understand current policies as well as their deficiencies. Consequently, varying dimensions of dangerousness are explored.
The text is divided into four parts. Part I, containing two chapters, is concerned with the general policy aspects of dangerousness. The first chapter explores the reasons for the re-emergence of dangerousness as an issue in Western criminology over the past ten years and the form this has taken. The definitional issues that have plagued this area are also discussed. Chapter Two deals with the competing doctrines that any penal policy must address. In the final section of this chapter, we apply these doctrines to the issue of dangerousness to illustrate the constraints that operate upon policy in this area and the manner in which these can be balanced.

Parts II and III focus on the subject of incapacitation. Part II contains two chapters examining the potential crime preventive gains of incapacitation policies, as well as ethical issues. In Chapter Three, the literature relevant to the assessment of collective and selective incapacitative programs, including experiments and quasi-experiments that have been conducted, is discussed. Chapter Four explores the reliability of predictions of criminal behavior, a precondition of selective incapacitation policies.

Part III, containing four chapters, outlines an empirical study we have conducted to test various collective and selective incapacitation policies. Specifically, through a retrospective analysis of the officially recorded criminal careers of close to one thousand Ohio offenders selected on the basis
of at least one arrest for a violent index crime, we evaluated the preventive potential of several hypothetical sentencing policies. This was done through comparing the effects these policies might have had with those actually in force during the adult criminal careers of these offenders. The amount of crime our policies could have averted is only one aspect of this comparison. Their fiscal and human costs, reflected by effects on prison populations and false positives, are also examined.

Chapter Five sets out the methodology—the sampling procedures, the variables used and their measurement. Chapter Six describes the general characteristics of the sample obtained from the criminal histories. Chapter Seven contains the findings of our incapacitation study and Chapter Eight comprises a summary and explanations of our findings. Also included in this summary chapter is a discussion of the methodological shortcomings of prediction and incapacitation studies.

Finally, Part IV synthesizes the entire work. The legal, moral, definitional, and policy issues are merged with the empirical evidence to arrive at some broad implications for policy relating to the dangerous.
PART I

SOCIOLEGAL POLICY AND THE DANGEROUS
CHAPTER ONE
DANGEROUSNESS: HISTORICAL AND CONCEPTUAL PERSPECTIVES

Since 1970, Western criminology has shifted its focus from a concern with the societal bases of criminality to a renewed interest in the individual offender, and, more specifically, the dangerous offender. This reorientation in criminological thought has only been partial—concern with the societal-structural underpinnings of crime has not been supplanted but merely supplemented. The recent tendency has been toward polarizing the offender population into two distinct categories—those responding to social environmental (largely situational) stresses, and those considered as pathological or career offenders.¹

Polarization, a penological fact,² has been alluded to in recent policy statements,³ although it has largely emerged in a "spontaneous" manner due to a number of concurrent developments. Whether such a classification of offenders into the benign and dangerous is warranted by the criminological evidence needs to be addressed and is a primary focus of this work. If efforts thus far aimed at the identification (either prospective or retrospective) of those committed to criminal lifestyles are any indication, then it can be said, at the very least, that this crude taxonomy of offenders has been unsubstantiated.

6
The idea that dangerous persons and groups exist is not a new one but a recurrent theme in the history of criminological thought. From the point of view of the sociological functionalist position, one might even say that the designation of certain persons in society as dangerous is necessary for the maintenance of social solidarity and normative consensus.\(^4\) In the same vein, some psychoanalytic theoreticians have argued that the identification of deviants is beneficial to the psychological integrity of those imposing the label as this process reaffirms their own normality.\(^5\)

The term "dangerous" has been applied in both political and non-political contexts. In the political context, the identity of those posing a danger to the existing system varies with the nature of the system, its rigidity or tolerance, the degree of pluralism or hegemony and so on. Danger in its non-political usage has been, in different contexts, attributed to those believed to be possessed by demons and/or religious heretics, eccentrics, those afflicted with physical abnormalities (be this cosmetic and/or functional in nature), the psychologically disturbed and the criminal or socially deviant.\(^6\) Some have argued cogently that the political and non-political spheres are inseparable; that the standards established in relation to what constitutes deviance, criminality, eccentricity, mental disturbance and so on are strongly informed by the prevailing political context. Critical criminologists of various persuasions have focused extensively upon the disproportionate input of the power elite, special interest
groups and *ad hoc* normative contingencies in the establishment of social standards, as well as their enforcement. Others have documented substantial cross-cultural differences in certain norms of conduct. Critics of the psychiatric profession have written of its social control role as well as of the class biases underlying definitions and diagnoses of mental illness.

Thus, it can be argued that definitions of danger cannot be formulated in an entirely objective manner, devoid of the intrusion of social values (particularly of those wielding the greatest political influence). The political and criminological realms converge maximally when deviant behavior is linked primarily to systemic problems such as poverty, injustice, corruption and the like. As Rennie has shown in her account of the historical treatment of those considered dangerous, the source of danger has been viewed across the entire spectrum from the political to the totally apolitical. Thus, from the medieval through the nineteenth century it was fashionable to speak of dangerous classes comprising the disadvantaged and the destitute in urban areas. The implication that the lower classes monopolized criminal activity reflects the class-based biases of some of the most prominent writers during this period and their fear of insurrections by the impoverished. During other eras, the dangerous have had no apparent political relevance. When criminal anthropology was at the height of its popularity, the focus was on the born criminal, an immutably antisocial beast for whom society
bore no responsibility. Some would contend, nevertheless, that even these attempts to objectify the dangerous through biological determinism and its late 20th Century counterpart, biosocial criminology, are infused with a conservative ideology exonerating social structures and inequities of the blame for criminality. Without implying that a consensus ever existed in relation to the sources of social danger, the most recent approach involving the policy of polarizing or bifurcating the offender population is the most sophisticated, recognizing as it does both the political and non-political dimensions of crime and dangerousness. The socio-political bases of much contemporary crime is acknowledged by mainstream criminologists. However, it is also recognized that some criminality exists in all social systems, and, due to human fallability, will remain despite ambitious efforts at social engineering. Within this residual category are the dangerous --the hardcore offenders responding to organic deficiencies or anomalies, early deprivation in infancy and/or later abuse or neglect, woefully inadequate role models, learning disabilities, a lack of interpersonal skills, or just merely the sheer thrill of engaging in prohibited and tabooed conduct (which may be expected to be at a maximum when the social engineers approach the objective of crime eradication).

Aside from the issue of whether this division of offenders into two distinct groups, one comprising the dangerous and nonmalleable, the other the nondangerous and malleable, is empirically justifiable, the current view ignores certain
forms of conduct which blur the simplistic distinction between the political and nonpolitical realms. Among these are serious violent and property crimes committed by those with clear political motives. Statutes pertaining to dangerous offenders are not being applied to persons responsible for these types of offenses. Also, in the United States at least, no special interventions exist with respect to "political" criminals. This type of offender could be characterized as both a rationally motivated, persistent, dangerous offender, as well as one responding to situational stresses of various kinds.

The lack of recognition of political criminals as a distinct group betrays a conservative bias in policy as offenses with political overtones are attributed to individual pathology or malevolence and international subversion, rather than to fundamental social systemic deficiencies. Another indication of such a bias, in relation to the current mainstream of thought on the dangerous offender, is the absence of policy prescriptions to deal with corporate or white collar offenders. Such an omission is hardly accidental in light of recent cases involving allegations of grievous conduct including corporate homicide.  

**DEFINING DANGER**

Further illustrating the difficulties involved in the definition of dangerousness are the divergent statutes that have been formulated with respect to the dangerous offender.
These statutes fall into two principal categories: (1) those concerned with the habitual or persistent offender, and (2) those dealing with the mentally abnormal offender and particularly those considered to have a propensity toward engaging in deviant sexual acts.

The habitual offender statutes in many countries have been most often applied to nuisance or petty offenders as opposed to those persistently engaging in violent behavior. Similarly, statutes pertaining to the mentally abnormal sex offender have often succeeded in indefinitely confining those responsible for rather innocuous behaviors such as exhibitionism. These statutes have been applied to relatively frivolous cases because they are often so ambiguous and far-ranging as to allow for broad procedural discretion. In the state of Alabama, for example, a sexual psychopath is:

A person who is suffering from a mental disorder but is not mentally ill or feebleminded to an extent making him criminally irresponsible for his acts, which mental disorder having existed for a period of no less than one year and being coupled with criminal propensities to the commission of sex offenses.

This statute can be applied to a person convicted of any sex offense who can be confined "until fully and permanently recovered." Mental health professionals are expected to distinguish mental disorder from mental illness (a substantively onerous task) and to identify propensities or offer predictions about the likelihood of future sexual misconduct. The limitations involved in clinical predictions are discussed in Chapter Four. One danger relating to this assessment is
the possibility that the two ostensibly independent findings, that of mental disorder and of propensities toward sex crimes, may be tautological. Thus, a finding of mental disorder may predispose a clinician to conclude, in light of the recent sex offense, that the offender is unstable and his behavior at best unpredictable. Wishing to be prudent, he may support indefinite confinement. Similarly, whether criminal propensities toward sex crimes are inferred directly from the offense or on the basis of bona fide psychodiagnostic procedures, the clinician may be theoretically inclined to believe that those beset by such propensities are necessarily afflicted with mental disorder.

Aside from the ambiguities with which statutes aimed at the dangerous offender are fraught, the disparate contents of such legislation from one jurisdiction to another illustrate the diverse views of danger. Habitual offender laws in the United States, for example, differ considerably from one state to another. In a surprisingly large number of states, one prior offense is sufficient to qualify an offender as habitual. Most of the remaining states require two or three prior offenses, with highly specific statutes in a handful of states requiring four and even five prior offenses. The nature of the offenses a person must commit to become eligible for habitual offender statutes range from any offense (including misdemeanours) in some states to violent felonies in others. Thus, it is possible to have committed only a handful of petty offenses in some states to be subject to
special legislation reserved for the dangerous. Although most states do require that an offender have at least one prior felony, a number of these do not require this to be a violent felony.\textsuperscript{17}

The sexual psychopath laws in the United States contain equally notable disparities. Whereas most statutes require a finding of mental disorder, a smaller number provide purely behavioral definitions. One example of the latter is the Massachusetts Sexually Dangerous Person legislation which may include

\begin{quote}
...any person whose misconduct in sexual matters indicates a general lack of power to control his sexual impulses, as evidenced by repetitive or compulsive behavior and either violence, or aggression by an adult against a victim under the age of sixteen years, and who as a result is likely to attack or otherwise inflict injury on the objects of his uncontrolled or uncontrollable desires.\textsuperscript{18}
\end{quote}

The offense(s) for which a person must have been convicted also vary substantially. Whereas in some states proceedings may be instituted for any sex offense, in others only the most grievous offenses are considered (e.g., forcible rape, indecent assault, indecent liberties with children). There are several states in which no conviction is required at all (e.g., Florida); where it is sufficient to demonstrate the presence of mental disorder and a propensity to commit sex offenses.\textsuperscript{19}

These statutory differences do not merely reflect regional or cultural differences, but fundamental problems in the conceptualization of danger. These include the diverse
uses of the term "dangerous," confusion about whether dangerousness is a property of situations or people, about the types of acts to be considered dangerous, the role of intent and rationality in the assessment of dangerousness and about the connection between dangerousness and mental illness.

Legal proceedings, with all their implications in terms of involuntary confinement and stigmatization, have been initiated on the grounds of dangerousness when persons have been deemed to be capable of inflicting physical harm upon others or themselves, when emotional trauma or distress were likely to have been experienced by victims or when a person has discharged his responsibilities in a negligent manner (e.g., the reckless spending of a family's savings). One question that immediately presents itself is a predictive one. What is the likelihood that a given person will perpetrate a physically injurious act? The ability of mental health professionals or others to predict such behavior with precision is presently being widely contested. The discussion of prediction is deferred to Chapter Four. The assessment of the probability of physical violence will be profoundly affected by the theoretical convictions of the assessor—specifically, whether the propensity toward dangerousness resides solely within the individual, or is a function of a complex interaction between the individual and his socio-physical environment.
Another problem with the aforementioned conception of dangerousness lies in the definition of either physical or emotional harm. Statutes do not tend to specify these harms or provide objective indicators of them. The threshold at which an act becomes dangerous thus remains unclear. It has been argued that the concept of harm itself cannot be objectified due to the intangibility of psychological injuries and the social, psychological relevance of physical injuries. The gravity of disfigurement, for example, cannot be measured by the extent of physical damage inflicted (i.e., pain experienced, medical costs, permanence, etc.), a difficult task in itself. The value placed on physical attractiveness in that context will affect the mental anguish experienced. Also, the attempted differentiation of physical and psychological harms is anachronistic in light of the currently acknowledged interdependence of organic and emotional processes. These difficulties in defining harm, along with the fact that legislation does not tend to include even broad definitional guidelines, enables the clinician to assume the role of moral entrepreneur, as well as expert witness.

The ethics of extending dangerous offender legislation to those considered to constitute a danger to themselves is clearly questionable, although such persons have been frequent targets of involuntary confinement proceedings in the past. In such cases, the state subscribes to the doctrine of parens patriae, whereby it becomes the ultimate guardian of the individual. Most interventions of this type,
often culminating in internment, are due to incompetence (inability or neglect) displayed by a person in relation to his sustenance.\(^23\) However, such interventions could have been substantially mitigated in many cases by modifications in the person's environment rather than by intervention predicated on the view of an immutable dangerous character-istic. Schwitzgebel writes of the proverbial "old lady" who, on a chronic basis, accidentally leaves the gas turned on after using the stove. The substitution of an electric stove for one that is gas-fuelled is far less expensive and intrusive than confinement.\(^24\)

This issue of whether dangerousness is a core trait possessed by individuals or largely a function of situational influences underlies many of the conceptual problems in the definition of the term. The tendency in traditional personality research, as well as within the legal profession, has been to assume a trait model of human behavior whereby an individual is believed to possess enduring characteristics which consistently manifest themselves across a wide variety of situations.\(^25\) On the opposite end of the continuum are the adherents of the stimulus-response perspective who emphasize the role of environmental stimuli in inducing consistent types of responses across individuals, while downplaying individual-related factors influential in the perception, interpretation and response to such stimuli.\(^26\)

Of increasing interest is the interactionist position whereby human behavior is viewed as a function of a continuous
interaction between the individual and the situations he encounters.\textsuperscript{27} This is not, however, an additive function as individual and situational influences are seen as operating synergistically. This is exemplified by the observation that people do not randomly encounter environments of different kinds but often select the situations in which they function and, furthermore, affect and alter these situations.\textsuperscript{28} Also, similar situations may elicit a wide variety of responses from different persons or even the same person over time. The implication is that a complete inventory of individual and situational characteristics will not describe the full range of behaviors which may be expected from any given person. A knowledge is required of the manner in which people possessing certain combinations of characteristics tend to react toward situations of varying kinds. Moreover, the probability that such persons will encounter those situations rendering them most volatile must be specified.\textsuperscript{29}

The policy implication is that there are few inherently dangerous persons or situations but combinations of these which must be identified. Walker, in attempting to reconcile the trait and situational approaches to behavior, writes:

What is said to be wrong with this usage is that it 'objectifies' the danger, by talking as if it were a characteristic of the person, instead of something that he might do in certain circumstances. If so, there must be the same objection to calling people 'loyal', 'truthful', 'irritable' or 'deceitful'. We do not mean that they are always behaving loyally, truthfully, irritably or deceitfully: only that this is how they usually behave in circumstances which test those qualities.
Nor do we mean, as objectors sometimes assume, that a man who is labelled as dangerously violent will inevitably injure someone who annoys or frustrates him. Not only do we make allowances for circumstances—such as the presence or absence of a policeman—but we also recognize the fact that a man's self-control varies, so that one day he will react violently to an insult which on another day he might swallow. All that we mean is that he is more likely than most people we know—or know of—to react violently.

Sometimes of course—but fortunately not often—we are talking about people who do not merely do harm as a reaction to a situation, but about people who seek out opportunities for harm. Some men go out looking for a fight; a few sexual offenders actively seek out victims. There are opportunity-takers and opportunity-makers as well as reactors.

...this argument is sometimes expressed by saying that there are no dangerous people, only dangerous actions. If all that is meant by this is that nobody is ever certain to do harm to others in the future, it is acceptable. Something may always intervene, whether it is a change of circumstances or a change of heart. But if it means that we can never say of anyone 'unless something very unlikely happens to prevent him, that man is going to kill or seriously injure somebody within the next year or two', then it goes too far.

Whether the crystallization of danger is primarily a function of individual dispositions or of situations, the specific types of acts that could qualify for legislative concern still need to be considered. Here, again, difficulties arise as a wide range of behaviors have been suggested as posing a danger to the individual and/or society. Those actions regarded by the public as most dangerous are those involving physical violence. However, few would contend that only such acts are dangerous or potentially so. Kidnapping and extortion can, at the very least, produce serious psychic distress for the victims involved. Residential
burglary, even where no confrontation takes place between offender and victim, often elicits feelings of personal violation. Economic crimes of any kind, if they occur with sufficient frequency, can undermine the established economic order. Fraudulent behavior, in particular, can be viewed as hazardous to social relations. Other offenses, such as arson and trafficking in various harmful substances, also may not technically fall under the umbrella of violence, although this fact does not render the consequences any less serious. Indeed, a large number of non-violent acts not legally proscribed can be considered dangerous (e.g., aggressive driving and hazing in college fraternities).

Dangerous acts, like dangerous propensities, are difficult to objectify as they can only be understood within a social context. A great deal has been written of the reinforcements for violent behavior existing in various cultures and sub-cultures. More universal approval is conferred upon acts of violence motivated by self-defense, altruism (the defense of family honor or euthanasia), or those endorsed by the political/legal system (in war, counter-insurgency operations, law enforcement, in sports, and within the family context). Thus violence and aggression cannot be regarded as synonymous with dangerousness. Further, the measurement of danger must be contextually relevant.

Walker has indicated that danger has both qualitative and quantitative components. Thus, it is insufficient to identify acts as dangerous without addressing the likelihood that
they will occur. Danger, then, is seen as a function (perhaps a multiplicative function) of both the probability and seriousness of harm. Both of these elements, according to Walker, must exceed a certain level to constitute a danger. The likelihood of harm must be sufficient to produce serious apprehension on the part of one who is not unduly neurotic. The negligible probability of the most grievous harm cannot be considered as a dangerous situation or we could all be considered to be living in a constant state of danger. Similarly, the imminence of negligible harm must be discounted or the term danger loses its policy relevance. The difficulty lies in the identification of the threshold at which the combined likelihood and seriousness of an act poses a clearly discernible social danger. Thus, while we may quarantine persons afflicted with smallpox, or segregate mass murderers from institutional as well as civilian populations, we could not resort to such interventions in relation to influenza victims or shoplifting offenders, even though the probability of contagion and recidivism, respectively, in these latter cases may be as high if not higher. Harm, in all cases, however, must be plausible and likely, rather than merely possible.

How does one measure the seriousness of an act? One means involves a retreat from efforts aimed at objectifying danger, recognizing its temporal and spatial relativity. The gravity of criminal acts, in a given society at any point in time, can be inferred from the legislation proscribing these acts. Actions can be ordered in terms of gravity on the basis
of the severity of intervention stipulated by criminal statutes. It may be argued, with some justification, that existing legislation does not reflect current sentiments due to the time span required to pass legislation, the obsolescence of many statutes, and the constantly evolving interpretation of others. It can also be argued that certain interest groups have a disproportionate influence in the formulation of penal policy.

An alternative procedure is to tap public sentiments via a referendum or some representative sample. Indeed, public attitudes toward crime and punishment have been systematically measured for close to two decades, stimulated by the landmark work of Sellin and Wolfgang. These attitudes have been recorded in public opinion polls substantially longer than that. One general finding is that such attitudes are not as labile and culturally bound as those advocating a total abandonment of objectification would suggest. Once offenses are ranked according to a hierarchy of seriousness, the level at which dangerous offender proceedings can be invoked can be identified to eliminate from consideration those acts which, irrespective of their frequency and probability of occurrence, do not warrant special intrusive interventions.

Another matter arising is whether the intent of the actor is relevant to the issue of dangerousness. By definition, "danger" refers to a situation involving potential
harm, and by implication its use in the criminological context reflects the need to reduce the likelihood and/or mitigate the impact of that which is feared. Concern with dangerousness has therefore always been a utilitarian one—whether the source was considered to be an entire racial-ethnic, political, or socioeconomic group, or particularly intractable criminal offenders.

Despite the preoccupation with the prevention of harm, Western legal systems have not excluded the neo-classical moralistic concerns of limited retributivism and desert. Thus, dangerous offender legislation, despite its frequent lack of precision regarding definitions of acts and persons appropriate for special interventions, is confined to actions deliberately committed as opposed to those arising from negligence. One salient exception is that of the mentally ill offender—this issue is dealt with below. It has been argued that the exclusion of white collar offenders and "dangerous" drivers from the purview of these statutes, aside from the political leverage they may wield relative to those to whom these statutes generally apply, is due to the lack of intentionality of their acts. The employer who subjects his employees to unsafe and unsanitary conditions may well be criminally liable for injuries or illnesses incurred, but it is unlikely that he set out to commit such harms. Whether the behavior of any offender is rationally motivated is not answerable at this time. The issue,
however, is one of intent versus inadvertence. An offender may confess to a predilection to certain sex crimes, although this commitment and the timing of the offenses may be beyond the control of his impulses. In this case, his actions may be unplanned, impulsive, and, hence, non-rational, but they are purposive, oriented as they are to a specific objective. The employer, on the other hand, stands to gain nothing from the victimizations resulting from his acts or omissions; these arise incidentally from his pursuit of some other objective (e.g., the maximization of profit).

One can, to some extent, infer whether an act is due to negligence or intent by its frequency. Even in the case of the employer, persistence in his harmful behavior following several admonishments and penalties would begin to approach the realm of intentionality because the consequences of his behavior should have been foreseen, and it could be said that he was willing to pay the price for these consequences in exchange for lowering the operating costs of his business.

While these fine distinctions between intentionality and negligence may be regarded as of purely academic concern, a focus on motives is justifiable on at least three grounds. First, even if the consequences are the same for an episode of driving under the influence of alcohol as they are for a case of cold-blooded murder, the sense of moral outrage experienced by those witnessing or connected with the incident will be substantially greater in the second case. This greater indignation should be reflected in penal systems.
adhering to the principle of desert. Secondly, where intentionality exists and is, indeed, made clear through statements by the offender, one can predict with a greater degree of certainty that the act will be repeated in the future. Here a utilitarian argument is invoked for examining motives. Finally, the degree of rationality deemed to underlie an act will be pertinent to the intervention selected in relation to the offender. The more rational offender might be considered more responsive to deterrent and educative approaches, while the impulsive may be (and have been) considered most suitable for long-term confinement.

The implication of the importance of motives is that the act itself, devoid of its symbolic content, is a grossly oversimplified focus in the formulation of penal policy in relation to the dangerous. As much as situationalism has made inroads in criminological theory and crime preventive policy, the motivation of individuals in perceiving, selecting and shaping situations, and in providing meaning to acts within their social contexts, is indispensable and will ensure an enduring focus upon the actor.

A major source of confusion stemming from the definitional problems associated with dangerousness is the frequent interchangeable usage of the term with mental illness. Historically, persons displaying bizarre or eccentric behavior have been considered dangerous, if only because the sources of this behavior were unknown, rendering the behavior unpredictable and arousing fear in those exposed to it. Today, the news
media contribute to this fear through the sensational reporting of serious crimes committed by ex-mental patients, thereby catering to and reinforcing public stereotypes of the mentally ill.44

The concept of mental illness itself is fraught with a multitude of definitional difficulties.45 As in the case of dangerousness, mental disorders have been regarded as both permanent states or characteristics and more transient conditions. Szasz writes:

Bodily illness is something the patient has, whereas mental illness is really something he is or does. If neurosis and psychosis were diseases, like pneumonia and cancer, it would be possible for a person to have both a neurosis and a psychosis. But the rules of psychiatric syntax make it absurd to assert such a diagnostic combination. Actually, we use the words 'neurotic' and 'psychotic' (and other psychiatric diagnostic terms) to characterize persons, not to name diseases.46

The confusion of mental illness and dangerousness involves two themes: (1) that mentally ill persons are dangerous, and (2) that the dangerous are mentally ill. Tautological thinking by clinicians and the provisions of some criminal statutes reinforce these notions. Thus, some psychiatrists view anyone engaging in violent behavior as suffering from an underlying disorder and those diagnosed to be mentally ill as unpredictable and therefore dangerous.47 Statutes have often merged the concepts defining mental illness as a condition which renders one dangerous.48

An assessment of the evidence reveals that the mentally ill as a whole are no more likely to commit serious crimes than are persons from the general population.49 This is so
despite the fact that the more recent studies of criminal behavior of ex-mental patients show that those institutionalized do, in fact, have higher rates of criminal activity than the rest of the population.\textsuperscript{50} The apparent discrepancy can be reconciled by the fact that those currently confined for mental disorder are considerably less representative of the entire population of mentally ill persons (including those not detected but who would presumably be so diagnosed) due to the effects of the de-institutionalization movement. This movement has led to the confinement of only the most severely disturbed, many of whom have had prior contacts with the criminal justice system. Ex-mental patients with such prior contacts have been found to have substantially higher rates of criminality than those without a criminal record, and it is this fact which seems to be responsible for the current upsurge in criminality among the mentally ill.\textsuperscript{51}

The second proposition—that the dangerous suffer from mental disorders—appears to be equally untenable. A number of studies of prison inmates show that the prevalence of serious disorders ranges between 10 and 20\%.\textsuperscript{52} Bearing in mind that inmates constitute only a small and unrepresentative proportion of the active offender, and, perhaps, even violent offender population, these figures are probably quite inflated, indicating that mental illness is not a major factor underlying most forms of criminality.

Persisting ideological, theoretical, and empirical controversies point to the difficulties involved in the
objectification of dangerousness, or at least to the necessity of providing definitions specific to the relevant socio-cultural context. Before proceeding with the divergent imperatives with which policy related to the dangerous must contend (and upon which some definitional issues hinge), the reasons for the current burgeoning interest in this area are explored.

THE RESURGENCE OF DANGEROUSNESS

The present popularity of the issue of dangerousness can be attributed to a number of current developments which are highly interdependent. One general observation that can be made is that this renewed interest on the part of policymakers is not, for the most part, based on rational, scientific grounds. Indeed, writers have commented on the paradox that the voluminous statutes recently enacted or recommended, heavily reliant as they are on the prediction of dangerousness, have accompanied a great deal of evidence pointing to the limitations of prediction. Still more recent studies, many of which have employed sophisticated operations research methods, have shown that the long-term confinement of the most active offenders would have only a modest impact upon overall crime rates. This literature is discussed in detail in Chapter Three.

The most obvious source of interest in dangerousness is the increased level of public fear engendered by a near global rise in total and violent crime over the past two
decades. In addition to this development has been the greater incidence of particularly heinous crimes, which often have been vividly covered by the increasingly zealous media. There is little doubt that the fear arising from objective increases in crime has often been reinforced and magnified in an exploitative manner by the media through a disproportionately high coverage of crime in newscasts, special features, police shows, sensational headlines, and the like.

The ability of well-publicized, brutal crimes to have an impact on public policy cannot be overstated. The formation of special committees and the enactment of legislation regarding dangerous offenders in both Great Britain and Canada, according to Petrunik, has been profoundly affected by one dramatic case of violent recidivism on the part of one ex-psychiatric patient in each country. The response of legislators to these events is fostered by indignation voiced by special interest groups such as the police, prison guards, and well-organized citizens' groups.

One clearly discernible effect of high volumes of criminality and, in particular, the more serious offenses, is the impact upon the criminal justice system's ability to process the same proportion of offenders it could in the past. This is one explanation for the polarization trend. The overtaxed system's resources can no longer cope with the more trivial cases, thereby necessitating the identification of, and a concentration upon, only those posing a danger to life and limb.
Over the same span of time, a rationale or, perhaps, rationalization, has been developed for the diversion of non-violent offenders from the criminal justice system or, at least, into community-based correctional programs. At the root of this movement was the humanitarian concern that petty criminals posing no physical threat to the community had been dealt with in an excessively harsh manner and, furthermore, that they required vocational training, opportunities for employment and social skills attainable through integration into society rather than medically-based interventions in a closed environment.

Thus, two parallel trends have been observed in recent years. A rise in serious crime has elicited hardline reactions from the public and special interest groups resulting in considerable pressure on policy-makers in favor of a more punitive stance towards offenders in general. At the same time, a sharp upsurge in crime during the 1960's and early 1970's has severely strained criminal justice system resources and, together with a movement advocating informal and community-based interventions, has produced a countervailing political force. The compromise has involved increased vigilance and punitiveness in relation to violent and habitual offenders and a reduced concern about non-violent or occasional offenders. This trade-off has been rendered palatable by surveys finding that most citizens have acknowledged participation in some criminal activity. Thus, just
as Garofalo once distinguished natural crimes or universally condemned acts from other illegal behavior, a "natural" dichotomy has been evolving, distinguishing those of us who commit an occasional violation from those persons deeply committed to antisocial behavior; thereby constituting a genuine threat to the livelihood of others and requiring segregation from the community as well as intensive treatment.

The manner in which two opposing ideologies can crystallize into a policy based on compromise is exemplified by the circumstances encompassing the introduction of dangerous offender legislation in Canada in 1977. In 1976, capital punishment was abolished largely through the efforts of the Prime Minister and Solicitor General, despite the fact that polls indicated that 80 percent of Canadians favored its retention under at least some circumstances. The dangerous offender legislation, part of a larger law and order package, was explicitly introduced to mitigate the furor over the capital punishment issue.

Another factor contributing to the espousal of more punitive approaches, at least for the more hardcore offenders, has been the apparent failure of rehabilitative programs, in both institutional and community settings, using diverse forms of intervention modalities. Although attempts are being made to refute the claim that "nothing works," the fact remains that the high expectations of the reform-oriented programs were not achieved and the triumphs that did occur
were infrequent and all too often documented in an anecdotal manner. The frustrations stemming from these failures fostered the belief that offenders are incorrigible and, hence, that our concern should center on public protection.

The notion of offender intractability has gained support from a number of recent longitudinal studies which have shown that after several arrests the probability of relapse is still very high. An additional finding of these studies is the disproportionate contribution to crime of a relatively small percentage of offenders. The clear implication is that the isolation of these chronic offenders can yield considerable crime preventive dividends. Whether this assumption is justified will be explored in Chapter Three.

Let us now turn to the imperatives of social policy which function as parameters in relation to all aspects of the dangerousness issue—that is, the definition of, predictions and modes of intervention relating to the dangerous.
REFERENCES


16. Ibid., p. 46.

17. Ibid., chap. 1.

18. Ibid., p. 49.

19. Ibid., p. 47.


23. Ibid.


26. Ibid.
27. Ibid.


41. According to Professor Nigel Walker, the only category of offender for whom recidivism can be predicted with a high degree of certainty includes those who have made declarations regarding their intention to recidivate. Walker, *Punishment, Danger and Stigma...*, *op.cit.*, p. 97.


63. See, for example, Marvin E. Wolfgang, Robert M. Figlio and Thorsten Sellin, Delinquency in a Birth Cohort. Chicago: University of Chicago Press, 1972.
CHAPTER TWO
SOCIAL POLICY AND THE DANGEROUS

In Chapter One, we placed the issue of dangerousness in historical perspective and discussed the reasons for the re-emergence of the dangerous offender as a major focal point of concern. We now turn to the various considerations and constraints that affect criminal justice policy in relation to the dangerous. Legislation pertaining to special offenders, up to the 1970's, was formulated primarily to confine offenders for the purpose of treatment and, ultimately, to prevent criminality through successful rehabilitation.\(^1\) This policy was compatible with the "new social defense" doctrine, which stressed the utilitarian as opposed to the mere humanitarian function of offender reform.\(^2\)

In the past decade, however, confinement of the dangerous has often been recommended and utilized solely to segregate the offender from the community in order to prevent his criminality during, and not merely following, his confinement. This method of quarantine through incarceration has been said to prevent the contagion of criminal value systems and skills.\(^3\) Also, the long-term incapacitation of the most criminally active and serious offenders is supposed to reduce the incidence of criminality in a substantial way.\(^4\) According to this view, rehabilitation is viewed as
secondary or as a mere "collateral aspiration" of imprison­ment. Similarly, retribution is inconsequential. The objective is to separate the offender from the community. Some of the most ardent proponents of incapacitation policies do propose that the incarceration experience be as humane as possible.

It has been stressed in the previous chapter that the issue of danger is, by definition, an utilitarian one, dealing as it does with the need to neutralize the source of the hazard. However, ethical considerations preclude a purely utilitarian or expedient disposition of the dangerous. Thus, even within this specialized realm of criminal justice, non-utilitarian values must be considered in policy. While neutralizing the dangerous primarily may be a pragmatic undertaking, identifying the source and nature of the threat is, as has been discussed, anything but a purely objective endeavour. Furthermore, even when the nature of the threat is agreed upon and moral/ethical considerations discounted, the best strategy available to pursue the utilitarian objective must still be determined.

The countervailing ideological and fiscal forces that shape general criminological policy must also be harmonized in relation to the dangerous. Thus, if humanitarian senti­ments informed the first, it would incompatible and, perhaps, counterproductive to brutalize those designated as dangerous. As a result, policy relating to the dangerous must be sensitive to the divergent pressures to which all penal policy
is subject and it must, to some extent at least, be compatible with policy relating to the mainstream of offenders.

From where do these pressures derive?

First, there is the view that penal sanctions should be commensurate with the intent of a violator, as well as proportional to the gravity of his violations. This is the principle of desert. While the occasional deviation from this principle may be justified on utilitarian grounds, its violation on a more regular basis or in questionable cases will undermine the credibility of the entire penal system.

Secondly, it has been said that the public has the right to express its ire in the form of a collective condemnation of socially disapproved behavior. This is the principle of denunciation. The denunciation of unlawful conduct through legal mechanisms gratifies hostile sentiments which, if disregarded, may become manifest in socially objectionable and injurious ways.

A third and more utilitarian concern of penal systems is the reduction of the volume and gravity of proscribed conduct. This is the principle of reductivism or prevention. This function can be pursued through three principal means: deterrence, offender rehabilitation and incapacitation. The requirements of reductivism often are in conflict with the first two principles.
The three principles of desert, denunciation and prevention are all elements of what can be referred to as the consensus perspective of penal systems. Despite differences in assumptions and orientations, the proponents of all three accept the existing legal order, assume its autonomy from the politico-economic context, and view crimes as normative deviations requiring control.

Another perspective of penal systems suggests that these systems do not represent public sentiments in their operations but are merely vehicles used by the politically powerful to maintain their dominant position in society. The legal order is seen as a function of conflict among contending interest groups rather than as a consensus rationally arrived at on purely moral grounds. According to the Marxian version of conflict theory, conflict is confined to capitalist societies and involves two monolithic groups—the ruling elite and the masses. A more dynamic variant, originating from group conflict theory, conceives of the politically powerful, at any given time, as an ephemeral coalition of disparate interest groups. Both positions agree that those with greater political clout have a disproportionate input into law-making and tend to be the beneficiaries of more favorable decisions in the administration of justice at all levels. The perspective subsuming the conflict schools of thought can therefore be referred to as the coercion perspective, as the penal system is regarded as an instrument of coercion.
One more position contained within the coercion perspective is social reaction theory. This approach, while not precluding the importance of social structural variables in the definition of acts or actors as criminal, focuses more on contingencies arising in the context of an act. These contingencies include the socio-economic, racial and related characteristics of the respective parties. Another possible contingency is that of sheer expediency. Penal systems can be regarded as coercive from this point of view because the definition of criminals is seen as depending upon the willingness and capability of a given audience to assert its disapproval of behavior through recourse to legal proceedings.

One further view of penal systems and policy can be designated as the systems perspective. Within this framework, criminal justice systems are not viewed as pursuing a given set of functions, subscribing to a particular ideology or serving a given constituency in the general population. Rather, such systems can be viewed as striving toward continuance and containing a large number of subsystems (police, judicial and correctional agencies, unions, etc.) with similar aspirations. The needs of continuance can be regarded as taking priority over any other system concern (e.g., the pursuit of justice). If such a concern jeopardizes continuity, the affected subsystems will make an adjustment to ensure persistence. Thus, ideology is secondary to expediency. A radical systems view might hold
that ideologies are mere rationalization for policies which must be instituted due to vested interest.

The three competing perspectives of penal systems can be conceptualized on a continuum on the basis of their emphases of moral or instrumental (utilitarian) objectives (Figure 1).

Moralism, in its extreme form, refers to the idea that all violations of the criminal law require a response due to the affront to the extant morality, irrespective of the anticipated consequences of the intervention. To do otherwise, according to this perspective, would be to negate the humanity of the offender—that is, to regard him as less than a responsible individual.

On the opposite end of the continuum is radical utilitarianism, whereby penal systems are seen as operating for instrumental reasons without consideration of moral concerns. The precepts of the classical school in criminology, although affirming the inherent immorality of punishment, would fall near this pole as penal interventions were justified purely on the basis of deterrence rather than the intrinsic nature of an offense.

Most penal philosophies, of course, fall somewhere in between these two poles. Lord Devlin has advanced a more moderate moralistic thesis, indicating that violations of morality must be counteracted, not merely for their own sake but because such violations undermine social bonds and the
FIGURE 1: Perspectives of Penal Systems
prevailing value system. Thus, the enforcement of morals has an instrumental value.

The rule-utilitarianism of Mill is a compromise position at the other end of the continuum. According to classical utilitarianism, an action (including punishment) is justified if the pleasure pursuant to it outweighs the pain taking into consideration all persons to be affected. According to Mill, an action is justified if it conforms to a rule which itself has a utilitarian justification, even if the action produces less pleasure or greater distress than that which could be attained by an alternative course of action. The rule may also be based on a moral objective or intrinsic good (e.g., humanitarianism).

Neither the consensus, coercion or systems perspectives fall entirely on one pole of the continuum. The systems perspective appears to be situated closest to the instrumental end as penal policy is seen as fostering the welfare of organizational and professional interests rather than any particular moral position. The enforcement of morality is only a latent aspect of the pursuit of self-interest throughout the criminal justice system. According to the coercion perspective, as well, penal systems primarily serve to consolidate the dominant position of interest groups in authority (this is particularly the argument of conflict theorists) as opposed to buttressing widely-held valued systems. To the extent that the legal order conforms to the values held by some groups in the society and/or this
order is intrinsically acceptable (according to some absolute moral standards), criminal justice systems can be said to be also fulfilling a moralistic function. However, if the existing legal or moral order represents a collection of contrived principles designed merely to justify the existing political system, then the criminal justice system reinforcing this morality is serving a purely instrumental function.

According to the consensus perspective, on the other hand, penal systems are more concerned with the enforcement of morality as an end in itself than they are with the survival of any political order. Indeed, crime prevention, for example, may undermine the vested interest of those groups and organizations which depend on criminality for their subsistence (although, admittedly, it may foster a burgeoning number of organizations engaged in preventive activities). The ideologies of desert, denunciation and crime prevention can also be differentially located on our continuum. The first two concern themselves with re-establishing the status quo ante through offender redress and redemption. The fact that beneficial consequences may accrue for the affected community through a re-affirmation of values or a diminution of crime is incidental. Most crime prevention programs, on the other hand, aim to directly impact the volume and gravity of victimizations. The possibility that the prevailing morality is buttressed is of secondary concern.
The next section explores, in greater detail, the varying perspectives of penal systems illustrated in Figure 1. Various dimensions of dangerous offender policy are then discussed in the context of these perspectives.

THE CONSENSUS PERSPECTIVE

Retribution/Desert

These two principles, dealing with the need for offender atonement, may represent contradictory aims but are now most often regarded as synonymous. Prior to the emergence of the classical school, retribution was not generally governed by the guiding principle of desert. Currently, in light of a revival in neo-classical thought, the idea of limited retributivism or proportionality between sanctions and the seriousness of an offense is popular.

Retribution has been justified on the ground that a violation of the law requires a response to reaffirm the victimized community's mores by ascribing blame to the offender. Excessive retribution can, of course, be counter-productive if the sanction (e.g., incarceration) in some way diminishes the person's capacity to perform socially productive roles and promotes secondary deviation. A tempered or limited retributivism may provide vicarious gratification for the victim, preclude the need for unofficial retaliation against the offender by aggrieved parties or others and, at the same time, avoids the brutalization of the offender and
Also, offender redress has been said to not only appease those seeking vengeance but to reinforce the commonly-held view of a just world, whereby the consequences one experiences are consonant with one's behavior. Thus, conformity is rewarded and deviation is punished. It can be argued that where the consequences of behavior are perceived as randomly allocated, social institutions will disintegrate.

Restitution can be considered as akin to retribution in the sense that offender expiation rectifies the imbalance produced by the offense. Rather than being purely punitive, this doctrine, with origins in Anglo-Saxon England, emphasizes victim-offender reconciliation. As currently applied, restitution generally involves economic reimbursement for the victim's loss or community service where the harm is generalized or material repayment is inappropriate. Direct victim-offender reconciliation and monetary remuneration is clearly inappropriate following violent personal offenses. Where community service is the means of restitution, the gratification afforded the victim is psychological. When reparation is monetary, this symbolic gratification is transformed to the material realm.

**Denunciation.**

Although it may frequently result in similar consequences, denunciation can itself be regarded as an ultimate penal objective separate from retributivism. Denunciation,
the collective condemnation of antisocial acts, can conceivably be performed by the mere existence of proscriptive statutes, through the offender's stigmatization or, more potently still, through the enforcement of criminal statutes and the application of punishments. The basis of denunciation is the need of the community to vent its anger, disapproval or revulsion with respect to prohibited acts. Some claim that the object of denunciation is the person rather than the act. This orientation might be motivated by a collective need to designate some people as unrighteous.

Although such reprobation may exercise specific and general deterrent effects, its functions extend beyond such utilitarian considerations. This is demonstrated by the existence of statutes which are virtually unenforceable and where retribution is inapplicable due to the lack of a tangible victim (e.g., suicide, acts against nature). Here, as Cohen has written,

Expression is primary. Such disapproval need not be cruel or take extreme forms. An enlightened society will recognize the futility of severely punishing unavoidable retrogression in human dignity. But it is vain to preach to any society that it must suppress its feelings.

Thus, even unenforceable statutes are maintained simply to avoid the tacit endorsement of morally repugnant behavior.

Denunciation, as retribution, involves the re-establishment of a pre-existing equilibrium among the victim, offender and the general population. More than for other penal functions, publicity of the process is vital if the cathartic
effect is to be maximized. Indeed, it has been suggested that if denunciation was the sole objective (disregarding deterrence and retribution), it would be sufficient to deceive the public into believing that punishment had taken place where this was actually not the case. Notwithstanding such a possibility, it is clear that the denunciative effect is most pronounced with the greatest visibility of social control processes. The mere knowledge that penalties exist for certain acts or even that people are being punished will not appease many in this era of impersonal justice. Collective denunciation through visible punishment may solidify social bonds, but its exaggeration, as in the case of unrestrained retribution, may result in collective brutalization. Similarly, excessive visibility of offenders may be counterproductive to their social reintegration.

Given the current bureaucratization and remoteness of criminal justice system processes from the victimized community in most developed countries, it is questionable whether the principle of denunciation is operative, particularly insofar as routine offenses are concerned.

The denunciation principle has been explicitly applied in some countries for minor offenses in lieu of conventional punishments. In China, for example, the criminal code calls for a reprimand or a statement of repentance or formal apology where the circumstances warrant such measures.
Reductivism or Crime Prevention

Frequently referred to as the utilitarian aim of legal sanctions, this penal doctrine seeks to enhance social protection. Since other penal principles (e.g., retribution) can promote social utilitarian functions (through public education and deterrence) and crime preventive efforts may be socially unproductive, reductivism and utilitarianism are not synonymous. Preventive efforts may be futile or even counterproductive if they are insensitive to the etiological underpinnings of crime. Overly zealous attempts to suppress crime which is largely attributable to social structural factors may precipitate political violence or merely the displacement (a relocation or change in the time or type) of criminal activity. 35

The three principal means of reducing crime are deterrence, incapacitation, and offender reform.

Deterrence

Originally stated formally by Beccaria and Bentham, this doctrine refers to the intimidation of a target group by penal sanctions prescribed or those actually meted out. 36 This group may comprise the general population (general deterrence) or particular offenders (specific deterrence). The extent to which sanctions deter crime is said to be a function of the certainty, severity and celerity of their administration. Deterrent effects can also result from the fear of apprehension itself, the stigma arising from
apprehension or the fear of injury sustained during the commission of the criminal act.\textsuperscript{37}

Sanctions based on the deterrence doctrine are oriented primarily toward prospective offenders, rather than the specific offender being sentenced. This target group is assumed to operate on the basis of rational choice, to be aware of the existence of sanctions for the particular offense and to perceive accurately the actual certainty, severity and celerity of their application.\textsuperscript{38} Clearly, the deterrence principle is not operative for those individuals not contemplating the commission of offenses nor for those not rationally motivated.\textsuperscript{39} Finally, in communities where the doctrine of deterrence is applied to its extreme, the ostensible success of the repressive measures may be jeopardized by the mere relocation of criminal activity.\textsuperscript{40}

Reviews of natural, field, laboratory and statistical experiments, quasi-experiments and self-report studies indicate the plausibility of a general deterrent effect, particularly where the objective certainty of sanctions is substantial and in relation to instrumental or minor offenses (e.g., traffic violations). The importance of publicity concerning the nature of sanctions, due to the frequent discrepancy between the objective and perceived, has also been noted.\textsuperscript{41} The existing evidence for a specific deterrent effect is less promising, with offender attributes seemingly overriding in importance factors relating to the certainty and severity of punishments.\textsuperscript{42}
Target hardening, the reduction of criminal opportunity via increased police surveillance, the improved security of potential targets, countless technological innovations and victim-oriented programs, can be considered a subclass of general crime deterrent strategies. This is due to the increased level of risk associated with criminality when opportunities are reduced. These methods have proliferated in recent years; however, their evaluation has been plagued by inadequate methodologies due to the tendency of social scientists to disassociate themselves from repressive intervention techniques and the vested interest of evaluators standing to reap large profits in the lucrative security industry. Intervention modalities oblivious to motivational factors may be most susceptible to the phenomenon of displacement. 43

Incapacitation

This mechanism is the converse of those measures aiming to promote societal-victim-offender reconciliation. The isolation of the offender from prospective victims is paramount, although the measures taken may vary in extremity and intrusiveness from capital punishment, long-term incarceration, mutilation, and pharmacological control on one hand, to surveillance in the community on the other. In addition to ensuring public protection, the more restrictive incapacitation strategies (most notably incarceration) are said to quarantine the offender through preventing the
contagion of antisocial values and lifestyles. Gibbs has referred to this function as normative insulation. \(^{44}\) However, this form of quarantine places the individual in proximity to others subjected to a similar fate and produces an intensification of mutual contamination, not to mention a proliferation of predatory behaviors within the prison walls. \(^{45}\) Another factor jeopardizing incapacitation effects is the possibility that the offender's position in the criminal subsystem will be replaced by others. This is most likely to occur where the target offender group is elastic (e.g., prostitutes), rather than more finite (e.g., mass murderers). \(^{46}\) Indeed, incapacitation can conceivably be counterproductive if an individual, upon release from prison, offends at a velocity in excess of that he would have maintained were he not institutionalized. \(^{47}\) This may be a form of compensation for protracted dormancy, it may result from economic want, the stagnation of maturational processes, the debilitating effect of prisons, or prisonization, including the application of skills learned in the institution.

A growing body of evidence suggests the existence of an incapacitation effect, both from the point of view of current sanctions and the potential for more stringent penal practices. \(^{48}\) Some concern has been voiced about the prohibitive cost entailed by the increase of current incapacitation levels in relation to the number of crimes thereby prevented. Whether the human cost exacted by such measures would be
offset by the preventive yield is a major subject of current debate. This issue is discussed in the following chapter.

Rehabilitation

The rehabilitation of the offender and his reintegration into society has, over the past several decades, been elevated to the level of a bona fide objective of criminal justice systems. Although ostensibly promoting broader social interests, the strategy of offender reform is primarily oriented toward the needs and interests of its recipient. In this respect it is unique as all other doctrines governing penal practice explicitly regard the collective interest as primary. Rehabilitation currently tends to be regarded as an ancillary process in correctional interventions rather than as a primary objective, involving the exploitation of opportunities to assist the offender, rather than as a means to extend the system's power over him, in his own best interest.

Rehabilitative strategies have been justified on two principal grounds. First, therapeutic interventions have been said to humanize corrections. Secondly, successful re-socialization can serve the more basic objective of crime prevention.

The contention that reform-oriented strategies, either as they are currently or potentially applied, promote humanitarianism can be questioned. The medical model upon which many of these approaches are predicated is itself based on
the notion that the offender is not totally responsible for his conduct, thereby justifying at times gross intrusions upon him—psychosurgery, castration, psychopharmacological therapy, aversive protocols and prolonged incarceration.\textsuperscript{54}

The individualization of dispositions entailed by reformism has produced serious disparities in sanctions applied to persons committing similar offenses.\textsuperscript{55} The rehabilitative approach has countenanced the indeterminate sentence which is seen as a source of prison violence and disturbances.\textsuperscript{56} Moreover, this approach, by adhering to a deterministic view of criminal behavior, fosters dependency on the part of offenders. Some observers have stressed the ability of motivated persons to shed the most resistant deviant identities.\textsuperscript{57}

As far as the crime prevention potential of reform-oriented policies are concerned, a great deal of evidence points to the limited efficacy of such programs.\textsuperscript{58} This may be partly attributable to the intractability of some offenders. Also important is the assumption, underlying liberal reform, that criminal recidivism is due to individual pathology or anomie. Discounted are social structural and situational factors, as well as the possibility that some crime may be rationally motivated.\textsuperscript{59}

Aside from deterrence, incapacitation and rehabilitation, crime prevention may be promoted by the educative and habituative effects of criminal sanctions.\textsuperscript{60} The continued enforcement of a statute may reinforce the gravity with which
an offense is viewed, promoting the general validation of the relevant social norms. Finally, the stigma accompanying arrest and conviction for criminal offenses may have preventive consequences apart from the punishment imposed.

THE COERCION PERSPECTIVE

The coercion perspective subsumes a number of theoretical approaches the most notable of which are the conflict approaches (both Marxian and functionalist) and the interactionist school. Despite their differences, one fundamental point of convergence is the role of social power in the formulation and administration of the law.

This view is buttressed by a considerable amount of empirical evidence. Studies by Hall and Chambliss regarding the evolution of laws relating to larceny and vagrancy in England indicate that, at the time of their promulgation, these laws served the purposes of powerful interest groups. Observations of police behavior, particularly in relation to juveniles, have led to the conclusion that the propensity to arrest may be heavily influenced by the social class attributes of the prospective arrestee. The disadvantages of poverty in terms of securing adequate legal counsel, bringing a case to trial and obtaining bail to properly prepare a defense has also been documented, as has the disproportionate representation of personnel, in the judiciary, from the more educated and affluent social strata. Furthermore, systematic biases in the allocation of criminal
sanctions to minorities and the poor have also been shown to have commonly occurred. 67

Despite such evidence, the coercive perspective has a number of limitations. Following is an abbreviated discussion of some of the more salient problems. First, although the original function of a law may have been the protection of special interests, its current role may be radically different. As Hall and others show, some laws governing theft evolved to protect the property of a small mercantile class. Presently, however, the majority of citizens in Western countries possess property worthy of protection. In fact, today the more affluent tend to be better insured and, consequently, have less to lose from theft than those of more modest means. Moreover, the poor are statistically most vulnerable and, hence, more affected by property crimes. 68 Furthermore, protection of the rights of property owners may benefit others as well. The prohibition of industrial sabotage, for example, does not merely serve corporate interests but the welfare of those whose subsistence is dependent upon a company's continued functioning.

It may also be argued that the critical theorists focus excessively on the process of criminalization, attending to the social reactions to behavior as opposed to the motivations and behavior of the actor. This relativism ignores the reality of mala in se offenses—those behaviors proscribed with similar vehemence over time and across most cultures. 69
When offender behavior is addressed, it is invariably viewed as political irrespective of the offender's political awareness and orientation or the expedient nature of the behavior.

Much of the contemporary evidence concerning social class and racial biases in the administration of justice relates to extra-legal behavior rather than to systemic (structural) inequities. To postulate that these unofficial indiscretions would disappear in an alternative social order is pure speculation. In fact, radical policy changes may exacerbate underlying prejudices as threatened constituencies attempt to compensate for a loss of political influence. Also, evidence of class bias is far removed from a coercion model predicated on an unconstrained use of political power. Thus, taken to its extreme, the coercion perspective requires that political and criminal justice systems concern themselves exclusively with the neutralization of those elements most likely to undermine the status quo. Yet, not only are most citizens in the bottom rungs of American society participating voluntarily in legitimate occupations, but those from more privileged sectors are progressively more frequently finding themselves at odds with the legal system. The increasingly vigorous enforcement of white collar offenses and regulation of commerce, as well as the closer scrutiny of political leaders (culminating in the resignation of a President and some more recent scandals) demonstrate that the locus of authority in American society is more diffuse
than the coercionists suggest. At the same time, the upgrading of standards for the incarcerated over the years, diversionary programs, the Miranda Decision and related developments have, perhaps, served to moderate the impact of the judicial system upon the socially disadvantaged. Proponents of the coercion perspective may counter this argument by indicating that such changes have only minimal impact and serve to consolidate control through providing a semblance of justice in order to co-opt the lower strata. Such an argument would acknowledge the ability of the indigent to extract concessions from the powerful and would jeopardize the notion of unconstrained power in favor of a homeostasis (functional) viewpoint. In any event, objective policy changes, such as those outlined above, irrespective of their intent, have beneficial consequences of a tangible sort for the socially "oppressed."

An overwhelming majority of offenses resulting in criminal proceedings are committed by the poor against the poor. This situation holds for both the most serious personal and property offenses. When the victims are organizations, especially during civil strife, they tend to be small neighborhood businesses operating at subsistence levels, rather than major corporations controlled by the "power elite." It can be argued that these are desparate acts perpetrated upon convenient targets by minority group members estranged from the political process. One can also
argue, within limits, that the official data reflect systematic biases in law enforcement and the administration of justice. Irrespective of which position is taken, the interests of the powerful are not threatened but, rather, enhanced by the real or perceived conflicts within the lower social stratum. The continuation of real conflict among minorities constitutes a divisive force. Attempts at its suppression can only serve to focus the diffuse hostility upon the establishment. This has occurred, in part, with the politicization of minority group prison inmates. 74

If, as others contend, social conflict is equally pervasive in different sectors of society and official statistics are spurious, then the most powerful sectors have no particular reason to be alarmed by the conduct of the poor, as opposed to any other group. On the contrary, it would be more sensible to suppress conflict occurring among the affluent. Yet, it is apparent, as exponents of this position argue, that an undue amount of attention has been paid to conflict among the poor. Whichever scenario is correct, the criminal justice system can scarcely be considered to be operating to the maximal benefit of the powerful.

Criminologists of the conflict schools have only indirectly been concerned with the operations of the criminal justice system itself--their focus is upon social relations in general. The relevance of such a focus, the Marxists aver, will be apparent when the capitalist social order is altered. At that point, within an egalitarian system, crime will be
eradicated and social control mechanisms rendered obsolete.\textsuperscript{75} The experience in revolutionary socialist societies contradicts such idealism.\textsuperscript{76} Indeed, many proponents of radical social change concede that mechanisms of social control, based on a revised normative system, have to be established.\textsuperscript{77} Thus, conflict theorists must also contend with the penal doctrines of retribution, denunciation and reductivism.

Notwithstanding these deficiencies, the coercion perspective has sensitized mainstream criminologists to the lack of equity in penal policy and the occasionally fortuitous aspect of the assignment of the label "criminal." Because the development and application of laws are partly a function of political processes, in which various interest groups have differential input depending on their respective power, criminality is not entirely an objective designation. Thus, policy-makers must be self-critical and acutely aware that efforts at objectification may foster the illusion that such policies are based on value-free, rational grounds. Or, when the objective reprehensibility of certain acts is not widely contested, policy-makers should be attuned to the alternative means of interpreting such behavior. Aside from simply dismissing the perpetrator as depraved and anomalous, he might be seen as a by-product of social structures and processes which themselves require scrutiny.
THE SYSTEMS PERSPECTIVE

According to the systems perspective, criminal justice system operations are primarily guided by the vested interest and expedient needs of organizations, with moral and ideological considerations playing a subsidiary role. The criminal justice system can be regarded as an open system, subjected to varying external constraints, interacting with competing systems and characterized by the exchange of feedback among its various components. The system strives to maintain equilibrium between inputs at one level (resources) and those on another (demands for services). Moreover, expansion and contraction of the system are limited by both exogenous and endogenous pressures. In short, the system can be seen as pursuing a dynamic homeostasis, which is facilitated by its inherent elasticity. Excessive elasticity, however, may be as detrimental to system maintenance as rigidity due to the possible loss of credibility of any system devoid of absolutes and regularities. Thus, consistency in the enforcement of at least some crimes is desirable if only to create the illusion that the system exists to uphold some set of principles. The tendency of criminal justice systems toward general stabilization has been shown by Erikson, Parizeau, Christie and by Blumstein and his colleagues, in their longitudinal examinations of crime rates and penal sanctions. System inputs, in terms of demands and capabilities, can also be measured. Demands, of course, represent the number of public service calls and
"clients" introduced into the system during a designated time frame. The capabilities represent primarily the personnel and equipment available to cope with a given level of demand. Clearly, both these parameters are adjustable; however, they remain relatively stable over time. Demands on the system, such as the public's propensity to report crimes, are quite elastic and will largely be governed by the system's response capability. Perceptions that the system is inefficacious may result in a diminution of offense reporting, thereby alleviating the stress on resources. Resources, which are somewhat less elastic due to budgetary limitations, may be expanded to accommodate increases in demand although most of the evidence indicates that crime rates explain only a small proportion of the variance in resources available. Most of the accommodations appear to occur on the demand side. Strains on resources can easily be documented— one need only observe the operation of the criminal justice system at any level in urban America.

Similarly, hypothetical upper and lower limits may exist in relation to the system's magnitude. Although these parameters, again, are quite elastic, they do provide direction for policy. Expansion of the system beyond the threshold may be dysfunctional due to resource constraints and public fear engendered by excessive levels of crime. The net result of system overexpansion is the exertion of public pressure to reduce crime. An inability to effectively
respond to such pressure may result in the alteration of crime recordkeeping to provide an illusion of efficacy. The extent to which the criminal justice system can contract is limited by the "empire-building" proclivity of bureaucrats. Adequate discretion exists at the various levels of the system to ensure that organizations are not rendered obsolete. Furthermore, a minimum of crime has been said to be a requisite for social solidarity and normative consensus.

The tendency of the criminal justice system toward stabilization and equilibrium can thus be shown. Several mechanisms, of varying formality, are responsible for actualizing these system objectives. At the lowest level of formality are public evaluations regarding the gravity of an act and whether it warrants official action. When the volume of crime becomes inordinate and system resources overtaxed, members of the public tend to overlook frivolous offenses as they will expect these to be ignored by officials. This will reduce demands on the system to a manageable level. When the volume of crime is negligible, the more frivolous offenses become salient and will often be reported, thereby maintaining the need for the system. When this spontaneous regulating mechanism is insufficient to maintain system homeostasis, a second, more official although informal process becomes operational. Examples of these processes are police department policies regarding the decision to arrest
and prosecutorial policies concerning the laying of charges (including plea negotiation). When these mechanisms fail, other policies, such as that of offender diversion, can be implemented to alleviate the stress upon the correctional system. Finally, a failure of such mechanisms to stabilize crime rates may necessitate legal changes such as those of criminalization/de-criminalization or changes in correctional standards. Systemic adjustment does not, in actuality, occur in such neat sequential stages. These adjustment mechanisms may be functioning simultaneously and some may not be operative at any given time.

The systems model is thus predicated on the notion that the most important criterion for policy decisions and even for decision-making at the individual level is expediency. Policy-makers can be seen as basing their decisions, at least partly, according to the optimal means by which their organization can remain intact. At a more individual level, the decision-maker attempts to maximize his profits. Thus, the prosecutor will select those cases for the docket that will either give him maximum public exposure (and that he expects to win) or those that are less time-consuming and will increase his won-lost record. Questions of substance, according to this model, are secondary. In a sense, the systems paradigm looks more closely at the way penal systems actually function as opposed to the way they ought to according to an abstract doctrine or political ideology.
As Blumberg indicates, when a particular criminal case gains undue public attention, advocates of the respective parties in the case (the defense, prosecutor and the Court) conspire to provide the illusion that adversarial court proceedings are the norm. This concession of the system to morality, as opposed to expediency, fosters the deception and permits the continuation of policies based on organizational and individual vested interests.

Currently, the most significant exogenous pressure upon the criminal justice system in the United States is the high volume of criminal activity. One coping mechanism the system can resort to is that of plea bargaining. A brief discussion of this mechanism will illustrate the systems perspective.

Plea negotiation constitutes a minor, but significant extension of traditional prosecutorial discretion along with the tendency of many offenders to offer unilateral guilty pleas. Fifty to 90% of the cases resulting in a conviction, in many jurisdictions, can be attributed to some form of bargaining—whether this concerns a reduction or dropping of the original charge(s), bargaining for concurrent charges or for more lenient sentences. The impetus, from the prosecutor's point of view, to engage in such negotiations is provided partly by judicial pressures to alleviate the overcrowded state of court dockets. From a personal point of view, a conviction attained without trial provides an easy victory for the prosecution. From the perspective of
the accused, negotiation can mitigate punishment when conviction is anticipated. All parties may thus consent to proceeding via negotiation. Unfortunately, the incentives to negotiate or, conversely, the disincentives to refrain from so doing, may undermine the voluntary nature of the accused's plea and enhances the likelihood that innocent persons lacking resources will forego the right to a jury trial.95

Plea negotiation individualizes legal proceedings, frequently moderates penalties and occasionally is responsible for punishing the innocent, thereby violating the principle of desert. Similarly, the procedure violates the principle of denunciation because proceedings are secretive rather than public, conciliatory rather than condemnatory. The criminal justice system, rather than expressing public indignation and demanding expiation, conveys to the accused and prospective offenders the idea that society approves of, or at least tacitly resigns itself to, the "quick fix." Also, plea negotiation cannot be sensitive to the objectives of deterrence, incapacitation and rehabilitation by virtue of the ability of recidivists to manipulate the system and obtain maximum concessions for "copping a plea." Career offenders, for this reason, may be more leniently dealt with on occasion than naive neophytes. Furthermore, the notion that plea bargaining fosters the offender's rehabilitation, by encouraging him to acknowledge his responsibility for the offense, has been discredited by Rosett who has stated that,
...in many courts, the guilty-plea process looks more like the purchase of a rug in a Lebanese bazaar than like a confrontation between a man and his soul.96

Plea negotiations can thus best be described as an imperative confronting an overburdened system than as a procedure justified by any accepted penal mandate.97 Similar arguments can be made regarding the motives of expediency underlying decision-making at other levels of the criminal justice system--such as at the point of arrest, bail, sentencing and parole.

THE PARAMETERS OF POLICY

The three perspectives of penal systems just discussed can all contribute to explanations of our present concern with dangerousness and, more importantly, if they are considered in tandem, can provide guidelines for the development of balanced, equitable and, perhaps, efficacious policies.

ADDRESSING THE COERCION PERSPECTIVE

Exponents of the various approaches subsumed within the coercive school have virtually ignored the politics of dangerousness.98 Depending upon the strain of critical criminology to which one adheres, the dangerous offender might be regarded as a bone fide insurgent expressing political disenchantment in symbolic form, as a depraved reminder of gross social injustices and repression or as a mere construct conjured up by conservatives or liberal reformists.
Whatever the attribution, the fact remains that serious predatory behavior has reached alarming levels in the United States and few societies (irrespective of the prevailing political and economic system) have escaped sharp increases in such behavior. The contribution of critical theorists stems from their emphasis on the political processes involved in our identification of what constitutes danger. The first step in developing an equitable policy is an examination of the major sources of danger, based upon the seriousness with which different conduct is viewed and the likelihood of its occurrence. Such an assessment may include corporate citizens and reckless drivers, rather than only those committing street crimes. Such an assessment may also identify extra-individual factors responsible for the concerned conduct. This might imply that social systemic or situational forces may be manipulated, in at least some cases, to avoid radical intrusions upon the liberty of an individual where this is irrelevant or can be avoided. Pedophiliacs could be prohibited from approaching school yards just as reckless drivers are barred from driving—compliance with these restrictions could be monitored by conventional surveillance or telemetric devices when these come of age. Confinement of the dangerous in maximum security facilities is not merely intrusive but may cost between forty and fifty thousand dollars per annum for each individual. Recently, the Solicitor General of Canada has indicated that the cost of custody in a Canadian secure psychiatric facility is $128,000 annually per individual.
It may be possible to maintain round-the-clock surveillance in the community for less than that.

An environmental approach can also be applied to corporate crime. Corporations manufacturing dangerous products could merely be prohibited from promoting and producing these products and placed under closer scrutiny rather than face closure resulting from endless litigation. Excessively punitive policies against corporations will be resisted most strenuously by employees. In such cases, these policies would be rendered unenforceable and lose their credibility. Less severe administrative sanctions (based on strict liability) can function as a superior deterrent because they can be applied with greater certainty and celerity. Also, innovative tactics, such as that of stigmatizing companies through advertising their indiscretions, can be attempted.

ADDRESSING THE SYSTEMS PERSPECTIVE

The systems perspective can also contribute to our understanding of present concerns with, as well as policy dilemmas relating to, the dangerous. It can be argued that the present tendency toward bifurcation in criminal justice policy is a systems response to fiscal imperatives resulting from both a crime problem which has overextended resources and tighter economic policies by Western governments. Thus, according to this position, a focus on a more manageable group of offenders is not due to scientific developments or moral considerations, but economic necessity.
A high profile and harsh approach with the most serious offenders can function as compensation for failures in combating the general problems of crime.

Bifurcation can be pursued in either a one- or two-track system. In the one-track system, the dangerous may merely receive maximum penalties (or at least more severe penalties than "ordinary" offenders committing similar acts) as prescribed by criminal statutes applicable to all offenders. In this type of system, the dangerous are not conceived of as qualitatively different from other offenders but, rather, on the far end on a continuum of seriousness. In the two-track system, separate codes, often involving distinctive procedures, provide for enhanced penalties for eligible offenders. The question has been raised as to the necessity of a second track when adequate discretion may exist in general criminal codes (including recent determinate sentencing systems) to accommodate the dangerous. It may be argued, in accordance with a systems view of penal policy, that resistance to the elimination of the second track is due to the vested interest of the psychiatric profession which, for close to a century, has exerted great influence in the disposition of special offenders.

ADDRESSING THE CONSENSUS PERSPECTIVE

One system which can accommodate the dangerous in one-track is the increasingly popular presumptive sentencing approach. This system comprises a determinate framework
permitting some judicial discretion based on the merits of each case. Penalties are thus set by legislatures and may be reduced or enhanced (within certain parameters), by mitigating or aggravating circumstances relating to the offense, the offender's prior record, his assessed dangerousness, and related factors. This type of system thus reconciles the doctrine of desert and the utilitarian consideration of public protection. Paradoxically, the approach caters to both conservatives and liberals. On the one hand, it guarantees punishments that are commensurate with the harm done. Indeed, preliminary observations indicate that both the certainty and length of prison sentences have increased where determinate sentencing has been employed. On the other hand, these systems, by structuring discretion, are designed to diminish capricious and discriminatory practices.

The dangerous offender, it can be argued, can be adequately dealt with in a presumptive sentencing system because serious offenses require commensurate penalties. Furthermore, an additional amount of time in confinement can be added, within the parameters provided for judicial discretion, if the person poses a grave risk to public safety. It is interesting to note that two of the leading exponents of determinate sentencing over the past decade, David Fogel and Andrew von Hirsch, each argue for special provisions with respect to the dangerous. Fogel has proposed substantially enhanced penalties (about twice the length provided for ordinary offenders committing comparable
offenses) with the possibility these can be further enhanced by about 20 to 40 percent if aggravating factors so warrant. Von Hirsch justifies the retention of "preventive restraint" following completion of a sentence for especially heinous or persistent offenders, because to do otherwise might invite irresistible public pressure. The net result might be the upgrading of all penalties and, consequently, the undermining of the entire tariff system.

Policy based on the principle of desert cannot, however, stray too far from the notion of proportionality between offenses and penalties. The use of special measures in other than exceptional cases will jeopardize the credibility of the entire penal system. The desert principle additionally requires that the intent of the actor be taken into consideration. Thus, those incapable of forming intent (e.g., the legally insane and those under the age of responsibility), those unduly provoked or subject to extraordinary stresses, and those acting inadvertently, should not be subject to the same punitive measures as those deemed to be fully responsible for their actions.

The deprivation of liberty, even on therapeutic grounds, can be construed as punitive. A great deal has been written recently in relation to involuntary psychiatric confinement and the right of the individual to avoid treatment. Punitive intervention by the state is only justified, according to the doctrine of desert, if there is some evidence that a person has engaged in wrongdoing.
Policy relating to dangerousness must also address the denunciative aim of penal systems. A relevant question, in this respect, is whether the object of such denunciations is acts or people. Most writers indicate that condemnation should focus upon the proscribed act, expressing the moral indignation of the public. On the other hand, the argument can be made that the public seeks pariahs both for psychological reasons and to deter others from engaging in tabooed conduct. Condemnation of the person, however, is based upon a trait model of human behavior, whereby the offender is viewed as being in an enduring state of dangerousness. This position is at least partly based on an erroneous conception given the polymorphous orientation of most offenders. Also, a policy of offender stigmatization will impede rehabilitative efforts.

If the criminal justice system is denouncing acts and not people, this objective can be pursued in a one-track retributive system based on the principle of proportionality. The major difference, in this case, between the demands of denunciation and desert concerns the role of intent. To some extent, the motivation underlying an act is irrelevant to the decision of society to denounce it. An "act against nature," for example, must be condemned if certain social norms are to be upheld and reinforced. Whether offender expiation should occur is another issue.

If, on the other hand, the object of denunciation is the offender, then a separate track dealing with special offenders
will maximize the effect. A two-track system stresses the qualitative differences between the dangerous and non-dangerous. The added intensity in denouncing this group of more serious offenders can perhaps compensate the public for its frustration in the criminal justice system's inability (and frequent unwillingness) to contain a large proportion of less serious offenders.

The goal of offender reform is at odds with those of retribution and denunciation if it is assumed that this can be better accomplished through compassion rather than punitive means. Rehabilitation cannot be viewed as a primary consideration in dealing with the dangerous. The term "dangerous" itself connotes the priority of public safety needs over the interests of the individual. Also, the finding that this penal strategy has not fulfilled expectations lends itself to even greater pessimism in the realm of the most seriously disturbed and/or recalcitrant offenders. Furthermore, rehabilitative programs, employing psychotherapeutic modalities, are not applicable to the large number of dangerous offenders who are not psychotic or otherwise seriously mentally impaired. Many dangerous offender codes have omitted consideration of these offenders.111

The strategies of general and specific deterrence have been found to be most effective in relation to rational rather than impulsive behavior, to those engaging in relatively frivolous offenses and occasional rather than career
offenders. Consequently, deterrence may be of limited utility as a means of neutralizing more serious, impulsive and/or disturbed offenders. The issue in determining the potential deterrent effect of punitive sanctions aimed at a small target group of dangerous persons is not whether these sanctions possess a preventive value in excess of a withholding of such sanctions. Such individuals, due to the seriousness of their conduct and, in many cases, their criminal history, would stand to receive fairly lengthy sentences on the basis of desert alone. Thus, the question is whether the additional punitive measures that some of these offenders might experience, where augmented penalties are established for special offenders, will enhance general or specific deterrence. The general deterrent effect of these special measures might be expected to be negligible due to their applicability to only a small proportion of the criminal population. If these preventive gains are minimal, one might be justified in asking whether they warrant the violation of the principle of desert.

Another pragmatic issue is whether the deterrent effect of sanctions upon serious criminal behavior is maximized by reserving harsh penalties for a relatively small group of offenders at the expense of providing more lenient sentences for others. Resources available to the criminal justice system are finite and, in the United States, many correctional systems are in a state of crisis due to overcrowding. Among the consequences of this situation has been
the mass release of felons (including the violent) in several states prior to their pre-established parole eligibility dates. Thus, the long-term incarceration of a small percentage of serious offenders may actually produce a net loss in deterrence due to the reduced certainty of incarceration or shortened sentences for the majority of offenders. A two-track system may therefore undercut efforts to deter serious crime. It could be that shorter prison terms for the dangerous, along with the increased use of the incarceration sanction for other serious offenders, is the most efficacious policy of deterrence.

The doctrine of deterrence poses one major ethical dilemma. Can one justify the punishment of one individual, over that deserved, to prevent behavior that might otherwise be committed in the future? Utilitarians may justify the suffering of one person for the good of others on the basis of aggregative rather than distributive justice. Aggregative justice is concerned with the net benefit of a given policy (i.e., the common good) rather than the apportioning of benefits among individuals. Specific deterrent measures may be more easily justifiable due to the misconduct of the offender and the inherent elasticity of a tariff system of punishments—that is, the penalty most appropriate for an offense is not absolute but relative to its social context.

On the other hand, sanctions administered solely on the grounds of general deterrence might be objected to because the recipient's suffering is used as an instrument for the
possible avoidance of the suffering of others sometime in the future at the hands of unspecified or prospective offenders. There are three key elements here. First, the possibility that the suffering is for nought. This will be the case where a punishment fails to have a deterrent effect. For the offender, pain is imminent if punishment is inflicted, for the public, it is only a possibility if punishment is avoided. Secondly, a balance must be struck between the extent and intensity of the pain experienced by the offender and that to be avoided by the public. If special measures reserved for the dangerous are taken against an individual on the grounds of general deterrence, with all their implications in terms of confinement, possible segregation, stigmatization, and the danger posed by other inmates, the harm spared others at the hands of prospective offenders should be substantial to justify these measures. The third element is temporal. The offender's pain is immediate, commencing with the application of sanctions. Withholding these sanctions may only have consequences for public safety at some remote point in the future.

Incapacitation can apply to a wide range of punitive measures, although it is currently most often used in relation to the incarceration sanction. There are two basic forms of incapacitation. The first is general, or collective incapacitation, whereby persons are incarcerated if they fall in a designated legal category by virtue of the offenses they have committed. The second form,
selective incapacitation, involves the use of prediction to classify offenders according to the risk they pose to society.

Recently, some studies have assessed the preventive potential of selective incapacitation policies as opposed to general incapacitation. Others have compared hypothetical with actual general incapacitation policies. These studies are examined in the next chapter.

Whereas serious methodological problems are involved in the evaluation of the deterrent and rehabilitative effects of penal sanctions, the assessment of incapacitation effects may be somewhat more reliable. General deterrent effects may be confounded by societal influences which may intrude from the time the relevant sanctions are imposed until they are expected to take effect. The effects of specific deterrence and rehabilitation may be indistinguishable. Furthermore, offender reform may be due to maturation, "spontaneous" remission or situational factors independent of correctional programs. The gross effects of incapacitation, on the other hand, can readily be calculated once individual rates of criminal activity are computed—various estimation procedures exist for this. The gross preventive effect, if computed on an annual basis for a given area, is a function of the number of person-years in prison multiplied by the average annual crime rate of these offenders.
This effect might be diminished by a number of factors. Long-term incarceration can result in serious personal debilitation. This, together with the effects of stigmatization, may enhance the likelihood of recidivism for the offender, or at least of his becoming a public charge. Long-term imprisonment may also yield diminishing returns as the offender may cease to be as criminally active or dangerous as he ages.

The incapacitation of an offender may fail to have a preventive effect if he is merely replaced in the criminal subsystem by others, or if his role is dispensible. Such replacement is more likely to occur with respect to market-oriented crimes where a public demand exists for services or where compelling socioeconomic factors are responsible for criminality. Criminal replacement is less likely to occur in relation to purely personal crimes perpetrated by severely disturbed individuals.

Related to this effect is the possibility that an offender, upon his release from an institution (providing this is not at an advanced age), may exceed the level of criminal activity he would have sustained at the same age if he was not incarcerated. This compensation for dormancy could be motivated by financial or psychophysiological factors. Another factor detracting from the gross preventive effects of incapacitation is that of prison violence. Policies based on isolating the most dangerous from society and placing them in proximity to one another increases the
dangerousness of prison environments. Although the victimization of prisoners may be discounted as a policy consideration, the fact remains that this constitutes punishment in excess of that legally prescribed.\textsuperscript{118}

Although retrospective studies of selective incapacitation policies may point to their potential, it is quite a different matter to implement these policies using prediction rather than postdiction. Fiscal and social costs place an upper bound on the number of people that can be incarcerated. Selective incapacitation policies must optimize the use of prison space in such a way as to avoid the imprisonment of the non-dangerous and reserve it for the dangerous until they cease to pose a grave risk. Unfortunately, as discussed in Chapter Four, our predictive tools may not be adequate to determine the optimal sentence for different groups of offenders. It may well be that the responsiveness of behavior to situational influences precludes accurate prediction, notwithstanding the techniques developed.

Incapacitation, on moral grounds, can be justified through an extension of the legal concept of self-defense. Most criminal codes justify the use of coercive measures by individuals against those who are likely to inflict harm upon them. This likelihood, of course, must approximate imminence as perceived by a "reasonable" person. Also, in Anglo-American legal systems, some correspondence must exist between the defensive action taken and the impending harm.\textsuperscript{119}
Incapacitation involves the collective application of the doctrine of self-defense, with the probability of harm and the issue of proportionality still being crucial. There is one critical difference. Self-defense may be invoked in legal proceedings to excuse preventive actions taken against persons who may never have actually violated the law but were only in the process of doing so for the first time. Preventive incapacitation, prior to any violations, is said to violate the presumption of innocence principle. Floud and Young write, "A man must justly forfeit his right to be presumed innocent before his right to be presumed harmless can be brought into question." A denial of the right to be presumed innocent can lead to the incapacitation of any person deemed to be dangerous or "universal preventive confinement." Analogies have been drawn between the quarantine of the dangerous and the physically ill, with the implication that if we can involuntarily confine the latter, who have not engaged in wrongdoing, we should be able to do the same for suspected dangerous persons without their having demonstrated such an inclination.

This analogy ignores the tangible nature of contagious medical illnesses subject to quarantine measures. The verifiability of such illnesses is high and prediction relating to their contagion are reliable, as are the expected consequences of contagion. Furthermore, the medically ill are likely to welcome treatment and appreciate the need for quarantine even if they do not celebrate it. Moreover, the
conditions of their confinement are likely to be more tolerable than those in penal or psychiatric institutions. Also, medical quarantine tends to be a short-term ordeal, whereas the incapacitation of special offenders is long-term if not indeterminate. Thus, there is no anology or precedent to universal preventive confinement in contemporary western countries other than during periods of crisis. Only radical exponents of incapacitation would dispute the importance of the desert principle in providing a general framework for such policies.

While preventive confinement is incapacitation beyond the term justified on the grounds of desert, the principle of justice still enters into the picture. It has been said that

...special sentences are meant to provide additional protection for members of the public by means of a just redistribution of certain risks of grave harm; they are not the means to a policy of indefinite incapacitation of dangerous offenders.  

Incapacitative measures, as those based on deterrence, should therefore strike a balance between the potential harm posed by the offender and that which he experiences. If they are indeterminate, they should periodically be reviewed due to the possibility that the offender's dangerousness has subsided.

The consideration of desert also necessitates that a distinction be drawn between punitive and preventive confinement. The first is just retribution for willful misconduct. The second is applied to mentally disturbed persons who may
not have committed any illegal acts or to offenders prior to trial or following the completion of their sentence. The goal of preventive confinement is solely to incapacitate and, consequently, the conditions of detention should be as humane as possible.

Nigel Walker has advanced some additional principles to guide the use of preventive detention. First, no matter how humane, confinement produces serious and lasting hardship to the offender and should only be used to prevent comparable hardships to prospective crime victims. Thus, these measures are only warranted if the harm feared cannot be remedied (e.g., enduring physical or psychological injury) and should not be applied to prevent property crimes, where victims can be compensated. This principle seems reasonable enough, although the distinction between what can and cannot be remedied is far from clear. Would the prevention of burglary or robbery suffice to invoke these measures? The victim of either of these offenses can be compensated for the loss of property. However, what about the trauma? It may be enduring, occasioning changes in lifestyle. On the other hand, the trauma does not approach the intensity experienced by forcible rape victims. Does some inconvenience, such as a long-term change in lifestyle, along with trauma that is probably of short duration, warrant protective measures?
A second principle enunciated by Walker is that preventive detention should only be used for those whose past acts of misconduct were not out of character for that individual. Related to this is the possibility that the offender's circumstances may have changed, such that he is unlikely to repeat his conduct—he may be physically incapacitated, his former adversaries may no longer pose a threat to him, or he may have moved from a highly criminogenic environment.

Finally, according to Walker, protective measures should be guided by the principle of minimal intrusion. Thus, if means other than detention can reasonably be used for social protection, these should be used.

While, on one extreme, there are those favoring universal preventive confinement, others reject any form of preventive confinement on the grounds that this does irreparable harm to a system based on desert. Von Hirsh reluctantly accepts the need to resort to preventive confinement in extraordinary cases in order to defend the entire system of sanctions from being undermined by public reactions to the heinous crimes of a dangerous few. Advocates of fixed sentences opposing any protective sentences overlook the relativity of what constitutes appropriate penalties for any given offense. While opposing the enhancement of penalties for the dangerous, they often support the granting of longer sentences for each successive offense. This is justified on the grounds that the more an offender repeats
his conduct the greater the assurance that he is responsible for it both in terms of his having committed the offense and his accountability for it. Thus, evidentiary errors or extenuating circumstances are less likely to have played a role as the individual accumulates a criminal record. Furthermore, according to von Hirsch, repetition of criminality should carry sanctions in its own right just as constructive social behavior, over an extended period, is rewarded over and above rewards obtained for each episode of that behavior.

The reason for treating the first offense as less serious is, we think, that repetition alters the degree of culpability that may be ascribed to the offender. In assessing a first offender's culpability, it ought to be borne in mind that he was, at the time he committed the crime, only one of a large audience to whom the law impersonally addressed its prohibitions. His first conviction, however, should call dramatically and personally to his attention that the behavior is condemned. A repetition of the offense following conviction may be regarded as more culpable, since he persisted in the behavior after having been forcefully censured for it through his prior punishment.

Hence, proponents of the justice approach to sentencing believe that a person's prior record should affect sanctions provided him. Others argue that this offers tacit approval to confinement beyond the time span warranted by desert because offenders are being penalized for offenses for which they have already paid their just dues. Thus, proponents of desert support additional confinement for recidivism but often not for dangerousness.
Indeed, as Packer has shown, most legal systems already include mechanisms to facilitate preventive detention.\textsuperscript{128} A number of actions are proscribed because they are considered as preparatory conduct for, or conducive to, the completion of criminal acts. These include vagrancy, status offenses, suspicious behavior, possession of criminal tools, attempted offenses, and conspiracy. The first two are presently in disrepute and are more remote from the criminal act than are the other violations. Nevertheless, they have conventionally been applied in a predictive fashion. Vagrancy laws, in most cases, have been enforced due to the apprehension that the vagrant would commit crimes and not due to the repugnance of vagrancy itself.\textsuperscript{129} Arrests on suspicion have served to neutralize those with criminal histories who are expected to recidivate. In the case of the possession of criminal tools, the law explicitly provides for penal intervention prior to a criminal act. In the case of attempts, this set of laws comes closest to the criminal act itself. An attempted offense is one in which both the intent to commit a crime and the necessary conduct were present and only fortuitous circumstances prevented its occurrence. Nevertheless, even here, sufficient ambiguities exist in relation to how close to completion conduct must be to qualify as an offense to characterize penal interventions as preventive in many instances.

The use of incapacitative strategies, as well as those of deterrence and rehabilitation, are as applicable to
corporations implicated in dangerous behavior as they are to perpetrators of street crime. In fact, as Braithwaite and Geis suggest, these preventive methods may be more effective in relation to corporate offenders. 130

Incapacitation is more workable with corporate criminals because their kind of criminal activity is dependent on their being able to maintain legitimacy in formalized roles in the economy. We do not have to cut off the hands of surgeons who increase their income by having patients undergo unnecessary surgery. All we need do is deregister them. Similarly, we can prevent people from acting in such formal roles as company directors, product safety managers, environmental engineers, lawyers, and accountants swiftly and without barbarism.... However, the substitution problems that plague traditional incapacitative models are also a major constraint on the efficacy of incapacitating individuals who have been responsible for corporate crimes. If, for example, the corporation is committed to cutting corners on environmental emissions, it can replace one irresponsible environmental engineer with another who is equally willing to violate the law.

This is where court orders to incapacitate the whole organization become necessary. Capital punishment for the corporation is one possibility: The charter of a corporation can be revoked, the corporation can be put in the hands of a receiver, or it can be nationalized. Although corporate capital punishment is not as barbaric as execution of individual persons, it is an extreme measure which courts undoubtedly would be loath to adopt, especially considering the unemployment caused by terminating an enterprise (although this does not apply to nationalizing it....)

A less draconian remedy is to limit the charter of a company by preventing it from continuing those aspects of its operations where it has flagrantly failed to respect the law. Alternatively, as part of a consent decree, a corporation could be forced to sell that part of its business which has been the locus of continued law violation. The participation of the regulatory agency in the negotiations would serve to ensure that the sale was to a new parent with an exemplary record of compliance. 131
Braithwaite and Geis also contend that corporations are more amenable to deterrence measures than street criminals due to the rational basis and future orientation of their behavior. Where legal violations are unintentional, due to organizational defects, they say that measures to rectify such problems can be more effective in preventing recidivism than are remedial measures aimed at altering the personalities of individual offenders.

CONCLUSIONS

In conclusion, dangerous offender legislation is applicable to types of offenders other than the street offenders to which such legislation has traditionally applied. Although statutes devoted to the dangerous serve utilitarian goals (primarily public protection), they cannot be unrestrained in this respect. Some balance must be achieved between the harm done by the offender and the measures taken against him. Periodic reviews of cases should be reserved when indeterminate sentences are imposed.

On the other hand, the establishment of special measures in relation to the dangerous is justified on the ground of collective self-defense. Some of the leading exponents of determinate sentencing concede that such measures are justified and, in fact, necessary. Indeed, preventive detention has long ago been institutionalized in western legal systems through the bail system, status offenses, vagrancy
laws, and the like. Once we acknowledge that some preventive restraint might exist, the issue becomes one of its systematic and judicious application.

In this respect the idea of selective incapacitation is becoming increasingly popular, given our experiences with deterrent and rehabilitative measures. The proponents of this approach aver that it is effective, its effects can be more readily observed than is the case with either deterrent or rehabilitative programs and that it merely systematizes and makes explicit the existing individualization of sanctions on the basis of predicted dangerousness. The next section addresses the issue of whether such optimism is warranted.
REFERENCES


48. See Chapter 3 for a detailed discussion of these studies.


62. Ibid., pp. 84-86.


76. See, for example, Gyorgyi Kalman, "The New Penal Code." Hungarian Digest, March 1981, 98-103.


94. Ibid.


97. Heumann suggests that involvement by attorneys in the plea negotiating processes as a routine means of case resolution is not due to case pressure (high case loads) but their adaptation to role expectations, incentives and so on. Thus, lawyers are said to be oblivious, in any given case, to the need to dispose of a case expeditiously due to an overtaxing of the criminal justice system. This interpretation of plea bargaining processes is complementary to, rather than an alternative for, traditional explanations, as it can be argued that systemic factors (including fiscal considerations) are at least partly responsible for the incentives and role expectations that impinge upon the individual attorney. See Milton Heumann, Plea Bargaining: The Experience of Prosecutors, Judges and Defense Attorneys. Chicago: University of Chicago Press, 1978.

98. A review by this writer of perhaps the most prominent radical periodical, Crime and Social Justice, revealed that only one paper has appeared on the subject of dangerousness, and that dealt with prediction.


100. Address by Canadian Solicitor General Robert Kaplan at Fifth Annual Conference on Applied Criminology sponsored by the University of Ottawa, March 1982.


105. Fogel, ibid., p. 255.


110. See, for example, Marvin F. Wolfgang, Robert M. Figlio and Thorsten Sellin, Delinquency in A Birth Cohort. Chicago: University of Chicago Press, 1972, Chap. 11.

111. Jean Floud, "Commentary." The Dangerous Offender - Prediction and Assessment. Proceedings of the Institute of Criminology, Faculty of Law, University of Sydney, 1981.


120. Ibid., p. 46.

121. Ibid., p. 60.


123. Ibid., pp. 101-103.


125. Ibid., Chap. 10.

126. Ibid., p. 85.


PART II

THE POTENTIAL OF INCAPACITATION POLICIES
CHAPTER THREE
THE PREVENTIVE EFFECT OF INCAPACITATION POLICIES

The confinement of the dangerous beyond the term prescribed for other offenders committing comparable offenses must be justified not only on moral grounds, but also empirically, to warrant the intrusion upon civil liberties, as well as other social costs.

A Canadian colleague has suggested that, despite the widely acknowledged problems in prediction, the one hundred or so most dangerous persons in Canada could be identified and their long-term incapacitation would be certain to promote public safety. While it is undoubtedly true that public safety would be enhanced by such a measure, this would also be the case if any group of one hundred recidivists selected at random met the same fate. Indeed, one can incapacitate a number of people from virtually any group in society and prevent some crimes from occurring.

To justify the various costs of long-term preventive detention, the nature and extent of the crime prevented should be documented. The crimes of a handful of people, however odious to the victims, may not constitute a public menace worthy of far-reaching draconian penal measures.
This would be analogous to a city marshalling extensive resources for an earthquake even though it has not experienced one for hundreds of years. A certain degree of risk will always exist; however, from a collective standpoint, there is a limit to the havoc that can be caused by such a small number of people. Social policies cannot be based on negligible risks faced by a "typical" person in society or risks to which only a very small number of persons are exposed.

The criteria according to which a group of offenders are conferred differential treatment must be made explicit to sustain the penal system's credibility and must be empirically justified. Furthermore, the size of the "dangerous" group must be systematically estimated. What are the grounds for saying that there are approximately 100 offenders in Canada for whom additional protective measures are needed? Why is this number not 50, 500, 1000 or more? Also, how many of the non-dangerous or less dangerous will we have to place in custody after their sentences are served (the false positives) before we have confined the dangerous 100? Moreover, if these 100 are readily identifiable, this is most likely due to their past conduct. If they have murdered, raped, or committed other serious crimes before, they could have been and, perhaps, were incapacitated for long periods. The issue then becomes one of documenting the additional preventive yield deriving from supplementary sentences where the current statutory sentence for an offense is less than life.
CALCULATING THE EFFECTS OF INCAPACITATION

The calculation of the effects upon crime of taking offenders out of circulation is a complex task. The incapacitated offender may be replaced by others engaged in crime, the sentence may alter the nature and extent of his criminal activity upon release, institutional environments will be affected, the offender's dependents may suffer, incapacitation may also have a deterrent effect and the credibility of the entire criminal justice system may be affected by certain incapacitation policies. If all these latent or indirect effects were considered, the net or actual preventive effect of incapacitation could be calculated. No study has even attempted to consider these latent effects. It is likely that only the gross effects, or those readily apparent and immediately deriving from offender quarantine, can be computed. The gross effect is, perhaps, the maximal or potential preventive yield of incapacitation, as most of the latent effects enumerated above, as well as others, probably detract from this effect.

The research on incapacitation focuses upon three issues. First, some studies have examined the preventive effects of existing levels of incarceration. Second, the potential of collective incapacitation policies has been assessed. These policies involve the use of mandatory terms for all persons convicted of certain offenses. Thirdly, the potential of selective incapacitation has been examined. Selective
incapacitation refers to the attempt to optimize correctional resources (i.e., prison space) by reserving them for those considered to be the most criminally active and dangerous. Such policies therefore contain an important predictive element.

A number of conditions must prevail if incapacitation is to exert a significant preventive effect.

First, the societal prevalence rates of criminality must be fairly low. Incapacitation effects will be at a maximum where most crime is being committed by a manageable number of offenders. If there are many first offenders in any given year, incapacitation effects for that year will be limited as only the offenses of recidivists can be prevented in a society disdaining the use of confinement for those with no criminal record. In any event, the identification of first offenders prior to their initial recorded offense is problematic.

Researchers at the Rand Corporation suggest that the offender population can be roughly divided into two groups: the intermittent group, comprising the majority of offenders, whose level of criminal activity is less than the average for all offenders, and the intensives, a smaller group of hardcore offenders who commit crimes well in excess of the mean for all offenders. The relative size of these two groups, if such a distinction is justified, will determine the potential of incapacitation policies. Such policies, particularly if they involve preventive as well as punitive
confinement, can be applied to only a limited number of offenders in other than authoritarian countries.

Irrespective of the zeal with which incapacitation policies are pursued, their impact is confined to persons whose offenses have been detected and who have been duly convicted, unless the presumption of innocence principle is to be violated. These policies depend upon the public's cooperation in reporting offenses, upon the ability of law enforcement agencies to apprehend suspects (which, in turn, is partly contingent upon the nature of the offenses—e.g., whether they tend to be stranger-to-stranger crimes or are committed against acquaintances), and upon conviction rates. If many crimes are committed by offenders who remain at liberty for long periods of time, the most severe penalties will have a negligible effect upon crime rates.

The efficaciousness of these system responses is largely a function of fiscal resources available. These resources also dictate the amount of prison space available. As this is not unlimited, it is imperative that promising incapacitation policies result in only the most modest increases in institutional populations.

To achieve the maximal effects of quarantine, its application to juvenile offenders must be contemplated. Youths, today, make a substantial contribution to the volume of serious crime. Although the extent of this contribution is difficult to ascertain with precision for a variety of reasons, juvenile arrests have been said to account for
almost one-half of all arrests for serious crime in the United States.\(^3\)

Finally, if incapacitation is to achieve its potential, policies to optimize the use of prison space must be developed. This is due to both fiscal constraints and the ethical objectionability of applying preventive confinement on a massive scale. Thus, predictions of dangerousness must be reliable enough to distinguish between hardcore, antisocial types capable of doing grievous harm and tractable offenders responding primarily to situational pressures. The importance of reliable predictions for selective incapacitation policies can be appreciated in light of the resource requirements necessitated by merely more rigorous collective incapacitation policies. Cohen has estimated, on the basis of a study of eight states, that a 10% reduction of the index crime rate would require from 34 to 311% increases in prison populations and a similar reduction in violent index offense rates only would entail 8 to 57% increases in prison populations.\(^4\) The wide variation among states is due to differences in current correctional outlays in relation to the varying crime rates in these states.

**THE EFFECTS OF EXISTING LEVELS OF INCAPACITATION**

Several attempts have been made to arrive at statistical estimates of the effects of current rates of incapacitation (discounting deterrent, rehabilitative and other concurrent effects)--that is, the reduction in crime that would exist
were prisons totally eliminated. These authors use rather sophisticated mathematical modelling procedures, with some involving empirically-based and others purely hypothetical assumptions. Due to the exploratory nature of the methodologies involved in the determination of incapacitation effects, and the outright flaws contained in some of the computations, the results of these studies are not directly comparable. Cohen has applied uniform computational procedures to the data and assumptions provided by the authors. Her conclusion was that the extant rates of incapacitation in the United States reduce the potential crime rates by from 18-25% in the various jurisdictions examined.

The Home Office in England has undertaken a study to determine the impact upon crime (as measured by convictions) if statutory remission was increased from one-third to one-half of prison sentences or if all incarcerated offenders in 1973 served four months less of their sentence. These two policies would be identical for those receiving exactly two-year sentences as remission would ordinarily be eight months and the proposed alternative would be twelve months. By computing the average annual conviction rates of a random sample of English prisoners, it was concluded that increasing remission from one-third to one-half would have increased convictions in 1973 by 1.2%. Reducing the time served by each offender by four months would have increased convictions by 1.6%.
THE POTENTIAL EFFECTS OF INCAPACITATION

The potential of alternative incapacitation policies can be explored through at least six methods:

1. Longitudinal studies of officially recorded criminal careers;
2. aggregated national data deriving from both law enforcement agencies and victimization surveys;
3. the study of criminal careers through self-report procedures;
4. statistical modelling techniques aiming to ascertain the rates of criminal activity for various types of offenders;
5. cross-sectional quasi-experiments; and
6. evaluations of career offender programs.

Longitudinal Research

A number of studies point to a high prevalence of criminality in the general population as well as to a disproportionate contribution of some offenders to crime.

One of the most prominent of these studies is the Philadelphia study of 9945 males born in 1945 conducted by Marvin Wolfgang and his associates. By the age of 18, 6% of the entire cohort was found to have amassed five or more arrests (the chronic offenders) and to have been responsible for over one-half of all offenses and two-thirds of violent offenses. In a recent follow-up of a 10% sample to 30 years of age, close to 15% of the cohort were found to be chronic offenders. They have been charged with three-fourths of all offenses attributed to the entire cohort, and 84% of
personal injury offenses. Greatly over-represented among these chronic offenders were members of the black minority in Philadelphia. Also important to note is that, by the age of 30, close to one-half of the cohort subsample followed up had at least one arrest for other than a traffic offense.

Questions relating to the generalizability of these findings to smaller communities devoid of the urban deterioration and social problems found in cities like Philadelphia can be illuminated by a retrospective study of criminal careers in three Racine, Wisconsin, birth cohorts undertaken by Lyle Shannon and his associates at the University of Iowa. Racine is an industrialized city of 100,000 residents with demographic characteristics more typical of "middle America."

For the three birth cohorts studied (1942, 1949, and 1959), 1% of males in the 1942 cohort had four or more contacts with the criminal justice system for felonies by 1974 (the final year of the study), and accounted for 29% of such contacts for the cohort. In the 1949 group, 3% of cohort males had four or more felony contacts and accounted for nearly one-half of all such contacts, and in the 1955 cohort, 6% of the males had four or more felony contacts (by the age of 19—or by 1974), and accounted for 70% of the total cohort felony contacts. With respect to the prevalence of crime in the Racine cohorts, Shannon found that 69% of the males born in 1942 had a non-traffic contact by 1974, 67% in the 1949 cohort, and 59% in the 1955 cohort.
Williams and his associates at the Institute for Law and Social Research examined all adult arrests in Washington, D.C. during a 56-month period from 1971 through most of 1975. There were 72,610 total arrests and 45,575 defendants, with those being arrested at least twice during that span of time constituting 30% of the defendants and accounting for 56% of the total arrests; those being arrested at least three times constituting 14% of defendants and accounting for 36% of arrests; those arrested at least four times constituting 7% of defendants and accounting for 24% of arrests; and those arrested five or more times constituting 4% of defendants and accounting for 16% of the arrests. Although the disproportionate contribution to crime increases as one moves from those being arrested two or more times to those arrested at least five times (from about a two-fold over-representation for the former group to a four-fold over-representation for the latter), 44% of all arrests during the time frame of the study were still of one-time offenders and 64% of all arrests were amassed by those with less than three arrests. Thus, while multiple and chronic offenders contributed to total arrests well over their representation in the population of arrestees, in absolute terms, once their offenses are discounted, a large number of offenses committed by less active offenders remain.

The Dangerous Offender Project in Columbus, Ohio, has undertaken both juvenile and adult criminal career studies. In a study of 1,138 Columbus juvenile arrestees born between
1956 and 1960, Hamparian and her associates found that as of the age of 18, approximately one-third of the entire group had been arrested at least five times and accounted for almost one-half of all violent offenses. In their study of the adult criminal careers of a sample of Columbus offenders arrested for a violent index offense between 1950 and 1975, Dinitz and his associates found support for findings arising from the juvenile study relating to the prevalence of chronicity among offenders. The 1,591 offenders amassed 12,527 arrests for an average of 8.3 per offender. This average level of criminal activity is undoubtedly an under-estimation of their true activity levels due to the exclusive concern with adult offenses and the fact that many of the offenders were only followed up through their early years of adulthood as a result of their youthfulness at the study's 1976 termination date. This is not to mention, of course, all the occasions in which they committed an offense and avoided detection. Using the Philadelphia criterion, about 65% of the offenders qualified as chronics and accounted for 88% of arrests for the entire sample. Indeed, almost 30% of the sample had ten or more arrests indicating that the application of special measures even to such an active group is impractical. The Rand distinction between intensive and intermittent offenders is supported by the fact that most offenders fell under the mean number of offenses for the entire sample, and a minority committed substantially more than the mean number of offenses.
However, the exact definition of an intensive is rather arbitrary, as at no level of criminal activity is there a sudden drop in the number of offenders involved. Thus, there are a relatively constant number of people in the sample who have been arrested from two to seven times. Following that, as one moves from those arrested from 8 to 48 times, a gradual decrease in the number of offenders is observed at each level of activity.

Two British longitudinal studies have shed further light upon the issue of offender prevalence. A study of all Newcastle children born in May or June of 1947 (1,142) and one of all boys in six London schools of ages 8 to 9 in 1961-62 (411) revealed that by their 17th birthdays, approximately 20% of the males had experienced a conviction.\textsuperscript{13} In the London study, those convictions were for indictable and "akin-to-indictable" offenses, and by the 21st birthday of the sample, 31% had sustained such a conviction.\textsuperscript{14}

**Estimates from National Data**

National data have been used in several countries to derive estimates relating to the prevalence of criminal behavior in society. In the United States, Christianson, on the basis of the 1965 Uniform Crime Reports, estimated that 50% of American males would be arrested for a non-traffic offense during their lifetime, and that substantial differences existed between whites and non-whites, as well as for urban and rural dwellers.\textsuperscript{15} A recent victimization
survey conducted by the United States Department of Justice found that, in 1980, 30% of all households (24 million) were touched by at least one index crime. If problems of recall and the multiple victimization of some households are considered, the total number of index crimes may exceed 30 million. If offenders average five index crimes per year at liberty, then there are about six million active offenders on the street at any given time.

A recent analysis of prevalence rates in England and Wales by Farrington lends support to these findings. He has found that, if current conviction rates for non-traffic offenses continue, the lifetime probability that an English or Welsh male will experience a conviction will eventually be about 44%. This is undoubtedly a conservative figure as one would expect conviction rates to increase as the post-1960 birth cohorts age and the earlier cohorts diminish in size. This increasing pattern of criminal activity by successive cohorts is documented by Farrington as he compares these recent findings based on 1977 data with those of 1965 data. This comparison indicates that overall prevalence has increased by about 40%. Longitudinal cohort studies also point to progressive increases in both criminal incidence and prevalence for successive cohorts.

Another indicator of the prevalence of criminality is the number of people with criminal histories at any given time. In Canada, 1.7 million persons have criminal records. This constitutes 7% of the country's total population. If
only males at crime eligible ages are considered as the denominator, this figure is substantially greater.

**Self-Report Studies**

Interviews administered both to members of the general public and offender populations also suggest that the societal prevalence of criminality is high and that some offenders have extraordinary rates of criminal activity.

In Flint, Michigan, Gold found that over 80% of the teenagers in the city could technically be considered delinquents, although about 60% of the youths committed only a few minor infractions. Seventeen percent of the teenagers were responsible for over half of all the offenses.

A study of 49 career robbery offenders by Petersilia, Greenwood and Lavin of the Rand Corporation revealed that, on the average, they committed 20 felonies per year at risk over a typical span of 20 years. They found that a small group of highly active offenders committed a disproportionate number of offenses.

In a Rand survey of 624 inmates drawn from five California correctional institutions, a substantial variation in criminal activity was found across different types of offenders. While those who admitted to committing homicide did so at an average rate of .27 offenses per year on the street, those involved in burglary committed, on the average, about 15 of these offenses per year and those trafficking drugs averaged 155 offenses per year. Many of these
offenders were also committing other offenses. The findings indicate that incapacitating the most active 8% in the sample could prevent three times the volume of crime that incapacitating the least active half of the sample could achieve. These highly active offenders were characterized by serious criminality as juveniles, criminal identities, and hedonistic attitudes.

A second survey conducted by Rand included 2,200 offenders from three states (California, Michigan, and Texas). Irrespective of the subgroups of offenders examined in this study, a highly skewed distribution emerges in crime commission rates. Most of the offenders fall well below the mean activity level for the entire sample, while a minority were found to commit well in excess of this mean number. In the case of those offenders admitting to burglary violations, close to 65% indicated they committed less than ten burglaries per year at liberty. Another 9% committed between 10 to 20 per year, and a further 5% between 20 and 30 per year. On the other extreme were the most active 10% who reported committing over 230 burglaries per year. If one attends to only these extremes of the distribution, one might understandably conclude that the early isolation of the most active group can yield substantial gains. However, there are another 10% who report committing between 30 and 230 burglaries per year. Many would contend that the 5% committing between 20 and 30 burglary offenses also require attention, especially since many are concurrently committing
other offenses as well. Thus, at least 25% of the entire sample can be considered highly active. In addition, the Chaikens claim that the distribution of offenders, according to their activity levels, is less skewed than the statements of the respondents suggest due to concealment of offenses by some and exaggeration by others. If some of those claiming low activity are concealing some offenses and some of those claiming to be highly active are exaggerating, the distribution becomes less skewed with a larger proportion of offenders falling in the more moderate activity categories. Also, the entire sample was drawn from an institutional population which, at any given time, probably contains a higher proportion of active offenders than any other sample of offenders.

The most serious and active subgroup of offenders identified in this study were the "violent predators" who were engaged in a mixed pattern of robbery, assault and multiple drug use, as well as trafficking. They were characterized by a history of violence by the age of 16, familial instability, chronic unemployment, and early hard drug use.

Building upon these characteristics of the most active offenders in the sample of 2,200 inmates, Greenwood estimated the preventive effects of selective incapacitation policies using such criteria. He found, in the most optimistic scenario, that such policies, if applied in California, could reduce the robbery rate by 15%, while also reducing the prison population by 5%.
Interviews drawn from a sample of the 1945 Philadelphia birth cohort also show that age may be a potent factor in criminal activity.\textsuperscript{30} Collins found that between the ages of 14 and 17, those members of the cohort committing index crimes averaged four to five such offenses per year, whereas those 18 to 25 years of age averaged three and one-half index offenses per year.

A random sample of 243 opiate addicts known to the Baltimore Police Department has revealed some astounding figures relating to the criminal activity of these individuals.\textsuperscript{31} This group amassed an average of nearly 2,000 crime days per career (24-hour periods at risk during which an individual committed at least one offense), and a total of close to one-half million crime days. On the average, they were criminally active 178 days a year during their careers, or about every second day.

**Statistical Modelling**

Statistical estimation procedures can also be applied to the problem of determining the \textit{true} crime rates of offenders of a given type. This is done by computing the general probabilities of arrest for designated types of offenses. The procedure involves the calculation of the proportion of arrests to total offenses in a given jurisdiction for a given offense type. The total number of offenses can be obtained by adjusting official statistics on the basis of victimization survey data. Having estimated
the general probability of arrest for selected offenses, individual crime rates can be estimated on the basis of arrest records for different offender types. One such study was undertaken by Blumstein and Cohen on the basis of criminal history information relating to over 5,000 Washington, D.C., arrestees. They found that, excluding homicide and rape offenders, offenders committing index offenses commit between 9 and 17 such offenses and between 22 and 34 total offenses per year. Those with drug, burglary, and larceny offenses in their careers tended to be the most active of these offenders.

Although the methodology of estimating crime rates provides a measure of the true criminal activity level of offenders of a particular type, and therefore distinguishes between different "types" of offenders, it still does not tell us how offenders are distributed within each category because it provides us with only the typical activity level of each type of offender. Thus, we do not know whether most offenders commit close to the mean number of offenses in their category or whether major differences exist. This question can be further illuminated through the cross-sectional examination of the criminal activity level among a given group of arrestees in any jurisdiction. If it is found that a large number of offenses in an area in any given year are committed by chronic recidivists, harsh interventions for these individuals can substantially enhance preventive efforts.
Cross-Sectional Studies

In Franklin County (Columbus), Ohio, Van Dine, Dinitz, and Conrad studied the arrest records of the 342 local arrestees for violent felonies in 1973 to determine whether they had a previous adult or juvenile felony conviction for which they could have been previously incapacitated, thereby possibly preventing their 1973 offense. They found that 181, or more than 50%, had no previous felony conviction. Undertaking a statistical experiment, the authors found that even if a mandatory sentence of five years was provided, all local convicted felons in the five years preceding 1973, the 1973 felony rate in the county would only have been reduced by from one to 4%. This is probably due to the few repetitively violent offenders, or at least the fact that within the span of five years, the likelihood of being arrested twice and convicted on the earlier offense for felonies is low. The figure of one to 4% is somewhat low because plea bargaining may have reduced the charge on the original conviction from a felony to a misdemeanor. Also, these arrestees may have accounted for a far greater total of the 1973 crime than arrest figures indicate. For these and related reasons, those re-examining this evidence have estimated that a five-year mandatory sentence for felony convictions would have reduced the 1973 violent felony rate by 15%. 
Johnson, in a study of arrestees for violent offenses in the state of Michigan, found that only about 24% in any given year had a previous violent felony conviction. Thus, he reasons, even the extreme policy of lifetime incarceration for all violent felons would only yield a maximum benefit of a 24% reduction in violence. Johnson also pointed out that a five-year mandatory sentence for all convicted felons would result in several billion dollars in expenditures, as there are 20,000 convictions for felonies every year in the state. He further noted that the elimination of institutional good time credit alone in Michigan would increase time served by 50% and have the effect of increasing the state prison population by 5,400 prisoners. The yield of such a policy, according to Johnson's calculations, would be to detain a mere 6% of those who would commit a violent felony in the state in the subsequent year.

In several examinations of selective incapacitation strategies based on correctional and judicial discretion models, Johnson found that noticeable reductions in Michigan violent crimes for 1975 could have been produced through, at most, modest increments in the state prison population. For the correctional discretion model, utilizing the Michigan Correctional Department's three-fold classification of offenders into high, medium, and low risk categories, Johnson found that, if the state's 1975 prison population had been screened for risk and provided five, two and one year respectively, the 1975 state prison population would have been
reduced by close to 500 inmates (a 4% reduction), and state violent crime would have been reduced by close to 4%. In the judicial discretion model, Johnson examined the potential crime reductive effect of imprisoning high-risk individuals who were actually put on probation and diverting low-risk persons who were actually imprisoned, while retaining the other aspects of the correctional discretion model. He found that, with this increase in discretion, almost 9% of violent crimes in the state during 1975 could have been averted at a cost of increasing the prison population by 10%. This type of selective incapacitation compares favorably with hypothetical blanket policies such as providing mandatory five-year sentences to all adult felons which, according to Johnson's calculations, would require a seven-fold increase in Michigan's prison population.

A study by the Manhattan District Attorney's office found that 6% of those arrested for robberies, assault, burglaries, and rapes in 1979 accounted for one-third of all reported offenses. Two-thirds of these offenders were under 25 years of age. As a group, they averaged 13 prior arrests and admitted to committing 34 crimes per year—whether this refers to a calendar year or year at exposure was not specified.

Career Offender Programs

Another way of viewing the feasibility and potential cost effectiveness of focusing upon a hardcore offender
group is through the assessment of ongoing career offender programs. Such programs have been established on a nation­wide basis in recent years to concentrate criminal justice system and, particularly, prosecutorial resources upon a select group of recalcitrant offenders to expedite their processing through the system, minimize the likelihood of their release on bail, and to maximize the probability of their conviction and incarceration, as well as the length of confinement. Ultimately, it is hoped that such programs, through increasing the expected time served of the most serious career offenders, will exercise a crime reductive effect through both incapacitation and deterrence. Two major assessments, one of a nationwide and the other of a California-based program, provide for limited optimism.

The nationwide assessment, conducted by the Mitre Corporation, examined programs in Columbus (Ohio), Kalamazoo (Michigan), New Orleans, and San Diego. Specifically, these evaluations focused on four intermediary objectives of these programs which would have to be satisfied before general crime preventive effects could be considered. The first performance measure concerned the manner in which the disposition of cases processed by the specialized career offender units differed from that incurred by similar career offenders and non-career offenders experiencing routine processing. It was found that the programs, in general, had no significant impact in terms of reducing the proportion of case dismissals for targeted career offenders, or in
increasing the proportion of cases tried, of guilty pleas, or of convictions in relation to the comparison group. The second objective, relating to the strength of convictions, seems to have been fulfilled in two of the four jurisdictions examined. In those programs, the targeted offenders were more likely to be convicted on the most serious charge, and those pleading guilty were more likely to do so to the most serious charge than the controls. The third assessment criterion examined was the rate of incarceration upon prosecution. In none of the four program sites was the likelihood of imprisonment increased once the decision to prosecute was made. In one program, both the probability and length of incarceration were increased for convicted offenders—a great deal of case attrition occurred in that program between the initial prosecution and conviction stages. With regard to the fourth performance measure, case processing time, it was again found that at only one site did the career offender program reduce the span of time elapsing between offenders’ initial arrest and their final disposition.

An evaluation of twelve California-based career offender programs have yielded different conclusions. Here again the evaluation was undertaken through a comparison with a similar baseline group of offenders receiving routine processing. In this study, it was found that on virtually all performance measures, the program successfully met its objectives. On most of these measures, however, program effects were only slight. Career criminal defendants were more often
in custody at the time of their preliminary hearings, and when their cases were adjudicated, than were the baseline career offenders, the average bail set for them was substantially higher, the proportion of convictions was larger, case dismissals fewer, the incarceration rate higher, and average sentencing longer than was the case with those obtaining routine processing. In only one major area, the time required to process career criminal cases, did the program show no improvement over routine processing. The evaluation, however, did not address the ultimate objective of career criminal programs—the reduction of crime in the communities involved.

CONCLUSIONS

The majority of longitudinal and horizontal studies point to a disproportionate involvement in serious criminality by a minority of offenders. However, the extent of this over-representation is subject to dispute, depending upon the specific study and one's preference for official records as opposed to self-reports. Even if one selects the most liberal estimates for the criminal activity of the most serious offenders, the evidence suggests that this group is a large one, in absolute, if not relative, terms, necessitating substantial increments in institutional costs to incapacitate them. Furthermore, if this incapacitation of all such offenders was achieved in any given year in
some jurisdiction, a substantial amount of serious crime would remain due to the high prevalence of offenders in the general population, the number of virgin offenders, and the large number of highly active offenders, in addition to those composing the most active group. Selective incapacitation studies show that, with current fiscal outlays, only very modest crime preventive gains can be attained.

Also emerging from this review is the youthfulness of many of the most serious offenders. This observation has led some to advance the radical proposal that, in order to obtain the maximal incapacitative effects, heavy penalties should be applied to offenders at the earlier stages of their criminal careers, as opposed to continuing the practice of reserving heavier punishments primarily for older offenders who have accumulated a lengthier criminal record. Humanitarian considerations, as well as the possibility that we might produce offenders of unprecedented dangerousness, probably ensure that such policies will never be institutionalized. In any event, the relationship between age and criminality is, as the discussion in Chapter Four will show, not as clearcut as these writers indicate.

A similar argument holds for the issue of race. Evidence concerning the most serious offenders indicates that minorities, particularly blacks, are even more over-represented in this group than in the general criminal population. Thus, selective incapacitation policies will surely exacerbate institutional racial imbalances, possibly producing even
more social and institutional disorder than at present. The political consequences of creating reservations for minorities within institutions would, in all likelihood, jeopardize the implementation of exclusively utilitarian policies. Policies restricted to adults and sensitive to the racial issue would seriously dilute selective incapacitation programs.

Another issue militating against the success of incapacitation policies is the low probability that the perpetrator of any given offense will be convicted. If, in any given year, only a small proportion of active offenders are apprehended and convicted in an area, even draconian sentences will have only a modest effect upon the volume of crime. The evidence from victimization surveys, self-report studies, prosecutorial decision-making processes (the dropping of charges and plea negotiation), and even specialized career criminal programs, indicates that the attrition of cases from the point an offense occurs to conviction is dramatic. A Vera Institute study in New York in the early 1970's found that only about 1/12 of reported felonies result in conviction. On the basis of the Vera study, therefore, only about 4% of all felonies result in a conviction.

Leading exponents of incapacitation policies propose that special protective measures might focus upon persons tending to commit such crimes as larceny, as they tend to
be more criminally active than those committing primarily personal violent crimes. The problem is that larceny and related property crimes are more often committed against strangers and, hence, the identification and conviction of perpetrators of these offenses is even less likely than for violent felonies. Also, targeting larcenists for special punitive measures may be regarded as unjust in relation to the gravity of their offenses. Victims may be less likely to report offenses, prosecutors to lay charges, and juries to convict persons whose impending punishment is seen as seriously out-of-line with the harm done. Thus, the attrition process may be even more profound where the principle of desert is so radically violated.

A final *sine qua non* of selective incapacitation policies is reliable prediction as these policies involve the confinement of persons for their anticipated rather than merely prior conduct. The issue is whether dangerous subgroups within the offender population can be identified early enough in their careers to appreciably diminish a region's volume of serious crime without over-extending its resources. If so, what are the best predictive factors and methods, their respective ethicality and deficiencies, and in what situations are predictions most appropriate? It is upon these key issues which utilitarian strategies, such as selective incapacitation, hinge, and to which we now turn.
REFERENCES


3. Zimring, ibid.


5. Ibid.


17. A minimum figure for the number of households victimized more than once is 5% of victimized households. *Ibid.*


26. Ibid.


33. This is not meant to imply that distinct types of offenders can be readily identified on the basis of legal or other criteria, as the polymorphous nature of most is acknowledged. The offender "type" here refers to the rather arbitrary characterization of an offender on the basis of his having committed a given offense in his career.


37. Ibid.


In the city of New York in 1980, there were 650,000 felony complaints, 80,000 suspects arrested, and 9,000 persons sentenced to prison. See The New York Times Magazine, "Keeping Bad Guys Off the Street." February 8, 1982, p. 38.


CHAPTER FOUR
THE PREDICTION OF CRIMINAL BEHAVIOR

The preventive confinement of persons considered to be dangerous has always been practiced in some form within Anglo-American legal systems. This propensity to predict is by no means limited to the legal field. It is a routine human preoccupation inherent in all social behavior. Prediction is frequently a very subtle process intertwined with many other considerations involved in a decision. Thus, the decision to turn on a light switch is based on the prediction that the action will result in the illumination of a room. However, the decision to turn on the switch is not merely based on that prediction, but upon the relative strength of the motive(s) to enter the room as opposed to undertaking some alternative action(s). Where prediction is less reliable, it is more difficult to discern the relative importance of predictions in the ultimate decision to act in a certain manner. This is particularly true in criminal justice system decision-making processes, where competing rationale for decisions exist on both the formal and informal levels. Observers of these decision-making processes do indicate, however, that a predictive element is almost always involved.
Formal efforts in prediction are hampered by the often capricious responses of criminal justice systems and the public toward illicit behavior. Since most independent and dependent variables in criminological prediction are measured on the basis of official records, the greater these are random or systematically distorted, the less they reflect the actual behavior of offenders. The more extensive these biases, the greater the likelihood that the predictive power of the independent variables will be minimal. If predictive power is maintained despite such distortion, this may be due to the fact that social reactions themselves are predictable and it is these that are being registered. Alternatively, it is conceivable that these distortions are so randomly distributed that the official data actually reflect the characteristics of the relevant offender population.

Some of the factors contributing to the arbitrariness of system responses to antisocial behavior are outside the purview of the system's control. The crime reporting practices of the public and the definitions conferred on social behavior in varying situational and normative contexts are hardly amenable to control. Similarly, human errors in wrongfully arresting and convicting the innocent, as well as failures in apprehending or convicting the culpable, will inevitably persist. The arbitrary and whimsical behavior of criminal justice system personnel is another matter. The behavior of these decision-makers has been found, at times,
to be as unpredictable as that of offenders. In an examination of dispositions received by a cohort of 1,138 violent juvenile offenders in Columbus, Ohio, Hamparian and her colleagues concluded that:

...all the "hard" quantifiable type variables, taken singly or in combination, with or without interaction effects, explain little of the variation in disposition. If nothing more, this study affirms that the soft, subjective variables—quality of family attachment, interest, and cohesion—were "better" predictors of individual arrest outcome than the traditional categories that are included in most predictive tables. 4

Bottomley, in England, has arrived at a similar conclusion. In a study of parole decision-making processes concerning 207 prison inmates, factors such as the prisoner's personality and attitudes had greater weight in the decision to recommend parole than did factors relating to the criminal history of the offender, his family situation, and employment prospects. 5 Clearly, the subjectivity of such factors as demeanor of the offender will perpetuate disparities in disposition for offenders with objectively similar characteristics.

In Canada, Hogarth, through interviews with 71 magistrates in the Province of Ontario, in relation to 1,103 criminal cases, found weak correlations between magistrates' perceptions of the facts of a case and the length of the sentences they imposed. 6 In Israel, Shoham examined the sentencing practices of nine judges in three district courts and concluded that the great variation between judges in sentences imposed could only be attributed to attitudinal
and dispositional differences on their part.\textsuperscript{7} Regional differences in sentencing,\textsuperscript{8} and ethnic, racial and sex discrimination,\textsuperscript{9} also point to a capricious system. The elimination of these disparate practices is a necessary first step in enhancing predictive efforts.

\textbf{DANGERS, LIMITATIONS AND ETHICAL DILEMMAS IN PREDICTION}

In developing a predictive instrument for criminal justice system decision-makers, the researcher should be cognizant of the varieties of uses to which the scheme may be applied, the criteria according to which its efficacy will be appraised, and its potential impact on all parties affected by its application. Most fundamental, however, are considerations relating to the "marketing" of the instrument itself as, unfortunately, methodological meticulousness and reliability are insufficient. In attempting to sell a predictive system to policy-makers, the researcher may be tempted to incorporate social utility as a principal component of the system, as opposed to sheer accuracy.\textsuperscript{10} Thus, if he finds that race is a good predictor of recidivism and partly attributes this to the prejudicial treatment of minorities at all stages of the criminal justice system, the researcher may overadjust for this factor, believing that erring on the liberal side might at least rectify, to some degree, inequities in the system. The inclusion of
such considerations in the scheme may be particularly appealing to policy-makers sharing the researcher's liberal sentiments. However, if the premises underlying the adjustment were subsequently repudiated on the basis of empirical evidence, the credibility of the entire effort, as well as similar predictive endeavors, would be set back vis-à-vis the policy establishment. Another danger is posed by the possibility that the policy-maker, enthusiastic about the proposal, adopts it as his own and uses it as a device to promote his own occupational position and ideological perspective. The scheme can thus evolve from an autonomous project, empirically verifiable on the basis of an accuracy criterion, to an object of vested interest allowing little accommodation to developments which might require its modification.¹¹

The researcher must also anticipate the different uses to which a predictive system may be applied, as well as the specific needs and capabilities of the practitioner. Such an instrument may serve as a mere guideline to decisions, it may structure discretion or its use may itself be discretionary. On the other hand, policy may require a mechanical adherence to the scheme, with the "decision-maker" serving the role of an accountant. In such an event, resistance undermining the entire system can be anticipated. If "sentencing by computers" was ever introduced, for example, judicial participation in the plea negotiation process and control in criminal procedures might increase. Also
relevant to the proper application of formal predictive devices are simplicity and parsimony. A device requiring a multitude of information relating to the offender presupposes the establishment of a data-gathering apparatus to obtain such information. In the absence of such resources, the user may merely circumvent tedious segments of the scheme, while placing disproportionate weight on items for which abundant information is available.

The cost of errors in prediction is not an absolute. One can develop prediction cutting points (i.e., prediction decision criteria) which minimize the total number of false positive and negative errors. A false positive is the erroneous belief that one has a given attribute or propensity (e.g., dangerousness) and a false negative error is the mistaken belief that one does not. False positives have been called errors of inefficiency as they result in the delivery of services to those not requiring them. False negatives, on the other hand, are errors of ineffectiveness as needs for services are not met. The ramifications of committing either of the errors depend upon the type of criminal behavior involved. The cost of a false negative, clearly, is substantially higher in the case of a violent offender as opposed to a habitual shoplifter. The cost of a false positive, at first glance, would appear to be higher with respect to the shoplifter as the risk, in the event he did recidivate, is rather low. Thus, falsely predicting recidivism for a petty property offender results in needless
expenditures as the risk of withholding these expenditures is low. On the other hand, the costs of needlessly providing services for a convicted violent offender is offset by the potential catastrophic consequences of erroneously releasing him from custody. In absolute terms, however, the cost of falsely detaining such an individual exceeds that for the petty offender, as tighter security measures are required for his detention. The cost of false positives may, paradoxically, undermine public security if the costs incurred by corrections tax resources to the point where the thresholds of violence at which false positive errors are preferred are raised to alleviate the burden upon the system.

The respective likelihood of committing false positive versus false negative errors is largely dependent upon the actual prevalence or base rate of the targeted behavior. An increasing base rate, with the sensitivity of the predictive device held constant, will reduce the number of false positives and increase the likelihood of false negatives. A decreasing base rate will have the opposite effect.

Generally speaking, base rates for violent behavior, even in America, have been too low to permit accurate predictions of violent recidivism. The closer the base rate in a population approximates 50%, the greater the relevance of predictive schemes. Conversely, as the base rate of the targeted behavior approaches zero or 100%, prediction in any particular case that the outcome will resemble that of the majority in that population will be more reliable than
a prediction based on the most sophisticated device. Thus, if only 5% of persons in a particular population subgroup commit violent offenses, the best prediction for any case within that group is that they will not commit a violent offense. If, on the other hand, 95% are violent, the best prediction is that of a violent outcome.

The generally low base rates of violence, combined with the current public and policy-related interest in identifying dangerous offenders, has resulted in a preoccupation, on the part of civil libertarians, with false positive errors. To be sure, there are examples of gross errors reported in the literature. Also, the argument that cases of false positives have been swept under the rug due to the vested interests served by institutionalization and the political impotence of detainees, cannot be ignored. Cases (particularly the sensational) involving violent recidivism of purportedly rehabilitated individuals unquestionably attain a notoriety which overshadows the silent anguish of those subjected to detention on false premises. Nevertheless, the number of false positives may be substantially overestimated in current studies. Most of these studies are based on circumstances in which clinical recommendations to confine suspected dangerous offenders were disregarded or where radical policy shifts occurred, resulting in a wholesale release of those destined for long-term confinement. It is quite conceivable that some of those releasees believed not to have recidivated after being identified as dangerous
may actually have committed offenses and avoided detection. In some studies, the follow-up period may have been insufficient to ensure that recidivism do not occur.

For those detainees not released by fortuitous circumstances, these possibilities provide little consolation. The fact remains that the criminal justice system lacks feedback concerning decisions to confine. One can only speculate on the correctness of these decisions. Such ambiguities easily lend themselves to rationalizations regarding the merits of institutionalization, particularly when the only concrete feedback to which criminal justice personnel are exposed involve cases of insufficient prudence.20

Aside from tautological aspect of many such decisions, the predictive enterprise may foster self-fulfilling consequences as well.21 That is, predictions may produce actions that validate them. Thus, if race is believed to be a good predictor of recidivism and policies are based on this belief, the differential treatment accorded the relevant racial groups may themselves be responsible for the varying outcomes. Predictions may also be self-defeating if measures are adopted to rectify problematic relationships (e.g., race and recidivism) identified by the projections. Paradoxically, a prediction may be invalidated by the resolution of a problem. Predictions may consequently be accurate at the time they are formulated and would remain so if the problem identified were not heeded. However, reactions to troublesome predictions can be expected,
transforming the context of the original predictions. A pertinent question is whether predictions should also attempt to incorporate anticipated societal reactions and policy changes. Such predictions will invariably be confounding, integrating predictions of the targeted behavior with different reaction scenarios—although the initial predictions can also involve conditional probability statements.  

Another limitation is the general exclusion of environmental factors from predictive efforts. The most comprehensive data regarding offender characteristics can account for only a limited proportion of the total variance in behavior due to the dynamic, interpersonal nature of many criminal acts. Even if an individual was "pre-destined" to commit an offense, the time and location at which it is committed, its gravity and the frequency of its repetition will be affected by situational stresses, the availability of opportunities, weapons and targets, victim behavior and other influential factors which arise in between the antecedent conditions assumed to be responsible for it and the actualization of the offense.

The fact is that future behavior does not constitute a mere projection of past events. Rather, new conditions and unanticipated events arise which, if not taken into account, will place an impenetrable ceiling on predictive accuracy. The task, thus, becomes one of monitoring events as they progress and considering newly obtained information.
Predictions cease to be useful, however, if they merely integrate current and past information, while lacking the capability to project at least fundamental relationships into the future. The optimal solution, therefore, is to develop models which can be applied for a duration of time sufficient to justify the expenditure of resources involved in their development but which, at the same time, do not presuppose the continuation of trends and relationships for an unrealistic period of time. For policy-planning in criminology, some consensus exists on a maximum of three-year forecasts.

Another impediment to prediction is the frequent ambiguity (particularly in the clinical realm) of predictor and criterion variables. The former refers to variables employed in making the prediction and the latter to the yardstick according to which a method can be appraised. The use of subjective factors as predictors, or the use of unreliable indicators in which the standard measurement error is large, results either in the concealment of some indicators actually used or in the use of unintended indicators. The use of criterion variables such as that of "dangerousness" add to the ambiguity of predictions. Dangerousness, as has been pointed out, can refer to a variety of behaviors, attributes, and the interaction of these with environmental conditions. Whenever dangerousness is being predicted or assessed, the specific behavioral referents of the term should be delineated. A broad
conception by clinicians of the properties of dangerousness invites tautological thinking regarding the prognosis of an offender. As Monahan avers, the clinician assessing a habitual offender for mental disturbance may believe that all such offenders are disturbed. The outcome of such an assessment is quite predictable.28

The use of predictions for both civil and criminal dispositions has been contested on practical, as well as ethical grounds.29 The practical objection centers around the limitations of past predictive efforts. Morally, civil libertarians claim that the individual should be punished for previous behavior rather than for that which is anticipated. Also, the prediction of dangerousness on the part of mental health professionals creates a role conflict for these people as they are simultaneously expected to perform therapeutic and social control functions. From the point of view of the "client," social control becomes paramount. The aforementioned ambiguities of clinical assessments also tend to bring the social control function to the fore. The assessed individual may be subjected to a "double-bind" situation whereby, irrespective of the behavior or mannerisms he exhibits, these will be construed as symptomatic of some form of aberration. The refusal to accept the role of "mentally ill" may be regarded as indicative of the person's failure to, as yet, come to terms with and work through his problems. On the other hand, the adoption of such a role and its concomitants may assure a poor prognosis.30
DIMENSIONS OF PREDICTION

Predictive systems can be viewed along several dimensions. Most fundamental is whether the scheme is actuarial or clinical. The first type is based on objectively discernible information and provides statistical statements regarding the predictive criterion. Clinical predictions incorporate more subjectively based factors in assessment and provide more generalized prognoses. These two approaches are not mutually exclusive. The principal difference between the two techniques is primarily one of emphasis; however, it is useful to consider them separately for conceptual reasons.

Next, predictions can be distinguished by the type of indicators used for both the predictor and criterion variables. Along a temporal dimension, there are static and dynamic factors. Static factors are those which remain constant at different assessments, while dynamic factors are those requiring periodic monitoring for change. Within the context of this temporal dimension is a spatial dimension concerned with whether the focus of assessment is the individual (offender) or his environment. Both individual and environmental factors may relate to past, current, and projected events or characteristics. Individual factors may be ascribed or acquired. These categories are not truly
mutually exclusive, however, with some factors potentially falling into either category, depending upon the theoretical framework to which one subscribes. Ascribed characteristics are those with which a person is naturally endowed. Acquired characteristics here are viewed as those which are a combined function of naturally endowed dispositions and social influences. These may be objectively discerned (based on behavioral criteria) or more subjectively evaluated through psychodiagnostic techniques. Environmental factors are those impinging upon an individual's development. They include factors currently affecting the individual (e.g., imminent influences upon parole) and projected etiological or situational factors.

Both actuarial and clinical assessments may include all of the above categories of factors, although the former are more likely to place greater weight upon the static than dynamic and a relatively balanced weight upon individual and environmental factors; the latter, in formal terms at least, are reliant upon more subtle and dynamic individual processes. These dimensions of prediction are summarized in Figure 2.

Actuarial and Clinical Prediction

There is considerable overlap between actuarial and clinical predictive systems. The most pure form of actuarial device involves statistical computations using archival data. Purely clinical predictions would be based on data obtained
FIGURE 2: A Typology of Predictive Systems
in the clinical examination. Actuarial and clinical techniques can be combined when clinicians consider "objective" biographical information and psychological test scores in their decisions or when clinical data is quantified and included in actuarial tables. 32

When the "pure" actuarial and clinical approaches are compared, several fundamental differences emerge. Actuarial systems tend to be more explicit with respect to the predictor and criterion variables. Consequently, such schemes can more easily be validated. The clinician, when confronted by a differing second opinion, can contend that assessment is a dynamic process which cannot be replicated due to the idiosyncratic nature of each case, as well as of the client-therapist relationship. Aside from containing more explicit criteria for evaluation, actuarial systems employ uniform criteria from one case to the next. Clinicians, on the other hand, may consider the relevance of a criterion to a specific case. 33 Furthermore, clinical methodologies tend to involve a wholistic approach, with a focus on the total personality. Specific traits are viewed in this context and assessments comprise an intuitive aggregation of these traits. 34 Actuarial schemes usually involve the additive compilation of specific factors (the weighting of factors is frequently involved). 35 This property indicates an assumption in actuarial schemes of the independent impact of these factors on the outcome variable.
Actuarial devices are limited by the nature of the predictive statements they provide. By placing individuals into various categories of risk, they can indicate the percentage of successful outcomes in each group. Unfortunately, any particular case is either a success or a failure and each risk category is likely to have cases of both. Since members of the same group are to be treated equally in policy, errors inevitably result. Thus, even if actuarial predictions are perfectly accurate, errors would still occur. If 75% of those with a particular attribute were found to recidivate violently upon their release from an institution, 25% of such persons would not manifest the behavior of the modal group. Error is thus built into actuarial systems. Clinical prediction, on the other hand, can hypothetically be totally accurate if the assessment techniques and predictive indicators are perfectly reliable, although the general exclusion of ecological variables places an upper bound upon the accuracy of clinical prediction. The existing evidence indicates that actuarial methods have superior predictive power. Evidence of relatively successful clinical prediction efforts do, nevertheless, exist—although the issue of base rates have most frequently been ignored in such studies.

Actuarial devices are limited by their inability to consider cases which cannot be properly classified into existing categories. The idiosyncratic elements in some cases may be more relevant than the established criteria.
In such an event, it may be useful to permit a clinician to override actuarial predictions as is done in the procedures set out by the United States Parole Board. A further limitation of actuarial predictive systems is that they are more dependent than clinical assessments upon comprehensive biographical information relating to the offender. The information possessed by the criminal justice system, whether contained in police, judicial or correctional files, is frequently inaccurate and ambiguous. Similarly, situations exist in which there is insufficient time to obtain the information necessary to complete actuarial tables. This may frequently be the case with respect to the decision to release an individual on bail or in cases of emergency civil commitment. Recourse to either fixed legal criteria or clinical assessments is thus required in such instances.

Static and Dynamic Prediction

Static prediction involves the use of indicators that remain constant over time. Such indicators can be historical (e.g., family history) or ascribed (e.g., race). Reliance on historical indicators can render an individual a "slave of his past." The problem with ascribed indicators is their questionable legality and the fact that they may only reflect discriminatory practices in criminal justice systems. In neither case does the individual exercise current control over these factors and is likely to become disillusioned by this inability to ameliorate his fate.
Consequences for correctional officials charged with either his reform or custody are clear. The repeated use of the same indicators in the determination of dispositions imposed upon an offender may have the effect of repeatedly punishing an offender for the same acts or attributes. The use of static indicators is made attractive by their frequent availability in offender files and by the fact that such information need not be updated.

Dynamic indicators are those requiring periodic monitoring. Included here are such concerns as the psychiatric status of an individual at the time of assessment, his general life situation, his institutional adjustment, and even one ascribed variable, his age. The state of Wisconsin, for example, requires that all probationers and parolees be reassessed at six-month intervals to determine whether reclassification of the individual is necessary with respect to custody. Such evaluations are geared toward examining the individual's present adjustment, as opposed to the criminal history factors emphasized in the original intake assessment. Of principal concern are such factors as the offender's adherence to the imposed conditions of probation and parole, his exploitation of community resources, and ongoing interpersonal relationships. Although the periodic collection of information required by dynamic assessment is more costly and occasionally more difficult than that required for static assessment, it has the obvious advantage of outlining the current status of an individual. The
crucial issue is whether dynamic factors, reflecting the most current information possessed by the system, should, despite their constant evolution and inherent instability, have a comparable weight in criminal justice decisions to the historical factors which may have been responsible for the individual's initial misconduct. Undue reliance upon dynamic factors would have the effect of diffusing responsibility for dispositions when the current trend is toward expanding legislative and judicial control. The use of factors based on the offender's "evolution" toward a socially constructive role may lend itself to a multitude of abuses on the part of offenders and well-intentioned mental health personnel aiming to serve the offender's interests. Also, because dynamic factors are frequently subjective and "measured" by clinical means, they lack the reliability of static indicators and thereby increase discretion in the system.

As mentioned, individual and environmental indicators are subsumed within the static and dynamic approaches. In some cases, these indicators are the same for both approaches, but are merely measured at different times. The factor of occupational status, for example, may be examined historically (e.g., the offender's employment history) or at the time of assessment (e.g., employment prospects). It is useful at this point to examine the value of some of the static and dynamic variables used in actuarial prediction.
Ascribed Characteristics

Sex

One of the attributes most consistently related to criminal behavior is that of sex. Cross-national evidence indicates that males are far more likely to engage in criminal activity and that this imbalance becomes more pronounced with the increased gravity of criminal conduct.\textsuperscript{44} Victimization surveys corroborate the findings from official data sources.\textsuperscript{45} Sex differences may be underestimated when one considers the paternalism of criminal justice systems toward females, with the result that young females may be more likely to be arrested for status and minor offenses.\textsuperscript{46} The extent to which sex will remain a good predictor appears, at least partly, to be a function of the female role in society. Continuing emancipation of women has contributed to a decline in the differential contribution of the sexes to crime as a whole. The importance of the societal role of women is illustrated by the more modest difference in criminality among black males and females.\textsuperscript{47} This appears to reflect the more active participation of black females in subsistence-related activities. In Germany, during the Second World War, the gap in criminal activity between the
two sexes decreased when women were forced to assume major
civilian responsibilities. Following the war, their crimi-
nality reverted to pre-war levels. One important artifact
regarding the currently observed increase in female crime is
the possibility that the former double standards involving
leniency toward women in the criminal justice system are now
eroding.

Race and Ethnicity

To engage in open discussion on the relationship
between race or ethnicity and crime is, as Radzinowicz and
King have put it, "to enter a minefield." Speaking of
tabooed subjects in criminology, Sagarin has further asserted that

...one [the researcher] must be aware of the
volatile nature of the material with which one
is dealing, and the responsible criminologist
offers findings with special care and circum-
spection when their potential for social harm
is great.

Acknowledging these admonishments, we will proceed to plunge
headlong into the minefield, but with full protective gear.

The factor of race, in the United States, is considered
a good indicator of the prevalence of criminality in a region.
More specifically, the black minority commits a markedly
disproportionate number of offenses relative to its numeri-
cal representation in the population. This is particularly
noteworthy with reference to all four index violent offense
categories. Indeed, in relation to similarly impoverished
and persecuted groups, such as residents of Hispanic descent, blacks still maintain substantially higher per capita rates for total and violent offenses. On the other hand, within a group of offenders, the difference in the extent of criminal activity across races may not be as pronounced in terms of the rate of offending, as it is in differentiating offenders and non-offenders. However, differential preferences in terms of crime selection and variation in offense gravity (blacks tend to commit more serious offenses than whites) have still been shown to remain. The debate rages regarding the basis for such differences. Some writers attribute these differences to racial oppression and the remanants of slavery, others to differential justice, others to urbanization and social disruption, others to a subculture of violence, and still others to outright racial inferiority.

Focusing on the historical and cross-cultural experiences of the black, Jewish and Irish groups, Radzinowicz and King have attempted to gain a broad perspective of the problem. They begin with the proposition that racial purity is a myth, stating that approximately 40% of blacks in the United States, for example, are at least half white and that many whites have black ancestry. Whereas, they proceed, American blacks account for a disproportionate number of serious offenses, relative to the U.S. population as a whole, black immigrants in England from Commonwealth countries have been as law-abiding as native Britons with the exception of
drug offenses and prostitution. Their over-representation among such offenders is attributed to the particular cultural characteristics of this group. In his comparative study of the North and Latin American systems of slavery, Elkins showed how the more closed and repressive system of the former elicited dependent infantile reactions on the part of slaves. The assumption of such roles rendered the subsequent social transition to free status considerably more problematic than in Latin America, where slaves could maintain their ancestral customs and participate in commerce.

The Jewish experience, according to Radzinowicz and King, has also varied across cultural and historical contexts. In European societies in which Jews were deeply involved in commerce, as a result of their exclusion from the professions and land ownership, they were prone to commit primarily commercial offenses and, for the most part, abstain from other types of crime. In societies where they were more integrated and performed as laborers, their offense patterns more closely resembled those of the general population. Moreover, in contemporary Israel, a great variation exists among subgroups of the Jewish population, with those of African origin being more actively involved in criminality than the Europeans. The key factor here again appears to be the unique sociocultural experiences of each subgroup.

As for the Irish, Radzinowicz and King assert that their domestic rates of criminality, with the exception of periods marked by political violence, are substantially
lower than either their urban or rural rates in England or Wales. They attribute this to the separation of the young migrant workers from their families and the difficult social adjustment involved in their rural to urban transition.

Another issue jeopardizing conclusions regarding differential racial propensities toward criminality concerns the different demographic characteristics of varying racial and ethnic groups. Calvin has argued, on the basis of 1976 U.S. population estimates, that whereas only about 24% of all American males were below the age of 14, 48% of poor black males were in that category. Given the assumed relationships between youth, poverty and crime, the argument can be made that once these two factors are taken into account, racial differences disappear. These factors will now be explored.

Age

Another ascribed variable considered to be a powerful predictor of criminality, and used in bail as well as correctional decision-making instruments, is that of age. The factor of age differs from those of sex, race and ethnicity in one crucial respect—it is a dynamic variable in relation to which the status of all individuals changes.

The Gluecks, in some of the earliest work, suggested that offender reformation was frequently attributable to the aging process and that the age of 35 was significant in the sense that only the most hardened individuals would persist in criminality beyond this point. Later, the Gluecks
changed their emphasis from chronological development to that of maturation, asserting that a delinquent career, once begun, had to take its course. The implication was that an individual first engaging in criminality at an early age would mature earlier than one commencing later on. A number of studies, however, indicate that the early onset of a delinquent career portends a longer and possibly more serious adult criminal career. Another phenomenon of relevance to the developmental process is the concept of the "latecomer" to delinquency. Individuals may, although they are unquestionably in the minority, begin their criminality in adulthood as the result of psychosocial stresses—these may include occupational or marital problems and those relating to psychophysiological deterioration. Aside from these general notions regarding the onset and cessation of criminal careers is the idea, based partly on folklore, that a linear progression exists in such careers from initially frivolous offenses to those of increasing gravity.

A great deal of evidence exists on the international level with respect to both the disproportionate participation of the young (under 25 years of age) in crime, as well as the progressive increase in this participation over the past several decades. The latter development can, perhaps, largely be attributed to changing demographic characteristics of many regions. The baby boom following the Second World War resulted, by the early 1960's, in a dramatic increase in the youthful segment of the population in many countries.
Despite the current alarm over rising criminal activity of youths, a disparity between the various age groups has long been acknowledged to exist. As early as 1833, the Belgian statistician Quetelet indicated that age was the most "energetic" factor in the commencement in and desistance from crime. In a comprehensive review of cross-national data, Mannheim found the peak ages for criminal activity to fall between 14 and 15 years. The problem with the use of aggregate statistics is the possible confounding influence of various factors.

Most of the evidence stems from comparisons of arrest rates for the various age groups during a specified period of time. The modal age group (i.e., with the highest crime rate) is taken as the peak age for criminal activity. However, the rate at which offenses are committed at a given age in a population indicates the incidence and not the prevalence of crime in that age group. Remaining unclear is the question of whether a small number of offenders are committing a great number of the offenses or whether a larger proportion of a given age group is participating in criminal acts at a less intensive rate. When one compares rates at different age groups, the fall-off of the aggregate crime rate from one age to another may indicate one of the following: 1) the desistance from crime on the part of a number of offenders by a certain age; 2) the de-intensification of criminality by a number of active offenders at a given age; 3) a declining entry into crime of virgin
(neophyte) offenders by a given age; and 4) some combination of the above. Thus, aggregated data does not address a major issue of interest with respect to prediction; that is, whether the criminal activity of offenders is affected by the process of aging.

A second problem in the use of aggregated data is that of cohort effects. An observed difference in the arrest rates of two age groups may reflect differential criminal propensities among the two birth cohorts being considered, rather than the varying susceptibility to crime of similar individuals at two stages of development. The more criminally active age group may be so because of unique criminogenic experiences shared in their development, rather than due to the age differential. According to Wilkins, the birth cohort experiencing the Second World War at the vulnerable ages of four or five would manifest increased crime-proneness and other disturbances as a result of the trauma incurred. Thus, the age-specific crime rates for the United States in 1965 of 24 to 29 year olds (those born between 1936 and 1941 in the United States) may be greater than those of 30 to 35 year olds (born between 1930 and 1935) due to the trauma and other debilitating effects of war during their development, rather than as a result of differing age.

The methodology most appropriate in circumventing such problems of interpretation is the longitudinal birth cohort study, where the progression of a group of contemporaries
Underdeveloped countries, as a consequence of their continued high fertility rates, are particularly prone to continued increases in the proportion of crime by the youthful and, consequently, in the total number of offenses they experience. Similarly, particular groups within developed countries, by virtue of their high fertility rates relative to the general population, will continue to be over-representatively involved in crime. Since such groups tend also to be more impoverished and crime "prone" than the norm, their contribution to overall crime can be expected to increase.

Sagi and Wellford have estimated that 30 to 50% of the increase in crime rates in the United States from 1958 to 1964 is attributable to demographic changes alone. In an analysis of the age- and sex-specific criminal conviction rates of Canadian provinces and territories, Hartnagel found that males under 30 averaged approximately a six-fold greater conviction rate than those over 30, whereas for females, this ratio was approximately three to one. When the age and sex composition of the respective provinces and territories were controlled for, the risk ordering with respect to crime conviction rates was somewhat altered and the range of differences in these rates was narrowed. Aside from the demographic thesis, increases in the incidents of crime among the young has been attributed to the concurrent effects of modernization. Crucial factors identified in this respect are urbanization, loss of community control and familial cohesion, as well as an increased pervasiveness of moral laxity.
is monitored through their development. Unfortunately, there is a serious dearth of such studies. In one major effort along these lines, Wolfgang and his associates found, in their study of Philadelphia juvenile offenders, that the earlier the age of onset of a delinquent career, the more offenses an individual is likely to commit by the age of majority (18). Furthermore, a noticeable increase in the seriousness of offenses occurred as the delinquent careers progressed. In a follow-up study, Wolfgang found, on the basis of interviews with chronic offenders in the cohort (those arrested at least five times), that between the ages of 14 and 17 they committed an average of four to five index crimes per year. Between the years 18 to 25, this rate of offending had declined to an average of just over three index offenses per year.

In a self-report study conducted at the Rand Corporation in California, interviews with 49 career felons indicated that, as juveniles, these offenders committed more than twice the number of serious crimes per month than they did as young adults and more than five times their rate as adults. In another Rand study, based on questionnaires administered to 624 male California inmates, individual offense rates were once again found to decline with age. It was also found, however, that the younger the age of the criminal career's onset and the more serious and extensive the offender's juvenile crime record, the greater the likelihood that the offender remained criminally active as an adult. In an Ohio
cohort study of juveniles conducted by Hamparian and her colleagues, this was supported by evidence that the early age of delinquency onset is related positively to the number of offenses committed by age 18. This is an expected relationship, however, by virtue alone of the longer periods of exposure of earlier starters to the possibility of criminal involvement and official detection. Furthermore, since later starters were more likely to begin their careers with a violent offense and to be subsequently incarcerated, only minimal exposure time remained (prior to the age of 18) during which they could recidivate. The authors have found no support for the notion of an increasing gravity of offenses with the progression of age. Indeed, of those engaging in their first offense before the age of 14, 59% had at least temporarily desisted from a life of crime by the age of 17.

Shannon, in his examination of three Wisconsin birth cohorts, also found the age of onset of a criminal career to be related to the probability of continuation. In the earliest cohort (1942), all persons with a police contact by the age of 13 (regardless of the number of such contacts) were certain to have at least one additional police contact following that age. In fact, well over one-half of these persons had at least five additional contacts. As in the two cohort studies just cited, an early age of delinquency onset was positively related to the total number of criminal justice system contacts. An interesting finding was that individuals with four or more contacts prior to the age of
18 had a better than even likelihood of exceeding that number of contacts following the age of 18, whereas, for those with three or less prior contacts, the situation was reversed—that is, less than one-half exceeded their pre-eighteen total following that age. What this seems to indicate is an intensification of criminality for those already criminally active as juveniles and a tapering off for those never deeply committed to criminality. However, several problems present themselves here. First, the time of exposure (years available to commit crimes) following the age of 18 exceeds that prior to it. Thus, an absolute increase in crimes following 18 years of age does not necessarily reflect an increase in the rate of offending. Second, dispositions involving incarceration may substantially alter this exposure time. If this time out of circulation is not taken into account, the velocity (rate) of criminal activity may be considerably underestimated. Since lengthy prison sentences are more likely to be provided an individual as his criminal career progresses, velocity at later ages may be greatly underestimated. If this is the case, Shannon's finding regarding an acceleration of criminality upon reaching adulthood, among those active as juveniles, may be further accentuated. Underscoring such a finding even more is the fact that none of the cohorts had reached the age of 40 at the time of the study, thereby presenting the possibility that some individuals would have committed still more offenses as adults than those already recorded.
Age-specific crime rates based on time of exposure (controlling for disposition) in adult cohort studies have been obtained in only a few studies. Blumstein and Cohen, for example, on the basis of four birth cohorts of Washington, D.C. arrestees, found modestly increasing arrest rates for individuals in all the cohorts as they progressed from their early to late twenties.87

Another way of examining the age factor is to observe parole outcome at various ages. In a study of 7,245 parolees released in 1968 across the United States, Babst and his associates found that the probability of parole success was almost invariant across different age groups. This included comparisons between those aged 19 years and less with those over 40 years of age.88 However, when offenders were classified according to their prior criminal records and drug or alcohol involvement, those over 25 years of age consistently did better than those under that age. In a Canadian study of 423 Ontario parolees in 1968, Waller, using the same cutting-point of 25 years of age, found that the younger parolees were substantially higher recidivism risks than were those in the older categories.89

Since much of the evidence of age differences in crime derives from arrest rates, it is important to consider the possibility that these age-related rates do not reflect the true criminal activity of the respective groups. Boland and Wilson claim that juvenile crime has been consideratly underestimated by official figures.90 They state that the arrest
of juveniles is less probable than that of adults because: 1) their crimes tend to be less serious; 2) they are more likely to select targets in their neighborhood and are thus more often in a position to intimidate prospective witnesses from reporting offenses; 3) their offenses are less often planned and thus infrequently tipped off to the police by informers; 4) legal constraints exist in many jurisdictions regarding the processing (fingerprinting, photographing, etc.) of juveniles, thereby making proper identification by victims and witnesses difficult; 5) they may be treated more leniently due to age; and 6) juvenile records are frequently unavailable and/or are poorly maintained. A study by Greenwood and his associates indicates that this pattern does not necessarily hold nationwide as a great deal of disparity exists among jurisdictions and their policies toward juveniles. In fact, they claim that juvenile crime may be overestimated due to the fact that one offense frequently results in the arrest of several youths—a consequence of more criminal activity in groups.\footnote{91}

Aside from the varying volume of crime committed by the respective age groups, the issue of the differential gravity of misconduct needs to be addressed. It has conventionally been believed that an individual progresses from rather innocuous offenses as a teen to more serious conduct as an adult.\footnote{92} Recent aggregated crime statistics indicate, however, that youths commit a fair share of violent and serious property offenses.\footnote{93} The general consensus
appears to be that persons in their young teens are most likely to engage in less serious property offenses and vandalism, those in their late teens and early adulthood are responsible for the highest proportion of serious property offenses and violent crimes, while those in later adulthood tend to engage in more sophisticated offenses, such as embezzlement, fraud and certain sex offenses.¹⁴

Cohort studies provide inconsistent support for these notions. In the Philadelphia study of juvenile offenders, it was found that the likelihood of violent criminality increases with the progression of the individual from the pre-teens to late teens.¹⁵ The likelihood of property offenses was found to be more regular, fluctuating with the succession of years. In the follow-up to 30 years of age, it was found that the mean seriousness of offenses increased steadily as an individual progressed from his juvenile years to early adulthood and then his twenties.¹⁶ It is important to note, however, that this did not necessarily represent a simple progression of offenders toward ever more serious conduct. Although people between the ages of 13 and 17 had a mean seriousness score of 110 and those between 26 and 30 had a mean seriousness score of 517, the first group comprised 842 cases and the latter 239. Thus, it may be that the less serious offenders desisted from crime by the age of 26 and only the most hardened group remained. The Columbus, Ohio, juvenile study found that if an individual committed two violent offenses there was less than an even chance that the
second would be more serious than the first.\textsuperscript{97} Few proceeded
to subsequent violent offenses. Indeed, when the delinquent
careers were divided into thirds, the first arrest for
violence was most likely to occur in the first third of the
career and thereafter more likely to occur in the second
third. The idea of a simple progression in gravity over age
was again not borne out.

The value of ascribed characteristics as predictors,
from both a pragmatic and ethical standpoint, is dependent
upon their resilience vis-à-vis the social context. If
great cross-cultural variation exists in sex, racial, ethnic,
and age differentiation with respect to criminal participation,
the forces of nurture rather than nature are, in all
likelihood, the predominant factors underlying these rela-
tionships. If this is the case, the use of these factors in
policy decisions may only serve to perpetuate the existing
differences through self-fulfilling prophecies.

The manner in which criminological myths can be per-
petuated is best illustrated through reference to one ascri-
based factor not yet discussed—that of physical attractiveness.
Findings of two studies involving jury simulations indicate
that both the probability of a guilty adjudication and the
severity of punishment upon such a verdict may be inversely
related to a defendant's attractiveness.\textsuperscript{98} It is clear that
the physically attractive have numerous social and occupa-
tional advantages.\textsuperscript{99} In societies with a strong emphasis
upon the physical form, those deemed unattractive or possessing deformities experience more discrimination at the legal and extralegal levels. Hostile antisocial behavior in response to social devaluation, symptomatic of the "Quasimodo Complex," has been clinically observed. In one British study, three-fold the facial disfigurements were found among offenders than in the general population. Although alternative explanations can be advanced with respect to such findings, including that of offender lifestyles, the implication is that the rejection confronting the unattractive elicits antisocial behavior which, in turn, reinforces such discrimination. Once an increased incidence of maladaptive behavior is observed among the unattractive, they may be deemed to possess unique criminal propensities. At that point, policy-makers may intervene and legitimate societal responses that further "validate" a relationship which, in reality, is socially generated.

Acquired Characteristics

Acquired characteristics are here defined as those attributes over which the individual may exercise some degree of control. The extent to which such control exists may be disputed on philosophical grounds. The distinction drawn between ascribed and acquired factors is meant only to imprecisely reflect this factor of control. The greater a person's control over a given attribute, the greater, perhaps, his responsibility for it. Also, the likelihood of
both primary and secondary deviance is diminished if the attribute and self-image in question can be shed by personal initiative.

Some relevant acquired factors include personality and intelligence, socioeconomic status, criminal history and adjustment to penal interventions, alcohol or drug abuse. All of these factors can be regarded in either a static or dynamic context, although differences exist in their staticity. Intelligence, for example, is generally considered to be fairly stable and rarely modifiable beyond 25 IQ points. The use of drugs or alcohol, on the other hand, may be episodic, stimulated by stressful events, or merely affected by changes in supply. One may be interested in the personality, socioeconomic status, narcotic dependence and criminality of the offender in the past or the manner in which some of these factors have a more immediate impact upon present or future behavior.

Personality and Intelligence

A large number of personality traits have been postulated to underlie criminality. These include psychopathy, inadequate personality, various neuroses, psychoses and non-delusional disturbances in cognitive processes. However, serious mental disturbances are generally considered to be present among only a small proportion of offenders. Furthermore, it should be remembered that most psychiatric studies of offenders are conducted in an institutional
environment. The possibility exists that such samples are not representative of the general offender population and that psychopathology may be acquired as a result of institutionalization.\textsuperscript{110} As with the issue of intelligence in criminality,\textsuperscript{111} the effects of differential rates of apprehension, conviction and incarceration, socioeconomic status and race must be disentangled from that of pathology. Thus, if those with psychiatric disturbances are more vulnerable to detection for their offenses and less likely to have adequate legal representation, their disproportionate appearance amongst those convicted and incarcerated may be due to this ineptness rather than as a direct result of the pathology itself. Moreover, the rates of disturbance among offenders must be related to the base rates for the population \textit{subgroup} to which they belong, rather than to the population as a whole.

The literature on clinical assessments of personality is replete with studies questioning the reliability of psychiatric diagnoses.\textsuperscript{112} Such problems may be due to differential psychiatric training, nosological difficulties and substantive disagreements among clinicians. A major problem arises when psychological and behavioral variables are used to "reinforce" one another. Guze, when studying psychiatric disturbances among a group of offenders, found that approximately 75\% were sociopathic.\textsuperscript{113} The indicators of sociopathy he used included those of prior police contacts, an assaultive history, and school delinquency. Thus, his
diagnosis of sociopathy was largely based upon previous antisocial behavior. In effect, then, a psychiatric condition was determined through behavior and this condition was subsequently applied to predict similar behavior in the future. Such circularity of clinical predictions has often been observed.

A great deal of attention has recently focused on the biological bases of personality and criminal behavior. This resurgence of biological explanations is based on sources as diverse as studies of twins and adoptees, research involving the electrical stimulation of neural systems regulating aggression, some evidence that slow autonomic nervous system activity and recovery is related to criminality (particularly psychopathy) and observations that assaultive behavior is associated with some forms of substance abuse (particularly alcohol and the amphetamines).

Biological studies tend to be compromised by at least one of the following problems. First, generalizations are sometimes made from animals where little experimentation with humans has taken place. Second, there are problems in measuring and defining such factors as electroencephalographic abnormalities. Third, a great deal of naivety prevails in the classification of offenders. Often, all offenders in a study are placed in one or a few crude categories without regard to differences in their previous conduct and contextual factors in their offenses. Finally, biological anomalies may be acquired during development.
and may even result from a deviant lifestyle or confinement, rather than be genetically based precursors of criminal behavior. Since the samples of these studies often comprise institutionalized adult offenders, this problem of differentiating acquired from inherited anomalies becomes more pronounced.

**Socioeconomic status**

Socioeconomic status has long been considered to be a key factor in criminality. Bonger asserted that capitalism brutalizes people through its encouragement of predatory behavior, and particularly the poor, due to the limited opportunities available for them to pursue legitimate activities. Merton contended that criminal behavior is a response to a discrepancy between culturally defined goals and institutionalized means to attain them. Thus, according to Merton, it was relative, rather than purely objective deprivation that was crucial for persons who do not have access to legitimate avenues to goals which they both desire and feel entitled to. Lower class youths, frustrated by their inability to achieve high social status, according to Cohen, invert the predominant value system to neutralize the adverse psychological impact of their failure. Subsequently, Cohen indicates, they may join forces with equally affected youths and the coalition thereby formed may serve to mutually reinforce their antisocial behavior. An alternative, although not necessarily mutually exclusive
position was that advanced by Miller. He identified distinct lower class values which are conducive to participation in criminal behavior--this is related somewhat to the thesis of violent subcultures advanced by Wolfgang and Ferracuti, although the latter's is a cross-cultural notion which is to some extent independent of social status. Whether one considers low socioeconomic status as a direct antecedent to crime or whether one regards this factor as mediated by cultural or psychodynamic factors, one unavoidable fact is that the evidence concerning this relationship is inconclusive.

Longitudinal studies examining crime rates during fluctuations in economic conditions provide contradictory findings regarding the role of absolute deprivation. Studies in which the anticipated finding of a positive relationship between periods of economic depression and crime is obtained tend to conclude, quite expectedly, that the economic factor was responsible. Studies showing that periods of prosperity are marked by increases in crime tend to attribute this to such things as increasing criminal opportunities and declining family cohesion. Radzinowicz and King have shown that a near universal increase in crime rates since the Second World War has been accompanied by a virtually ubiquitous (at least in the industrialized world) improvement in objective standards of living. As for the thesis that such problems have been confined to capitalist countries, documentation by both Western scholars and
official sources within Communist countries indicate otherwise. In the United States, Wilson has cogently argued that in the 1960's, despite the longest period of sustained national prosperity since the Second World War, as well as the institution of innumerable programs designed to alleviate poverty and other forms of social deprivation, crime rates grew at a faster rate than at any time since the 1930's.

Ecological studies of crime have provided among the strongest support for the postulated negative association between social class and crime. These studies have consistently found that the highest concentration of crime is in the central core of cities inhabited primarily by lower income groups. Included in many of these studies is the observation that exclusively commercial areas in the cities' core are highly vulnerable to crime, reflecting, perhaps, a sense of deprivation. The high burglary victimization rates of affluent households located close to lower income areas also lends credence to this possibility, as does some evidence accrued from interviews with offenders. A number of serious methodological problems jeopardize the validity of these studies and enhance the likelihood of "ecological fallacies."

Another source of support for a relationship between socioeconomic status and criminal activity derives from birth cohort studies such as those undertaken in Philadelphia and Columbus, Ohio. In the first, social class discriminated well between delinquents and non-delinquents when race
was controlled. Individuals with low socioeconomic status (those residing in census tracts in which the median income of families was below the regional median) were found to have a higher rate of multiple offenses, higher rates of recidivism, and were more likely to engage in offenses against a person than those of higher social status. In the Columbus study, 94% of black violent offenders and 75% of white violent offenders in the cohort were of low social status (using the same definition of social status.) In the case of blacks, however, the proportion of violent offenders of low social status was not substantially higher than the proportion of blacks with low social status in Columbus as a whole. Also, in this study, a highly significant positive association was found between the extent of a youth's poverty and his likelihood of recidivism.

The evidence regarding the predictive value of such factors as social status, race and sex is characterized by one major problem. Persons with certain attributes (e.g., low social status) are generally considered to be more vulnerable to arrest, prosecution and conviction than those with other attributes exhibiting similar conduct. One procedure used to test whether this accounts for observed racial, class and other differences is the self-report study, where people are asked to indicate the type and volume of crimes they have committed during a designated period of time. On the basis of such studies, Gold contends that almost all youngsters have committed some form of delinquency
and those who are caught constitute a small fraction of all offenders. Thus, the distinction between delinquent and non-delinquent, he claims, is spurious—people can best be viewed on a continuum from more to less delinquent. The findings of self-report studies, taken together, do not illuminate the relationship between social status and criminality. Some support the conventional wisdom, others refute it. One problem is that ethnic differences may exist in the reliability of responses. Other ascribed characteristics of respondents, when interacting with those of the investigator, may further jeopardize the internal validity of such instruments. The greatest indictment of self-report studies is that investigators occasionally attempt to validate them using the frequently maligned official data. With official data as a yardstick, it is difficult to imagine the scenario that can justify a self-report study. If a high degree of concurrence exists between the two data sources, no reason exists to reject the official source. In the event of low concurrence, it is the invalidated instrument, rather than the yardstick, which must be rejected.

One additional way to study the relationship between objective socioeconomic status and crime is to examine recidivism rates for persons of varying income preceding and following incarceration. A large number of studies indicate that pre-prison income level and job stability, as
well as satisfying employment upon release, discriminate well between success and failure on parole.141

The fact that the relationship between objective social status in crime is hazier than is generally believed raises the possibility that relative deprivation may play an important role in a more complex relationship. Relative deprivation involves a subjective feeling that, according to some standard, the opportunities available to an individual are insufficient to achieve that which he deserves. The standard may be a hypothetical conception of what is reasonable to expect or, more concretely, it may be the status of other persons to whom the "deprived" individual is exposed (either directly or via the mass media).

The fact that absolute deprivation is not consistently related to criminality, particularly in affluent societies, should not be surprising. Very few individuals suffer from acute deprivation of such intensity as to evoke a visceral response, via criminal behavior, to ameliorate the situation. Hunger, the need for shelter, and other primary needs, can probably be met more easily through legitimate means such as welfare and various charities. The selection of criminality to resolve this problem is evidence of the operation of factors other than sheer deprivation. Moreover, only certain crimes can be linked to extreme deprivation—homicides, forcible rapes and assault can only be directly attributed to economically induced misery by a fertile imagination. One would expect objects of crime to more often be
necessary items or those convertible to cash than is actually the case. Observations of those confronting abject poverty have overwhelmingly yielded the conclusion that such people are too preoccupied by subsistence related activity on a legitimate level, or resigned to despair, to become conscious of alternative courses of conduct which can rectify their situation.\textsuperscript{142} 

No less an economic determinist than Karl Marx acknowledged that the grievances of the working class are most profound when their objective standards of living are on an upswing.\textsuperscript{143} This he attributed to the still more rapidly accelerating improvement in the lifestyle of the bourgeois which, in relative terms, actually reduced the worker's satisfaction from its level prior to the upswing. Davies, in developing a formal theory of revolution, has contended that insurrections are most likely to occur when a prolonged period of social and economic development is followed by a sharp reversal, if only for a brief period.\textsuperscript{144} He viewed social expectations as rising at a similar rate as that of actual need satisfaction. When a sudden halt or retrogression in the improving objective situation occurs, an intolerable gap may develop between this situation and continuing rising expectations, setting the revolution into motion. Gurr, in an examination of insurrections in 114 nations, concluded that relative deprivation, induced either by increasing expectations or decreasing opportunities, was the key factor underlying social unrest.\textsuperscript{145} He added that the
greater the absolute intensity of expectations, the greater the anger when these are unfulfilled. In a study of 72 black-white race riots in the United States between 1913 and 1963, Lieberson and Silverman found, in a comparative analysis with control cities not experiencing the riots, that unrest was more likely to occur where the disparities in median income for the two races were least. Moreover, for the cities examined, black median income in the riot and non-riot cities was comparable, whereas white income tended to be lower in the former. Two factors may thus have been at work. First, whites may have reacted violently to their declining social status relative to blacks—despite such a reaction, they still were of higher objective status than blacks. Second, the rising expectations of blacks, due to their improved relative status to that of whites, may have stimulated a greater assertiveness on their part. Martinson, speaking of prison violence, partly attributed its proliferation in the 1960's to the unmet expectations of inmates following rapid improvements in services and general institutional conditions.

At the psychological level, expectations are said to derive from prior experience that certain investments produce appropriate reinforcements or from observations of the rewards accrued by other persons making similar investments (reference groups.) Relative deprivation also is said to involve a perception that the attainment of these legitimate expectations will be blocked. Furthermore, the
probability of blockage (as perceived by the individual) must increase rather suddenly because a gradually increasing likelihood of blockage would avert the legitimate expectations from reaching a critical level. The result is a cognitive dissonance introduced by either a sudden diminution of opportunities or the development of unrealistic expectations. Along with the discomforting psychological state of dissonance are defense mechanisms aimed at reducing it. If these are not successful in neutralizing the dissonance, through either lower expectations or the perceived likelihood of blockage, the deprivation will be viewed as social structural and an outward expression of the grievance will constitute the dissonance reducing mechanism.

The frequently ambivalent findings regarding the association between crime and economic conditions may, to some extent, be attributed to the different periods of observation—with some investigators focusing on the long-term trend of increasing prosperity and others assessing the economic conditions directly preceding observed trends in crime. Also, the effect of general societal economic conditions upon resources available to the criminal justice system must be considered. These resources are generally acknowledged to be more dependent upon fiscal constraints than on the salience of the crime problem. A prosperous economy would generally be more conducive to larger outlays for law enforcement. Increased police activity, in turn, may have a net effect of reducing crime if the deterrence
yielded exceeds the additional criminality "generated." Whatever the outcome, this intervening variable of criminal justice system expenditures may confound the relationship between economic conditions and crime.

The use of absolute or relative socioeconomic status indicators as a criminological predictor is problematic from both a pragmatic and ethical standpoint. Practically speaking, the identification of relative deprivation requires the measurement of subjective states. Objective social status, even if it were shown to be strongly associated with criminality, would present the policy-maker with the same dilemmas faced in the use of ascribed variables. Policies based on the differential treatment of persons according to their class membership could result in the attribution, by the disadvantaged, of their fate to structural inequities and enhance the actualization of Marxian prophecies.

Criminal History

Among the most fundamental canons of science is that historical events are recurrent and, therefore, reliable indicators of the future. Experience from diverse fields provides support for this notion. Studies of social systems under extreme stress from natural disaster agents, for example, indicate that the most crucial determinant of a system's response and recovery capability is its pre-disaster preparedness. In the field of neuro-pathology, the prognosis of brain trauma victims has been closely linked to
their pre-morbid personality. In the criminological realm, the prior criminal record of an individual has generally been considered to be the most reliable predictor of future behavior. Given the notoriously high recidivism rates plaguing the field and pronouncements that "nothing works" in corrections, it is tempting to conclude that many offenders are intractable and that, consequently, the best prediction that one can make is that an ex-offender will persist in his misconduct. The factor of prior record subsumes such considerations as the number and seriousness of prior offenses, including violations of probation and parole, violence in and escapes from institutions, misbehavior in the military, and so on.

The number of previous offenses has been found in several cohort studies to be related (although not necessarily linearly) to subsequent criminality. In the Philadelphia cohort study of adult offenders (up to the age of 30), it was found that the probability of committing an offense increased steadily from 47.3% for the first offense to 84.7% for a sixth offense, given the person had committed a fifth offense. Thereafter, the transitional probabilities of recidivism, up to the twentieth offense, generally fell between 80 and 90%. Also, there was a general increasing likelihood that an offense was of the index variety from the first through the twentieth offense. This does not necessarily mean, however, that as an offender proceeds through his career he is progressively more likely to commit a
serious offense. It may simply be that those committing more offenses may have been committing serious offenses all along, while the less serious offenders are dropping out of crime after only a few offenses. On the other hand, it is unlikely that an offender could commit many index offenses without being incarcerated for a prolonged period of time. It was also found that, as of 26 years of age, only 12% of those without a juvenile record became adult offenders, whereas, 43% of those with such a record continued their criminality into adulthood.

In the Ohio juvenile cohort study, there was no evidence of a progression toward the increasing seriousness of offenses as individuals approached the age of majority (18). The pattern of offending that emerged resembled that of the Philadelphia group. A large number of offenders (29.5%) were arrested only once and a further 16.2% desisted following their second arrest. Over 30% committed five or more offenses. Thus, here again, the predictability of recidivism after the first few offenses is rather low, but becomes more certain thereafter.

Shannon, in his Wisconsin cohort study, found a strong positive correlation between the number of police contacts a person has prior to the age of 18 with the number of adult contacts. He also found that those with the least contacts before 18 were still far more likely to commit a felony or major misdemeanor following that age than those without such contacts; however, the nature of the juvenile violation did
not appear to make a difference with respect to the likelihood of serious offenses during adulthood. Despite the improvement in the prediction of serious offenses provided by a knowledge of the juvenile record, the fact remained that the best prediction that could be provided was that no individual would commit a serious offense in adulthood—this was due to the low base rate of violence.

The importance of the criminal history factor as a predictor can also be examined by observing the effect of a criminal record on the adjustment of persons released on bail and parole. In a study of three different Pennsylvania samples of persons released on bail (1973-75), Ozanne and his colleagues found criminal history to be one of the few factors to consistently discriminate between success and failure. In a Los Angeles study of those released on bail (1969-70), Gottfredson found prior offense variables to be central with respect to success. In the nationwide study of parolees conducted by Babst and his associates, a clear linear relationship emerged between the extent of the prior criminal record and parole outcome. Those with no previous record had a favorable outcome (one year following release) in 79.9% of the cases, those with two or more prior sentences and either a probation or parole violation in their past had only a 50.2% likelihood of success. In two studies involving matched pairs of burglary and robbery offenders
released from California institutions in 1965, Jaman and her colleagues found several prior record variables significantly related to outcome.\textsuperscript{162} For both those incarcerated on robbery and burglary charges, the variables of age at first arrest, the presence of a juvenile record and commitment, a history of escapes from confinement and institutional misbehavior provided significant discrimination between the matched pairs with respect to outcome. A Canadian study of the criminal cases of 802 offenders yielded the finding that social history variables are the best predictors of recidivism.\textsuperscript{163} Particularly important and relating to prior record was whether the individual had been to court by 16 years of age and whether he had recent drug offenses. Waller, in his Canadian sample of 423 parolees, found both the number of commitments to institutions and seriousness of the most recent offense to be statistically significant predictors of outcome.\textsuperscript{164}

Studies relating the seriousness of the most recent offense to recidivism have consistently found that those committing offenses against persons are substantially less likely to recidivate than those committing property crimes.\textsuperscript{165} This has been said to be due to the impulsivity of many violent offenders and their reaction to environmental stresses, as well as the greater commitment of property offenders to criminal lifestyles.\textsuperscript{166} The notion that more serious offenders are less prone to recidivism appears to contradict some of the aforementioned cohort studies, where progression
toward more serious conduct in a career was found and where those having committed serious offenses in their teens were more likely to commit a serious offense during adulthood than those without such a prior serious offense. These ambivalent findings can, however, be reconciled in several ways. First, the definitions of seriousness and violence used differ across the various studies. Second, the cohort studies did yield the conclusion that the general base rates of violence are relatively low. Thus, there appears to be a large group of one-time violent offenders who commit "crimes of passion" and subsequently desist from criminality. There are others who offend episodically, interspersed with long periods of lawful behavior. These cases would not be captured in most studies because the conventional criterion of successful adjustment is a lack of recidivism for two years or less upon release. There may be, on the other hand, a number of violent habitual offenders who are as likely to recidivate as are property offenders. Indeed, were it not for the fact that many violent recidivists were incarcerated for prolonged periods, this tendency might become considerably more pronounced.

Closely related to, and to some extent correlated with, the length of an individual's criminal record is his velocity or rate of offending. The theoretical notion underlying velocity is that, as an individual progresses from one offense to the next he becomes more deeply committed and habituated to a criminal lifestyle. This habituation is expected to
result in the progressively increasing velocity of crime commission. Thus, the temporal intervals between crimes may provide clues concerning the tractability of offenders. Although very few studies have examined this phenomenon, the results are suggestive of a habituation effect.

Cockett, in England, examined the criminal histories of three different institutional samples (96 boys in each) where all boys had at least four prior convictions without a custodial sentence. A steady increase in velocity (a decrease in intervals) was found, for all three samples, as the youths advanced from the first through their fifth offenses. The three samples were then pooled and reclassified according to the age of their first offense. The first group comprised those who began their careers between eight and eleven years of age, the second group comprised those who began between 12 and 15, and the third, those beginning between 16 and 19. A statistically significant difference in the intervals between the first and second offenses was found among the three groups. Those with the earliest age of onset averaged 28.5 months between the first and second offenses, the middle group averaged 17.5 months, and the oldest onset group averaged only 6.2 months between the first two offenses. For all these groups an increase in velocity occurred when this first interval was compared with that between the fourth and fifth offenses. Thus, for the youngest onset group, the mean spacing between the fourth and fifth offenses was 9.2 months, for the middle group this became 7.1 months, and for
the group starting latest the mean velocity was 5.1 months. The decline for the first two groups was statistically significant, while the decline for the last group was clearly negligible. The significant decline for the two groups starting earliest can be explained by the extremely large gap between the first two offenses for these boys—perhaps indicative of a tentativeness on the part of extremely young offenders. On the other hand, the group starting latest experienced only a slight increase in velocity due to the already high velocity after their first offense. Interesting to note is the fact that the later starters maintained a substantially higher velocity throughout their careers. The author then examined the careers of 37 members of the group who had eight convictions prior to a custodial sentence. This group was subdivided into those beginning their careers between 8 and 12 years of age and those committing their first offense between 13 and 17 years of age. A gradual increase of velocity was found for both groups up to the fifth offense, after which a levelling-off occurred. Here again, the most dramatic increase was experienced by the group starting earlier--this was particularly evident following the second offense.

The most noteworthy problem in Cockett's British study is that of generalizability. In his effort to avoid the possible contaminating effect of dispositions upon his analysis of offense intervals, he selected, for his sample, only those individuals who had no prior institutional
sentences but who, at the same time, had committed at least four previous offenses. His analysis was thus probably restricted, for the most part, to petty offenders. A more recent study by Hamparian and her colleagues avoided this problem by including all members of a birth cohort with more than one offense in the analysis (the examination of intervals requires at least two offenses) and subtracting institutional time served from the calendar time, for any interval, to obtain the time of exposure, or "street time," between offenses. The findings, based on 572 juvenile offenders, closely corroborated those of Cockett. As in that study, a dramatic increase in velocity occurred after the second offense relative to the period following the first offense. This increase then continued more gradually until the sixth offense, at which time a levelling-off occurred. It will be recalled that this levelling-off occurred following the fifth offense in the British study. When the intervals through the first five offenses were averaged out and compared with velocity from the fifth through the tenth offense, the tenth through the fifteenth and the fifteenth through the twenty-third, Hamparian and her associates continued to find gradually declining intervals from the lowest to highest groups of offense pairs. Thus, velocity appeared to be increasing as one moved from the first five offenses (a mean of 10.94 months) to the subsequent five (5.47 months), and again as one moved from the tenth to the fifteenth offense (3.68 months), and once again from the fifteenth to
the final offenses (2.24 months). However, the ostensible increase may be at least partly attributed to the early desistance from crime of the low velocity offender and the persistence of high velocity offenders, rather than simply the increasing velocity of a given group proceeding through their careers. Further supportive of the previous study was the finding that those commencing their careers later on have higher velocities than those with earlier ages of onset. This may be an artifact arising from the confinement of the study to juvenile careers (up to 18 years of age). An individual beginning his career at 17 and having at least two offenses can only have a high velocity. The analysis of spacing between violent offenses yielded the finding, once again, that velocity increased with each successive offense. Thus, the mean street time between the first and second violent offense was 18.55 months, between the second and third it was 14.48 months, and between the third and fourth violent offenses the mean interval was 13.71 months. Again this apparently increasing velocity may be due to the high velocity of the most persistently violent offenders and the early desistance of the occasionally violent. As for the interval between the first arrest and first violent offense, Hamparian and her colleagues found that for those committing a violent offense after their first offense, approximately one-half committed a violent crime less than two years (street time) following their initial offense.
Wolfgang and his associates, in their Philadelphia juvenile birth cohort study, also found a similar pattern of increasing velocity during the progression of the juvenile criminal career. Across all offense types studied (non-index, injury, theft, damage and combination), dramatic reductions in the interval between the second and third offense occurred (averaging about 10 months) from that between the first and second offense (averaging about 17 months). For most offense categories, there was another major decline in the interval following the third offense (averaging about eight months). Generally, these declines continued up until approximately the tenth offense, after which a levelling-off occurred. The intervals were computed on the basis of calendar time and therefore did not take into account time spent in institutions.

A different form of analysis of spacing has been performed by Gottfredson. In an examination of variables relating to the absconding of persons on bail in Los Angeles, he found the interval between the current and most immediate prior offense to be of central importance. The lower this interval and, therefore, the higher the velocity, the greater the likelihood that an individual would fail to appear in court.

The offender's criminal record is probably the most frequently used criterion in criminal justice decision-making. A survey by the American Justice Institute found that 92% of 57 instruments reviewed included the prior record as a
decision criterion. Family and social factors were included 88% of the time, employment and education factors in 81% of the cases, a history of drug or alcohol use in 57% of the cases, residential stability in 48% of the cases, and factors relating to the current offense in 36% of the cases. A prior record was considered in all 21 of the pre-trial instruments reviewed as well as in seven of ten sentencing and parole release instruments, in three of seven institutional custody instruments and in 12 of the 21 community supervision instruments.

Criminal history, as a criterion in criminal justice decision-making, is primarily a static factor on which an individual's status can diminish but not improve. Wilkins and his colleagues have argued that if an offender has been punished for a crime, it is immoral, after a subsequent offense, to augment his "deserved" punishment on the basis of his previous misconduct. This, it is claimed, would be tantamount to punishing the person twice for the same offense. Von Hirsch, a leading exponent of the commensurate deserts doctrine, on the other hand, insists that the notion of desert should include prior misconduct. He further suggests that the time elapsing since the previous conviction should be considered. The greater this interval, he argues, the more difficult it becomes to ascribe culpability for the current offense to factors relating to a prior offense. Moreover, von Hirsch adds that provisions should be made for the expungement of criminal records relating to offenses.
made in the remote past. With respect to this issue, the Canadian Committee on Corrections recommended in 1969 that, even for indictable offenses, an offender's criminal record should be annulled after a five-year crime-free period following the offense.\footnote{175} Annulment in that context referred to the unavailability of prior record information to the court in sentencing decisions, rather than to physical destruction.

**Institutional Behavior**

Very little is known about the effect of institutions, but a great deal has been inferred from high recidivism rates, institutional violence and episodes of psychopathology (e.g., the Ganser Syndrome). The effect of differing lengths, types and degrees of confinement on different personality and age groups has only infrequently been examined. One of the impediments to examining these effects is the disparate criteria for evaluating adjustment in different institutions. This is borne out by the American Justice Institute Survey of criminal justice system decision-making instruments in which institutional instruments showed little consistency in the factors included.\footnote{176} This is largely due to the intuitive rather than empirical basis of these instruments. The evidence that does exist suggests that institutional adjustment is a poor predictor of recidivism.\footnote{177}

The traditional view of institutional adjustment associated with Clemmer was that of "prisonization" or the
gradual adoption by inmates of the values and attitudes of a presumed monolithic inmate subculture.\textsuperscript{178} It was postulated that the extent of prisonization was positively and linearly related to the length of time incarcerated.\textsuperscript{179} Subsequently, this thesis was modified by Wheeler and others who posited that a curvilinear relationship exists in prison adjustment, whereby the offender's values are transformed from the prosocial values that they were assumed to carry with them into the institution, to antisocial values and attitudes in the middle of their term and, finally, to prosocial values once again as they prepare for release.\textsuperscript{180} More recent work has indicated that adjustment patterns vary in relation to personality differences,\textsuperscript{181} the style of institutional management,\textsuperscript{182} and subcultural traits "imported" into institutions by inmates.\textsuperscript{183} Thus, institutional adjustment is currently believed to be largely influenced by conditions to which offenders are exposed prior to incarceration.

Given the lack of consistent and reliable data regarding institutional misbehavior, the most appropriate way to examine the impact of confinement on subsequent behavior and the prisonization hypothesis may be to examine the relationship between the length of prison time served and recidivism controlling for antecedent conditions (factors imported into the institution) and such things as differential management styles.
There have been several studies which have explored the effect of differential prison terms and parole outcome. Babst and his associates classified a national sample of almost 15,000 parolees (all incarcerated for burglary) on the basis of prior record, age, as well as drug and alcohol use. For a number of offender types (there were 22 identified), less prison time portended a more favorable outcome than for those serving longer sentences. Unfortunately, for an approximately equal number of types the opposite was true. Taking the offenders as whole, time served was not consistently related to parole outcome. Jaman and her colleagues, drawing from a pool of 1965 California parolees, matched 75 pairs of robbery offenders and 120 pairs of burglary offenders on such factors as age, ethnic origin, prior record, narcotic history, and type of parole unit, varying only time served within each pair—time served was dichotomized with one member of each pair having served less than the median time for robbery or burglary and the other having served above the median time. Robbers serving less than the median time were found to have more favorable outcomes than those with above median prison terms in all three follow-up periods (six months after release, one year and two years). For the latter two periods, the differences in outcome were statistically significant. The same pattern held for the burglary offenders at all the follow-up periods with the exception that statistical significance was only attained when the groups were compared two years after release. Beck and
Hoffman, in a study of 1,546 parolees from the federal system in 1970, found a slight, although non-significant, positive relationship between time served and the likelihood of recidivism or violation.\(^{186}\) The authors observed a general increase in unsuccessful outcomes for those serving the greatest amount of time relative to those serving a moderate amount of time within each of five offender groups classified according to risk. This latter group, in turn, tended to do worse than those serving the least amount of time. Waller, on the basis of his Canadian sample of parolees, did not find the length of imprisonment to be related to outcome.\(^{187}\)

In the realm of juvenile offenders, Wolfgang and his colleagues have accumulated some strong evidence pointing to the deleterious impact of incarceration both in terms of enhancing the likelihood and celerity of recidivism.\(^{188}\) They found that where a youngster started his career by committing an index offense, he was more likely to commit a second index offense, and considerably sooner, if he received a court rather than a remedial disposition. The type of disposition made little difference in terms of recidivism, where the second offense committed was non-index; however, here again a court disposition expedited recidivism by an average of over seven months. In those cases where an individual began his career with a non-index offense, the type of disposition made little difference with respect to the probability of recidivism to either an index or non-index offense. This
may be attributable to the very small number of persons who received other than remedial dispositions. It could also be that the innocuousness of first-time non-index offenders overrode the potential negative impact of a more severe penalty. Nevertheless, even here a court disposition was followed by a more rapid return to crime for both index and non-index recidivists. Court dispositions were also more likely to be followed by recidivism after the second offense for the various combinations of index and non-index offenses, but the sample sizes were not sufficiently large to draw any firm conclusions. Rather consistently, again, recidivism appeared to be expedited by this type of disposition as opposed to the remedial form. While the likelihood of recidivism after the third offense no longer appeared to be related to disposition, the time intervals between the third and fourth offenses indicate quite consistently that a court disposition was more rapidly followed by an offense than was a remedial disposition. This general pattern of more rapid recidivism following court dispositions underestimated the actual situation, due to the fact that many of those receiving court dispositions were incarcerated. Thus, the true spacing between offenses for these people started at the time of release from an institution, rather than at the time of the previous offense. The offense rate of these people, based on time at risk, was thus even higher than that indicated by the calendar time length of the intervals between offenses.
Hamparian and her colleagues, in their Columbus juvenile cohort study, found substantial support for the notion that more intrusive forms of intervention may be counterproductive. 189 Controlling for variables such as offense sequence number (whether the first, second, third offense, etc.), offense type, age, race, sex, and socio-economic status, they found that regardless of the offense sequence number, institutionalization tended to speed up recidivism (using street rather than calendar time data) and informal supervision to delay it most. These two forms of intervention constituted the two extremes in terms of intrusiveness. The other two types of intervention examined were jail detention (the most intrusive measure next to institutionalization) and formal supervision (the third in order of intrusiveness). Across five different categories of offenses (aggravated, robbery and other violent, assault and molesting, property, status and public order), with no exceptions, the more intrusive the penalty the swifter the return to crime. Controlling for all the aforementioned variables and taking all offenses together (first, second, third, etc.), the average interval following an aggravated offense was 6.85 months for those institutionalized, 10.43 months for those jailed, 10.86 months for those subject to formal supervision, and 14.37 months for those provided informal supervision.
Although these five studies examining the impact of time served and the form of penal intervention have applied rigorous controls, a methodological caution is in order. Taken as a whole, they suggest that where the level of intervention is related to recidivism, the more intrusive forms adversely affect outcomes. Given the difficulties of control and randomization inherent in quasi-experimental studies, the possibility exists that a major factor(s) was not controlled for or extraneous factors intervened. It is possible that those individuals provided the harshest penalties were a more hardened lot to begin with, and that the differences between them and the "controls" were so subtle as to escape detection. These differences could involve highly intangible factors such as the extent of family support and personal demeanor. Studies cited at the beginning of this chapter indicate the importance of intangible factors in criminal justice decision-making. It may be that such factors constitute better predictors of recidivism than the tangible ones generally controlled.

The use of either institutional adjustment factors or the mere fact that an individual has experienced incarceration in criminal justice system decisions is questionable from an ethical standpoint. The first lends itself to abuses from several sources. One source of data for gauging an offender's adjustment may be a clinical evaluation—a method fraught with subjectivity. "Objective" indicators of prison adjustment, such as citations from correctional officers, have a
limited meaning due to the lack of due process in institutions. Although grievance mechanisms exist, the ultimate arbiters of grievances are most frequently prison officials rather than impartial persons. Also, institutions are places where violent reactions are elicited on a routine basis and where an individual may be required to respond aggressively. The use of institutional maladjustment to justify withholding parole or increasing subsequent sentences is ethically questionable due to the lawlessness and danger prevailing in prison environments. Penalization on such grounds may constitute a form of double jeopardy. Furthermore, the use of institutional adjustment as a decision-making criterion invites play-acting on the part of inmates. This latter objection applies to most dynamic factors as the inmate and his collaborators (lawyers, family and friends) can manipulate events to provide the most favorable impression prior to a decision. Fortunately, institutional behavior has not generally been a key factor in parole or subsequent sentencing decisions.  

Knowledge of prior prison terms served by an individual has also occasionally been included in pre-trial and sentencing instruments. Even if such experiences are shown to have detrimental effects, the use of punishments incurred, in addition to his past behavior, in decision-making means that we punish the offender for what we did to him in the past.
Drug and Alcohol Use

Substance use and abuse may be related to criminality in several ways. First, it may produce biochemical, neurological and related psychophysiological changes which may precipitate violent behavior arising from perceptual distortions (e.g., the hallucinogens); agitation, hypersensitivity and mood alteration (e.g., the amphetamines), and a lowering of inhibitions (e.g., alcohol). These changes may involve a progressive deterioration of cerebral functioning (dementia) or they may be of an acute nature constituting a more immediate precipitant to, or facilitator of, violent episodes.

With respect to the precipitative effect, studies of the dynamics of violent offenses have shown the frequent presence of alcohol not only for the offender, but for the victim as well. Amphetamine intoxication has also been blamed for a smaller number of serious offenses against the person. It has been argued that incidents of violence in which these substances have been involved are not solely a product of the abuse itself but, rather, the abuse by persons already pre-disposed to such behavior. Second, the physical and social debilitation occasioned by substance abuse may necessitate that an individual, out of economic want, commit property offenses. This type of behavior is characteristic of "skid-row" alcoholics. Third, dependence on a substance (particularly the opiates) may force the addict to commit property offenses (including robbery) to support his
habit. Such persons have been said to account for an inordinate number of offenses. In a recent self-report study of 243 known opiate addicts in Baltimore, it was estimated that these persons had collectively amassed close to half a million crime-days—24-hour periods during which they had committed at least one offense.\textsuperscript{197} Also, the use of illicit drugs and alcohol may make an individual susceptible to involvement in violence simply as a result of his exposure to a criminogenic environment. The desire to obtain illicit substances requires that he enter into contact with unscrupulous persons and groups. The "rip-off" in drug transactions has been said to account for a high percentage of drug-related violence.\textsuperscript{198} Similarly, the desire to drink alcohol may involve patronizing neighborhood bars, which are among the most frequent sites of violence.\textsuperscript{199} Whatever the nature of the connection between substance abuse and crime, a great deal of evidence exists to the effect that the bail absconding and recidivism are, \textit{ceteris paribus}, more likely to occur where such abuse exists.\textsuperscript{200}

The inclusion of substance abuse among criminal justice system decision criteria is problematic. First, it is difficult to ascertain the specific quantities and types of drugs an offender has been or is using. The user himself, most frequently, is unaware of the specific chemicals and purity of the substances he is ingesting.\textsuperscript{201} Second, the effect of a drug varies according to such factors as dose, the route of administration, personality, individual
tolerance and fatigue levels, age, weight, sex and general health. 202

ENVIRONMENTAL FACTORS

Frequently overlooked in criminological prediction efforts and policy is the environmental context in which the individual functions. These factors, as indicated in Figure 2 can be subdivided into the historical, current and anticipated. Influences ranging from the family, peer and general sociophysical environments to the availability of criminal targets, weapons and mind-altering substances may have affected a person's past behavior. In addition, one may need to assess the current status of these factors to determine their potential influences upon, for example, an individual released on parole. More difficult, still, is the attempt to anticipate the status of these factors at more remote points in the future--this requires the specification of various contingencies which may arise along these lines. Monahan has asserted:

With situational predictors, however, one must establish both [Monahan's emphasis] a statistical relationship between a given situation and violent behavior, and the probability that the individual will, in fact, encounter that situation. One might, for example, predict with a high degree of accuracy that a given class of offenders will resort to violent behavior when confronted with a situation they interpret as a challenge to their masculinity. To predict the actual occurrence of violence, one would then have to perform a separate prediction concerning whether they will encounter such a situation during the period under investigation.
It can be argued that the inclusion of situational variables is the most pressing current need in the field of violence prediction. The principal factor inhibiting the development of situational predictors of violence is the lack of comprehensive ecological theories relating to the occurrence of violent behavior.²⁰³

Aside from the differential time frame in which various environmental factors are operative—i.e., the past, present and future—these factors can be distinguished by the manner in which they may have an effect upon lawbreaking. On the one hand, an individual's family of origin may not exercise a direct effect upon his criminal behavior as an adult. This factor is more likely to predispose him to such conduct, the fruition of which, and the precise form the criminal behavior will assume, is more directly influenced by peer associations and the opportunity structures in the community.²⁰⁴ More specifically, still, the time and location in which a given episode of behavior occurs will be directly influenced by physical aspects of environments which can inhibit or facilitate an act—surveillance levels in an area, the prevalence of crime prevention technologies, weapons, drugs or alcohol, and the accessibility of such dangerous sites as bars.

Environmental factors can thus be distinguished on the basis of their remoteness from the criminal act itself. Remoteness, in this sense, is in no way meant to reflect the importance of a given factor in the causal sequence culminating in criminal behavior. Rather, it refers to the location
of the factor in that sequence. In terms of elapsed time, a more "remote" factor need not have exerted an influence long before situational facilitators. Indeed, the influence of the two factors may be simultaneous and interactive.

A good example of the interaction of differentially remote factors is provided by containment theory. The family environment, according to this perspective, is viewed as potentially inhibiting criminal behavior through the instillment of a strong self-concept and prosocial values. On the other hand, subcultural pressures may be pulling the individual in the opposite direction. These pressures will be continuously interacting with the net result based upon the relative strength of the containment versus the pull factor. It is conceivable that neither of the factors will totally prevail as the individual may drift in and out of criminality, he may desist after briefly flirting with delinquency, or he may commit his first act of criminality in adulthood.

Aside from the differential location of environmental factors in the sequence of events leading up to a crime, the same factor may operate at various levels of remoteness to the criminal conduct. The peer environment to which an individual is exposed, for example, may itself serve as a primary socializing agent, instilling self-discipline and providing emotional support. At the same time, it will perform its conventional role of transmitting subcultural values and, perhaps, rationalizations and skills required
for criminal behavior. On still another level, the peer group may introduce the individual to drugs, facilitate the acquisition of weapons, or actually coerce or prod the individual into undertaking criminal actions. Thus, the role of the peer environment may be one that relates directly to the actual criminal act itself (its timing, location and the form it assumes), as well as one which nurtures the propensity to behave in an unlawful manner.

An environmental factor may thus play a single or more highly complex role in crime. In the brief section to follow, some evidence is introduced regarding the predictive utility of family and peer environments, as well as ecological factors generally more directly affecting the criminal act itself.

**Family Environment**

Since the work of the Gluecks, a great deal of evidence has been accumulated regarding the integral role of the family with respect to criminality; specifically, such factors as family cohesiveness, as well as parental separation, affection, discipline, aggression and consistency. An additional large number of studies document the important bearing of family settings upon recidivism for probationers and persons released from confinement. There is a dearth of evidence comparing the relative predictive power of family environment variables (whether the family of origin or procreation) with others, such as criminal history
variables. Most studies merely include such information as the marital status of an individual, rather than that concerning the characteristics of the family milieu. Where evidence does exist, regardless of the specificity of family-related data, this dimension has consistently been found to be of secondary importance to ascriptive and criminal history variables.

One observation buttressing the notion of a pivotal family role in crime relates to the existence of the multi-delinquent family in which several siblings and/or generations have been at odds with the law. A classic study, in this respect, was that undertaken by Dugdale in 1875 in which he outlined the depravity of the Jukes family. A recent media account reported a story of a California family in which all three generations are criminally active and have amassed 400 arrests in the past ten years. Cormier, in a study of 50 multi-delinquent families, found that of 249 sons produced, 149 were known delinquents (117 of whom had served at least one penitentiary sentence). Reckless and Dinitz have stated that over one-half of the juvenile court cases in the typical American city derive from multi-problem families, even though such families compose only 7 to 10% of all urban families.

The family, aside from contributing to criminality through heredity, psychopathology, and the transmission of antisocial values, may precipitate violence in a more direct fashion. Since the pivotal study of homicide by Wolfgang,
the home has been recognized as among the most frequent sites of violence. In the case of domestic homicide, the relationship between the assailant and victim has frequently degenerated to such an extent that situational contingencies such as the availability of weapons and the likelihood of arrest are probably secondary to the impassioned feelings existing prior to the act. This is illustrated by the diverse forms of weapons and "M-O" used in such cases.

Peer Environment

The peer environment may affect behavior through its role of primary socializing agent to that of situational facilitator. An extensive literature exists which points to the central role of the peer group in criminality; however, quantitative evidence comparing the importance of peer influence and other factors is lacking. One indication of the potency of the peer environment is the recent documentation of the penetration of neighborhood gangs into the correctional system. The resulting polarization of inmates along racial, ethnic and political lines has led some observers of prison life to discard notions of a monolithic inmate society and a uniform code of conduct. Various gangs have shown a continuity from the street to institutions--with the gangs' organization, formal and informal rules and rituals being maintained. As Jacobs has noted, these gangs may circulate their own written codes for institutional conduct to incoming members. These gangs provide protection,
emotional support, and facilitate the attainment of contraband for their membership.

**Situational Variables**

This group of variables refers to situations which may enhance the likelihood of aggressive or other criminal conduct. Some of these include:

1. The demographic characteristics of the area in which an individual resides and otherwise spends a large proportion of his time. If such a neighborhood contains a high percentage of people deeply involved in crime, serious economic problems, prevalent drug or alcohol abuse and related social ills, the likelihood of an individual's initial involvement or relapse into crime, irrespective of his personal characteristics, would tend to be greater than in a more socially stable and prosperous neighborhood. In such areas, the individual would be more likely to encounter pressures, temptations and values conducive to antisocial behavior. As well, in communities in which crime is rampant, the individual is more likely to encounter threatening situations in which violent retaliation is necessary and, perhaps, expected.

2. The frequenting of particularly dangerous sites within these neighborhoods. Areas with large transient populations, containing rooming houses and a large number of bars
have been found to be sites of a disproportionate number of violent, public order and vice-related offenses. \textsuperscript{222} Similarly, parks, bus terminals and related sites in urban areas, with their transient populations, illicit transactions and physical design may render the individual more vulnerable. \textsuperscript{223}

3. Criminal opportunities in a given area relative to the threat of detection by police. Such factors as the availability of desired targets, \textsuperscript{224} the availability of weapons, \textsuperscript{225} surveillance levels in an area (including pedestrian and vehicular traffic, vegetation obstructive to visibility, the employment of defensible space concepts, occupancy rates in homes and street lighting), \textsuperscript{226} the existence of alarm systems and other crime prevention technologies, \textsuperscript{227} and police patrol strategies may all play a role in the individual's decision to commit unlawful behavior and the selection of the type, time and location, as well as the frequency of such behavior. It may be argued that the extent of criminal opportunity is irrelevant because its curtailment will not inhibit the criminal activity of one predisposed to such behavior but will merely displace behavior in such a manner as to circumvent existing obstacles. The evidence relating to such a claim is as yet far too preliminary for definitive statements on this matter. However, total displacements of criminal activity (i.e., where the volume of displaced crime equals that which was suppressed) have not yet been observed.
4. Territoriality and population density. It has been hypothesized that offenders (particularly the violent) have lower anxiety threshold when their personal space is infringed. In spatial terms, this means that some individuals routinely require more personal space to function without anxiety. Upon infringement of this "body buffer zone," the person may behave aggressively. Ambivalent evidence exists as to the reality of these differences between violent offenders and others.228

A more commonly presumed relationship is that between population density and crime. It has been believed that excessive crowding is a major contributing factor to high crime rates in congested urban areas. In fact, most studies controlling the often confounding effects of ethnicity and social class indicate that no such relationship exists, whether it is of a neighborhood or of housing arrangements that were considered.229 It has also been claimed that overcrowding is a primary factor underlying prison disturbances.230 However, this has not been substantiated through studies in which the characteristics of prison inmates, levels of security, managerial style and general institutional conditions have been controlled. It may be possible that density in a civilian population is unrelated to aggression, whereas such a relationship does obtain in an institutional setting. Such a finding could be explained by several factors. First, it could be that density must reach a
certain threshold before its adverse effects are experienced. This threshold may only be achieved in correctional and other total institutions. Another important factor is the time of exposure to given densities. The civilian, even in a major metropolitan area, is rarely exposed to high density situations for the duration of an entire day. The civilian may exercise various options to obtain relief from overcrowding (e.g., a stroll in a park or on a quiet street). Confinement in a correctional institution, due to its around-the-clock nature, the regimented and collective nature of activities, the perpetual noise and the lack of privacy for even bodily functions, is a more encompassing and intense experience. Finally, density may be relevant to prisoners but not civilians, precisely because the former constitute a more aggressive lot from the outset. Thus, offenders may be more sensitive to overcrowding due to their requirement of larger buffer zones, as well as other factors.

5. The availability of drugs and alcohol. As elaborated in the previous section, knowledge that an individual with prior drug problems has ready access to such substances will surely lessen his chances of parole success. The likelihood of physical debilitation and his subsequent inability to work, the inordinate funds that may be required to support a drug habit, the unscrupulous persons with whom he may enter into contact, and the possible direct criminogenic
effects of the substances themselves all militate against success.

These and other situational/environmental factors are not, in reality, mutually exclusive and additive influences upon behavior. A problematic family environment and simultaneous drug-taking may provide a poorer prognosis for the individual than merely the sum total of their independent effects. In addition, similar circumstances may elicit a diversity of reactions from different people. Furthermore, people frequently choose to enter dangerous situations or environments.

In considering the use of environmental factors in prediction, it is important, from an ethical standpoint, to differentiate those factors over which an individual exercises no control (or at least current control), from those which he can readily alter. The characteristics of an individual's family of origin can no more be modified than his age or race and, thus, all objections pertaining to ascribed variables are applicable to static environmental factors. On the other hand, decisions to frequent bars which are often the sites of violence, to engage in illicit drug transactions, and to carry lethal weapons, are more voluntary. Somewhere between these two extremes are such factors as areas of residence where the individual is physically free to change environments although he may be prevented from so doing by financial constraints, familial considerations and the like.
One further point that should be made regarding the use of dynamic environmental variables is that their use can lend themselves to abuse and deception by offenders. If family stability is considered a good predictor of parole success and is explicitly used in parole decisions, the individual can misrepresent facts about his family to create a semblance of stability.

**Intuitive Prediction**

As indicated at the outset of this chapter, prediction in some form inheres in all human behavior, including decision-making at all levels of criminal justice systems. Thus, the decision by a police officer to arrest a juvenile may be partly governed by his projection of the youth's past behavior and attributes into the future. Youngsters with a certain history and/or attributes may be more prone to arrest because the officer involved feels the youth is intractable and "will never amount to anything." Judges also may make intuitive predictions about an accused which may affect a disposition. These intuitive predictions may operate at varying levels of awareness. Their impact upon the ultimate decision is difficult to discern because they are so intertwined with other factors, such as the philosophical position of the decision-maker and the facts of the case. The former will dictate the importance of predictions relative to other penal considerations. Intuitive predictions may influence
perceptions of the facts of a case rather than simply being based upon them.

The complex and fickle nature of informal, intuitive predictions provide a clear justification for the formalization of the process. To some extent, intuitive prediction has been institutionalized in the legal process via psychiatric testimony, although clinical prediction may be more palatable than that of police and judges. Intuitive prediction can be considered on one end of a continuum with systematic prediction on the other. Predictions below the threshold of individual awareness can be considered the most extreme form of intuitive prediction. Psychiatric prediction, which even clinicians concede, contain an important intuitive component, is closer to systematic prediction as it is based on a theoretical model, adheres to established methodologies, can, to some extent, be evaluated, and is undertaken by trained clinicians. A "systematic" prediction, by contrast, in its ideal sense, would involve the use of only those indicators that have been shown to be good predictors, where inter-rater reliability in the measurement of these predictions is high and the accuracy of the prediction can be unambiguously assessed. These requirements could, in all likelihood, only be achieved by actuarial schemes.

One of the most notable experiments in intuitive prediction was the Cambridge-Somerville Youth Project where teachers and policemen were asked to nominate pre-adolescents
who were likely to have future difficulties with the law. Predictions were based upon these nominations, as well as upon assessments made by three clinicians. Matched pairs of subjects were allocated to experimental and control groups, with the first receiving intensive counselling and other forms of intervention, while the control group was withheld such treatment. A follow-up, two decades later, arrived at the well-known conclusion that serious prediction errors occurred and that the treatment regime was generally ineffective. Indeed, false positives outnumbered true positives by a ratio of approximately three to two. This ratio may be somewhat inflated if one considers the possibility that some youths participated in delinquent behavior that was never detected. Another important point to note is that predictions made for the boys from the more delinquent neighborhoods contained far fewer false positives than those for boys from better neighborhoods. This was due to the greater base rates of delinquency in such areas. Finally, as is rarely pointed out, very few false negative errors occurred—despite the high base rates of delinquency in the entire group. There were over seven correct predictions of non-delinquency for every incorrect prediction. In the study as a whole, correct predictions outnumbered errors by a slight margin. Although this study has been considered as a classic example of the flaws inherent in prediction, the findings are not radically different from those of more systematic, actuarial efforts.
A more successful effort in intuitive prediction has been observed in Columbus, Ohio. There, a number of schools in high delinquency areas were visited and sixth-grade teachers asked to nominate both students who were unlikely to become delinquent (designated as the good boys) and those possibly or likely to get into trouble (the bad boys). The latter group was then divided into experimentals and controls, with the experimentals being provided a special program to boost their self-concepts—as this factor was seen as possibly differentiating the good from the bad boys. The control group was withheld any such intervention and the good boys served as a comparison group. Prior to the program, about 20% of the bad boys and 5% of the good boys were known to the police. If the teachers were generally unaware of the legal status of the students, these figures are already indicative of their ability to discriminate the good from the bad boys. Assuming this to be the case, the teachers' nominations also proved to discriminate quite well between good and bad boy delinquent behavior during and following (for a three-year period) the program. During the program, the predicted bad boys were six times as likely as the good boys to get into trouble. In the follow-up period, the bad boys were two and one-half times as likely to have police contacts. This reduction in the differences between the two groups cannot be attributed to the program as negligible differences were found between the experimentals and controls either during or following the program. It appears
that aside from the overall difference in delinquency between the good and bad boys, a higher proportion of the good boys embarked upon their delinquent careers at a later age.

Another study involving teachers' predictions was a retrospective analysis in Kansas City of the classroom personality and behavior of 104 delinquents in the early school years. The end of year reports on these delinquents' personality and behavior, provided by teachers for the first five years of school, were compared with a matched group of controls. It was found that those ultimately to become delinquent were more than twice as often cited for misconduct, almost twice as often for having an "objectionable personality," almost twice as often for having poor work habits, and more than twice as often for having a poor attitude toward school than were the non-delinquents.

STATISTICAL METHODS IN PREDICTION

Once the variables have been selected for an actuarial predictive effort, decisions must be made regarding the manner in which these should be combined to meet the objectives of prediction. First and foremost of these objectives, of course, is that of maximizing the predictive ability or power of the variables in question; or, put conversely, the minimization of predictive errors be these false positives or negatives. This effectiveness of a predictive model must be tempered by the consideration of efficiency.
The development of parsimonious predictive schemes is important for several reasons. First, the less variables that are included the less expensive it is for the criminal justice system to collect the information necessary for the initial development of a predictive instrument. Second, the updating of a predictive instrument (this should be an ongoing process) requires a sample proportional to the number of variables used. Large numbers of variables require samples of enormous magnitude to make statistical inferences, or else, cell counts will be too small. Third, the practitioner utilizing the device will need to obtain all the information required on a case-by-case basis before making a decision. If discretion is incorporated into the system and the practitioner can override the predictive scheme, such overrides may occur with a frequency closely related to the complexity and dimensions of the scheme. If such discretion is limited, shoddy data collection practices may occur to compensate for the additional burden upon the practitioner. Finally, cumbersome and sophisticated predictive systems will be incomprehensible to the individuals to whom they pertain. The criminal justice system is not served by an instrument which fails to clarify to the offender the criteria underlying system decisions.

One way to maximize parsimony is to limit the predictive system to those variables which add measurably to the predictive power of a scheme. The identification of these variables may pose a problem as a variable may exercise both
direct and indirect effects upon the criterion (predicted) variables. Multivariate causal models, such as those in path analysis, may be useful. Even if only direct effects are considered, the identification of the most important predictor variables may be problematic as, in analytical techniques such as multiple regression, the order in which they are entered in an equation can profoundly effect their apparent explanatory power. Thus, the stepwise technique within the general linear approaches might be employed. Generally, this technique involves a prioritization of variables at each stage of the equation building process. That is, the first variable to enter the equation is that with the greatest initial association with the predictive criterion (e.g. recidivism). The second variable entered is that which, in combination with the first, affords the highest association. The procedure continues in a similar manner until the further addition of variables no longer yields a statistically significant increment of predictive power. At each stage, as well, variables may be deleted from the equation if, upon the addition of a new variable at that stage, the information provided by the resulting combination of variables is redundant.

The issue of variable redundancy or overlap is central to the objective of parsimony and the selection of a statistical method for prediction efforts. While the linear procedures of regression and discriminant analysis are tailor-made to eliminate redundancy, "accounting" schemes that have been used in criminological predictions, such as the Burgess
Method, merely combine variables in an additive fashion without regard for redundancy. Thus, the extent to which they measure the same thing, and the manner in which they are interrelated, is obscured. Aside from the general linear models, the problem of overlap can be tackled through a technique such as factor analysis which reduces highly intercorrelated variables to one common factor.\textsuperscript{240} This factor can then be entered as a variable into a simple accounting scheme, linear model, or other system and be measured accordingly.

The assumptions inherent in a given statistical technique are also relevant. The accounting schemes and the general linear techniques usually assume linearity and additivity of these variables in relation to the criterion. Thus, a straight line relationship is assumed to exist, with the score of the criterion increasing by specified units in relation to a corresponding increase in the predictor variables. Interaction terms can be included in regression equations in recognition of the interactive effect of two variables. Other techniques also can accommodate variable interaction. In addition, in regression, variable transformations can be undertaken to reflect nonlinear relationships.\textsuperscript{241}

Another element in the combination of variables, recommended early on by the Gluecks, is that of weighting. Predictor variables can be provided differential weights to reflect their relative influence upon the outcome variable.
Some of the earlier, and even many current actuarial schemes have lacked such weighting. Weighting is an integral part of some methods. Multiple regression, for example, provides coefficients reflecting the predictive yield of each independent variable in an equation when all other variables are controlled.

The level of measurement of both the predictor and outcome variables is also germane to the selection of a statistical method, as well as to the reliability of a predictive model. The higher the level of measurement, the greater the likelihood of error in rating subjects (or other units of analysis) on the relevant variables. Clearly, it is easier to discern a subject's sex or race than his IQ. Similarly, the dichotomization of IQ into "low" and "high" will be less problematic than giving the subject a specific score. In categorical measures, only cases located near cutting-points will be misclassified. This misclassification problem can be avoided by eliminating such cases or scores from the analysis. An IQ score may be affected by the condition of the subject on the day of assessment, by the environment in which the test is administered, by the characteristics of those administering it, and countless other factors. No single assessment can be completely reliable (even assuming the perfect internal validity of the instrument), so interval level measures are prone to error. Providing that measurement error is evenly distributed across a sample, the analysis will
be unaffected as far as the relationship between this independent and the outcome variable is concerned. However, if an interaction exists between particular characteristics of subjects and those of the testing environment, a great deal of variation in measurement error may occur from one subject to another.

The implications of measurement error become most apparent during the development of a predictive model. The procedure in such efforts usually involves the selection of a construction sample and the use of an existing data base to formulate the preliminary model. This model is then tested against a comparable validation sample to determine the extent to which its predictive power is maintained for the latter sample. The loss in prediction from the construction to the validation sample is referred to as shrinkage. The greater the measurement error, the greater the shrinkage to subsequent samples will be as the errors become further compounded with each successive sample to which the predictive system is applied. This is due to the fact that the system itself, if it is periodically updated, will not be based on a number of samples in which shrinkage (due partly to measurement error) occurred. It may be argued, from a purely mathematical point of view, that the increasing size of the data base will lend greater credence to the predictive model as the errors of measurement offset one another. This is only true, however, if such errors are "random." If measurement criteria
or scores change over time or location as the data base is expanded, this will not be the case. Systematic changes in police, judicial and correctional record keeping do occur over time and across jurisdictions. These changes will have less of an impact upon categorical than upon interval level data, minimizing shrinkage for models comprising the more crudely measured variables.

On another level, parametric statistics which deal primarily with continuous variables, contain assumptions which, if violated, may provide "biased" estimates of an outcome variable. Assumptions in regression analysis such as the normal distribution and equal variances of a dependent variable over the various observations of an independent variable(s) must obtain or serious estimation problems may result. Non-parametric methods, on the other hand, because they lack such assumptions, are more robust in that the shrinkage of a predictive model from one sample to another is likely to be less pronounced. By utilizing less refined data and analytical methods, however, one is sacrificing precision which, in the realm of prediction, means the ability to make precise (not to be confused with accurate) predictions of behavior.

One further point that needs to be addressed in the selection of a statistical technique is that of population homogeneity. That is, can one assume that a single predictive model will be equally powerful for different population
subgroups? If, for example, alcohol abuse is entered into a model because it is found that it is a good predictor of recidivism, can it be safely assumed that such abuse is equally dangerous among females as among males, or among the old as for the young, for those of higher as opposed to lower social status, for those with no assaultive history as for those with such a history? By not taking into consideration what is, in a sense, an interaction between a given predictor item and certain characteristics of individuals, the predictive power of the model is weakened because it may be applied to segments of the population to which it is largely irrelevant. One way to circumvent this problem is to initially classify the concerned population into the most homogenous groups (via techniques such as association analysis) and then to develop separate predictive models for each group.

Following is a brief discussion of statistical methods that have been used, evaluated or proposed for predictive efforts. No attempt is made to be exhaustive; in fact, only a representative technique (the best known) in each class is presented.

**Burgess Method**

Included here are a class of simple actuarial tables which assume linear, additive relationships among the variables in the system. The first such table was developed in 1928 by Ernest Burgess on the basis of a population of Illinois parolees. Burgess examined 21 factors related
to the probability of successful parole outcome. Each factor was arbitrarily given a maximum value of one point. If an individual belonged to a category on a particular factor that had a parole violation rate under that of the whole population, he received a favorable point. The person's total score over the 21 factors was then tallied to determine his general class in terms of the probability of recidivism. The major modification of this technique was devised by the Gluecks who correlated each predictive factor with the outcome variable to determine its relevance in distinguishing between parole success and failure. These factors were then weighted according to the extent of this situation.

One advantage of these relatively crude prediction tables is the simplicity with which they can be used by practitioners. Also, the categorical data which they contain are less subject to measurement error and are distribution-free. Thus, this technique can be quite robust, minimizing shrinkage from one sample to another. The major deficiency of these tables is that they do not provide for variable overlap or interaction. Variable overlap creates redundancy and the lack of recognition of variable interactions undermines the predictive power of such tables.

**Configural Analysis**

Configural analysis is a class of techniques in which an initially undifferentiated population is subdivided into groups according to some criterion. This criterion can be the maximization of the groups' homogeneity in which case
the procedure is a taxonomic one—probably the best known technique here is association analysis. Predictions can then be made on the basis of these classifications; however, the classifications produced by association analysis do not provide the best discrimination among groups in terms of their future behavior because the formation of the groups is based on a homogeneity rather than outcome criterion (e.g., recidivism). The most appropriate configural method in the development of groups that are distinguished on the basis of an outcome criterion is predictive attribute analysis. This method involves the initial subdivision of a sample into two groups on the basis of that factor (usually dichotomous) which is most strongly associated with the predictive criterion. Thus, if recidivism is the criterion and sex is the variable most closely related to it for a sample, offenders would first be divided according to sex. The resulting two groups are then further subdivided into two groups apiece based upon the best predictor in each group. These factors can, of course, be different for the two groups as, for example, the predictive variables for males and females may differ considerably. This process of subdivision continues until no factors significantly related to the outcome criterion remain. The procedure thus provides a hierarchical method of offender classification, whereby groups can be situated on a continuum according to their probability of success on a criterion.
Configural analysis takes into account variable interactions through the process of group division. It also accommodates the heterogeneity of offender populations by providing varying predictions for different subpopulations rather than applying the same predictive model to the entire population. The categorical data used makes it attractive to practitioners.

A major disadvantage of configural analysis is the need to reclassify entire populations if variable cut-off points are altered by social or policy changes. Let us suppose that the variable "drug use" was formerly dichotomized into the categories of "infrequent" and "frequent," with the former including usage up to twice a week. An increasing frequency of use in the general population may warrant the extension of that category to three times per week to differentiate casual from intensive use. The resulting reclassification may require reshuffling the membership of virtually every group formed. The same consequence would occur with the finding that, as cases are added to the data base, the factors, on the basis of which the original groups were formed, were changing in their respective relevance to the outcome criterion. This procedure also does not indicate the degree of intercorrelation or the relative importance of the predictor variables within any subpopulation.
Multiple Regression

In multiple regression, equations are developed to describe the relationship between a number of independent variables and the outcome (dependent) variable. This relationship is usually assumed to be linear and additive with a dependent variable varying in relation to the combined variation of the independent variables and a constant. Each variable possesses a weight (regression coefficient) which describes the direct effect of that variable upon the dependent variable, controlling for the remaining variables in the equation. Thus, it is possible to ascertain the relative importance of each variable in the system. However, because the magnitude of these coefficients differ according to the order in which they were entered into the model, the stepwise procedure elaborated above is recommended. Because each coefficient represents a direct effect upon the outcome variable, with all other variables in the system controlled, the problems of variable intercorrelation and overlap are largely avoided. As multiple regression is primarily used in the analysis of interval level data, it can provide precise predictions related to such outcome criteria as the likelihood and seriousness of future criminal violations. At the same time, such precision renders the technique more vulnerable to measurement error and the violation of assumptions regarding error terms. Thus, shrinkage from sample to sample tends to be greater for such methods than those
involving categorical data. Like all techniques other than
the configural approach, multiple regression models are
usually based on entire populations and thus assume popula-
tion homogeneity. This assumption can be avoided, however,
by combining the two techniques. Thus, a population can be
classified into as homogeneous groups as is possible through
association analysis or a related technique and separate
regression equations can be developed for each subpopulation
thereby obtained. This dual approach has been said to yield
better results than the use of either technique alone.

Generally speaking, regression does not address the issue of
independent variable interaction, although interaction terms
can be included in an equation.

Multidiscriminant Analysis

Somewhat similar to regression analysis with a dicho-
tomous dependent variable is multidiscriminant analysis.
This technique reverses the procedure of most multivariate
methods by dealing with a priori groups in developing a
linear, additive model which best discriminates between the
existing groups. Thus, selected variables are provided
weights on the basis of their discriminating power vis-à-vis
the groups (on some criterion such as parole outcome and a
statistical criterion such as the F-ratio). The variables
ultimately incorporated into the model will be those that,
in combination, best differentiate the groups. Here again,
a stepwise procedure is frequently employed to develop the
most parsimonious model. Thus, one can take two groups of parolees, one of which has had a successful outcome and the other which has not. Then, an equation is developed comprising those variables and coefficients that provide maximum discrimination between parole success and failure for the sample. This equation can then be used as a classificatory device to place subsequent individuals in one group or the other based upon their scores on each variable and the relative weight of these variables. The entire system can then be tested against a person's actual performance.

The assumptions of discriminant analysis are less restrictive than those for regression analysis with a categorical dependent variable. These include the normal distribution of the discriminating variables within each group, a statistically significant difference in the group means on each variable, similar group variances of the variables and the additive rather than the interactive relationships among the discriminating variables.²⁵³

Log-Linear Analysis

This technique has only recently been proposed for use in criminological predictions.²⁵⁴ Log-linear analysis provides a means by which linear models can be developed for categorical variables, including the interaction effects of independent variables. This technique examines all conceivable ways in which each independent variable can affect the dependent variable (both directly and interactively
with the other independent variables). Even if all the variables are dichotomous, this will produce a cell count of \(2^x\), with the exponent "x" representing the number of independent variables. Through a stepwise procedure, only those main and interactive effects that significantly contribute to the development of a parsimonious model are retained. This is done through initially determining the extent of associations between all categories of the hypothesized predictive variables and the outcome variable through chi-square tests of independence. Presuming there is a significant association, variables are then introduced, through the stepwise approach, based on the criterion that they significantly reduce the chi-square value of the overall model. This thereby provides the model which best explains (the best fit) the observed cell frequencies. It will be remembered that the higher the chi-square value the greater the departure of the observed from the expected (according to the null hypothesis of independence between the relevant variables) frequencies. Through the conversion of cell counts to logarithms, an additive model is obtained as in regression. This model will, as mentioned, comprise coefficients pertaining to those main and interactive effects that are retained after all effects from the saturated model (all conceivable effects of the independent variables upon the dependent variable) that detract from parsimony are omitted. Probabilities relating to the predictive
criterion (e.g., parole success) can be calculated on the basis of the final model.

Log-linear analysis is attractive due to its sophisticated handling of categorical data, its consideration of predictor variable interactions, its weighting of both main and interactive effects and its ability to identify the most parsimonious subset of predictors among the group of variables. Its one major drawback is its requirement of a large number of cases for even relatively few variables due to the number of cells necessary to accommodate all the categories of the independent variables and their interactions.

Other Techniques

All of the methods enumerated above are capable of providing the practitioner with statements relating to the probability of alternative outcomes; although some techniques provide these in a more direct fashion than others. Multiple regression, for example, can provide precise predictions of future behavior and can also serve as a taxonomic device by providing a continuous distribution of offenders according to the risk they pose to society. One can additionally compute the probabilities of various outcomes (e.g., recidivism) for the offender categories thereby formed. For the techniques using categorical outcome criteria, probabilities are readily computed from the existing data base.
Some of the most sophisticated probability models include such techniques as Network Analysis in which the probability of various event sequences are computed based upon knowledge regarding the nature of these events, as well as their interrelationships. This might include the delineation of various situational scenarios that a designated type of person might experience. Thus, the characteristics of an individual and situations he is likely to encounter (as well as their likelihood) are taken into account, as is his expected reactions to these. This type of scheme is testable by computer simulations, particularly (although not exclusively) if a deterministic system is assumed. The anticipation of complex scenarios is a problematic task, as the passage of time inevitably nullifies and necessitates the modification of the scheme. This is due to the fact that change in merely one link in the network will alter all the projected scenarios. A more modest approach would be to assume a Markov process whereby behavior at one point in the sequence is assumed to be dependent only upon the individual's state (condition) at the previous point, rather than upon a multitude of prior decision points.

Several comparisons have been undertaken to determine which statistical method is superior in terms of such criteria as predictive power, assumptions of the technique and shrinkage from construction to validation samples. These comparisons have involved the application of the different techniques to the same sample of offenders and data set.
They have primarily pertained to the Burgess method, configural analysis, multiple regression, and log-linear analysis. These studies overwhelmingly indicate that there is little to choose in terms of explanatory power between these techniques and that the slight advantage, in this regard, of the more sophisticated multivariate techniques tends to be offset by the greater shrinkage encountered due to measurement error.\textsuperscript{260} The implication of these findings is that the selection of a method be based on other than statistical criteria—e.g., the nature of the data base and the method most usable by decision-makers in the criminal justice system.\textsuperscript{261} Another implication is that mathematical wizardry will not resolve the problems of prediction. These problems can only be tackled through improved offender classification procedures, the use of more reliable data bases and more careful variable selection, if they can be resolved at all.

\textbf{CONCLUSIONS}

The evidence presented in this chapter points to serious limitations in our ability to predict criminal behavior. No variable or factor that has been used has escaped controversy in relation to its predictive value and very few factors have been spared of criticism on ethical grounds. Also, the methods used to study some variables (e.g., age) have been seriously flawed. Even if future
studies are performed meticulously, several factors will continue to undermine predictive efforts.

First, the criminal justice system data upon which most criminological predictions are based do not accurately reflect offender behavior as the system reactions culminating in official processing are themselves unpredictable. The use of alternative data sources will always be questioned due to their reliance on the truthfulness and accuracy of respondents who, in any case, are frequently not representative of the population to which these responses are attributed.

A second problem stems from difficulties in the measurement of some variables. The measurement of personality characteristics is notoriously problematic. Even biological variables may be difficult to measure. Furthermore, one's status on ascriptive variables such as race is seldom clear-cut. In order to determine the full impact of variables such as race and social class, one must surmount more than the obstacles involved in their objective measurement. One's identification with a given group will undoubtedly affect one's reaction to the status of that group. A person's lineage may indicate he is primarily Caucasian but if he is reared in a black neighborhood, he is likely to identify with that race. Similarly, if one has an "objectively" low social status, one may perceive this as a temporary condition or as one from which he cannot extricate himself. These
identifications and perceptions can profoundly influence behavior and are, in turn, affected by a multitude of factors.

A third major factor undermining prediction is the situational element in all human behavior. Studies thus far have primarily attempted to identify situational predictors of behavior. Because an individual's personality will affect his choice of situations, as well as his reactions to these, situational and personality variables must be viewed in concert. Thus, the likely outcomes of varying persons exposed to varying situations must be determined. More difficult, still, is the anticipation of the situations a person will actually encounter.

We have shown that the mathematical techniques used to combine information are not very relevant to the predictive ability of a given set of variables. This is because all these techniques have deficiencies. The assumptions of existing predictive methods are based on gross oversimplifications of the world in which offenders actually live. These techniques have assumed such things as the independence of predictor variables, linearity in their relationships with criterion variables and recursive (non-reciprocal) causal relationships amongst the variables in a given causal model. Moreover, the number of variables generally used in prediction have been too few and have lacked the interdisciplinarity required for serious efforts.
It is important to qualify these pessimistic remarks by stating that the nature of the dependent or criterion variable is also instrumental in the outcome of predictions. The more specific the predictions we are trying to make—in terms of the nature, timing or location of an offense—the less likely we are to succeed. Human behavior is often fickle, lacking regularity or consistency. "Out-of-character" episodes and the innumerable situations to which people are exposed affect the specific dimensions of behavior. However, it may be reasonable to believe that greater consistency exists on critical, fundamental dimensions such as the general pursuit of a law-abiding as opposed to antisocial lifestyle. In this regard, predictions of recidivism have been far more reliable than predictions of its specific dimensions.

One final point. Our ability to predict is contingent upon the prevalence of that we are predicting. Correct predictions of violent recidivism (true positives) will be made more frequently in areas where the base rates of violent recidivism are higher. The more unlikely an event, the less likely we are to predict its occurrence, all other things being equal.
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PART III

A LONGITUDINAL STUDY OF INCAPACITATION EFFECTS
CHAPTER FIVE

THE SAMPLE AND VARIABLES

OBJECTIVES OF THE STUDY

The majority of previous incapacitation studies have employed statistical modeling or cross-sectional procedures to ascertain the preventive effects of collective or selective incapacitation policies (be these actual or hypothetical). The findings of these efforts have usually assumed the form of statements indicating the actual or potential crime reductive yield of a given policy in a designated area and its fiscal costs—generally expressed in terms of the policy's effects on prison populations.

This study was longitudinal, retrospectively comparing the effects of alternative sentencing policies to those which were actually applied to a sample of adult offenders whose criminal careers were at an advanced stage, if not completed, at the time of the study. Close to one thousand offenders were selected, their criminal histories and dispositions were determined, and the issue addressed was whether these alternative policies would have had a net preventive effect exceeding that produced by the sanctions actually applied. It will be recalled from the evidence
presented in Chapter Three that all penal policies involving imprisonment as a sanction, regardless of their arbitrariness, are believed to have at least a modest crime reductive effect. This study sought to determine whether alternative collective or selective incapacitation policies could have reduced the criminal output of the sample, and, if so, at what fiscal and human costs.

**SELECTION OF THE SAMPLE**

This study was part of a larger project undertaken under the auspices of the Dangerous Offender Project at the Academy for Contemporary Problems in Columbus, Ohio. The sample used was part of a larger sample already comprehensively described in a previous publication of the Project entitled *Careers of the Violent.* For a detailed discussion of the manner in which the sample was drawn, data-related problems and sample characteristics, the reader is referred to that work. Only those aspects of sampling and methodology that relate directly to this incapacitation study are discussed here. Some additional descriptive information is included to give the reader a feel for the offenders included in this study.

The objective of the previous study described in *Careers of the Violent* was to retrospectively examine, through official records, the criminal careers of a representative group of violent offenders arrested in Columbus, Ohio, between
the years 1950 and 1975 inclusive. Due to the serious under-reporting and, hence, attrition of cases for the offenses of assault and forcible rape, the investigators decided to focus on homicide and robbery offenders among the index violent offenders, in order to maximize the representativeness of the sample. The Columbus Police Department maintains separate murder and robbery books in which all such incidents are listed. Due to the preponderance of robbery over homicide offenses, the investigators selected every second offense listed in the murder book and every twentieth offense listed in the robbery book for the 25-year time span of the study. As it turned out, there were 1591 instant offenses of which about 60% were drawn from the murder book and the remainder from the robbery book. Also, interestingly, many of the offenses contained in these books (and, hence, the instant offenses) were neither homicide nor robbery but were frequently less serious offenses. It was believed that this was partly due to the reduction of charges (perhaps to an included offense) when the police lacked sufficient evidence on the murder or robbery charge. Thus, the instant offenses included a large number of other offenses, including rape, aggravated assault, weapons offenses, burglary, and many others.

The offenders included in that study were, then, those persons who were arrested for the 1591 instant offenses. Female arrestees were so few that they were excluded from the sample. The preponderance of cases selected from the
murder book was problematic as this could potentially produce external validity problems owing to the substantially higher actual prevalence of robbery offenders. These problems were circumvented by the use of weighted measures for the robbery sample when the offenders were analyzed as a group.

Federal Bureau of Investigation "rap sheets" were obtained for the entire sample in 1976 in order to ascertain their officially recorded criminal histories as adults. The investigators then examined these records to determine such things as the ages of onset and desistance of adult criminal careers, patterns in the velocity (rate) of offending, the comparative history of homicide and robbery offenders, patterns in dispositions over varying stages of criminal careers, the effects of varying dispositions on subsequent conduct, the effects of substance abuse, and so on.

One of the problems invariably encountered in retrospective studies in which cases are selected on the basis of recent behavior (in this case misbehavior) is that follow-up periods, from the point of a case's inclusion in the sample, may be insufficient to get a totally retrospective view. In other words, offenders in the study were often too young to have completed more than a small portion of their potential criminal careers. This was due to the fact that the sample included arrestees up to 1975 and in 1976 their criminal records were obtained. The youngest
offender in the sample was born in 1958, so it could hardly be assumed that by 1976 he, or others born in the 1950's and even the 1940's, had completed their careers in crime. The objective, however, in the Careers of the Violent project was to examine the characteristics of a representative group of Columbus violent offenders arrested over a 25-year period. Having a completed criminal career was not a requisite for a case's inclusion in the sample. Rather, the extent of career criminality among this group of arrestees for violent behavior was a matter to be determined.

In the present study, on the other hand, the primary objective is to determine whether the contribution of a group of offenders to crime could have been diminished through alternative incapacitation policies. This issue cannot be adequately addressed without a knowledge of all the offenses committed by these individuals (at least those officially recorded) and the point at which they tended to desist from further criminal activity. For the purposes of this study, therefore, we selected only those who we could reasonably assume were at or near the end of their criminal careers. This assumption is always, of course, tenuous at best. The certainty of desistance is only ensured upon a person's demise. Limitations in the reliability of predictions preclude definitive statements about desistance prior to that point. One can use an arbitrary criterion such as five crime-free years from the point of the last arrest. However, if an individual is confined, the five years must
realistically be calculated from the point of release.
Unfortunately, the FBI data we used only provided institutional release dates in a minority of cases. Furthermore, inferences of desistance based on the five-year criterion may be undermined if a person's persisting criminality was simply not detected during that period, yet might be detected at a later date. Moreover, the death of a subject might not be known by the FBI and thereby be confused with desistance. Although death is a guarantee of desistance, it is a career end which cannot be equated with voluntary desistance. Given all these problems in identifying criminal desistance, even in retrospective studies, we decided to use the criterion of age to select a subsample of the 1591 offenders whom we assumed had desisted or were close to the end of their careers.

We therefore assumed that all cases 35 years of age or over by the end of 1976 (the study's cut-off date) had completed their careers in crime. The selection of this age is not arbitrary. Many observers of the maturation/burn-out phenomenon, dating back to the Gluecks, have considered this to be a critical age.\(^2\) We might have been more prudent and selected the age of 40 or even 50 as the criterion; however, the higher the age the smaller our sample and the less representative it would be of the population of violent offenders arrested during the years 1950-1975. Whereas the dates of birth for the sample of 1591 offenders ranged from 1889 to 1958, we selected those born between 1915 and 1942
for the present study, thereby including individuals who had reached from 35 to 62 years of age as of 1976. We thereby eliminated a sizeable number of the youngest from the original sample (those born between 1943 and 1958), as well as a smaller number born prior to 1915. In the process, we eliminated the oldest and youngest members of the original sample. Some might argue that the 1915-1942 group is not representative of the original randomly selected violent offenders. Several responses can be made in relation to this argument.

The primary objective of this study was to examine the patterns of offending for those with completed or nearly completed criminal careers. Unless one undertakes a prospective study with a large sample (this is needed because one can only guess, \textit{a priori}, the proportion that will become delinquent and there is also a problem of case attrition) and is willing to wait several decades for the sample to age, the selection of offenders who are both through their careers and representative of a given offender population may be an impossible task. The evidence presented in Chapter Three indicates that, in any jurisdiction, in any given year, a sizeable proportion of arrested or convicted persons are young and/or virgin offenders. It is entirely possible that the youngest have characteristics that are different from that of their elders. A study which endeavoured to describe the criminal careers of a representative sample of persons
arrested during a given period must necessarily incorporate a prospective component to follow-up these young offenders.

In this study, we did the next best thing. We retained all but a small number (those born prior to 1915) of cases aged 35 and over, thereby maintaining a fairly representative group of "finished" offenders from the randomly drawn sample. Sacrificing some external validity for an improvement in internal validity, we decided to dispense with those born following 1942 as their careers did not generally have sufficient time to crystallize by 1976. It should be noted that many young offenders remained in our sample since the selection criterion was a homicide or robbery arrest between 1950 and 1975. Thus, any person in our sample, even those born in 1915, could have committed most of their offenses at a very young age so long as one was committed after 1950. By the same token, those born after 1942 were not all young offenders, although that likelihood was greater than for those born earlier. Those born before 1915 were eliminated because the sampling criteria would necessitate that they be active offenders at advanced ages. A person born in 1900, for example, would have had to be actively involved in crime beyond 50 years of age. Thus, the age extremes of the original sample were eliminated to avert undermining the study's internal validity occasioned by the sampling procedures. Also, including those born at the end of the last century or early in this century allows the intrusion of
historical influences such as genuine cohort differences and differential crime enforcement, reporting and recording, rendering comparisons and pooled analyses with offenders born in the 1940's and 1950's questionable. The FBI's Uniform Crime Reports started in the 1930's and, consequently, our earliest offenders were not active prior to the implementation of that system.

To recapitulate, we selected all persons born between 1915 and 1942, inclusive, who were part of a larger sample of 1591 randomly selected Columbus, Ohio, violent offenders previously studied. The selection of this specific sub-sample was done in such a way as to include only those with completed criminal careers while minimizing historical and cohort effects and maximizing sample size and generalizability.

THE VARIABLES

Some of the variables and concepts used in this study are listed below.

Sex. Only males were included in the sample due to the negligible number of females that would have qualified according to our selection criteria.

Race. We dichotomized this variable into "whites" and "non-whites", with the latter group primarily comprising blacks.
Cohorts. Our study dealt with people drawn from 28 annual birth cohorts from 1915 through 1942. While for some analyses each of these cohorts were observed separately on some criterion, the cohorts were often collapsed into several groupings—e.g., 1915-1918, 1919-1922, and so on. The major reason for these occasional separate analyses of the different cohorts was to determine the extent to which historical influences may confound the pooled analyses, thereby jeopardizing both the internal and external validity of the study.

Age. The dates of all the offenses of our subjects were not obtainable from the FBI records. The dates of arrest were thus used as the points of departure for all analyses and the age of an offender at any given offense was simply determined by subtracting his birthdate from the data of a particular arrest. With the knowledge of the ages at arrest for each offender, their officially recorded criminal events could be observed.

Offenses.

a) Instant offenses. This was the offense for which our cases were included in the sample. Whereas our initial sampling procedures called for only homicide and robbery offenders to be selected, other offenses appear in the murder and robbery books. It is conjectured that most of these other offenders were also homicide or robbery offenders with
charges being reduced to enhance the likelihood of conviction or to make a deal with an offender. The instant offenses covered a wide range, including property and public order, as well as violent, offenses.

b) **Initial offenses.** This refers to the first offense listed on each offender's "rap sheet" - i.e., the first arrest as adults. In some cases, this coincided with the instant offense. Thus, where the instant offense constituted the first or only arrest sustained by an offender, instant and initial offenses were synonymous.

c) **Offense sequence number.** The offense sequence number merely refers to the number of a designated arrest in the career of an offender (i.e., the fifth offense, eight offense, etc.).

d) **Offense classification.** In the Careers of the Violent project, a master list of offenses was drawn up according to the violations of the 1591 offenders studied. The resulting 95 offenses were classified into "violent," "other violent," "property," "public order," "other" and "narcotics" offense categories. This six-fold typology was not retained for the analyses in this study. The master list is reproduced in Appendix A. It will also be observed that a number of the offenses contain several subcategories. Under criminal homicide, for example, murder in the first or second degree, manslaughter, murder of a policeman, attempted
aggravated murder, aggravated murder, and conspiracy to murder offenses can be found.

Other offense typologies were developed in this study where specific analyses so required.

1) **Offense seriousness scale.** All offenses contained on the master list were ranked (weighted) mathematically according to their seriousness. The seriousness of offenses can be determined in at least three ways: i) through arbitrary ratings by an investigator based upon some stipulated criterion(a); ii) by surveying members of the public for their perceptions of the relative or absolute seriousness of a number of offenses;³ and iii) by basing seriousness weights upon the sanctions provided by a relevant penal code.

While aware of its shortcomings, we opted for the third solution which, while less subjective and arbitrary than the first, was fiscally more feasible than the second. Indeed, the method of surveying public attitudes has seldom been done correctly—that is, with a representative national or regional sample rather than merely a convenient one (students, policemen, judges, etc.). Bearing in mind that the seriousness scale to be constructed was not the ultimate objective of our study but, rather, an intermediary one, and, given our resources, we decided to forego the use of a survey in favor of the assignment of weights on the basis of the maximum statutory penalties prescribed for each
offense in the revised Ohio Penal Code. The specific methodology, results and validation procedures are described in Appendix B.

It can be argued that such a penal code is disproportionately informed by the interests and sentiments of certain groups of citizens, particularly those in the higher social strata who are closer to the throttle of power. It can also be argued that, even if such a code accurately reflects the attitudes of a cross-section of the public, it is always an anachronism due to the time needed to pass statutory amendments. Although both of these arguments contain an element of truth, neither the class conflict nor the attitudinal lability arguments should, in our opinion, be maintained without qualification. Although it would be unreasonable to argue that equal representation across divergent social strata exists in any society with respect to input into law-making, it is equally untenable to disregard the differences that exist between authoritarian regimes and constitutional democracies in the formulation of laws. The suggestion that the extrapolations made by social scientists from the ratings of primarily social science students are superior to those than can be drawn from norms promulgated by duly elected legislators is questionable.

Also, to belabor the point that different social classes have disproportionate inputs into law-making is to imply that legal codes are far more dynamic than they
actually are and that the values, interests and attitudes of different socioeconomic groups are necessarily and radically different. Perceptions of the relative seriousness of crimes are, according to this view, seen as solely or predominantly a function of economic standing. Were this true, the current burgeoning interest in the enforcement of white collar crimes would have been stimulated by the lower social strata rather than middle class intellectuals and the prevention of street crime a higher priority of the more rather than less affluent. The idea that the various socioeconomic groups are vast monoliths each obsessed with the pursuit of its own economic interests (which are, in turn, considered to be mutually exclusive and to shape the respective perceptions of sanctions) is a gross oversimplification.

2) Offense switching analysis. In one analysis, the objective was to determine the degree of offender specialization across the adult criminal career. It was felt that simply recording offender transitions from one legal offense category to another may not be as substantively relevant as changes in behavioral patterns. Thus, an offender's alternation between common and aggravated assault, or between grand and petty larceny, may often reflect a more technical or fortuitous element in the final designation of the offense rather than a genuine change in motivation or tactics. As a result, felonious and common assault, alcohol
and drug history, burglary and aggravated burglary, were merged for this analysis.

e) **Offense identification.** Where a series of charges were laid against an offender on a given date, the offense used was the most serious of these charges. The data coders were instructed to use the master list of offenses as a guide as, in general, the higher an offense appeared on this list, the more serious it was.

**Alcohol and Drug History.** These variables were dichotomized into "yes" and "no or don't know" categories. Due to the great deal of missing or unreliable information on these variables, it could not be assumed that those with no mention of a history of alcohol or drug abuse actually did not have such a history. It was for this reason that the "no" and "don't know" categories were merged. On the other hand, a mention of such a history was taken as a reliable indicator that such a history did, in fact, exist.

**Disposition.** Since the FBI files occasionally omit details relating to the disposition of cases, some problems were encountered with respect to missing information. More serious was the frequent lack of information on the release dates of those confined to institutions. This information was necessary where we sought to determine such things as the length of time elapsing between successive offenses. In order to recover information on the nature and severity
of dispositions, we used estimates where such information was lacking. The estimation procedures are outlined in Appendix C.

Spacing. One of the major variables we examined was the interval between offenses to determine, among other things, whether offenders' velocity or rates of criminal activity accelerated or decelerated as they aged and accumulated a criminal record. Two measures of spacing were used:

1) Calendar time. The time elapsing between successive arrests without regard for time in confinement. This measure had the advantage of avoiding errors encountered in determining dispositions either through our estimation procedures or due to faulty record-keeping practices by law enforcement agencies. Some investigators of criminal careers have observed that the time in confinement is quite negligible over the typical offender's career. If this is true, determining dispositions for analyses of spacing is unnecessary. It may be, however, that despite the limited amount of information lost in the aggregate, this information loss will not be uniformly distributed across the entire sample but will be more pronounced for certain offender types, resulting in a distortion of our data base.

2) Street time. A true measure of an offender's activity in any given year can only be obtained if his time at liberty is known. Two offenders may commit a similar
number of crimes during the span of a year, but if one served nine months of the year in prison while the other was at liberty for the entire year, the activity level of the first is clearly greater. Offender activity must therefore be measured in relation to the time one is at liberty and thereby eligible to commit crimes in the community. To compute this "street time," we used our estimates of time served by offenders when we had information that they were confined or assumed that this was the case and the actual duration of confinement was unavailable. Thus, street time was computed by subtracting the time served between a given pair of arrests (this was most frequently zero) from the calendar time between those same arrests. Where no prison time was served or assumed to be served, the calendar and street time values are identical.

Recidivism. Recidivism for any offender was inferred from the existence of at least one arrest following any designated point in a career. The absence of any such arrest was taken as an indication of desistance from crime. One form of analysis involved the computation of the transitional probabilities of recidivism; that is, the recidivism rate for the sample at each arrest (e.g., after the first, second, third arrest, and so on).
REFERENCES


2. See Chapter Four for a discussion of the age factor in crime.


CHAPTER SIX
CHARACTERISTICS OF THE SAMPLE

It will be recalled that our sample was drawn from an original 1591 violent offenders arrested in Columbus, Ohio, between 1950 and 1976. Our criterion for the selection of a sample from within this group was a birthdate between 1915 and 1942 inclusive. A total of 959 offenders qualified for our sample. They ranged between 35 and 62 years of age by the study's 1976 termination date.

Table 1 illustrates the instant offenses qualifying the 959 offenders for the study. Homicide, rape, robbery, felonious assault and weapons offenses account for well over 90% of the instant offenses. Virtually all of these rapes and felonious assaults were found in the Columbus Police Department murder book leading us to believe that these cases involved voluntary and involuntary homicide incidents where the charge was reduced due to insufficient evidence. Most of the weapons instant offenses were found in the robbery book leading us to believe that the same situation obtained in these cases.
### TABLE 1

**THE INSTANT OFFENSES OF THE SAMPLE**

<table>
<thead>
<tr>
<th>Type of Offense</th>
<th>Frequency of Appearance</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Homicide</td>
<td>160</td>
<td>16.7</td>
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<tr>
<td>Rape</td>
<td>86</td>
<td>9.0</td>
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<tr>
<td>Robbery</td>
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<td>27.5</td>
</tr>
<tr>
<td>Felonious Assault</td>
<td>326</td>
<td>33.9</td>
</tr>
<tr>
<td>Other Assault</td>
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<td>11.0</td>
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<tr>
<td>Arson</td>
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<td>.4</td>
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<tr>
<td>Weapons</td>
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<td>8.4</td>
</tr>
<tr>
<td>Burglary</td>
<td>7</td>
<td>.7</td>
</tr>
<tr>
<td>Larceny</td>
<td>4</td>
<td>.4</td>
</tr>
<tr>
<td>Forgy - Counterfeit</td>
<td>2</td>
<td>.2</td>
</tr>
<tr>
<td>Disorderly Conduct</td>
<td>1</td>
<td>.1</td>
</tr>
<tr>
<td>Menacing</td>
<td>1</td>
<td>.1</td>
</tr>
<tr>
<td>Kidnapping</td>
<td>2</td>
<td>.2</td>
</tr>
<tr>
<td>Fugitive</td>
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<td>.4</td>
</tr>
<tr>
<td>Embezzlement</td>
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<td>.1</td>
</tr>
<tr>
<td>Gambling</td>
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<td>.1</td>
</tr>
<tr>
<td>Escape</td>
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<td>.1</td>
</tr>
<tr>
<td>Parole Violation</td>
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</tr>
<tr>
<td>Investigate</td>
<td>2</td>
<td>.2</td>
</tr>
<tr>
<td>Purse Snatching</td>
<td>1</td>
<td>.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>959</strong></td>
<td><strong>99.3a</strong></td>
</tr>
</tbody>
</table>

*Does not equal 100% due to rounding errors.*
Table 2 illustrates the ages of our 959 offenders at the time of their arrest for the instant offenses. Our concern that the sample might be somewhat older than those typically arrested for homicide and robbery offenses, due to the selection procedures, may be justified as the modal age categories were between the mid-twenties to the mid-thirties. However, there is a precipitous drop-off in the late thirties as is often observed.

The 959 offenders were arrested on a total of 8203 occasions with an average of 8.6 arrests per offender. The offenders ranged from those arrested only once (45 cases) to several arrested over 40 times (Table 3). The highest number of arrests accumulated by any offender was 48. The nature of the charges occurring most frequently is listed in Table 4. These 21 categories accounted for close to 75% of all the offenses. Offenses appearing most frequently, aside from the expected homicides and robberies, were assault, larceny, burglary, possession of weapons, rape, auto theft, intoxication and traffic offenses.

Nonwhite offenders (of which all but two were black) constituted slightly more than half the sample and, on the average, were arrested one more time than the white offenders (Table 5).

The ages of arrest for the sample showed a persisting level of criminal activity from early adulthood through to the late thirties (Table 6). As this table also shows,
TABLE 2
THE AGE AT THE INSTANT OFFENSES FOR THE SAMPLE

<table>
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<tr>
<th>Age of Arrest at Instant Offense</th>
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<th>% of Total</th>
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<tr>
<td>18</td>
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<td>2.2</td>
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<td>42</td>
<td>4.4</td>
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<td>48</td>
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<td>4.2</td>
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<td>32</td>
<td>3.3</td>
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<td>53</td>
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<td>2.9</td>
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<td>50</td>
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<td>.6</td>
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<tr>
<td>50+</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>951</strong></td>
<td><strong>100.0</strong></td>
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</table>
TABLE 3

NUMBER OF OFFENDERS AT EACH NUMBER OF ARRESTS

<table>
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<tr>
<th>Number of Arrests</th>
<th>Number of Cases</th>
<th>Number of Arrests</th>
<th>Number of Cases</th>
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<tr>
<td>1</td>
<td>45</td>
<td>25</td>
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<tr>
<td>2</td>
<td>86</td>
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<td>5</td>
</tr>
<tr>
<td>3</td>
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<td>19</td>
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<tr>
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<tr>
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<tr>
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<td>48</td>
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### TABLE 4

THE OFFENSES MOST FREQUENTLY COMMITTED BY THE OFFENDERS

<table>
<thead>
<tr>
<th>Type of Offense</th>
<th>Number of Incidents</th>
<th>% of All Incidents</th>
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</thead>
<tbody>
<tr>
<td>Criminal Homicide</td>
<td>234</td>
<td>2.9</td>
</tr>
<tr>
<td>Rape</td>
<td>257</td>
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<tr>
<td>Robbery</td>
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<td>8.5</td>
</tr>
<tr>
<td>Felonious Assault</td>
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<td>8.0</td>
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<tr>
<td>Other Assault</td>
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<td>10.1</td>
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<tr>
<td>Weapons</td>
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<td>4.3</td>
</tr>
<tr>
<td>Burglary</td>
<td>512</td>
<td>6.2</td>
</tr>
<tr>
<td>Larceny</td>
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</tr>
<tr>
<td>Auto Theft</td>
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<td>3.6</td>
</tr>
<tr>
<td>Forgery - Counterfeiting</td>
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<td>2.3</td>
</tr>
<tr>
<td>Gambling</td>
<td>180</td>
<td>2.2</td>
</tr>
<tr>
<td>Driving Under Influence</td>
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<td>2.1</td>
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<tr>
<td>Intoxication</td>
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<td>6.3</td>
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<tr>
<td>Disorderly Conduct</td>
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<td>1.9</td>
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<td>Vagrancy - Transiency</td>
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<td>1.5</td>
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<td>Suspicion</td>
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<tr>
<td>Break and Entry</td>
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<td>Parole Violation</td>
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<tr>
<td>Non-Support</td>
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<td><strong>TOTAL</strong></td>
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<tr>
<td>Race</td>
<td>Number of Cases</td>
<td>Total Number of Arrests</td>
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<tr>
<td>--------</td>
<td>-----------------</td>
<td>-------------------------</td>
</tr>
<tr>
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<td>3558</td>
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<tr>
<td>Black</td>
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<td>TOTAL</td>
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TABLE 6
THE NUMBER OF ARRESTS AT EACH AGE

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<td>-</td>
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<td>22</td>
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<td>49</td>
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<td>24</td>
<td>308</td>
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<td>52</td>
<td>35</td>
</tr>
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<td>26</td>
<td>369</td>
<td>53</td>
<td>19</td>
</tr>
<tr>
<td>27</td>
<td>335</td>
<td>54</td>
<td>17</td>
</tr>
<tr>
<td>28</td>
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<td>335</td>
<td>56</td>
<td>7</td>
</tr>
<tr>
<td>30</td>
<td>377</td>
<td>57</td>
<td>7</td>
</tr>
<tr>
<td>31</td>
<td>315</td>
<td>58</td>
<td>2</td>
</tr>
<tr>
<td>32</td>
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<td>33</td>
<td>351</td>
<td>60</td>
<td>1</td>
</tr>
</tbody>
</table>
the youngest age of a recorded arrest occurred at 7 years
and the oldest at 60 years.

Offenders in our sample were born between 1915 and
1942 inclusive. Table 7 shows the number of offenders born
in each of these years and the respective level of criminal
activity of these annual birth cohorts. Fewer cases emerged
from the 1915 to the 1923 cohorts than from later cohorts.
No clearly discernible pattern of escalating, stable or
diminishing activity is evident when the earlier cohorts
are compared with the later ones. When these cohorts are
collapsed into four categories (Table 8), however, there
is evidence of an increase in activity from the earlier to
the later cohorts. The only exception to this is the
1929-35 category. This finding is particularly noteworthy
because those born more recently are less likely to have
completed their careers in crime and, consequently, the
increase may actually be more pronounced than is evident
from the table. Therefore, to make this comparison more
equitable, we can compare the offense production of these
cohorts up until the age of 35 as this was the minimum age
to which all cohorts were followed up. As Table 9 suggests,
there is a dramatic increase in the arrest rate from the
earlier to later cohorts. Further evidence of this cohort-
specific or historical effect upon criminal activity is
presented later in this chapter in the analysis of offender
velocity.
TABLE 7
THE NUMBER OF CASES AND ARRESTS
IN EACH ANNUAL BIRTH COHORT

<table>
<thead>
<tr>
<th>Year of Birth</th>
<th>Number of Cases</th>
<th>Total Number of Arrests</th>
<th>Mean Number of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1915</td>
<td>16</td>
<td>98</td>
<td>6.13</td>
</tr>
<tr>
<td>1916</td>
<td>17</td>
<td>150</td>
<td>8.82</td>
</tr>
<tr>
<td>1917</td>
<td>13</td>
<td>102</td>
<td>7.85</td>
</tr>
<tr>
<td>1918</td>
<td>24</td>
<td>247</td>
<td>10.29</td>
</tr>
<tr>
<td>1919</td>
<td>37</td>
<td>331</td>
<td>8.95</td>
</tr>
<tr>
<td>1920</td>
<td>29</td>
<td>191</td>
<td>6.59</td>
</tr>
<tr>
<td>1921</td>
<td>21</td>
<td>183</td>
<td>8.71</td>
</tr>
<tr>
<td>1922</td>
<td>27</td>
<td>308</td>
<td>11.41</td>
</tr>
<tr>
<td>1923</td>
<td>30</td>
<td>322</td>
<td>10.73</td>
</tr>
<tr>
<td>1924</td>
<td>37</td>
<td>230</td>
<td>6.22</td>
</tr>
<tr>
<td>1925</td>
<td>47</td>
<td>405</td>
<td>8.62</td>
</tr>
<tr>
<td>1926</td>
<td>40</td>
<td>294</td>
<td>7.35</td>
</tr>
<tr>
<td>1927</td>
<td>35</td>
<td>281</td>
<td>8.03</td>
</tr>
<tr>
<td>1928</td>
<td>44</td>
<td>384</td>
<td>8.73</td>
</tr>
<tr>
<td>1929</td>
<td>41</td>
<td>269</td>
<td>6.56</td>
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<td>1930</td>
<td>46</td>
<td>425</td>
<td>9.25</td>
</tr>
<tr>
<td>1931</td>
<td>23</td>
<td>263</td>
<td>11.43</td>
</tr>
<tr>
<td>1932</td>
<td>47</td>
<td>244</td>
<td>8.28</td>
</tr>
<tr>
<td>1933</td>
<td>31</td>
<td>244</td>
<td>7.87</td>
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<td>243</td>
<td>7.59</td>
</tr>
<tr>
<td>1935</td>
<td>38</td>
<td>276</td>
<td>7.26</td>
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<tr>
<td>1936</td>
<td>37</td>
<td>436</td>
<td>11.78</td>
</tr>
<tr>
<td>1937</td>
<td>39</td>
<td>408</td>
<td>10.46</td>
</tr>
<tr>
<td>1938</td>
<td>44</td>
<td>338</td>
<td>7.68</td>
</tr>
<tr>
<td>1939</td>
<td>37</td>
<td>256</td>
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<td>1940</td>
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<td>529</td>
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<td>1941</td>
<td>39</td>
<td>352</td>
<td>9.03</td>
</tr>
<tr>
<td>1942</td>
<td>37</td>
<td>249</td>
<td>6.73</td>
</tr>
<tr>
<td>TOTAL</td>
<td>959</td>
<td>8203</td>
<td>8.55</td>
</tr>
</tbody>
</table>
### TABLE 8

**THE CRIMINAL ACTIVITY OF FOUR SUCCESSIVE BIRTH COHORTS**

<table>
<thead>
<tr>
<th>Year of Birth</th>
<th>Number of Cases</th>
<th>Total Number of Arrests</th>
<th>Mean Number of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1915-1921</td>
<td>157</td>
<td>1302</td>
<td>8.30</td>
</tr>
<tr>
<td>1922-1928</td>
<td>260</td>
<td>2224</td>
<td>8.55</td>
</tr>
<tr>
<td>1929-1935</td>
<td>258</td>
<td>2109</td>
<td>8.17</td>
</tr>
<tr>
<td>1936-1942</td>
<td>284</td>
<td>2568</td>
<td>9.04</td>
</tr>
<tr>
<td>TOTAL</td>
<td>959</td>
<td>8203</td>
<td>8.55</td>
</tr>
</tbody>
</table>
TABLE 9
THE NUMBER OF ARRESTS RECORDED BEFORE THE AGE OF 35
FOR EACH ANNUAL BIRTH COHORT

<table>
<thead>
<tr>
<th>Year of Birth</th>
<th>Number of Cases</th>
<th>Arrests before 35 years of age</th>
<th>Mean Number of Arrests before 35 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1915</td>
<td>16</td>
<td>32</td>
<td>2.00</td>
</tr>
<tr>
<td>1916</td>
<td>17</td>
<td>59</td>
<td>3.47</td>
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<tr>
<td>1917</td>
<td>13</td>
<td>30</td>
<td>2.31</td>
</tr>
<tr>
<td>1918</td>
<td>24</td>
<td>83</td>
<td>3.46</td>
</tr>
<tr>
<td>1919</td>
<td>37</td>
<td>106</td>
<td>2.86</td>
</tr>
<tr>
<td>1920</td>
<td>29</td>
<td>81</td>
<td>2.79</td>
</tr>
<tr>
<td>1921</td>
<td>21</td>
<td>95</td>
<td>4.52</td>
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<tr>
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<td>27</td>
<td>151</td>
<td>5.59</td>
</tr>
<tr>
<td>1923</td>
<td>30</td>
<td>155</td>
<td>5.17</td>
</tr>
<tr>
<td>1924</td>
<td>37</td>
<td>131</td>
<td>3.54</td>
</tr>
<tr>
<td>1925</td>
<td>47</td>
<td>234</td>
<td>4.98</td>
</tr>
<tr>
<td>1926</td>
<td>40</td>
<td>173</td>
<td>4.33</td>
</tr>
<tr>
<td>1927</td>
<td>35</td>
<td>191</td>
<td>5.46</td>
</tr>
<tr>
<td>1928</td>
<td>44</td>
<td>262</td>
<td>5.95</td>
</tr>
<tr>
<td>1929</td>
<td>41</td>
<td>203</td>
<td>4.95</td>
</tr>
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<td>1930</td>
<td>46</td>
<td>292</td>
<td>6.35</td>
</tr>
<tr>
<td>1931</td>
<td>23</td>
<td>196</td>
<td>8.52</td>
</tr>
<tr>
<td>1932</td>
<td>47</td>
<td>319</td>
<td>6.79</td>
</tr>
<tr>
<td>1933</td>
<td>31</td>
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<td>6.32</td>
</tr>
<tr>
<td>1934</td>
<td>32</td>
<td>192</td>
<td>6.00</td>
</tr>
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<td>1935</td>
<td>38</td>
<td>218</td>
<td>5.74</td>
</tr>
<tr>
<td>1936</td>
<td>37</td>
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<tr>
<td>1937</td>
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<td>357</td>
<td>9.15</td>
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<td>7.07</td>
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<td>6.70</td>
</tr>
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<td>1940</td>
<td>51</td>
<td>518</td>
<td>10.16</td>
</tr>
<tr>
<td>1941</td>
<td>39</td>
<td>350</td>
<td>8.97</td>
</tr>
<tr>
<td>1942</td>
<td>37</td>
<td>249</td>
<td>6.73</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>959</strong></td>
<td><strong>5792</strong></td>
<td><strong>6.04</strong></td>
</tr>
</tbody>
</table>
Tables 10 and 11 show that other important factors affecting the extent of criminal involvement of the sample was a history of drug or alcohol use. Those known to have a drug history had, on the average, nearly twice the number of arrests as those who had no record of such a history. Similarly, those known to have histories of alcohol abuse averaged over three arrests more than those with no record of such abuse.

THE EXTENT OF OFFENDER CHRONICITY AND RECIDIVISM PROBABILITIES

Using the Wolfgang et al criterion of chronicity (five or more arrests), the majority of the offenders in our sample qualify as chronic. As Table 12 shows, 641 of our 959 offenders (66.8%) had at least five arrests. Indeed, 323 offenders (33.7%) had at least ten arrests. Thus, two-thirds of our sample had five or more arrests and one-third were arrested on ten or more occasions. This table also shows that the probability of recidivism is quite stable across different stages of a criminal career. At no point up to the 30th arrest (the remaining arrest sequence numbers were omitted due to the small number of offenders continuing beyond this point) was the likelihood of re-arrest less than 80%. By and large, this probability ranged between about 83 and 88%. Thus, with few exceptions, about 15% of the cases dropped out at each arrest sequence number. Two of
TABLE 10

DRUG HISTORY AND CRIMINAL ACTIVITY

<table>
<thead>
<tr>
<th>Drug History</th>
<th>Number of Cases</th>
<th>Total Number of Arrests</th>
<th>Mean Number of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72</td>
<td>1007</td>
<td>13.99</td>
</tr>
<tr>
<td>No or Don't Know</td>
<td>887</td>
<td>7196</td>
<td>8.11</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>959</strong></td>
<td><strong>8203</strong></td>
<td><strong>8.55</strong></td>
</tr>
</tbody>
</table>
### TABLE 11

**DRINKING HISTORY AND CRIMINAL ACTIVITY**

<table>
<thead>
<tr>
<th>Drinking History</th>
<th>Number of Cases</th>
<th>Total Number of Arrests</th>
<th>Mean Number of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>372</td>
<td>4055</td>
<td>10.90</td>
</tr>
<tr>
<td>No or Don’t Know</td>
<td>587</td>
<td>4148</td>
<td>7.66</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>959</strong></td>
<td><strong>8203</strong></td>
<td><strong>8.55</strong></td>
</tr>
</tbody>
</table>
TABLE 12

THE PROBABILITIES OF RECIDIVISM AFTER EACH ARREST

(Up to 30 arrests)

<table>
<thead>
<tr>
<th>Arrest Sequence Number</th>
<th>Number of Cases Active</th>
<th>% of Cases Recidivating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>959</td>
<td>95.3</td>
</tr>
<tr>
<td>2</td>
<td>914</td>
<td>90.6</td>
</tr>
<tr>
<td>3</td>
<td>828</td>
<td>88.8</td>
</tr>
<tr>
<td>4</td>
<td>729</td>
<td>88.0</td>
</tr>
<tr>
<td>5</td>
<td>641</td>
<td>87.2</td>
</tr>
<tr>
<td>6</td>
<td>559</td>
<td>88.0</td>
</tr>
<tr>
<td>7</td>
<td>492</td>
<td>86.4</td>
</tr>
<tr>
<td>8</td>
<td>425</td>
<td>88.2</td>
</tr>
<tr>
<td>9</td>
<td>375</td>
<td>86.1</td>
</tr>
<tr>
<td>10</td>
<td>323</td>
<td>84.8</td>
</tr>
<tr>
<td>11</td>
<td>274</td>
<td>88.0</td>
</tr>
<tr>
<td>12</td>
<td>241</td>
<td>83.0</td>
</tr>
<tr>
<td>13</td>
<td>200</td>
<td>85.5</td>
</tr>
<tr>
<td>14</td>
<td>171</td>
<td>85.4</td>
</tr>
<tr>
<td>15</td>
<td>146</td>
<td>87.0</td>
</tr>
<tr>
<td>16</td>
<td>127</td>
<td>87.4</td>
</tr>
<tr>
<td>17</td>
<td>111</td>
<td>83.8</td>
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<tr>
<td>18</td>
<td>93</td>
<td>84.9</td>
</tr>
<tr>
<td>19</td>
<td>79</td>
<td>82.3</td>
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<td>81.5</td>
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<td>41</td>
<td>97.6</td>
</tr>
<tr>
<td>24</td>
<td>40</td>
<td>85.0</td>
</tr>
<tr>
<td>25</td>
<td>34</td>
<td>91.2</td>
</tr>
<tr>
<td>26</td>
<td>31</td>
<td>83.9</td>
</tr>
<tr>
<td>27</td>
<td>26</td>
<td>80.8</td>
</tr>
<tr>
<td>28</td>
<td>21</td>
<td>81.0</td>
</tr>
<tr>
<td>29</td>
<td>17</td>
<td>88.2</td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>93.3</td>
</tr>
</tbody>
</table>
these exceptions occurred after the first and second arrest. As recidivism was observed in over 90% of the cases after both the first and second arrest, it would appear that one and two-time offenders have been under-represented in our sample as it makes little intuitive sense that re-arrest rates are higher for persons embarking on a criminal career than they are for those well advanced in such a career.

The distribution of criminal activity across our sample only to a very limited degree supports the notion that the offender population comprises two broad groups—the intermittents who form the majority of offenders and commit less than the mean number of offenses and the intensives, a minority of offenders with a level of activity well above the mean. The gradual and consistent desistance of offenders up to the 30th arrest shows that the distribution of offenders in terms of their volume of activity can more accurately be represented on a continuum than by a bimodal distribution. There are too many offenders at moderate (near the mean) levels of activity to warrant the contention that a natural dichotomy exists. Table 13 shows the number of persons in the sample above and below the mean level of activity (8.6 arrests) and the respective crime production of these two groups. While it is true that offenders arrested over the sample mean account for almost 70% of all arrests and that they are a minority within the sample, it must be pointed out that this is still a very large group (almost
TABLE 13

A COMPARISON OF THE CRIMINAL ACTIVITY OF OFFENDERS
ABOVE AND BELOW THE MEAN NUMBER OF ARRESTS

<table>
<thead>
<tr>
<th>Level of Offending</th>
<th>Number of Cases</th>
<th>% of All Cases</th>
<th>Number of Arrests</th>
<th>% of All Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below the Mean</td>
<td>584</td>
<td>60.9</td>
<td>2547</td>
<td>31.0</td>
</tr>
<tr>
<td>Above the Mean</td>
<td>375</td>
<td>39.1</td>
<td>5656</td>
<td>69.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>959</td>
<td>100.0</td>
<td>8203</td>
<td>100.0</td>
</tr>
</tbody>
</table>
40% of the sample). One can observe a skewed distribution, similar to that found by Rand researchers, whereby the modal categories occur at the lowest criminal activity levels and a long tail exists signifying the relatively small group of highly active offenders (Figure 3). The term "relatively" needs to be stressed as this group is of significant size in absolute terms.

The graph shows that it is from about the fifteenth arrest that the tail begins and where the most active offenders, who are at the same time manageable in number, can be found. At 15 or more arrests, there are still 146 cases of the sample of 959 or 15.2% remaining. If our sample is representative of violent offenders entering the criminal justice system, it means that between one of every six or seven arrestees will develop this highly active pattern. This group of offenders accounts for 3116 (38%) of all arrests so their criminal involvement constitutes a two and one-half fold over-representation in relation to their size within the sample. What these figures mean is that assuming prediction equal to our retrospective analysis in precision and with the long-term quarantine of these offenders prior to their first arrest, about 38% of the offenses for which offenders in the sample were arrested could have been prevented. If such "universal" preventive detention is considered unacceptable, then long-term confinement could only, at best, be applied after one arrest
Figure 3: The Number of Cases at Each Arrest Sequence Number (Up to 30 Arrests)
producing a maximum preventive yield of 36.1%. Thus, assuming perfect prediction and sufficient institutional space to house 15% of all violent index offenders for the duration of their criminal careers (this could mean life) would still leave about two-thirds of their crimes with us. This, of course, assumes a uniform probability of arrest for all violent index offenders. Although this may well be a dubious assumption, it is quite clear that there are large numbers of offenders falling in what might be called a middle range of activity. These are offenders more active than the intermittents identified at Rand but less so than the intensives. In our sample, there was a large number of people with between about 5 and 15 arrests. It is unlikely that many of these are casual offenders as such a number of arrests suggests an active involvement for all but the exceedingly incompetent offender. In the same way, one with about one half dozen to a dozen arrests during his career (about one every three years) can hardly be assumed to be an intensive criminal as defined by Rand; that is, one who commits hundreds, if not thousands, of serious offenses (robbery, assault, etc.) a year, unless the intensive masterfully evade apprehension. Such deftness is unlikely to be the rule when one considers the profile of the prototypical "intensive" presented to us by Rand—a person whose family of origin was marred by instability, who has had a history of violence by the age of 16, has
TABLE 14

THE CHARACTERISTICS OF ONE AND TWO-TIME OFFENDERS

<table>
<thead>
<tr>
<th>Nature of the Charge</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Homicide</td>
<td>13</td>
</tr>
<tr>
<td>Rape</td>
<td>5</td>
</tr>
<tr>
<td>Robbery</td>
<td>6</td>
</tr>
<tr>
<td>Felonious Assault</td>
<td>17</td>
</tr>
<tr>
<td>Weapons</td>
<td>3</td>
</tr>
<tr>
<td>Fugitive</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nature of First Charge</th>
<th>Number of Cases</th>
<th>Nature of Second Charge</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Homicide</td>
<td>4</td>
<td>Criminal Homicide</td>
<td>13</td>
</tr>
<tr>
<td>Rape</td>
<td>5</td>
<td>Rape</td>
<td>8</td>
</tr>
<tr>
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<td>21</td>
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</tr>
<tr>
<td>Felonious Assault</td>
<td>20</td>
<td>Felonious Assault</td>
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<tr>
<td>Other Assault</td>
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</tr>
<tr>
<td>Burglary</td>
<td>2</td>
<td>Burglary</td>
<td>2</td>
</tr>
<tr>
<td>Larceny</td>
<td>4</td>
<td>Larceny</td>
<td>2</td>
</tr>
<tr>
<td>Gambling</td>
<td>1</td>
<td>Gambling</td>
<td>3</td>
</tr>
<tr>
<td>Driving Under Influence</td>
<td>3</td>
<td>Driving Under Influence</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>Other</td>
<td>21</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>86</strong></td>
<td><strong>TOTAL</strong></td>
<td><strong>86</strong></td>
</tr>
</tbody>
</table>
TABLE 15

A COMPARISON OF THE CAREER CRIMINAL ACTIVITY OF OFFENDERS
ON THE BASIS OF THE NATURE OF THEIR FIRST ADULT ARREST

<table>
<thead>
<tr>
<th>Nature of First Adult Arrest</th>
<th>Number of Cases</th>
<th>Total Number of Arrests</th>
<th>Mean Number of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robbery, Burglary or Larceny</td>
<td>313</td>
<td>2878</td>
<td>9.19</td>
</tr>
<tr>
<td>Homicide, Rape or Felonious Assault</td>
<td>177</td>
<td>926</td>
<td>5.23</td>
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<tr>
<td>All Offenders</td>
<td>959</td>
<td>8203</td>
<td>8.55</td>
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</table>
## TABLE 16
THE CHARACTERISTICS OF OFFENDERS WITH EXACTLY THREE ARRESTS

<table>
<thead>
<tr>
<th>Nature of Charge</th>
<th>1st Charge</th>
<th>2nd Charge</th>
<th>3rd Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Homicide</td>
<td>3</td>
<td>7</td>
<td>12</td>
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<tr>
<td>Rape</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Robbery</td>
<td>8</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Felonious Assault</td>
<td>14</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Other Assault</td>
<td>12</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Burglary</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Larceny</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Auto Theft</td>
<td>6</td>
<td>4</td>
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<tr>
<td>Gambling</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Driving Under Influence</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Intoxication</td>
<td>3</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Traffic</td>
<td>9</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Non-Support</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>99</strong></td>
<td><strong>99</strong></td>
<td><strong>99</strong></td>
</tr>
</tbody>
</table>
been chronically unemployed and has exhibited a continuing pattern of multiple drug use (including hard drugs) from an early age. Thus, there is every reason to believe that there is a large group of moderately active offenders whose contribution to crime is sufficient to seriously undermine incapacitation policies oriented primarily toward the most active groups. Further problems for an incapacitation strategy are posed by the type of offenses committed by occasional as opposed to highly active offenders. Table 14 illustrates the characteristics of the 45 one-time arrestees in the sample. These offenses could not be prevented by incapacitation due to a lack of a previous recorded offense for these offenders. Thirty-five of these offenders committed violent index offenses involving personal injury or death (criminal homicide, rape and felonious assault), indicating these are often out-of-character "crimes of passion." Despite the fact that about one-third of all first arrests for the sample were for robbery, burglary, or larceny (Table 15), only six offenses involving property (robbery) can be found among those arrested only once.

Tables 14 and 16 also display the offenses found most frequently to characterize those arrested two and three times. A similar picture prevails, with violent personal crimes being over-represented and property crimes under-represented. Also strongly represented among two and three-time offenders are offenses against public order and
morality such as gambling, driving under the influence, intoxication, traffic and non-support. These findings would therefore appear to support the conventional wisdom that those tending toward violent crimes are generally less criminally active than property offenders. Table 15 bears this out as those beginning their adult careers with robbery, burglary or larceny are destined to have almost twice the number of arrests as those beginning with an arrest for homicide, rape or felonious assault. If this is the case, the policy-maker has a moral dilemma—whether to focus on the occasional or situationally induced violent offender on one hand or on the more active but less harmful (although certainly not innocuous) property-oriented offender. If primary attention is devoted to the protection of life and limb, then the first category cannot be disregarded; if it is upon producing the most impressive results on a crime prevention balance sheet, then the appropriate focus should be the latter group. The present tilt of incapacitation proponents is in this second direction.

THE DEGREE OF OFFENDER SPECIALIZATION

In confirmation of the findings of many other longitudinal studies, a substantial amount of offender crime switching was observed. Table 17 shows the 15 offense patterns which appeared most frequently in the records of the 959 offenders. Some offense categories were merged as
### TABLE 17

**THE PROBABILITY OF SELECTED OFFENSE PAIRS APPEARING TOGETHER IN A CRIMINAL CAREER**

<table>
<thead>
<tr>
<th></th>
<th>Homicide</th>
<th>Rape</th>
<th>Robbery</th>
<th>Assault</th>
<th>Weapons</th>
<th>Burglary</th>
<th>Larceny</th>
<th>Auto-Theft</th>
<th>Forgery</th>
<th>Gambling</th>
<th>Traffic</th>
<th>Alcohol/Drugs</th>
<th>Disorderly</th>
<th>Parole</th>
<th>Non-Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Homicide</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>Rape</td>
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<td>.63</td>
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<td>.47</td>
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<tr>
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<td>.38</td>
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<td>Alcohol/Drugs</td>
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<td>.20</td>
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<td>.45</td>
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<td>.81</td>
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<td>.13</td>
<td>.157</td>
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<tr>
<td>Non-Support</td>
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<td>.71</td>
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<td>.42</td>
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<td>.19</td>
<td>.43</td>
<td>.68</td>
<td>.27</td>
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<td>.11</td>
<td>.34</td>
<td>.27</td>
<td>.13</td>
<td>.16</td>
<td>.11</td>
</tr>
</tbody>
</table>

**Number of Instant Offenses**
- 160
- 86
- 264
- 337
- 81
- 7
- 4
- 2
- 1
- 1
- 1

**Percent of Instant Offenses**
- .17
- .09
- .28
- .35
- .08
- .01
- .00
- .00
- .00
- .00
- .00
the objective was to determine changes in behavior patterns rather than merely changes in the legal designations of offenses. Thus, felonious and other assaults were merged, as were alcohol and drug-related offenses. As such, offense switching was technically more prevalent than indicated in the matrix presented in Table 17. To the extent that only officially recorded arrests are considered the results obtained substantially underestimate the true diversification of the offenders.

The cells of the matrix in Table 17 contain the conditional probabilities of the appearance in a criminal career of each type of offense at the head of the columns given the presence of an offense heading each row. The diagonal contains the number of cases in which at least one offense of that category appeared. Thus, in the first row, the diagonal value indicates that 215 persons in the sample had at least one homicide on record. Looking back at Table 4 we can see that the cumulative number of homicide incidents for the sample was 234. Thus, several persons had committed more than one homicide. For this analysis, this fact was irrelevant as the concern was to determine the likelihood of an offender committing any one of the 15 types of offenses given the fact he had committed any one of the other 14. In the second cell of the first row, for example, the value of .11 refers to the probability that an offender committing a homicide at some point in his career will or
has also committed a rape—the order of occurrence is not considered. This probability is obtained by determining the number of offenders with at least one homicide arrest (215) and searching their criminal records to determine how many have also been arrested for rape. In the first cell of the second row, the reverse is examined—the number of homicide offenders among the 178 rape offenders.

The probabilities presented in the matrix must be viewed in relation to the probabilities expected by the manner in which the sample was drawn and the incidence of these offenses within the sample. Homicide, for example, was the instant offense in 160 cases, or 17% of the sample, so the appearance of a homicide in about one-fifth of the careers of assault, auto theft and other offenders is not surprising; rather, it is to be expected. What one must look for in each column are probabilities well in excess of that expected according to the distribution of the instant offenses. Also listed at the bottom of the matrix are the proportion of cases in which each offense group appeared. Figures in the cells exceeding these proportions are especially meaningful.

The offense appearing most often in a criminal career was assault. Sixty-eight percent of the sample was arrested at least once for assault, 43% at least once for robbery, 37% for larceny, 36% for burglary, 34% for traffic offenses, 27% for alcohol or drug-related offenses, 27% for weapons
offenses, and so on. Although about two-thirds of the offenders had at some point committed an assault, about one-third of the sample (35%) was drawn on the basis of the commission of an assault. Thus, one must attend to the discrepancy between the proportion of cases in which an offense appeared and the proportion expected on the basis of the number of times that offense served to include a case in the sample. In the case of assault, about one-half of cases not included in the sample for an assault still had at least one assault on record. Larceny, burglary and traffic offenses each appeared in over one-third of the offenders' histories despite the fact that, taken together, they accounted for only 1% of the instant offenses. Over one-quarter of the sample had an alcohol or drug-related offense on record and over one-fifth an auto theft even though neither of these offenses was represented among the instant offenses. Other offenses appearing considerably more often than expected according to the nature of the instant offenses were alcohol/drugs, auto theft and weapons. It is also noteworthy that, excluding those selected for inclusion due to a rape offense, over 10% of the entire sample had at some point been arrested for a rape.

A closer analysis of the crime combinations committed by our offenders shows the diversity of their behavior and their lack of amenability to simple classification schemes. In the first column, only those arrested for gambling
offenses are considerably more likely to commit a homicide than one would expect according to the base rate of homicide in the sample. Least likely to have a homicide on record are rape offenders. Most likely to commit rape are those arrested for disorderly conduct, followed surprisingly by those committing the property offenses of burglary, auto theft and larceny. Least likely to commit rape is, interestingly, the homicide offender. Most likely to commit robbery are parole violators, forgers, followed by those committing burglary, larceny and auto theft. Least likely to commit robbery are, again, homicide offenders. Most likely to commit assault are those arrested for disorderly conduct, traffic, alcohol/drugs and gambling offenses. Least likely to commit assault are those committing robbery. Those most likely to commit weapons offenses are those arrested for disorderly conduct and alcohol/drugs followed by larceny, burglary and auto theft. Rape offenders are least likely to commit weapons offenses. Those most likely to commit burglary are larceny, auto theft and forgery offenders, as well as parole violators. Least likely to commit burglary are homicide offenders. Most likely to commit larceny are forgery, burglary, auto theft and weapons offenders, as well as parole violators. Homicide offenders are least likely to commit larceny. Most likely to commit auto theft are forgery, burglary and larceny offenders and parole violators. Least likely to commit auto theft are
homicide and gambling offenders. Most likely to commit forgery are auto theft, larceny and burglary offenders; least likely are homicide offenders. Those most likely to commit traffic offenses are alcohol/drugs and auto theft offenders and those arrested for disorderly conduct; least likely are rape offenders. Most likely to commit alcohol or drug violations are weapons and traffic offenders and those arrested for disorderly conduct; least likely are homicide offenders. Most likely to commit disorderly conduct violations are alcohol/drugs and weapons offenders; least likely are homicide offenders. Most likely to violate parole are forgery, auto theft, burglary, robbery and larceny offenders; least likely are homicide and gambling offenders. Although no type of offender has a likelihood of being arrested for gambling offenses or non-support well in excess of the base rate of these offenses in the sample, most likely to commit both were those arrested for disorderly conduct. The matrix in Table 18 highlights the most probable offense combinations.

The table shows that, aside from non-support and gambling offenses, the only offenses never appearing as very likely in a criminal career are homicide and rape with the exception, of course, of those offenders selected for the sample on the basis of their commission of these offenses. Moreover, homicide offenders are unlikely to commit rape and vice-versa; thus, these can be set apart from one another. Although there is a tendency of homicide and rape offenders
TABLE 1B

THE MOST LIKELY OFFENSE COMBINATIONS

<table>
<thead>
<tr>
<th></th>
<th>Homicide</th>
<th>Rape</th>
<th>Robbery</th>
<th>Assault</th>
<th>Weapons</th>
<th>Burglary</th>
<th>Larceny</th>
<th>Auto-Theft</th>
<th>Forcery</th>
<th>Gambling</th>
<th>Traffic</th>
<th>Alcohol/Drugs</th>
<th>Disorderly</th>
<th>Parole</th>
<th>Non-Violent</th>
<th>Support</th>
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<tr>
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<tr>
<td>Disorderly</td>
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<tr>
<td>Violation</td>
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</tr>
<tr>
<td>Non-Violent</td>
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<tr>
<td>Support</td>
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</tr>
</tbody>
</table>
to be more specialized (which in a large measure is due to their lower number of arrests), this is only a matter of degree relative to other offenders. Looking across the rows of the first matrix (Table 17), one can observe that more than one-half of both homicide and rape offenders have been arrested for assault and, in a surprising proportion of cases, both types of offenders committed property offenses. Assault, which has a high frequency of occurrence for all offenders, conforms to the aforementioned two personal violent crimes in that assault offenders do not have an inordinately high probability of committing any other type of offense, thereby separating them from other offenders.

Although many combinations of offenses appear, two clusters are most salient. The first cluster suggests the existence of a polymorphous property offender who often interchangeably commits burglary, larceny, auto theft, robbery, forgery and weapons offenses and is the type most likely to violate parole. This is suggestive of a generalized antisocial type. Persons tending toward the commission of these crimes are the most criminally active in the sample.

The second principal offense cluster suggests the existence of a more reckless, emotionally unstable offender who often commits a combination of alcohol/drug, traffic and public order offenses as well as assault. This type of offender might be most appropriately described in psychiatric terms as having an "inadequate personality."³
THE VELOCITY OF OFFENDING

Velocity is based on the spacing or intervals between offenses and, as such, is an indicator of the rate of an offender's criminal activity. An understanding of the pattern of velocity for different offenders can provide clues in relation to the timing of recidivism.

Table 19 shows the distribution of velocity for all offense pairs (successive offenses) committed by the sample. Close to one-half of all arrests were followed by another arrest within one year (calendar time), where another arrest did occur. Two-thirds of arrests were followed by another within two years where another arrest occurred. The number of cases decreases gradually as one moves to larger intervals. Nevertheless, over 10% of the intervals exceeded five years. Such large gaps between arrests may be due to institutional confinement, a low rate of detection of active offenders or in some cases, the episodic nature of offender behavior.

Table 20 illustrates the relationship between offender velocity and year of birth. Here again, a generally increasing level of activity can be observed from the earlier to later cohorts. Whereas offenders born in 1915 averaged over four years of street time (taking into account time in confinement) between arrests, by the late 30's offenders
### Table 19

**The Length of the Intervals Between Arrests**

<table>
<thead>
<tr>
<th>Calendar Time Between Arrests</th>
<th>Number of Intervals</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>.0 - .3</td>
<td>2084</td>
<td>28.8%</td>
</tr>
<tr>
<td>.4 - .6</td>
<td>893</td>
<td>12.4%</td>
</tr>
<tr>
<td>.7 - .9</td>
<td>621</td>
<td>8.5%</td>
</tr>
<tr>
<td>1.0 - 1.2</td>
<td>477</td>
<td>6.6%</td>
</tr>
<tr>
<td>1.3 - 1.5</td>
<td>379</td>
<td>5.3%</td>
</tr>
<tr>
<td>1.6 - 1.8</td>
<td>314</td>
<td>4.4%</td>
</tr>
<tr>
<td>1.9 - 2.10</td>
<td>262</td>
<td>3.7%</td>
</tr>
<tr>
<td>2.20 - 2.4</td>
<td>233</td>
<td>3.2%</td>
</tr>
<tr>
<td>2.5 - 2.7</td>
<td>221</td>
<td>3.1%</td>
</tr>
<tr>
<td>2.8 - 3.0</td>
<td>170</td>
<td>2.3%</td>
</tr>
<tr>
<td>3.1 - 3.3</td>
<td>151</td>
<td>2.1%</td>
</tr>
<tr>
<td>3.3 - 3.6</td>
<td>160</td>
<td>2.2%</td>
</tr>
<tr>
<td>3.7 - 3.9</td>
<td>120</td>
<td>1.6%</td>
</tr>
<tr>
<td>4.0 - 4.2</td>
<td>100</td>
<td>1.4%</td>
</tr>
<tr>
<td>4.3 - 4.5</td>
<td>118</td>
<td>1.6%</td>
</tr>
<tr>
<td>4.6 - 4.8</td>
<td>84</td>
<td>1.2%</td>
</tr>
<tr>
<td>4.9 - 5.1</td>
<td>75</td>
<td>1.0%</td>
</tr>
<tr>
<td>5.2 - 28.5</td>
<td>782</td>
<td>10.8%</td>
</tr>
</tbody>
</table>
## TABLE 20

THE VELOCITY OF OFFENDING BY BIRTH COHORT

<table>
<thead>
<tr>
<th>Year of Birth</th>
<th>Mean Street Time to a Subsequent Offense (In Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1915</td>
<td>4.35</td>
</tr>
<tr>
<td>1916</td>
<td>2.15</td>
</tr>
<tr>
<td>1917</td>
<td>2.70</td>
</tr>
<tr>
<td>1918</td>
<td>1.86</td>
</tr>
<tr>
<td>1919</td>
<td>2.19</td>
</tr>
<tr>
<td>1920</td>
<td>2.45</td>
</tr>
<tr>
<td>1921</td>
<td>2.21</td>
</tr>
<tr>
<td>1922</td>
<td>1.65</td>
</tr>
<tr>
<td>1923</td>
<td>1.73</td>
</tr>
<tr>
<td>1924</td>
<td>2.53</td>
</tr>
<tr>
<td>1925</td>
<td>2.11</td>
</tr>
<tr>
<td>1926</td>
<td>1.82</td>
</tr>
<tr>
<td>1927</td>
<td>1.73</td>
</tr>
<tr>
<td>1928</td>
<td>1.66</td>
</tr>
<tr>
<td>1929</td>
<td>2.26</td>
</tr>
<tr>
<td>1930</td>
<td>1.45</td>
</tr>
<tr>
<td>1931</td>
<td>1.28</td>
</tr>
<tr>
<td>1932</td>
<td>1.55</td>
</tr>
<tr>
<td>1933</td>
<td>1.52</td>
</tr>
<tr>
<td>1934</td>
<td>1.63</td>
</tr>
<tr>
<td>1935</td>
<td>1.60</td>
</tr>
<tr>
<td>1936</td>
<td>1.02</td>
</tr>
<tr>
<td>1937</td>
<td>.94</td>
</tr>
<tr>
<td>1938</td>
<td>1.18</td>
</tr>
<tr>
<td>1939</td>
<td>1.36</td>
</tr>
<tr>
<td>1940</td>
<td>.87</td>
</tr>
<tr>
<td>1941</td>
<td>1.06</td>
</tr>
<tr>
<td>1942</td>
<td>1.23</td>
</tr>
</tbody>
</table>
tended to be re-arrested about every 12 months that they were at liberty up to the point of desistance.

Table 21 shows the relationship between velocity and the age of an offender. For both the calendar and street time measures there appears to be a gradual decline in the magnitude of the intervals between arrests with age, indicating that the velocity of offending may increase as one gets older. This trend appears more precipitous when the calendar time measure is used. This can be explained by the fact that the intervals are inflated at younger ages. Looking at the discrepancy between the calendar and street time measures, one can observe that there is usually at least a six-month difference from the ages of 18 to the late 20's. Toward the later ages the two measures become quite similar. This indicates that at older ages disregarding time in confinement (which the calendar time measure does) does not produce significant errors due to the negligible institutional time served. This apparent inverse relationship between age and the severity of sentences may be confounded by, among other things, the possibility of a lessening seriousness of conduct with age.

We thus have two startling findings. The first is that the rate of criminal activity appears to accelerate with age which is contrary to most contemporary pronouncements on the maturation/burn-out hypothesis (Chapters Three and Four). The second observation is that older offenders
<table>
<thead>
<tr>
<th>Age at Arrest</th>
<th>Mean Calendar Time to a Subsequent Arrest</th>
<th>Mean Street Time to a Subsequent Arrest</th>
</tr>
</thead>
<tbody>
<tr>
<td>-18</td>
<td>3.26</td>
<td>2.71</td>
</tr>
<tr>
<td>18</td>
<td>2.28</td>
<td>1.66</td>
</tr>
<tr>
<td>19</td>
<td>2.47</td>
<td>1.72</td>
</tr>
<tr>
<td>20</td>
<td>2.52</td>
<td>1.84</td>
</tr>
<tr>
<td>21</td>
<td>2.66</td>
<td>1.96</td>
</tr>
<tr>
<td>22</td>
<td>2.45</td>
<td>1.93</td>
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<tr>
<td>23</td>
<td>1.96</td>
<td>1.42</td>
</tr>
<tr>
<td>24</td>
<td>2.04</td>
<td>1.52</td>
</tr>
<tr>
<td>25</td>
<td>2.06</td>
<td>1.62</td>
</tr>
<tr>
<td>26</td>
<td>1.84</td>
<td>1.35</td>
</tr>
<tr>
<td>27</td>
<td>1.98</td>
<td>1.53</td>
</tr>
<tr>
<td>28</td>
<td>2.12</td>
<td>1.68</td>
</tr>
<tr>
<td>29</td>
<td>2.00</td>
<td>1.57</td>
</tr>
<tr>
<td>30</td>
<td>1.97</td>
<td>1.54</td>
</tr>
<tr>
<td>31</td>
<td>1.70</td>
<td>1.39</td>
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<tr>
<td>32</td>
<td>1.98</td>
<td>1.67</td>
</tr>
<tr>
<td>33</td>
<td>2.15</td>
<td>1.72</td>
</tr>
<tr>
<td>34</td>
<td>1.79</td>
<td>1.48</td>
</tr>
<tr>
<td>35</td>
<td>1.96</td>
<td>1.63</td>
</tr>
<tr>
<td>36</td>
<td>2.06</td>
<td>1.67</td>
</tr>
<tr>
<td>37</td>
<td>1.58</td>
<td>1.32</td>
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<td>38</td>
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<tr>
<td>39</td>
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<td>1.78</td>
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<tr>
<td>41</td>
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<tr>
<td>42</td>
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<td>1.49</td>
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<tr>
<td>43</td>
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<tr>
<td>44</td>
<td>1.78</td>
<td>1.59</td>
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<tr>
<td>45</td>
<td>1.07</td>
<td>.81</td>
</tr>
<tr>
<td>46</td>
<td>.96</td>
<td>.86</td>
</tr>
<tr>
<td>47</td>
<td>1.11</td>
<td>1.06</td>
</tr>
<tr>
<td>47+</td>
<td>1.38</td>
<td>1.09</td>
</tr>
</tbody>
</table>
are dealt with in a less punitive fashion than more youthful offenders. This contradicts the finding that punishment becomes progressively more severe as offenders age and accumulate a lengthier criminal record. These findings may be, at least partly, spurious due to possible sampling biases and methodological artifacts, some of which may be inherent in all longitudinal studies. These issues will be discussed in Chapter Eight.

Table 22 examines the relationship between velocity and offense sequence number and yields similar conclusions. Again a strong linear positive correlation exists between the length of a career and velocity. Thus, the more arrests one has the more rapidly an arrest tends to be followed by another arrest. Also, time in confinement tends to decrease with the length of a career as indicated by the near coincidence of calendar and street time from about the 20th arrest. At face value, these figures tell us that the rate of offending accelerates with the progress of a career while, paradoxically, punishments imposed decline in severity.

Tables 23, 24 and 25 illustrate the relationship between velocity and race, drug and alcohol use, respectively. Despite the disproportionate number of nonwhite offenders in our sample relative to their representation in the civilian population of Franklin County and despite the fact that they average about one more offense than the white offenders in our sample, the velocity of offending for the two racial
### TABLE 22

**THE VELOCITY OF OFFENDING BY OFFENSE SEQUENCE NUMBER**

<table>
<thead>
<tr>
<th>Offense Sequence Number</th>
<th>Number of Intervals</th>
<th>Mean Calendar Time to Subsequent Offense (In Years)</th>
<th>Mean Street Time to Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>914</td>
<td>3.26</td>
<td>2.73</td>
</tr>
<tr>
<td>2</td>
<td>828</td>
<td>2.72</td>
<td>2.15</td>
</tr>
<tr>
<td>3</td>
<td>729</td>
<td>2.55</td>
<td>2.03</td>
</tr>
<tr>
<td>4</td>
<td>641</td>
<td>2.38</td>
<td>1.92</td>
</tr>
<tr>
<td>5</td>
<td>559</td>
<td>2.03</td>
<td>1.47</td>
</tr>
<tr>
<td>6</td>
<td>492</td>
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</tr>
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<td>7</td>
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<td>1.25</td>
</tr>
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<td>8</td>
<td>375</td>
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<td>1.21</td>
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<tr>
<td>9</td>
<td>323</td>
<td>1.66</td>
<td>1.23</td>
</tr>
<tr>
<td>10</td>
<td>274</td>
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<td>11</td>
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</tr>
<tr>
<td>12</td>
<td>200</td>
<td>1.33</td>
<td>1.07</td>
</tr>
<tr>
<td>13</td>
<td>171</td>
<td>1.24</td>
<td>.95</td>
</tr>
<tr>
<td>14</td>
<td>146</td>
<td>1.05</td>
<td>.81</td>
</tr>
<tr>
<td>15</td>
<td>127</td>
<td>1.08</td>
<td>.91</td>
</tr>
<tr>
<td>16</td>
<td>111</td>
<td>.99</td>
<td>.84</td>
</tr>
<tr>
<td>17</td>
<td>93</td>
<td>1.12</td>
<td>.84</td>
</tr>
<tr>
<td>18</td>
<td>79</td>
<td>.88</td>
<td>.71</td>
</tr>
<tr>
<td>19</td>
<td>65</td>
<td>1.10</td>
<td>.93</td>
</tr>
<tr>
<td>20</td>
<td>53</td>
<td>.87</td>
<td>.80</td>
</tr>
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</tr>
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<td>.89</td>
<td>.87</td>
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<td>.45</td>
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<td>.44</td>
</tr>
<tr>
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<td>14</td>
<td>.55</td>
<td>.55</td>
</tr>
</tbody>
</table>

(cont'd)
TABLE 22 (cont'd)

<table>
<thead>
<tr>
<th>Offense Sequence Number</th>
<th>Number of Intervals</th>
<th>Mean Calendar Time to Subsequent Offense (In Years)</th>
<th>Mean Street Time to Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>12</td>
<td>.69</td>
<td>.69</td>
</tr>
<tr>
<td>32</td>
<td>10</td>
<td>.66</td>
<td>.43</td>
</tr>
<tr>
<td>33</td>
<td>10</td>
<td>.82</td>
<td>.69</td>
</tr>
<tr>
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<td>.77</td>
<td>.77</td>
</tr>
<tr>
<td>35</td>
<td>9</td>
<td>.43</td>
<td>.39</td>
</tr>
<tr>
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<td>9</td>
<td>.58</td>
<td>.58</td>
</tr>
<tr>
<td>37</td>
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<td>38</td>
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<td>.34</td>
</tr>
<tr>
<td>40</td>
<td>6</td>
<td>1.63</td>
<td>1.21</td>
</tr>
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<td>5</td>
<td>.13</td>
<td>.11</td>
</tr>
<tr>
<td>42</td>
<td>4</td>
<td>1.24</td>
<td>.63</td>
</tr>
<tr>
<td>43</td>
<td>4</td>
<td>2.46</td>
<td>1.86</td>
</tr>
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<td>4</td>
<td>.59</td>
<td>.20</td>
</tr>
<tr>
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<td>3</td>
<td>.37</td>
<td>.37</td>
</tr>
<tr>
<td>46</td>
<td>1</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>47</td>
<td>1</td>
<td>.73</td>
<td>.73</td>
</tr>
</tbody>
</table>
### TABLE 23

**THE VELOCITY OF OFFENDING BY RACE**

<table>
<thead>
<tr>
<th>Race</th>
<th>Mean Calendar Time to Subsequent Offense (In Years)</th>
<th>Mean Street Time to Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2.06</td>
<td>1.60</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>2.04</td>
<td>1.63</td>
</tr>
</tbody>
</table>
### TABLE 24

**THE VELOCITY OF OFFENDING BY DRUG HISTORY**

<table>
<thead>
<tr>
<th>Drug History</th>
<th>Mean Calendar Time to Subsequent Offense (In Years)</th>
<th>Mean Street Time to Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1.40</td>
<td>1.06</td>
</tr>
<tr>
<td>No or Don't Know</td>
<td>2.15</td>
<td>1.70</td>
</tr>
</tbody>
</table>
## TABLE 25

THE VELOCITY OF OFFENDING BY DRINKING HISTORY

<table>
<thead>
<tr>
<th>Drinking History</th>
<th>Mean Calendar Time to Subsequent Offense (In Years)</th>
<th>Mean Street Time to Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1.79</td>
<td>1.47</td>
</tr>
<tr>
<td>No or Don't Know</td>
<td>2.32</td>
<td>1.78</td>
</tr>
</tbody>
</table>
groups is almost identical. Drug and alcohol use, on the other hand, do seem to substantially increase the rate of criminal activity.

**THE SERIOUSNESS OF OFFENSES**

The distribution of all 8203 offenses is displayed in Table 26 on the basis of the scale of offense seriousness explained in Appendix B. Most of the offenses are located at the lower end of the scale. Specifically, over 50% have a value of 63 or less. Thus, although the sample was selected on the basis of serious offenses, most of the arrests are more innocuous.

Table 27 shows the average seriousness score of seven successive sets of birth cohorts. A gradual progression toward the commission of more serious acts is observed from the most temporally remote to the most recent cohorts.

The relationship between the age of offenders and the gravity of their offenses does not show such linearity (Table 26). A bimodal distribution can be observed with the charges, on the average, being more serious between the ages of 18 and 21 (inclusive) and between 28 and the mid-30's than at other ages. From the mid-30's there is a noticeable decline in the average seriousness of offenses, although offenses committed over 47 years of age tend to be more serious than for any other age group. Also interesting is the observation that offenses prior to the age of 18 are
TABLE 26

THE SERIOUSNESS OF OFFENSES

<table>
<thead>
<tr>
<th>Offense Seriousness Scores</th>
<th>Number of Arrests</th>
<th>% of Arrests</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2213</td>
<td>27.0</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>0.0</td>
</tr>
<tr>
<td>31</td>
<td>838</td>
<td>10.0</td>
</tr>
<tr>
<td>38</td>
<td>19</td>
<td>0.2</td>
</tr>
<tr>
<td>63</td>
<td>1173</td>
<td>14.3</td>
</tr>
<tr>
<td>75</td>
<td>12</td>
<td>0.1</td>
</tr>
<tr>
<td>83</td>
<td>188</td>
<td>2.3</td>
</tr>
<tr>
<td>88</td>
<td>419</td>
<td>5.1</td>
</tr>
<tr>
<td>125</td>
<td>894</td>
<td>10.9</td>
</tr>
<tr>
<td>150</td>
<td>11</td>
<td>0.1</td>
</tr>
<tr>
<td>175</td>
<td>69</td>
<td>0.8</td>
</tr>
<tr>
<td>238</td>
<td>1166</td>
<td>14.2</td>
</tr>
<tr>
<td>350</td>
<td>11</td>
<td>0.1</td>
</tr>
<tr>
<td>363</td>
<td>257</td>
<td>3.1</td>
</tr>
<tr>
<td>451</td>
<td>707</td>
<td>8.6</td>
</tr>
<tr>
<td>1025</td>
<td>234</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8203</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Year of Birth</td>
<td>Number of Arrests</td>
<td>Mean Seriousness Score</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>1915-1918</td>
<td>597</td>
<td>130.95</td>
</tr>
<tr>
<td>1919-1922</td>
<td>1013</td>
<td>131.60</td>
</tr>
<tr>
<td>1923-1926</td>
<td>1251</td>
<td>145.88</td>
</tr>
<tr>
<td>1927-1930</td>
<td>1359</td>
<td>150.12</td>
</tr>
<tr>
<td>1931-1934</td>
<td>1139</td>
<td>149.19</td>
</tr>
<tr>
<td>1935-1938</td>
<td>1458</td>
<td>153.26</td>
</tr>
<tr>
<td>1939-1942</td>
<td>1386</td>
<td>162.76</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8203</td>
<td>148.36</td>
</tr>
<tr>
<td>Age at Arrest</td>
<td>Number of Arrests</td>
<td>The Mean Seriousness of Offenses</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>-18</td>
<td>248</td>
<td>132.91</td>
</tr>
<tr>
<td>18</td>
<td>305</td>
<td>166.27</td>
</tr>
<tr>
<td>19</td>
<td>243</td>
<td>162.12</td>
</tr>
<tr>
<td>20</td>
<td>283</td>
<td>163.39</td>
</tr>
<tr>
<td>21</td>
<td>308</td>
<td>167.79</td>
</tr>
<tr>
<td>22</td>
<td>341</td>
<td>147.56</td>
</tr>
<tr>
<td>23</td>
<td>332</td>
<td>153.67</td>
</tr>
<tr>
<td>24</td>
<td>308</td>
<td>149.56</td>
</tr>
<tr>
<td>25</td>
<td>355</td>
<td>141.46</td>
</tr>
<tr>
<td>26</td>
<td>369</td>
<td>143.21</td>
</tr>
<tr>
<td>27</td>
<td>335</td>
<td>126.82</td>
</tr>
<tr>
<td>28</td>
<td>322</td>
<td>155.08</td>
</tr>
<tr>
<td>29</td>
<td>335</td>
<td>157.51</td>
</tr>
<tr>
<td>30</td>
<td>377</td>
<td>156.83</td>
</tr>
<tr>
<td>31</td>
<td>315</td>
<td>146.25</td>
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<tr>
<td>32</td>
<td>375</td>
<td>173.45</td>
</tr>
<tr>
<td>33</td>
<td>351</td>
<td>153.02</td>
</tr>
<tr>
<td>34</td>
<td>300</td>
<td>161.60</td>
</tr>
<tr>
<td>35</td>
<td>266</td>
<td>122.51</td>
</tr>
<tr>
<td>36</td>
<td>249</td>
<td>156.40</td>
</tr>
<tr>
<td>37</td>
<td>254</td>
<td>138.04</td>
</tr>
<tr>
<td>38</td>
<td>197</td>
<td>136.11</td>
</tr>
<tr>
<td>39</td>
<td>167</td>
<td>127.62</td>
</tr>
<tr>
<td>40</td>
<td>167</td>
<td>115.34</td>
</tr>
<tr>
<td>41</td>
<td>138</td>
<td>148.88</td>
</tr>
<tr>
<td>42</td>
<td>154</td>
<td>112.53</td>
</tr>
<tr>
<td>43</td>
<td>144</td>
<td>143.56</td>
</tr>
<tr>
<td>44</td>
<td>109</td>
<td>125.76</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
<td>108.90</td>
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<tr>
<td>46</td>
<td>92</td>
<td>86.29</td>
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<tr>
<td>47</td>
<td>86</td>
<td>138.19</td>
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<tr>
<td>47+</td>
<td>288</td>
<td>180.75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8203</td>
<td>148.36</td>
</tr>
</tbody>
</table>
markedly lower in seriousness than those in the young adult period of 18-21.

Looking at offense seriousness as the criminal career advances—that is, by offense sequence number—one can observe a general decline in the average seriousness of offenses from the first arrests through to the 20th and beyond for those continuing to accumulate a record (Table 29). Starting at about the 25th arrest there is considerable instability in the average seriousness scores when successive arrests are compared due, in large part, to the small number of people still active at these stages. The high average seriousness of offenses in the first several arrests can probably be attributed to the high proportion of violent index offenses committed at this stage of a career. Occasionally, these are the only arrests an offender had. Referring back to Tables 14 and 16, we can observe that a disproportionate number of arrests for one, two and three-time offenders were homicide, rape and felonious assaults. Conversely, a disproportionate number of later arrests are for non-violent property and public order offenses.

Tables 30, 31 and 32, respectively, display the relationships between race, drug and alcohol consumption and offense seriousness. Nonwhites were on the average charged with slightly more serious offenses than were whites. Those with either a known drug history or a history of alcohol abuse were, interestingly, found to commit less serious
TABLE 29

THE SERIOUSNESS OF OFFENSES BY OFFENSE SEQUENCE NUMBER

<table>
<thead>
<tr>
<th>Offense Sequence Number</th>
<th>Number of Arrests</th>
<th>The Mean Seriousness of Offenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>959</td>
<td>183.71</td>
</tr>
<tr>
<td>2</td>
<td>914</td>
<td>164.61</td>
</tr>
<tr>
<td>3</td>
<td>828</td>
<td>156.10</td>
</tr>
<tr>
<td>4</td>
<td>729</td>
<td>169.67</td>
</tr>
<tr>
<td>5</td>
<td>641</td>
<td>154.63</td>
</tr>
<tr>
<td>6</td>
<td>559</td>
<td>151.35</td>
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<tr>
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<td>171</td>
<td>128.56</td>
</tr>
<tr>
<td>15</td>
<td>146</td>
<td>91.97</td>
</tr>
<tr>
<td>16</td>
<td>127</td>
<td>98.68</td>
</tr>
<tr>
<td>17</td>
<td>111</td>
<td>114.54</td>
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<tr>
<td>18</td>
<td>93</td>
<td>105.77</td>
</tr>
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<td>19</td>
<td>79</td>
<td>111.39</td>
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<td>20</td>
<td>65</td>
<td>96.42</td>
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<td>41</td>
<td>136.93</td>
</tr>
<tr>
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<td>40</td>
<td>192.38</td>
</tr>
<tr>
<td>25</td>
<td>34</td>
<td>68.74</td>
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<tr>
<td>26</td>
<td>31</td>
<td>102.10</td>
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<td>21</td>
<td>100.43</td>
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<td>15</td>
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(cont'd)
<table>
<thead>
<tr>
<th>Offense Sequence Number</th>
<th>Number of Arrests</th>
<th>The Mean Seriousness of Offenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
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<td>95.29</td>
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<td>32</td>
<td>12</td>
<td>119.58</td>
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<td>142.70</td>
</tr>
<tr>
<td>34</td>
<td>10</td>
<td>32.70</td>
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<td>122.11</td>
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<td>36</td>
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<td>25.67</td>
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<tr>
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<td>9</td>
<td>57.67</td>
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<td>48.44</td>
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<td>39</td>
<td>8</td>
<td>136.88</td>
</tr>
<tr>
<td>40</td>
<td>8</td>
<td>58.25</td>
</tr>
<tr>
<td>41</td>
<td>6</td>
<td>81.83</td>
</tr>
<tr>
<td>42</td>
<td>5</td>
<td>146.80</td>
</tr>
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<td>4</td>
<td>113.25</td>
</tr>
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<td>204.00</td>
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<td>45</td>
<td>4</td>
<td>69.50</td>
</tr>
<tr>
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<td>3</td>
<td>30.67</td>
</tr>
<tr>
<td>47</td>
<td>1</td>
<td>2.00</td>
</tr>
<tr>
<td>48</td>
<td>1</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8203</strong></td>
<td><strong>148.36</strong></td>
</tr>
</tbody>
</table>
TABLE 30
THE SERIOUSNESS OF OFFENSES BY RACE

<table>
<thead>
<tr>
<th>Race</th>
<th>Number of Arrests</th>
<th>The Mean Seriousness of Offenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>3558</td>
<td>143.60</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>4645</td>
<td>153.94</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8203</td>
<td>148.36</td>
</tr>
<tr>
<td>Drug History</td>
<td>Number of Arrests</td>
<td>The Mean Seriousness of Offenses</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Yes</td>
<td>1007</td>
<td>135.60</td>
</tr>
<tr>
<td>No or Don't Know</td>
<td>7196</td>
<td>150.14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8203</td>
<td>148.36</td>
</tr>
</tbody>
</table>
### Table 32

#### The Seriousness of Offenses by Drinking History

<table>
<thead>
<tr>
<th>Drinking History</th>
<th>Number of Arrests</th>
<th>The Mean Seriousness of Offenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4055</td>
<td>130.75</td>
</tr>
<tr>
<td>No or Don't Know</td>
<td>4148</td>
<td>165.57</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8203</strong></td>
<td><strong>148.36</strong></td>
</tr>
</tbody>
</table>
offenses on the whole than did those lacking such a history. In the case of those with a history of alcohol abuse, this was probably due to the fact that such persons tended to primarily commit petty public order, traffic offenses and larceny (see Table 17).
REFERENCES


CHAPTER SEVEN
TESTING THE EFFECTS OF COLLECTIVE AND SELECTIVE INCAPACITATION PROGRAMS

In order to assess the potential of incapacitating offenders, we undertook several statistical experiments with our sample of 959 offenders. We sought to determine the number of their offenses that could have been prevented were other policies in place during their criminal careers. We also examined the errors in identification (the false positives) and the additional fiscal expenditures (e.g., additional man-years in prison) that would have resulted from these policies.

COLLECTIVE INCAPACITATION

Collective incapacitation, it will be recalled, refers to the application of identical, determinate sentences to all persons, in a given jurisdiction, convicted of committing a given offense(s). Such policies, therefore, do not attempt to distinguish between persons of differing degrees of dangerousness. Rather, they ensure that all persons committing certain serious crimes are incapacitated for a substantial period of time. If one assumes that the commission
of a serious offense in the past is predictive, to some extent, of similar behavior in the future, then it might be argued that the collective incapacitation of serious offenders can reduce crime over arbitrary sentencing based on intuition and contradictory doctrines. In Chapter Four, we showed, from studies in a number of countries, including the United States, that the prediction of dispositions is a difficult task due to the diverse sentencing criteria used by judges. It can be safely assumed that the offenses committed by our sample, which spanned close to 50 years, were dealt with very differently over time, across different judges and jurisdictions (although most were tried in Ohio). We thus examined the improvement in crime prevention that could have been attained had these people been consistently subject to tough measures for their most serious offenses.

The policy we tested, resembling as it does those prescribed by the revised Ohio Penal Code,$^1$ called for a mandatory five year prison term for the first time commission of an index offense, kidnapping or other offense we have classified as "other violent" (see Appendix A) and a ten-year term for a second such crime. Our policy did not provide for penalties beyond the ten year term as only a small proportion of the sample would have been affected.

We first assumed that all arrests for the targeted offenses could result in a conviction—a necessary assumption given the fact that dispositional information was frequently lacking in the FBI "rap sheets." Such an
assumption serves to substantially overestimate the crime preventive effect of any incapacitation policy. This was acceptable to us, as our objective was to determine the maximum yield of a policy, given the most liberal assumptions.

We also assumed that our policy would not have affected the arrests accumulated by the offenders that were beyond the scope of the penalties. Thus, deterrence or any effect of incarceration other than incapacitation were not considered.

Our procedure involved a separate examination of each offender's criminal career. At the first appearance of a targeted offense, we applied a hypothetical five year prison term. Any offense actually committed within that five year period was counted as one preventable by our policy. We then scanned the offender's record for another targeted offense following the expiration of the hypothetical five year term. For the next such offense, if another one was present, we applied a ten year term and another tally was made of offenses that would have been prevented during that span of time. See Appendix D for our computational procedures using one case as an illustration. We did not proceed beyond the ten year term because, as mentioned, few offenders were still active over 15 years beyond their first targeted offense and of those still active a large proportion were near the study's 1976 termination data. Thus, the effects of a third sentence could not be gauged.
To illustrate this last point, suppose an offender was born in 1938 and committed his first targeted offense in 1958. Our policy calls for his incapacitation up to the same point in 1963. If another targeted offense appeared in 1964, this policy would have him incapacitated through the same date in 1974. The effects of a subsequent targeted offense appearing in 1975 could not be gauged as our monitoring period ended in 1976. The situation was more likely to occur for offenders born later as desistance from crime may not actually have occurred as is assumed in our study. However, these cases were in the minority and could not have substantially altered our findings.

While the improvement in crime prevention brought about by our alternative policy could be gauged, the increases in crime, by some offenders, that may have been produced if this policy was in force rather than the practices actually in force, could not be determined. Thus, where a person was actually incarcerated for a period in excess of that called for in our policy, he may have committed additional offenses under our policy thereby diminishing the net gain of the collective incapacitation policy. This is really the issue of the false positives in relation to the actual sentences imposed. The instances in which actual penalties exceeded the alternative sentencing policy were few but did detract from the yield of the latter to an indeterminable degree. This is why our objective was to identify the
maximum gain possible by such a policy rather than its precise expected gain.

Table 33 summarizes the findings of our collective incapacitation experiment. It indicates that, given our liberal assumptions, 4315 of the 8203 offenses (53%) for which offenders in our sample were arrested could have been averted through the draconian measures called for by our collective incapacitation policy. The maximum yield of this program would, then, have been to reduce the output of offenders from a career average of 8.55 detected offenses to 4.05 offenses, thereby eliminating 4.50 offenses per individual.

The fiscal and human costs of such a policy can be reflected by the additional prison time required for its implementation. All 959 offenders would serve at least one five year term because they were all arrested at least once for an index offense—this was a requirement of their inclusion in our sample. Since all index offenses were targeted by our proposed program, their incarceration for at least five years was guaranteed. The only exception to this would have occurred where an offender committed his first and, perhaps, only targeted offense within five years of December 31, 1976, the study's cut-off date. We would then have reduced his hypothetical prison term to the amount of time he could have served to the end of 1976. Although we found no such case for the five year term, in about 15% of the cases in which the ten year term would have been meted
TABLE 33

A COMPARISON OF THE CRIME PREVENTIVE EFFECTS, PRISON TIME AND FALSE POSITIVES RESULTING FROM THE ACTUAL SENTENCES WITH THOSE PROPOSED IN THE COLLECTIVE INCAPACITATION OF SELECTED OHIO OFFENDERS

<table>
<thead>
<tr>
<th></th>
<th>Actual Policies</th>
<th>C.I.P.(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Offenses</td>
<td>8203</td>
<td>3888</td>
</tr>
<tr>
<td>Mean Number of Offenses per Criminal Career</td>
<td>8.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Mean Prison Time Served (Years)</td>
<td>4.5</td>
<td>10.8</td>
</tr>
<tr>
<td>False Positives - 5 Year Terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Estimate</td>
<td>Unknown</td>
<td>+24.8%</td>
</tr>
<tr>
<td>Conservative Estimate</td>
<td>Unknown</td>
<td>+8.2%</td>
</tr>
<tr>
<td>False Positives - 10 Year Terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Estimate</td>
<td>Unknown</td>
<td>+20.2%</td>
</tr>
<tr>
<td>Conservative Estimate</td>
<td>Unknown</td>
<td>+17.4%</td>
</tr>
</tbody>
</table>

\(^a\)Collective Incapacitation Policy
out, this term could not have been served by the end of 1976. We thus reduced the sentence to the amount of time that could have been served; for, to do otherwise would be prejudicial to the collective incapacitation policy because incapacitation beyond 1976 could not prevent any crime as we had no records beyond that point.

Using the procedures described in Chapter Five to estimate prison terms actually served by our offenders when institutional release dates were unavailable from the FBI files, we compared the amount of time they actually served with that they would have served if our policy had been in place during their entire careers in crime. As Table 33 shows, our collective incapacitation policy would have resulted in about a two and one-half fold increase in prison time served by the 959 offenders. For the average offender, this would have meant an increase from 4.45 years in prison to 10.84 years. This would have been the price for, at the very most, cutting their crime production by one-half.

It may be argued that the preventive effect of our incapacitation policy is underestimated due to the many undetected offenses averted during the additional six and one-half years of confinement. It may be argued as cogently that this is counterbalanced by the higher actual level of criminal activity of these offender while at liberty. It must be remembered that even this harsh incapacitation policy would only remove the average offender from the street for about eleven years. The criminal careers of our offenders
often span over 20 years. Therefore, if it is assumed that offenders are far more active than their arrest records indicate, incapacitating them will likely prevent far more offenses than our calculations show, but will also fail to prevent far more offenses when offenders are free. Further discussion of undetected criminal behavior is reserved for Chapters Eight and Nine.

One further element must be introduced in the context of this trade-off between a 53% reduction in crime (remembering this is absolutely a maximum figure—the actual figure probably being well below that) and a 250% increase in prison man-years allotted in accordance with our tough incapacitation measures. This is the issue of false positives or the number of occasions in which the additional prison time provided for by our policy yielded no additional crime preventive effect over that of the sanctions actually imposed. From a utilitarian perspective, additional imprisonment in these cases is fruitless (discounting possible deterrent effects) and constitutes a needless expenditure of resources. Where incarceration has no practical value and, particularly, where an offense did not involve personal injury or aggravating circumstances, it may also be argued that such incarceration is inhumane.

We thus tallied up all the circumstances in which a five or ten year penalty would have been called for by the incapacitation policy and would have not prevented even one offense over that prevented by the actual penalties to which our
offenders were subject. We made no attempt to ascertain the false positives already resulting from the original sentences. The objective was to determine the additional false positives that could be incurred if our alternative policy was instituted.

A five year prison term was applied exactly once to offenders in the sample (on 959 occasions). A ten year term was applied in about two-thirds of the cases (on 640 occasions). As Table 33 shows, the five year term would have failed to prevent even one recorded offense on 238 occasions or on about one out of every four (24.8%) times it would have been applied. The ten year term would have failed to bear fruit 131 times or on about one of every five occasions (20.2%) it would have been applied. It should be remembered that these ten year terms would not have been completed by the 1976 cut-off date about one-sixth of the time they would have been used.

False positives are always somewhat inflated because the continued criminal activity of an offender occasionally goes undetected. In some of the situations where we identified false positives, this was more likely to have occurred than in others. If an offender receiving a five year term (according to our policy) was not actually re-arrested within the five year period but committed an infraction later on, it might be assumed that he was active but that his behavior was merely undetected during that period. Another possibility would have been that he was actually confined
for that period of time (or a substantial portion of it) and we were unaware of this. Very little could be done in relation to this second possibility.

To ascertain the degree to which undetected criminal behavior inflated the false positives, we recalculated the false positives using more conservative assumptions. Specifically, we counted all the occasions in which the five or ten year terms would have been imposed at the time of the offender's last recorded offense. It is safer to assume that no actual criminal activity followed an offender's final recorded arrest than it is to assume that this was the case during a long interlude between recorded arrests. Tabulating false positives in this way, we found that only 79 of the 929 (8.2%) five year terms prescribed by our policy and 113 of the 649 (17.4%) proposed ten year terms would have been applied without yielding additional crime preventive effects over that produced by the dispositions actually imposed (Table 33). These false positives, it must be remembered, are over and above those resulting from the actual sentences. The low number of false positives for the proposed five year terms in this second calculation reflects the low desistance rates of our offenders after only one or a very few offenses.
SELECTIVE INCAPACITATION

Selective incapacitation is an approach whereby penal measures are based on the projected dangerousness of offenders. Offenders are first classified according to the risk they pose to the public and incapacitative measures (most notably, incarceration) are reserved for high risk individuals. In this way, finite institutional resources can serve to maximize crime preventive effects at the expense of some equity in sentencing. Selective incapacitation policies will be progressively more effective as our ability to identify the most serious offenders (assuming the definition of such offenders is agreed upon) at the earliest possible stages of their criminal careers improves.

Policy A. On the basis of the findings described in Chapter Six, we determined that the best candidates for tough incapacitative measures may be those starting their adult criminal careers with an arrest for robbery, burglary or larceny. Tables 15 and 34 respectively show that these offenders averaged almost twice as many offenses as those beginning with the purely violent crimes of homicide, forcible rape and felonious assault, and were more active than all remaining offenders (including the violent starters) by an average of one offense. A differential of one offense
TOTAL 34

A COMPARISON OF CAREER LEVELS OF CRIMINAL ACTIVITY OF THOSE FIRST ARRESTED FOR SELECTED PROPERTY-ORIENTED OFFENSES WITH ALL OTHER OFFENDERS

<table>
<thead>
<tr>
<th>Nature of First Charge</th>
<th>Number of Cases</th>
<th>Total Arrests</th>
<th>Mean Number of Arrests</th>
<th>Mean Offense Seriousness</th>
<th>Mean Street Time to a Subsequent Offense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robbery, Burglary, or Larceny</td>
<td>313</td>
<td>2878</td>
<td>9.19</td>
<td>159.68</td>
<td>1.55</td>
</tr>
<tr>
<td>Other</td>
<td>646</td>
<td>5325</td>
<td>8.24</td>
<td>142.25</td>
<td>1.74</td>
</tr>
</tbody>
</table>
is not insignificant when one considers that the typical offender in the sample was arrested less than nine times. In addition, Table 34 shows that the rate of offending of those beginning their adult careers with robbery, burglary or larceny was higher and the average seriousness of their offenses greater than that of all other offenders taken together. These offenders are thus prime candidates for incapacitation.

We undertook to apply the identical sentencing policy to the 313 offenders whose first adult arrest was either robbery, burglary or larceny as was applied to the entire sample in the collective incapacitation study. The first index or "other violent" offense was to be met with a five year prison term and a subsequent offense was to be met by a ten year term. All assumptions remained the same. The objective was to determine the number of offenses this selective incapacitation policy could have prevented over the sentences actually imposed. Under this policy, we retained the actual sentences imposed for the remaining offenders. It is obvious that the application of such a policy to less than one-third of our offenders could not prevent as much crime as identical measures applied to the entire sample. The aim of selective incapacitation, however, is not the maximization of crime prevention but the pursuit of this objective within given fiscal parameters. It is meant to be a cost-effective policy. Thus, in comparing collective and selective incapacitation policies,
close attention must be paid to the expenditures required by these respective policies, as well as the human costs involved as reflected by the false positives.

Table 35 summarizes the performance of our selective incapacitation policy when compared to the actual sentences received by the sample. Total criminal output would have been reduced by a maximum of 1440 offenses or 17.6%. For the targeted offenders, up to a 50% reduction in their career output might have been attained. To achieve these results, a 133% increase in prison time served for the targeted offenders would have been required. This amounts to a 50% increase in time served for the sample as a whole.

The false positives produced by selectively incapacitating these offenders would be few—particularly for the ten year prison terms and the conservative estimates for both the five and ten year terms. This reflects the long span of their criminal activity and the fact that many are career criminals. Our selective incapacitation policy would only negligibly increase the false positives over those incurred from the actual sentences imposed for the sample as a whole. The conservative estimates place the likelihood of a false positive for either a five or ten year term at about 3 to 4%.

Table 36 compares our collective and selective incapacitation policies. The collective incapacitation measures could potentially reduce three fold the crimes as the selective incapacitation measures aiming at robbery, burglary
TABLE 35

A COMPARISON OF THE EFFECTS OF SELECTIVELY INCAPACITATING THOSE BEGINNING THEIR ADULT CAREERS WITH ROBBERY, BURGLARY OR LARCENY WITH THE EFFECTS OF THE ACTUAL SENTENCES IMPOSED

<table>
<thead>
<tr>
<th></th>
<th>Actual Policy</th>
<th>S.I.P. a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Offenses</td>
<td>8303</td>
<td>6763</td>
</tr>
<tr>
<td>Mean Number of Offenses Per Career for these Offenders</td>
<td>9.2</td>
<td>4.6</td>
</tr>
<tr>
<td>Mean Number of Offenses Per Career for All Offenders</td>
<td>8.6</td>
<td>7.1</td>
</tr>
<tr>
<td>Mean Prison Time Served by these Offenders (Years)</td>
<td>5.1</td>
<td>11.9</td>
</tr>
<tr>
<td>Mean Prison Time Served by All Offenders (Years)</td>
<td>4.5</td>
<td>6.7</td>
</tr>
</tbody>
</table>

False Positives - 5 Year Terms

<table>
<thead>
<tr>
<th></th>
<th>Liberal Estimate</th>
<th>Conservative Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>+17.3%</td>
</tr>
<tr>
<td>+ 3.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 10 Year Terms

<table>
<thead>
<tr>
<th></th>
<th>Liberal Estimate</th>
<th>Conservative Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>+ 7.7%</td>
</tr>
<tr>
<td>+ 2.6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aSelective Incapacitation Policy
TABLE 36
A COMPARISON OF THE COLLECTIVE AND SELECTIVE INCAPACITATION POLICIES

<table>
<thead>
<tr>
<th></th>
<th>C.I.P.⁹⁹</th>
<th>S.I.P.¹⁰⁰</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Offenses</td>
<td>3888</td>
<td>6763</td>
</tr>
<tr>
<td>Mean Number of Offenses</td>
<td>52.6%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Prevented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Number of Offenses</td>
<td>4.1</td>
<td>7.1</td>
</tr>
<tr>
<td>Per Career for All Offenders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Prison Time Served</td>
<td>10.8</td>
<td>6.7</td>
</tr>
<tr>
<td>by All Offenders (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Positives Over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual Policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 5 Year Terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Estimate</td>
<td>24.8%</td>
<td>17.3%</td>
</tr>
<tr>
<td>Conservative Estimate</td>
<td>8.2%</td>
<td>3.8%</td>
</tr>
<tr>
<td>- 10 Year Terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Estimate</td>
<td>20.2%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Conservative Estimate</td>
<td>17.4%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

⁹⁹Collective Incapacitation Policy
¹⁰⁰Selective Incapacitation Policy
and larceny beginners. The criminal output of the sample as a whole would have been almost double under the selective as under the collective policy. The cost of collective incapacitation, both in fiscal and human terms, may be substantially greater. That policy would have required that, on the average, offenders serve over four years (60%) more time in prison during their criminal careers than would have been the case if the selective incapacitation policy was in place. False positives, also, would be far less likely to occur in the case of selective incapacitation. Most estimates for our collective incapacitation policy show a false positive rate of about 20%, whereas most estimates for the more selective measures are well under 10%.

Policy B. A second selective incapacitation policy we examined was based on the variables we felt may best distinguish offenders in terms of the seriousness of offenses and their velocity or rate of offending. From the characteristics of the sample described in Chapter Six, variables such as age, race, drug or alcohol history and offense sequence number differentiate offenders on dangerousness to different degrees. We sought to determine whether our offenders could be adequately classified on the basis of these variables, disregarding ethical objections to some of these variables for the moment. This would be a first step to the retrospective (hypothetical) application of selective
penal measures to those posing the greatest risk in order to assess their potential.

Multiple regression was selected as the statistical method used to determine the predictability of dangerousness. Regression is appropriate where several variables are continuous (interval or ratio level). Also, as indicated in Chapter Four, this method compares favorably with other techniques in terms of its predictive power.

Dangerousness was measured on two dimensions. First, we looked at the ability of our independent variables to predict the amount of time elapsing between any given arrest and a subsequent arrest, where another one did occur. We used the street time measure here as we wanted to exclude the contaminating effect of prison time an offender may have served between any given pair of arrests. Secondly, we looked at the predictability of the seriousness of any given offense using the same independent variables—although different frames of reference for some of these variables were used. Our crime seriousness scale was used to measure this dependent variable.

The independent variables on which the time of re-arrest was regressed were:

1. The age of an offender at the arrest preceding the interval in question;

2. the offense sequence number of the arrest preceding the relevant interval;
3. the seriousness of the offense preceding the relevant interval;

4. the length of the previous interval in an offender's criminal career--ie., prior to the arrest preceding the relevant interval;

5. an offender's race--dummy values were used to deal with the dichotomous measurement of this variable;

6. an offender's drug history using dummy values; and

7. an offender's drinking history using dummy values.

The independent variables upon which offense seriousness was regressed were:

1. The age of an offender at the time of the relevant arrest;

2. the offense sequence number of the relevant arrest;

3. the seriousness of the previous offense;

4. the street time elapsed since the previous arrest;

5. an offender's race using dummy values;

6. an offender's drug history using dummy values; and

7. an offender's drinking history using dummy values.

Initially, we divided our sample of 959 offenders into construction and validation samples so we could validate our predictive models developed from the construction sample. In neither of the multiple regression analyses did our findings promise to provide us with anything resembling an
adequate means for distinguishing between offenders of differential velocity or seriousness. The explained variance was so low that we saw no purpose in testing or validating any incapacitation policy using such a seriously inadequate instrument. We thus pooled the construction and validation samples to determine if this lack of predictability applied to the sample as a whole.

As Tables 37 and 38 show, we fared no better in this regard. A forward inclusion stepwise regression procedure was used to both ensure that all seven independent variables in the two regressions remained in the final solutions and that they were ordered on the basis of the variance they explained in the dependent variables. From Table 37, we can see that, taken together, the independent variables explained 6% of the variance in the timing of an offender's re-arrest. This figure is so low that it is possible that virtually any seven variables selected blindly would comparably explain the dependent variable. The only variables of any significance were offense sequence number (related negatively to the size of the relevant interval) and the length of the previous interval (positively related).

As for the prediction of the seriousness of any given offense, Table 38 hardly provides more optimism for prediction. The total variance explained is just over 8%. Only offender age (related negatively) appears to be of any value in predicting seriousness.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Multiple R</th>
<th>R Square</th>
<th>R Square Change</th>
<th>Simple R</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offense Sequence Number</td>
<td>.205</td>
<td>.042</td>
<td>.042</td>
<td>-.205</td>
<td>-.624</td>
</tr>
<tr>
<td>Length of Previous Interval</td>
<td>.226</td>
<td>.051</td>
<td>.009</td>
<td>.140</td>
<td>.923</td>
</tr>
<tr>
<td>Offense Seriousness</td>
<td>.236</td>
<td>.056</td>
<td>.004</td>
<td>-.039</td>
<td>-.849</td>
</tr>
<tr>
<td>Drug History</td>
<td>.242</td>
<td>.059</td>
<td>.003</td>
<td>.086</td>
<td>.454</td>
</tr>
<tr>
<td>Race</td>
<td>.244</td>
<td>.059</td>
<td>.001</td>
<td>.006</td>
<td>.136</td>
</tr>
<tr>
<td>Age</td>
<td>.244</td>
<td>.060</td>
<td>.000&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.072</td>
<td>-.451</td>
</tr>
<tr>
<td>Drinking History</td>
<td>.244</td>
<td>.060</td>
<td>.000&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.062</td>
<td>.590</td>
</tr>
<tr>
<td>CONSTANT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.010</td>
</tr>
</tbody>
</table>

<sup>a</sup>Zero value due to rounding
TABLE 38
OFFENSE SERIOUSNESS REGRESSED ON
SELECTED INDEPENDENT VARIABLES
(Stepwise Solution)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Multiple R</th>
<th>R Square</th>
<th>R Square Change</th>
<th>Simple R</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.235</td>
<td>.55</td>
<td>.055</td>
<td>-.235</td>
<td>-.228</td>
</tr>
<tr>
<td>Length of Previous Interval</td>
<td>.265</td>
<td>.070</td>
<td>.015</td>
<td>.065</td>
<td>9.528</td>
</tr>
<tr>
<td>Seriousness of Previous Offense</td>
<td>.278</td>
<td>.077</td>
<td>.007</td>
<td>.027</td>
<td>.697</td>
</tr>
<tr>
<td>Offense Sequence Number</td>
<td>.285</td>
<td>.081</td>
<td>.004</td>
<td>.011</td>
<td>-1.661</td>
</tr>
<tr>
<td>Drinking History</td>
<td>.289</td>
<td>.084</td>
<td>.003</td>
<td>.057</td>
<td>20.090</td>
</tr>
<tr>
<td>Race</td>
<td>.290</td>
<td>.084</td>
<td>.000</td>
<td>.024</td>
<td>7.253</td>
</tr>
<tr>
<td>Drug History</td>
<td>.290</td>
<td>.084</td>
<td>.000</td>
<td>.007</td>
<td>1.348</td>
</tr>
<tr>
<td>CONSTANT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>91.745</td>
</tr>
</tbody>
</table>

*Zero value due to rounding*
Given these findings, we had little option but to abandon any attempt to predict the timing or seriousness of offender recidivism with the variables used in our study and, hence, to test selective incapacitation policies that could be based on such a predictive device.
REFERENCES


2. Although one can never be sure of the criminal activity confined offenders would have partaken in had they not been incarcerated, this can be estimated through a determination of individual offense rates by mathematical modeling procedures. These procedures are based on clearance rates for offenses—data difficult to obtain for offenders active as far in the past as those we studied.

The false positives we looked at were in excess of those that actually occurred. In only a few cases did our policy call for penalties under those actually imposed.
CHAPTER EIGHT
SUMMARY AND CONCLUSIONS

In this study, we tested the potential of various collective and selective incapacitation policies to determine the amount of crime, committed by selected adult offenders, that could have been prevented were these policies in force during their criminal careers. The sample was selected on the basis of every second murder incident arrest and every twentieth robbery incident arrest occurring in Columbus, Ohio, during the years 1950 to 1975 inclusive. The 959 persons arrested for these incidents and born between 1915 and 1942 (inclusive) formed our sample.

MAJOR FEATURES OF THE SAMPLE

Criminal Activity of the Sample

The 959 offenders amassed 8,203 arrests for a sample mean of 8.6 arrests. The offenders were arrested from one to 48 times, with most experiencing less than 13 arrests. Those tending toward violent offenses were generally less active than those more often committing property offenses. Offenders arrested only a very few times committed a disproportionate number of violent offenses. Those first
arrested for robbery, burglary or larceny averaged almost twice the number of arrests as those first arrested for homicide, rape or felonious assault. As for recidivism, the probability of re-arrest consistently ranged between 80 and 90% regardless of the career stage considered.

Race

Slightly over one-half of the sample was nonwhite. On the average, these offenders were arrested on one more occasion than were white offenders. The offenses of non-white offenders also tended to be slightly more serious than those of white offenders.

Age

The ages at arrest ranged from 7 to 60. The ages of greatest criminal activity extended from 18 to about 35 years.

Birth Cohorts

An increase in the volume and seriousness of criminal behavior was observed for those born later. As an example, those born between 1915 and 1921 averaged 8.3 arrests, while those born between 1936 and 1942 averaged over nine arrests.
Drug History

Those with a recorded history of drug use were arrested almost six more times on the average, than were those without such a history. Their offenses, however, tended to be less serious in nature. These highly active offenders formed well under 10% of the sample.

Drinking History

Those with a recorded history of alcohol abuse averaged over three more arrests than those without such a history, but their offenses also tended to be less serious. This group constituted over one-third of the sample.

Crime-Type Specialization

A great deal of transition between offenses was observed. Despite the fact that offenders were selected on the basis of an index violent offense, most of the charges in their records were for non-violent, and often petty, offenses. The offenses appearing most often, aside from the high volume of homicide and robbery expected as a result of our sampling procedures, were assault, rape, burglary, larceny, intoxication, auto theft, weapons and traffic offenses. Those committing homicide and rape were amongst the most specialized. Two major offense clusters emerged reflecting, perhaps, two distinct polymorphous offender types.
The first is what we have called a "generalized antisocial type," often interchangeably committing robbery, burglary, larceny, auto theft, forgery and weapons offenses, as well as violating parole. The second generalized offender type we identified was designated as "inadequate," due to the apparent non-utilitarian and self-destructive nature of their acts. These included substance abuse, traffic and public order offenses.

**Velocity**

Two-thirds of all arrests that followed another arrest occurred within two years (calendar time) of the first. The velocity of offending tended to increase with age and the progress of a career. At older ages, calendar and street time are similar and sometimes even identical, indicating that light penalties were more often received at more advanced ages.

**Offense Seriousness**

Most of the offenses fell on the lower end of our scale of seriousness. Offense seriousness tended to decline with age and the progress of a criminal career. This may also explain the lighter sentences received by older offenders.
Our procedure involved retracing the criminal careers of the 959 offenders and comparing the effects of the actual sentences received with our hypothetical policies. We focused exclusively on the differential incapacitative effects of the policies being compared. Any additional deterrent, rehabilitative or other effects of the contending policies were not considered. Nor did we consider the possibility that incapacitative efforts may be undermined by the criminal replacement of the incarcerated individual by other offenders. Also, we assumed that all the arrests of our sample resulted in conviction or could have with more vigorous prosecution. The attrition of cases in the criminal justice system, even where career offender programs have been instituted, suggests that this assumption is much too optimistic. Criminal replacement and case attrition both detract from incapacitation effects. We can only speculate about the extent to which they would have undercut the policies we tested.

The likelihood of criminal replacement increases when offenses are committed by groups or when they fulfill a demand (e.g., drug trafficking). We had little information on the extent to which our offenders operated in groups. As far as meeting social needs, Table 4 indicates that most of the offenses did not fall into this category.
Case attrition is more likely to have substantially inflated our estimates of the effects of the incapacitation policies tested. In 47% of the arrests experienced by our subjects, there was either no information on the disposition received or charges had been dropped. There is every reason to believe, therefore, that convictions could not have been attained in a large number of incidents. Where this was the case, incapacitation policies respecting the presumption of innocence principle could not have been applied.

Although we cannot specify the extent, we do know that these factors will reduce the preventive effect of our policies and have therefore emphasized that the volume of prevention yielded by each policy is a maximum figure.

One further factor not considered in the computation of this maximum figure, and thereby detracting from it, is that our alternative policies, on occasion, called for shorter sentences than those actually imposed. As such, the incapacitative effects of the actual sanctions may have exceeded those of our policies in those instances. Again, we can only speculate about the criminal activity the offenders would have engaged in had they been released from institutions earlier than was actually the case.

We looked at three possible policies. First, we examined the effects of severe collective incapacitation measures—these measures correspond to provisions of the revised Ohio Penal Code. Specifically, we explored the
effects of imposing a mandatory five year prison term (without the possibility of remission or parole) for an offender's first index or "other violent" crime. A similar offense following this five year period would be met by a mandatory ten year term.

Next, we identified a group of offenders who typically were more criminally active and whose actions tended to be more serious than was the sample as a whole. This group comprised those whose first arrest as an adult was for robbery, burglary or larceny. We then tested the effects of applying the identical policy of five and ten year prison terms to this group alone, leaving the remainder of the sample with the dispositions actually received.

Finally, we attempted to identify, through a selected number of variables, those attributes that could best predict the rate and seriousness of offending using a multiple regression model. The objective was to provide a means of identifying the highest risk offenders at any stage in a career such that selective incapacitation policies, based on this predictive model, could then be assessed. We met with dismal failure in this regard.

Indeed, this study on the whole provides little support for the position that collective or selective incapacitation should serve as a primary doctrine of penal policy. Whereas the first, collective incapacitation, may prevent a substantial amount of crimes committed by recidivists, this finding is
tempered by the additional costs incurred by the judicial and correctional system and the needless incarceration (from a utilitarian standpoint) of more persons than is the case under traditional policies. These fiscal costs and false positives increase in direct relation to the severity of collective incapacitation measures.

In the case of the harsh collective measures we tested, involving the mandatory five and ten year terms, we found that a maximum (disregarding case attrition, offender replacement, etc.) of about one-half of our offenders' recorded crimes might have been prevented. These measures would have produced a two and one-half fold increase in prison time served for our offenders over that actually served. The number of false positives may have increased by as much as 20% over that actually experienced.

Selective incapacitation attempts to minimize correctional costs and false positives by focusing on the most active and serious offenders. When our policy targeted those beginning their adult criminal careers with robbery, burglary or larceny, we found that the crime preventive potential was only one-third that of collective measures (a maximum of 17% of crimes prevented), but the increase in additional prison time served would only be 50% for the sample as a whole and additional false positives would be negligible.
When we attempted to test the potential of selective incapacitation by identifying the most active and serious offenders with the predictor variables of age, race, drug and alcohol history, the velocity and seriousness of previous offenses and the offense sequence number, the results were so unimpressive that we were forced to abandon the effort to test any policies based on selections made with these variables.

The best predictions that could be made were simply that offenders, regardless of age or the stage in the career, would be re-arrested. The probabilities of recidivism ranged from 80 to 90% for any offense number. The only clearly discernible pattern was that homicide, felonious assault and forcible rape offenders tended to desist from crime somewhat earlier than did property-oriented offenders.

Our predictions were weak despite the fact that they were actually *post hoc* ("post-dictions"), based on our retrospective knowledge of the sample's activities. These predictions were not even tested on a validation sample. Despite our retrospective knowledge of the distribution of arrests in our sample and the identity of the most active offenders, we can observe the limitations of incapacitation. There were so many chronic offenders (about two thirds of the sample), that incapacitating the most active, but still manageable, group of persons arrested fifteen or more times for life would have left us with a substantial amount of crime.
If all those highly active offenders (15% of the group fell in this category) were so identified after their first arrest and confined for the duration of their careers in crime, only about one-third of all crime committed by the sample could have been prevented. Moreover, the offenses of this highly active group tended to be of the less serious variety. A great deal of the most serious crime could, therefore, not have been averted. The major reason for this modest potential yield of incapacitation is the high proportion of active offenders amongst those committing violent index crimes.

**EXPLAINING THE DIFFICULTIES IN PREDICTION**

Our difficulties in prediction can be attributed to at least four factors: (1) problems resulting from inadequacies in our data base—this includes both distortions in criminal justice data as well as missing information; (2) problems inherent to the prediction of all human behavior; (3) problems related to longitudinal methodologies; and (4) measurement error, sampling biases and other methodological problems that were specific to our study.

**Data Related Problems**

As we know all too well, data collected by the criminal justice system is often merely the "tip of the iceberg" in terms of the total volume of criminal activity. More
problematic still is the possibility that this "tip" does not reflect that which lies below. In all likelihood, the official criminal histories provided by the FBI seriously underestimated the criminal activity of our sample. This, in itself, may have resulted in the underestimation of the incapacitation effects of our hypothetical policies, as the number of offenses averted by incapacitation increases in direct relation to the velocity of offending. It is also the case, however, that the underestimation of criminal activity by the official records also extends to periods in the criminal careers during which even our tough measures would not have applied. Consequently, one can only speculate about whether most of the undetected behavior took place during those points in the career when our policies applied or those points when offenders would have been at liberty. Since we did not address undetected behavior in any of our analyses, we have in fact assumed that our findings relating to incapacitation based on official records neither under nor overestimated those that would have been obtained through a knowledge of actual behavior. We thus assumed that the undetected behavior of the sample during periods of proposed incarceration was related to that during periods at liberty in the same way that detected behavior during the proposed periods of incarceration was related to such behavior at liberty.
The most serious problems posed by undetected behavior arise when this is misrepresented and not merely underestimated by the official records. The Chaikens at the Rand Corporation claim that criminal histories obtained through self-report procedures yield a different picture of offender behavior from that based on official records.\(^1\) They contend that offender behavior is more stable (specialized) than reflected by the official histories. While they acknowledge that most offenders do not specialize in one offense, they indicate that offenders tend to alternate between a limited number of offenses. This fact, they say, becomes manifest when one obtains the complete picture of an offender's criminal activity rather than information relating to no more than a mere handful of offenses. If the Chaikens are correct, our difficulty in predicting the seriousness of offenses can at least partly be attributed to systematic biases in official records relating to the extent of offense specialization. This is so because official criminal histories show a continuous transition from one offense to another.\(^2\)

It is also conceivable that the timing of recidivism could be more accurately predicted if the actual picture of offender behavior could be obtained. Official records show a great deal of instability in the velocity of offending. The gaps between offenses often differ substantially over the same career and consistent patterns of increasing or decreasing velocity rarely emerge. This can be explained by the
fortuitous aspect of detection. People simply tend to be arrested on an irregular basis and the unpredictability of the timing of recidivism may reflect the irregularity of the criminal justice system's response to crime as much as the erratic nature of offender behavior. Criminal behavior may actually occur with greater regularity than official data indicates, thereby making its timing more predictable.

Official criminal records are also sensitive to law enforcement policies, prejudices and standard criminal investigation techniques. With respect to the last, police departments quite logically focus their attention upon known offenders in the community. Common sense dictates that the likelihood of police interrogation and arrest is greater for one possessing a criminal record than for one without such a record, everything being equal. Arrests of known offenders may be based on an inflated conception of probable cause and little evidence often resulting in the dropping of charges. Since our study, as many other longitudinal investigations, has equated arrests with offenses, we may have overestimated the criminal involvement of some individuals in our sample, and, thus, their recidivism probabilities.

Another aspect of official records that may have undermined the reliability of our data and, perhaps, its predictability, was the reduction of charges. Such reduction, often due to insufficient evidence relating to the original charge, appears to have occurred quite frequently for the
instant offenses. There is no reason to believe that the situation was any different for other offenses committed by the offenders in our study. An accurate identification of the charge is paramount where a key dependent variable is crime seriousness.

Missing information was another source of concern. The major problem here related to the dispositions received and, where prison sentences were imposed, the amount of time actually served. Velocity, being a critical variable, is very sensitive to errors we might have made in estimating prison time served when release dates were unavailable. The reliable measurement of drug and alcohol use, two key independent variables, may also have been jeopardized by the large number of cases in which no information was available.

There are two ways in which our problems of undetected criminal behavior and missing information could have been surmounted. Firstly, we could have undertaken a self-report survey of our sample. This, however, was beyond the scope of our resources. Secondly, we could have estimated the true criminal activity of our offenders using mathematical modeling procedures. Blumstein and Cohen have shown how this can be done with arrest records. The procedure is based on the clearance rates by arrest within a given jurisdiction and involves the highly questionable assumption that the probabilities of arrest are uniform for all persons committing a given offense (e.g., all persons committing robbery).
The procedure has never been applied to a data base that encompasses the time frame of our study. The estimation of individual crime rates would have required that we ascertain clearance rates dating back to 1930—the year the first adult arrest for our sample occurred. This would have been a monumental, if not impossible, task with potentially little yield.

**Problems in Predicting Behavior**

One of the key factors said to undermine predictions in previous studies is the situational element involved in criminal behavior. As Monahan has indicated, the major impediment to prediction stems from our inability to anticipate the situations an individual will confront even when the key situational correlates of criminal behavior are identified.

Among these situational factors is the response of the criminal justice system itself to the behavior of a given offender and its contribution to his assimilation of a deviant identity. If the system does affect offender behavior through harassment and brutalization, we must acknowledge that we are not examining static personality traits that can be projected into the future. We can no longer view the criminal histories we study as representing "objectifiable" portraits of offenders drawn by a reactive system. When seen in this light, the system may also serve as a catalyst.
indelibly etching its effect on offender behavior, precluding the notion that certain objectifiable characteristics of persons committing such offenses as homicide and robbery do exist.

There are, of course, other situational factors affecting offender behavior. In fact, even if one assumes that criminality is determined by some overpowering social structural or personality traits, the importance of situations in the selection of the nature and timing of an offense, as well as the victim, is indisputable. In our study, a striking amount of crime switching was observed. In the case of the property-oriented offender, acts such as robbery, burglary, larceny and auto theft were almost interchangeably committed, reflecting the importance of offender opportunism. From the other major pattern observed, those engaged in assault, substance abuse and committing traffic and public order offenses, we inferred the existence of an "inadequate" personality. Such individuals, also, may be highly responsive to situations in the selection of the nature and timing of an offense.

Other explanations for prediction problems in this as well as other studies may include the possibility that some predictor variables are not as important as previously believed. Two of our variables that stand out in this regard are race and age.
Although race, in the United States, is regarded as a crucial variable explaining criminal involvement, contradictory evidence exists regarding the extent of racial differences in the rate and seriousness of criminal activity. Our study found such differences to be negligible.

The age factor in crime has also received a great deal of attention. Disregarding possible sampling biases for the moment, the idea of offender "burn-out" or at least a decline following young adulthood was not supported. If anything, this relationship was contradicted by our study. It may well be the case that prevalence rates, as reflected in aggregated national statistics, may well be higher for teens and young adults; but, if only those persisting in crime as adults are observed, the situation may be quite different. The longitudinal approach permits us to monitor the same group of offenders over time and to control for the crucial confounding variable of prison time served. Disregarding this variable can result in a serious underestimation of criminal activity at more advanced ages (25 years and up), when prison terms served tend to be longer.

Problems in Longitudinal Methods

The principal problem in any longitudinal study is that of historical changes intervening between the initial and final observations. The longer the time span of a study, the greater the likelihood that significant social
changes provide contending explanations for the findings. Forty-six years elapsed between the first and final arrests of our sample. We observed a clear escalation in both the velocity and seriousness of criminal behavior from the earliest to the more recent birth cohorts. This may indicate a genuine pattern of intensification in offender activity, it may reflect increasing selectivity on the part of police in their decisions to arrest or merely be due to improvements in police record-keeping and reporting to the FBI, since the Uniform Crime Reports were initiated. Whichever explanation is correct (all may have played a part), both the internal and external validity (generalizability) of our study may have been undermined.

Our objective was to examine patterns in the criminal careers of offenders to ascertain the factors most predictive of future behavior. The intervention of historical factors may preclude statements about the "natural evolution" of these careers. It is very likely, for example, that our observations of age-related patterns, as well as those related to stages in a career (offense sequence number), were confounded by historical effects. Thus, our surprising finding that the velocity and seriousness of offending escalates with age or offense number may actually have been an artifact of improved law enforcement and/or reporting or social changes occurring concurrently with aging and the advance of a career. As such, aging or career progression may have had
little to do with our observed relationship. Moreover, the unevenness of these historical effects may explain the low correlation found between aging or offense number and our criterion variables. It is reasonable to believe that events such as the Second World War affected offender behavior and the criminal justice system's response to it.

A study spanning almost one-half of a century can also be subject to problems of generalizability. Even if confounding historical effects posing internal validity problems are discounted, can we assume that the criminal careers now unfolding will possess patterns similar to those completed? Even if we accept a static, trait model of behavior, we must acknowledge that certain aspects of social environments may profoundly affect criminal behavior. A case in point is the impact of the proliferation of heroin use since the mid-1960's. Another is the tremendous black migration to industrial cities from small communities in the Black Belt and the subsequent white flight.

Retrospective longitudinal studies are marked by an additional problem. Samples generated inevitably lack uniformity; cases may diverge substantially in age, rendering comparisons difficult. While some offenders are at or near the completion of their careers in crime, others have just begun. This was the case in the original random sample from which our own sample was selected. This asymmetry necessitated our removal of the younger offenders from the
study, a decision which may have had serious consequences
in terms of its validity. We shall return to this question
in the next section.

Correlations with age or offense number are confounded
by another problem inherent in longitudinal studies—one
that, to this writer's knowledge, has been completely ignored
in previous studies. When we correlate age or offense
number with the rate or seriousness of offending, we are not
looking exclusively at the age or career stage-related
behavioral patterns of a given group of offenders. Unless
all offenders have reached the same age, we are observing
a declining number of offenders when we get to those age
categories that some of our offenders have not reached.
Similarly, as we look at offense velocity and seriousness at
advanced points of a career (say, at the fifteenth or
twentieth arrest), the figures we obtain only represent those
persons still active at these stages. If the cases remaining
for analysis at a given age or stage are not representative
of the entire sample on a relevant dimension, then systematic
biases exist. These biases loom larger as the attrition
increases. Unfortunately, the extent of such biases will
forever remain speculative because we cannot determine how
the persons not reaching these ages or stages in a career
would have behaved.

Looking back at Table 29, we see an overall decline in
the mean seriousness of offenses from the first to later
arrests. If we compare the seriousness scores of the first and fifteenth offenses, we can observe that, on the average, the first is about twice as serious. However, at the first offense, all 959 offenders are included. At the fifteenth offense, only 146 persons are still active. Thus, we are not following up a group of offenders from the first to the fifteenth offense to ascertain changes in behavior as their careers unfold. This is what our correlations imply we are doing. Rather, we are comparing the crime seriousness of different offenders at each arrest.

The only way to circumvent this problem is to observe only those cases that have reached a designated point in a career. In the above example, we could trace back the 146 persons who were arrested fifteen times. This would add to the validity of our career stage-related comparisons, but unfortunately, would detract from the generalizability of our findings because we have excluded so many cases from our original randomly selected sample. There appears to be no escaping this "Catch-22" situation for those undertaking retrospective longitudinal studies. In one of the analyses (Table 9), we did employ the solution of excluding all arrests over the age of 35 to verify the finding that cohort differences in criminal activity do exist. This was necessitated by the fact that those in our last birth cohort (1942) could not have been arrested beyond that age. In addition, we conducted a series of analyses of velocity and
offense seriousness only for those offenders whose criminal careers spanned at least 9 years to examine the effects of age and career stage. The results of one such analysis (offense seriousness by age) is compared in Appendix E with those obtained using the entire sample in order to illustrate the differential findings obtainable by the two approaches.

The implication of case attrition for the analyses of offense velocity and seriousness is that our observations showing an increase in velocity, a decrease in seriousness, and a lessening severity of punishment with age and the evolution of a career may be an artifact. It could simply be that those committing numerous offenses and persisting in criminal behavior at advanced ages were always high velocity offenders committing less serious offenses and, therefore, subject to lighter sentences. If this is the case, it is no surprise that older age groups and later career stages show high offense velocity and low mean seriousness scores.

This brings us to another key problem of longitudinal studies. A person having a long arrest record must necessarily have been committing offenses primarily of a less serious nature; otherwise, it is unlikely he would remain at liberty long enough to be re-arrested on many additional occasions. The most active offenders in our sample were arrested on over 40 occasions. These offenders would never have approached this number of arrests if they had embarked
on their careers with several serious crimes. A perusal of their records confirmed the fact that their offenses were often minor in nature.

This artifact undermines the finding in this and other studies that even violent offenders tend to commit primarily non-violent offenses. How could it be any other way? How many serious or violent offenses can a person commit before being incapacitated for long periods? Even our empirical support for the conventional wisdom that property-oriented offenders tend to be more criminally active than the violent can be questioned on these grounds. Homicide and forcible rape offenders are often given lengthy prison sentences; whereas larcenists, burglars and even robbers may not serve a great deal of time. Ethical considerations preclude us from allowing known murderers and rapists to remain at liberty for periods sufficient enough to determine the havoc they are capable of.

Our findings showing extensive crime-switching also may not be exempt from this artifact. Offenders were included in our study for the commission of at least one serious offense (usually homicide or robbery). Since, as just discussed, it is unlikely that one can be arrested very often for such serious offenses, anyone with more than a few arrests must necessarily have other, less serious offenses in their records. Crime-switching, in this way, is a built-in feature of longitudinal studies using arrest records.
Problems Specific to Our Study

Probably the major problem specific to our study was that of sampling bias. By removing those persons who had not reached the age of 35 by the end of 1976 from a randomly selected sample, we may have introduced several problems.

Firstly, according to the ages at the instant offenses, our sample appears to slightly over-represent offenders active at older ages and, possibly, the more active offenders. This would be so because we have eliminated those born after 1942—such offenders need not have been active at older ages as inclusion into the sample merely required a relevant offense between 1959 and 1975. On the other hand, those born in 1915 (our earliest cohort) would have had to be active until at least 35 years of age.

Counterbalancing the possibility that we have selected a disproportionately active offender group is the likelihood that the most recently born offenders excluded would have been the most active. This would be the case if the pattern we found of increasing velocity with successive cohorts continued. Another factor militating against a disproportionate number of active offenders is the fact that homicide offenders were over-represented in our sample—that is, more of our cases were drawn from the Columbus Police murder book than from the robbery book, despite the fact that there are far more robbery than homicide offenders. If the proposition
that homicide offenders are less criminally active than robbery offenders is indeed correct, then we have a far less active group than one that is more representative of Columbus violent offenders.

In the earlier study using a similar sample and upon which this study was based, the analysis of the robbery offenders was mathematically weighted to rectify this discrepancy. We declined to follow suit for several reasons. First, no clear distinction exists between murder and robbery offenders. There are offenders drawn from the murder book who committed robbery and vice versa. Second, the assumption of different levels of activity for these two offender types is still a matter to be determined rather than assumed. In any case, our primary objective in this study was to determine whether predictions can be made on the basis of career patterns rather than to describe different offender groups. Third, police classifications of offenses for inclusion into the two books may have been fraught with errors—this is reflected by the seemingly diverse offenses placed in these books. Finally, weighting is always a somewhat arbitrary undertaking. This can be based on the ratio of robberies to homicides. Assuming we can determine this ratio (remembering that the rates of reporting differ for these two crimes), this does not necessarily mean that the number of cases drawn from the two books should be related similarly. This is so, both because some offenders
commit both offenses, and because there may be a different number of homicides in the career of a typical offender drawn from the homicide book than there are robberies in the career of an offender drawn from the robbery book.

So far we have speculated about the extent to which the criminal careers we examined are representative of the criminal careers of all persons committing violent index crimes. We have said that our sample may have been more active than one that is truly representative because the selection criteria required that some persons active at older ages be included. On the other hand, we argued that this might be offset by our elimination of later, more active birth cohorts and an over-representation of homicide offenders. At least one further argument can be made on each side to further confound the issue.

The offenders in our sample were monitored anywhere from 35 to 62 years of age depending on their birthdates. By assuming their desistance from crime beyond these years, we undoubtedly underestimated the total number of arrests some may have experienced. In this way, we have underestimated the recorded criminal activity of the sample.

On the other hand, the sample may have been drawn in such a way as to select a disproportionate number of active offenders. We selected those arrested for every second incident listed in the murder book from 1950 to 1975 and every twentieth incident in the robbery book. Our selections
were thus offense rather than offender based. Mathematically, there is a greater likelihood of selecting persons with more offenses listed—this likelihood increases the more active the offender. While incidents of murder and robbery were selected through a systematic random procedure and may well have been representative of all such incidents, those committing these offenses may not be equally represented. Active offenders may have been over-represented in relation to their numbers in the offender population. However, this issue of representation is a difficult one. Can we say we have a more representative sample when all persons have an equal probability of being selected or when persons are selected in proportion to their contribution to crime? Our sampling procedure was designed to be representative in the second sense.

Thus, it is difficult to resolve whether we have selected offenders who were more or less active than some undefined offender population. Sampling problems are not an adequate explanation for the poor prediction of behavior we obtained. Regardless of whether our sample had too many homicide offenders or was slightly more active than the ideal, there is little reason to believe that predictions based on age, offense sequence number, velocity, race and so on would have improved appreciably. If prediction was seriously jeopardized by our sampling biases, then this indicates that, at the very best, the behavior of only
certain types or groups of offenders (as yet unknown to us) is predictable from their career patterns. Sampling biases, in this study, would have had their greatest impact in relation to our incapacitation findings. As an example, a greater number of high rate property-oriented offenders would have increased the yield of and decreased the false positives for our collective incapacitation policies.

A second methodological problem specific to our study and, perhaps, affecting predictions more seriously, is that of measurement error. We have already mentioned the problems posed by missing data for the measurement of the intervals between offenses (in street time), as well as for the variables of drug and alcohol history.

The validity and reliability of our measurement of offense seriousness (one of our dependent variables) is particularly relevant here. Does the scale we developed reflect the seriousness of crimes? Are the sanctions prescribed for offenses good indicators of seriousness? Reliability of measurement would have been affected by the improper identification of offenses brought about by such things as the reduction of charges.

To summarize, there are a number of methodological problems that may have jeopardized the validity of our study. Some are specific to this study, others plague all longitudinal studies, and still others may undermine any
efforts to predict human behavior (whether through official or unofficial data). We have enumerated only a few. Some of these problems are so serious as to place in jeopardy many, if not all, prediction and incapacitation studies—particularly those of a quasi-experimental nature. At the very least, these problems indicate that categorical statements are not justified and that penal policies and doctrines cannot be based on a limited number of studies employing only one form of methodology.
REFERENCES


PART IV

SYNTHESIS
CHAPTER NINE

DANGEROUSNESS IN AMERICA:
SOME FINAL REMARKS

Over the last decade, policy-makers in criminal justice have been forced to wrestle with several disturbing developments. Serious street crime in the United States had, perhaps, reached unprecedented levels. This has produced pervasive fears and engendered changes in lifestyle, including widespread measures to enhance personal protection. In view of this fear and well-founded skepticism about the criminal justice system's ability to neutralize crime through rehabilitative or social welfare approaches, a new hardline has emerged.¹

This hardline appears to be motivated less by retributive impulses than by demands for protection. It has gained legitimacy through the work of scholars tending to come from outside the field of criminology and even the social sciences. The investigations upon which their conclusions rest point to an image of the dangerous offender that differs somewhat from that provided by the prevailing sexual psychopath and habitual offender laws. This new source of threat is defined by behavioral rather than psychiatric criteria. He tends to be a young male, often black, frequently involved in hard
drug use and to have a voracious appetite for crime. This level of criminal activity is said to substantially exceed the proportion of such offenders in the criminal population as a whole. Furthermore, this type of offender tends to commit crimes of moderate to high seriousness. Foremost among these is the prototypical predatory street crime—robbery.

The solution conferred to us by those articulating this new hardline is simple and dispassionate—incapacitate these offenders until they are no longer troublesome. Thus, we should selectively incapacitate offenders on the basis of the earliest possible indications of their future dangerousness, due to the belief that the most active and violent stages of a criminal career occur during adolescence and early adulthood. Through quarantining these dangerous predators, we are told that we can make substantial inroads into the crime problem at little, if any, additional fiscal cost. The evidence that we have reviewed (including that provided by the proponents of selective incapacitation themselves) and presented does not support this contention.

The institutionalization of the selective incapacitation doctrine would, we believe, have at least two major effects. First, it would objectify the dangerous offender more than has previously been the case, due to the sophisticated analyses and credible documentation underlying this doctrine. Such an objectification would focus policy on traditional
crime and possibly divert attention from genuine dangers posed by sources other than the indigent. A focus on traditional crime and "dangerous classes" would certainly not be a new development, but the approach of selective incapacitation, as it is now conceived, would render this more formal, even if this is not the intention of its authors.

A second major consequence of doctrinaire incapacitation policies would be a total undermining of the principle of desert. Sentencing based on desert is concerned with both the degree of offender culpability (the presence of aggravating or mitigating circumstances) and with proportionality between crimes and sanctions. Any conformity of incapacitation policies to these considerations would be purely incidental.

Incapacitation is a utilitarian strategy of crime prevention falling within what we have called the consensus perspective of penal systems. This perspective, as we have defined it, takes the prevailing legal definitions of crime as a point of departure and concerns itself with the manner in which the criminal justice system should respond to violations of legal norms. There are, however, other credible perspectives and doctrines which policies ought to address.

The coercion perspective, as we have called it, takes a critical view of both the substance and administration of the law. Exponents of this position regard social power as the ingredient most critically distinguishing criminal
offenders from non-offenders. Selective incapacitation, particularly as it unfolds, may well be regarded by such persons as the ultimate repressive tactic, as it would undoubtedly increase concentrations of the poor and minorities in the criminal justice system. These groups are already well over-represented among the general offender population. Some evidence suggests that they are even more over-represented among the hardcore offender group that would be targeted by selective incapacitation programs. These adhering to the coercion perspective are sure to take issue with definitions of dangerousness that discount the multitude of other non-criminalized or unenforced behavior, committed by more privileged groups, that is both harmful and wilfully committed. Objectifying dangerous offenders can be counterproductive if it polarizes social groups and undermines the penal system's credibility by signalling to offenders that repression, rather than justice, is its primary aim.

Leading exponents of selective incapacitation reject the principle of justice in sentencing on the ground that we already have considerable disparities. The fact that we currently deviate from the ideals of justice does not justify its total abandonment. Justice is not an absolute either in the sense that a certain universally accepted sanction must follow a given act or that penal systems should totally ignore other doctrines, including the
utilitarian. The concept of justice, as it is most often used, implies that some balance exist between the intent and harm done by an individual and the harm visited upon him by the State. It is based on distributive justice, the idea that a person's outcomes should be commensurate with what he deserves. This does not preclude aggregative justice, the notion that the general good, and not merely the apportioning of rewards and punishments on the individual level, is worth pursuing--this is, of course, the fundamental precept underlying such utilitarian approaches as incapacitation. What justice refers to is a rough balancing of harms suffered by offenders and victims to promote the perception that the penal system strives for equity. A latent aspect is the reinforcement of socially approved behavior that fair and predictable system responses hopefully engender. There have been few writers since biblical times who have claimed that specified penalties are universally applicable for criminal acts.\(^5\) The Classicists, reknowned as they were for a fixed scale of sentences, were not motivated by moral absolutism but primarily by utilitarian considerations.

The cost of totally dispensing with the concept of distributive justice would be very high. The belief in a social contract would erode. A system which punishes people for their attributes (even if they are behavioral proclivities), rather than acts, will not afford a sense of security--the raison d'être of penal systems. Pragmatically, history tells
us that penal systems considered to be grossly unjust will be undermined. Where excessive leniency is perceived to be the problem, vigilantism may arise to compensate for this. Where the system is considered to be too harsh, the public will not cooperate with law enforcement agencies.

Selective incapacitation promises to substantially deviate from the principle of proportionality. A large number of studies, including our own, support the idea that the most active offenders tend to commit "instrumental" offenses such as robbery and crimes against property, whereas those committing homicide, rape and felonious assault are more likely to be episodic or even one-time offenders responding to situational forces. Proponents of selective incapacitation have stated that we must apply special punitive measures to the first category if we are to bring crime rates down. A very recent statement was even more unequivocal, suggesting as it did that we apply such measures to those committing larceny.

One can imagine the consequence of being more punitive toward thieves than toward murderers. Incidents of larceny would more often go unreported and be settled informally (perhaps even with a gun if expressive crimes were not harshly dealt with), than is presently the case if the prospective punishment was seriously out-of-line with the gravity of the offense. Police officers would be likely to release all but the most unamiable suspects after a verbal reprimand.
Prosecutors would require more conclusive evidence before laying a charge. They would also find that many more larceny cases go to trial, adding to, rather than detracting from (as incapacitation proponents tell us), judicial bottlenecks. This increased saturation of the system would result from the preponderance of property as opposed to violent crimes and our inability to, as of yet, adequately identify a priori the more and less active property offenders. This point will be addressed shortly as claims of success in this regard have been made by Rand Corporation researchers. Finally, evidentiary requirements will be elevated by jurors in response to the heavy penalties to be received by larcenists should a guilty verdict be rendered.

Thus, in compensation for penalties that would undoubtedly be perceived by the public and agents of the criminal justice system as unfair, the rate of case attrition would increase, thereby reducing the certainty of incarceration. This development would undercut both the policy's incapacitative as well as deterrent effects and, perhaps, offset any possible preventive gain. Even under current policies, attrition rates for property crimes are in excess of those for personal crimes, particularly homicide. A relationship between offender and victim is far more likely to have existed prior to a violent offense, making the task of identifying, apprehending, and convicting the perpetrator easier than is the case with property crimes. When seen in
this light, the targeting of violent crimes is substantially more cost effective.

What of some of the violent offenses or offenders that doctrinaire selective incapacitation policies would be less concerned with? Should we not denounce such acts or express our indignation to these offenders? The growing victims rights movement partly reflects the dissatisfaction of victims and their families with the punishments offenders (primarily the violent) receive. One can imagine the militancy of this movement and the vigilantism that would be unleashed by a sharp reduction in the penalties prescribed for some of the most serious crimes.

The issue is not whether a rigid system based on desert should be retained in the classical tradition. No such system exists today. Even in states with presumptive sentencing frameworks, discretion exists to augment the standard penalty for an offense if the prior criminal record of the offender or the gravity of his act so warrants. Also, as we have shown in Chapter One, there has been an evolution toward a more selective use of incarceration, even if this has not been based on one unifying doctrine. Western countries now tend to reserve institutional penalties for repeat and/or violent offenders.

The issue becomes one of the degree to which sentences should be individualized, bearing in mind the problems this has caused in the past (serious sentencing disparities,
abuses of discretion and offender playacting among them) and the high cost of abandoning the desert principle. Does the crime preventive potential of being even more selective in incapacitating offenders justify these costs? The most optimistic evidence presented to us by leading exponents of selective incapacitation policies suggests that the answer must unequivocally be in the negative.

If we look at the much publicized work done at the Rand Corporation by Peter Greenwood and his associates, we find that a 15% decrease in robbery, accompanied by a 5% reduction in prison populations is the best scenario they observed when they tested a number of policies. They found that such a reduction would only occur in California (they also looked at Texas and Michigan), because only in that state has the criminal activity of hardcore offenders apparently reached a level sufficient to make a noticeable dent on crime rates. Greater selectivity in confinement may well avert some crimes, particularly in the short term. How much is not certain, as the figures provided by these and other researchers completely discount increases in case attrition and offender replacement brought about by policies that focus more on property-oriented offenders. Further, since the most dangerous offender group identified by Rand is that of the "violent predators," individuals often engaged in hard drug use, it is at least incumbent upon us to consider other policy options, such as decriminalization,
before adopting draconian measures to deal with them. The loss of the criminal justice system's credibility resulting from a deviation from the justice model should alert policymakers to the dangers of being seduced by fiscally attractive, but myopic policies obsessed with a criminological balance sheet.

In the last chapter, we discussed some of the serious methodological problems in quantitative studies of incapacitation, including our own. The magnitude of these problems suggests that these tenuous findings not take the place of well-reasoned judgment in the formulation of policy.

The Rand work on selective incapacitation was based on inmate surveys conducted en masse at only a very limited number of institutional sites. The veracity of the responses by the admission of some of their own researchers, was suspect. This, in itself, is not unique to that study. However, the direction, rather than merely the magnitude, of the distortion is unknown. This fact, perhaps, renders self-report information even more objectionable than official data because biases in official records tend to be more systematic, underestimating a person's volume of criminal activity.

Self-report studies are retrospective tools, which, at best, tell us what a person has done in the past and not what he intends to do in the future. Thus, correlates of self-reported criminality may not be applicable to future populations. Also, regardless of its virtues, self-report
data cannot be used in policy where due process is guaranteed. We may know that a person with certain characteristics commits many more crimes than his record indicates. Despite our certainty of this, we cannot penalize him for unspecified behavior he might be involved in on the basis of what people, who we believe are like him, have told us they tend to do.

This brings us to the ultimate irony of the Rand work. After undertaking a survey of 2,200 inmates in three states to ascertain their true, rather than recorded, levels of criminal activity, they correlated these findings with official data to determine the best predictors of criminality. They thereby acknowledge that system decisions, particularly where harsh penalties may be involved, must rest on factual rather than speculative information, as deficient as official data may be. By intercorrelating official and self-reported data, the biases inherent to these information sources are compounded.

The predictive variables they used to classify offenders into varying groups of risk included a conviction before the age of 16, a prior conviction for the instant offense type, commitment to a state juvenile facility and incarceration for at least 50% of the two years preceding the most recent arrest. Thus, of the seven predictive variables they used, four of these measure the criminal justice system's response as well as offender behavior. In Chapter Four, we discussed the ethics of penalizing offenders for what the system has
done to them. The fact of a prior incarceration may be a good predictor of behavior because it makes it more likely that a person will be closely monitored by police and charged when arrested, rather than simply because it reflects an antisocial propensity. Selective incapacitation would have us add another prison term to the offender's record because he was previously confined, even though, as we have shown (Chapter Four), decisions relating to the nature of the charge and sentence are often fickle. This latest term may make it even more likely that he will be incarcerated in the future. No attempt is made to use data independent of the criminal justice system, other than the inmate self-reports. Thus, the zeal of the Rand researchers to use alternative data sources is no longer evident when they select, for some of their independent variables, the most suspect and objectionable data maintained by the criminal justice system.

Selective incapacitation promises to provide a means to combat America's crime problem exclusively through the resources of the criminal justice system. The evidence suggests that the preventive gains would, at best, be modest and, perhaps, of short duration. While other strategies have attempted to produce similar results without requiring substantial social reform (e.g., psychiatric intervention), incapacitation differs from these in its punitive approach. Although the inducement of pain is not a precondition, a realistic view of American prisons can hardly come to any
conclusion other than that it is a punitive doctrine. Incapacitation theorists consider prison as a mere warehouse which turns people out in roughly the same shape it received them. To buttress this argument they point to a multitude of quantitative studies which tell us that recidivism rates are not responsive to varying institutional programs and that the length of incarceration has no consistent effect upon the probability or speed of recidivism. Their unfamiliarity with institutions and undue reliance on mathematical models betrays them here. Our inability to, as yet, measure the multidimensional effects of incarceration cannot preclude sensible statements about its probable effects. There are many intangible and subtle processes that defy measurement. The psychophysiological imbalance and deterioration of the offender, his separation from the community, the effects on his dependents, the social stigma attached to the incarcerated, and the offender's growing identification with antisocial elements are but a few of the unmeasurable effects. Thus, the assumption that the time an offender is out of circulation is protection bought by society is questionable as most of the social consequences of institutionalization are adverse.

There are other factors which incapacitation theorists ignore, such as the replacement of confined offenders by others in the illicit marketplace--this marketplace also responds to the laws of supply and demand. Also, the
attrition of cases in the criminal justice system will always place a ceiling on the potential of any suppressive policies. The polarization of some social groups, the loss of the penal system's credibility through an undermining of the desert principle and increasing vigilantism are just a few other costs to contend with.

Policies evaluated on a criminological balance sheet may be doomed to fail if one takes the point of view of what we have called the systems perspective of penal systems. Given the elasticity of crime, preventive gains may be offset by compensating increasing crime reporting by the public, due to rising expectations of what the criminal justice system can accomplish. Just as new horizons are identified in medicine when an old nemesis is neutralized, the eradication of one form of criminal behavior will lead to a focus on other and, perhaps, new forms of deviance. This is the nature of vested interest. Thus, the quantitative computation of crime reduction is insufficient to gauge improvements in the general quality of life.

The criminal justice system cannot be separated from other social spheres. It is only one component of the social system that deals with the essence of social policy—human rights and dignity. Human rights, to this writer, are the principal focus of criminal justice. There is a three-fold concern: the rights of offenders, victims and the general public. Radical criminologists might insert a fourth
concern—protection of the powerful. The difference between what have traditionally been called liberals and conservatives is merely the focal point of their concern. Liberals have tended to align themselves with offenders, as guardians of offender rights. Conservatives have identified more closely with the public's need for protection. Victims, too, are primarily seen as a conservative concern; except in the case of rape, which is a cause célèbre of liberals.

If we see penal policy as principally concerned with human rights—protecting individual liberties, reinforcing collectively held values, providing security and assistance to troubled people—then we must be sensitive to the larger social context within which the criminal justice system operates. American society is beset by a multitude of conflicting policies impeding the concerted efforts required to combat dangerous behavior, whether by this we mean street crime or less traditional concerns.

Reiman has provided a humorous account of a classroom exercise in which he asked his students to design a criminal justice system that would maintain a stable and visible level of crime. Their proposals included such things as making "victimless" behavior illicit, permitting wide discretion and, thereby, disparities in the system, dehumanizing offenders, and providing few opportunities for their re-socialization and imposing an inextricable criminal label on
offenders. The students had, through these and other proposals, described the American criminal justice system.

The problems and paradoxes that have produced a social concern with dangerous behavior, yet render us impotent to deal with it, are still more fundamental. Innumerable public opinion polls in the United States indicate that the control of traditional crime is considered a very high priority, given the pervasive fears and lifestyle changes produced by objectively, and relative to other western countries, high levels of such crime. At the same time, individual liberties and not social control measures are considered as pre-eminent. This orientation is constantly reinforced by the American judiciary. The individualism of the frontier days still remains, with innovativeness and eccentricity being highly valued. The various quirks of media celebrities, including illicit behavior and moral turpitude, are held in admiration or, at most, indifference. The tolerance of these role models signifies that deviation is valued and steps toward the regimentation of behavior will be resisted. Our review of research has shown that even forms of deviation that are not positively valued are highly prevalent, particularly in urban America where entire "subcultures" of crime exist. It is difficult to encourage deviation in general and to simultaneously discourage specific forms. America must wrestle with her incompatible aims of individualism and social control.
Those traditionally called conservatives oppose the recreational use of psychotropic drugs, while supporting the easy access of the public to lethal weapons. They support the current administration's policy of unleashing an armada of ships and other resources to stem the flow of drugs into the United States, while ignoring the fact that this traffic is sometimes aided by government officials in countries the administration supports.

Those considered liberal tend to advocate the decriminalization of at least "soft" drugs, defend offenders' rights and call for the government subsidization of abortions. Their support for offenders extends to an opposition of capital punishment on the ground that all human life, including that of the most culpable and evil, is sacrosanct and superior to the alternative, regardless of the conditions of existence. Their support for abortions is often based on the view that the probable quality of life enjoyed by the fetus does not warrant existence. The liberal's advocacy of civil liberties does not extend to a realm specifically guaranteed by the Constitution--the right to bear arms.

These paradoxes are certainly not unique to the United States; although they are occasionally more pronounced there. Also very pronounced are economic inequities. While there are, perhaps, an unprecedented number of vagabonds in the country, an unprecedented amount of resources are being allocated for prison construction. The multitude of
structurally unemployed are being met with promises of interstellar warfare. The ethos of individualism also takes its toll on interpersonal relations, as reflected by the growing trend toward serial monogamy, if not a new celibacy.

With so many fundamental social problems and such anarchy in social policy, it is inconceivable that the solutions lie within the criminal justice system. Even if they did, the system would not likely be given a full mandate to undertake suppressive policies, as that of selective incapacitation, due to the political turmoil they would produce. The criminal justice system, therefore, can do little more than respond to each convulsion as the maze of special interest groups that constitutes America struggles with the identity of, and policies for, the dangerous.
REFERENCES


7. Often mentioned in this regard is the case of nineteenth century England, where the existence of over one hundred capital crimes made some of these offenses virtually unenforceable.


APPENDIXES
APPENDIX A

MASTER LIST OF OFFENSES

I. VIOLENT OFFENSES

01 Criminal Homicide

murder 1° and 2°
manslaughter
murder of policeman
attempted aggravated murder
aggravated murder
conspiracy to murder

02 Rape

assault to rape
attempted rape
rape of female under 14
under 12
under 10
carnal knowledge
sodomy
molesting females
incest
crimes against nature

03 Robbery

armed robbery
assault to rob
unarmed robbery
AWR
conspiracy to rob bank

04 Felonious Assault

assault to kill
assault intent to shoot
ADW - assault with a deadly weapon
aggravated assault
maiming
cut to kill
shoot to kill
complicity
unlawful or malicious wounding with weapon
aggravated battery
30 Kidnap
  abduction
  child stealing

II. OTHER VIOLENT OFFENSES

05 Other Assaults
  resist arrest
  assault and battery
  unlawful or malicious wounding without weapon
  wife beating
  aggravated menacing
  assault and battery on police officer
  simple assault
  assault on police officer
  fighting
  prison riot
  fleeing police
  torturing another
  physical control
  mistreatment and maltreatment (Navy)

06 Arson
  suspicion of arson
  careless fires
  firebomb

07 Weapons
  CCW, CCF
  CCW under disability
  ex-convict with gun
  UUW
  discharge firearm
  violation Uniform Firearm Act

29 Menacing (threats)
  pointing firearms
  intimidating a witness

33 Forceable trespass and malicious entry

34 Intimidation

83 Aggravated Burglary

89 Purse Snatch
III. PROPERTY OFFENSES

08 Burglary
   suspicion of burglary
   possession of burglary tools
   break into deposit box

09 Larceny

10 Auto Theft
   Dyer Act
   OMVWOC
   ITSWM
   UDAA
   T-18 USC
   UTA

11 Forgery and Counterfeiting
   charging telephone without authorization
   misuse of credit card

12 Fraud
   false pretense
   defraud inkeeper

13 Embezzlement

14 Stolen Property
   (buying, selling, possession, receiving, concealing)

31 Theft
   (Grand, Petit) and
   stealing (STL 0/50, STL u/50)

35 Bad checks (Ex and del); w/c under

36 Failure to pay (taxi)

38 Trespassing

39 Breaking and Entering
   B & E
   Brk and Ept
   SHB
   Storehouse breaking
52 Malicious destruction of property
67 Blue Sky Law
68 Mail theft
75 Permitting Sunday Sales
76 Dumping of refuse and littering
77 Conversion of trust Property
81 Safecracking
82 Shoplifting
90 Pickpocket

IV. PUBLIC ORDER

15 Illegal sex and importuning
sexual imposition
illegal sexual intercourse
abuse of a corpse

16 Prostitution
Mann Act
White Slave Act
dir for use of prostitution
keeping house - pimp

17 Gambling and gaming
promoting scheme of chance

18 Offense of Family and Children
child endangering
indecent liberties with minor
interfering with custody
bigamy
contributing to sex delinquency of child
19 **Driving under influence of drugs/alcohol**

DUI, OMVI, DWD, DU REV, drunk under revocation.
4511.19 (Ohio)

20 **Liquor Laws and Distilling**

- open container
- ABC act
- possession of mash

21 **Intoxication and Indecent Conduct**

- dis pers L & L

22 **Disorderly Conduct**

- disturbing the peace
- surety of peace
- annoys others and secret peeking
- lewd and lascivious

23 **Vagrancy and sleeper vagrancy**

- transient, train-riding

24 **Curfew and Loitering**

25 **Runaway**

37 **False Alarm**

40 **Failure to depart or disperse**

41 **Pandering**

43 **Traffic Violations**

- VTC, VSAL, ROMV, PSC, TOI, NDL, NPL, ACDA, UCT
- disregard police officer
- hit and skip
- jaywalk
- failure to use crosswalk
- driving under revocation
- C & R driv (St. Louis)
50 Harboring a felon
58 Juvenile Delinquency
    joy riding, non-theft
61 Peace bond violation
66 Obscene language, improper language
69 Minor purchase (by juvenile)
    permitting consumption
    minor transport-alcohol
74 Possession of obscene literature
    possession lewd pictures
78 Prowling
86 Public health law (violation health and
    safety)

V. OTHER OFFENSES

26 Suspicious Person (no offense stated)

    Inv. Det.
    Failure to give good account
    General principles

28 Bastardy

32 Escape (unless violent is mentioned)

42 Parole violation, probation violation

44 Aiding and Abetting

45 Contempt of Court, Perjury,
    Writ of recognizance

46 Fugitive

47 Obstruct Justice, Official Business –
    interfering

48 Non-support and failure to provide means
49 Investigation (no offense stated)
hold for parole/probation office
(no offense stated)

53 Contributing to delinquency of minor;
wrongful influence; act in a way, CONT

54 Failure to Appear (BFOI)

55 Indecent Exposure and Lewd Act and
Improper Dress

56 Telephone Harassment

57 Obscene Phone Calls

59 AWOL; AOL; Violation Selective Service Act;
desertion, 96 Article of War

60 Failure to register or notify address

63 False information and falsification

64 Hitchhiking

65 Impersonation of Government Officer

70 Possession of fireworks

71 Violation Building Code

72 Vandalism and criminal mischief and
    car damaging

73 Internal Revenue and City Tax violations

79 Unlawful spitting

80 Capias (if they go after him)

84 Misdemeanor; conspiracy to commit
    misdemeanor

85 Abortion

87 Endanger safety by non regard of life

88 Bribery
91 Penal Code
92 Vice; Inv. Morals; Not of good fame
93 Conspiracy
94 Extortion
95 Failure to obey general or lawful order (military)
96 Violation of rabies quarantine
97 Interstate Commerce Laws

VI. NARCOTIC DRUGS

27 Drug Violations

Harrison Act
possession of cannibas with intent to sell hallucinogens
VSNL
keeping house (drugs)
illegal use of motor vehicle to transport narcotics
selling hallucinogens to minors
FJDA

NOT CLASSIFIED AS OFFENSES

felony registration
compulsory registration
voluntary submission
Inquiry-Armed Services
material witness
peace bond
APPENDIX B

SCALE OF OFFENSE SERIOUSNESS

All the offenses committed by our offenders, and there­fore contained in the Master List of Offenses (Appendix A), were given a seriousness rating. This was done by deter­mining the minimum sentences prescribed by the Ohio Penal Code for each type of offense. For auto theft, for example, this was 15 months in prison. For a number of offenses, particularly those of a more serious nature, several minimum sentences are given due to the differential gravity of the acts subsumed within these categories. Thus, under homicide, there is first and second degree murder, aggravated murder, manslaughter and so on. Each of these carries its own penalty. Where an offense category had more than one penalty prescribed for it, we took an average of the minimum penal­ties.

In a large number of cases, the minimum penalty for an offense was a fine or other non-institutional sanction. These offenses were thus given a value of zero. Homicide, as one might expect, rated highest. When the minimum penal­ties for the different types of homicide were averaged out, homicide had a rating of 10.25 years. This means that a case of average gravity would receive a minimum of about ten years in prison. To finalize our scale, we multiplied
the rating for each offense by one hundred to eliminate the fractions. Those offenses with a zero rating were not affected by this. We needed to remove these zeros, however, to avoid computational problems. We thus provided all these offenses with an arbitrary rating of two. This still left these offenses substantially below any other offense grouping. Table 39 displays the scale values of our offenses.

In order to confront the argument that legislation often does not affect current thinking about the seriousness of offenses, we examined the extent to which policy corroborated our ratings. Using the Ohio Department of Corrections data for the prison time served in 1979, we correlated (by ranks) the mean time served for each felony category with the prescribed penalty for each offense. The Spearman Rank Order Correlation Coefficient ($r_s$) was .77. This makes us confident that policy quite closely adheres to the legislative guidelines.
<table>
<thead>
<tr>
<th>VALUE</th>
<th>OFFENSE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1025</td>
<td>Criminal Homicide</td>
</tr>
<tr>
<td>451</td>
<td>Robbery, Aggravated Burglary</td>
</tr>
<tr>
<td>363</td>
<td>Rape</td>
</tr>
<tr>
<td>350</td>
<td>Kidnapping</td>
</tr>
<tr>
<td>238</td>
<td>Felonious Assault, Burglary</td>
</tr>
<tr>
<td>175</td>
<td>Intimidation, Contempt of Court, Perjury, Fugitive, Harbor a Felon, Bribery, Conspiracy, Extortion</td>
</tr>
<tr>
<td>150</td>
<td>Obstruction of Justice</td>
</tr>
<tr>
<td>125</td>
<td>Arson, Auto Theft, Drug Violations, Escape, Forceable Trespass and Malicious Entry, Breaking and Entering, Parole or Probation Violation</td>
</tr>
<tr>
<td>88</td>
<td>Weapons, Contributing to Delinquency, Safecracking</td>
</tr>
<tr>
<td>83</td>
<td>Forgery and Counterfeiting</td>
</tr>
<tr>
<td>75</td>
<td>Prostitution</td>
</tr>
<tr>
<td>63</td>
<td>Larceny, Fraud, Embezzlement, Stolen Property, Gambling, Offenses of Family and Children, Theft, Bad Checks, Failure to Pay, False Alarm, Pandering, Blue Sky Law, Mail Theft, Malicious Destruction of Property, Possession of Obscene Literature, Conversion of Trust Property, Shoplifting, Purse Snatching, Pickpocketing, Abortion</td>
</tr>
<tr>
<td>38</td>
<td>Trespassing</td>
</tr>
<tr>
<td>31</td>
<td>Other Assaults</td>
</tr>
<tr>
<td>25</td>
<td>Vandalism</td>
</tr>
<tr>
<td>2</td>
<td>All Other Offenses</td>
</tr>
</tbody>
</table>
APPENDIX C

ESTIMATING THE TIME SERVED FOR OFFENSES

Our major concern here was to determine the amount of prison time served for an offense (if any), so that the street time between arrests could be ascertained. We assumed that where a prison sentence was received, the offender was incarcerated from the date of arrest. We only estimated the sentence when an institutional release date was unavailable in the offender's files. We thus retained information that was available pertaining to time served.

In many cases the "rap sheets" provide the date and nature of a charge and nothing else. Although we can often assume that charges were dropped, in some cases (we do not know how many) information relating to the adjudication and sentence has simply not been placed in the FBI files. We thus developed an estimation procedure based on the typical amount of time served in Ohio for relevant offenses, during specified periods of time. For many offenses, of course, where dispositional information was missing, we assumed that a sentence other than prison had been given.

The arrests of our offenders extended from 1930 to 1976. We therefore needed different estimates for time served in different periods due to the likelihood that
policies changed over time. When we assumed an institutional disposition was received, we made a note of the date of arrest. We used separate estimates for three periods: 1) before 1950, 2) 1950-1961 (inclusive), and 3) 1962 to the study's termination date. We thus ensured that no set of estimates applied for more than about a 15 year period. We used the United States Bureau of Prison data to obtain our estimates for all three periods.\textsuperscript{1} The 1942 publication was used for the first period, the 1951 publication for the second, and the 1964 publication for the third period. These publications list the average (sometimes the median) time served for different offenses in each state, as well as the federal system. We, of course, used the data they contained for Ohio.

Given this information, we now had to determine the offenses committed by our offenders to which these sentences should be applied. We assumed that all persons charged with homicide, rape, robbery, kidnapping and aggravated burglary served prison sentences. The U.S. Bureau of Prisons data was thus applied to all such offenses. Also, if a penitentiary sentence was indicated in the "rap sheets" for any other offense, we applied the Bureau of Prison figures for the appropriate period. For all offenses other than the five specified above and not being followed with certainty by a penitentiary sentence, we assumed that no prison time was served. On occasion, our estimates were clearly wrong
because offenders were re-arrested during periods we believed they were still incarcerated. In such cases, our estimates were adjusted to accommodate this information. Specifically, our estimate of the institutional release date was brought back to a point one month preceding the date of re-arrest. Once all the prison terms were estimated, we determined the street time between offenses by subtracting time served from the calendar time elapsing between any pair of arrests. When time served was zero, street and calendar time were equal.
REFERENCES

APPENDIX D

THE METHOD OF COMPUTING
INCAPACITATION EFFECTS

Table 40 displays the arrest history of one of our offenders. He was born about one-third of the way through 1925—for computational purposes, we divided the year into thousandths. His officially recorded criminal activity, as an adult, spanned about 27 years; from about the middle of 1945 (when he was 20 years of age) to the middle of 1972 (at which time he was 47 years of age). He was arrested a total of nine times.

By looking at the Master List of Offenses contained in Appendix A, we can identify the offenses the code numbers represent. His first arrest, in 1945, was for Intoxication and Indecent Conduct. This is not an offense targeted by our incapacitation measures so we move on to the next offense. This is a weapons charge, which would be targeted by our program. Thus, at the point of his 1947 arrest, our policy would have him incapacitated for five years. Any offense he committed between the date of this arrest and the same point in 1952 is counted as one prevented by our policy. We can observe that there are three such offenses—his third, fourth and fifth. Thus, the five year term could have prevented three officially recorded offenses.
### TABLE 40

A SAMPLE OF AN ARREST HISTORY

CASE NUMBER: 57  
DATE OF BIRTH: 1925.34

<table>
<thead>
<tr>
<th>Arrest Number</th>
<th>Date of Arrest</th>
<th>Age at Arrest</th>
<th>Offense Code Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1945.595</td>
<td>20.261</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>1947.408</td>
<td>22.074</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>1950.427</td>
<td>25.093</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>1951.323</td>
<td>25.989</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1952.085</td>
<td>26.751</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>1959.436</td>
<td>34.102</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>1961.112</td>
<td>35.778</td>
<td>26</td>
</tr>
<tr>
<td>8</td>
<td>1961.970</td>
<td>36.636</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>1972.537</td>
<td>47.203</td>
<td>7</td>
</tr>
</tbody>
</table>
The first arrest following the expiration of this hypothetical five year term is his sixth, a felonious assault in 1959. This, also, would be a targeted offense and, since it would be his second (if the policy had been in force), we would now incapacitate him for ten years. He was actually arrested for two offenses during the ten year period following the 1959 arrest, so we consider these preventable by our policy. The final arrest in 1972 is beyond the scope of our policies.

Therefore, of his nine recorded offenses, our five year term would have prevented three and our ten year term would have prevented two offenses. The total yield of fifteen years of incarceration, according to our calculations, would have been to prevent five of nine recorded offenses. This is quite typical of our cases as the average number of arrests across our sample was 8.55, we most often applied both the five and ten year terms and found the gross preventive yield of our policy to be about 50% of the original offenses.
APPENDIX E

THE EFFECT OF CASE ATTRITION ON FINDINGS IN LONGITUDINAL STUDIES

We have said that analyses of offender behavioral patterns over age or stages of a career may be compromised by the continued attrition of cases at each point. If we examine the relationship between offense seriousness and age, our objective is to determine whether offenders tend to commit offenses of increasing, diminishing or equal seriousness as they age. In all criminal career studies, there are a number of offenders who have committed only a very few offenses, making it difficult to discern patterns in their behavior. If a substantial number of offenders drop out of crime by their mid-twenties, observations of offense seriousness at ages beyond that point can only be made for the offenders still active. At different ages, we will therefore be observing different groups of offenders, rather than one group of offenders over time.

To overcome this problem, we conducted a series of analyses with the subsample of offenders who had been arrested at least once by the age of 22 and at least once following the age of 30. Thus, this group was criminally active for a minimum span of nine years.
Table 41 displays the mean seriousness of their offenses at each age. When we compare these findings with those of the entire sample (Table 28), we can observe an unstable pattern of offense seriousness over age; whereas, the pattern for the entire sample was one of a gradually diminishing seriousness with age. We can, perhaps, partly explain this by the fact that many of the purely violent and, hence, most serious offenders, committed only a very few offenses and were unlikely to be included in this last analysis. Generally, the seriousness scores of the entire sample were substantially higher than those of this limited group of active offenders. This is shown by the differences in the grand means of the two analyses. These differential findings, then, show the extent to which case attrition can distort the findings of longitudinal analyses and the correlations which derive from them.
### TABLE 41

**THE SERIOUSNESS OF OFFENSES BY AGE OF ARREST FOR OFFENDERS WITH A CAREER SPAN OF AT LEAST 9 YEARS**

<table>
<thead>
<tr>
<th>Age at Arrest</th>
<th>Number of Arrests</th>
<th>Mean Seriousness Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>-18</td>
<td>26</td>
<td>101.54</td>
</tr>
<tr>
<td>18</td>
<td>14</td>
<td>105.07</td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>93.63</td>
</tr>
<tr>
<td>20</td>
<td>24</td>
<td>89.50</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>73.71</td>
</tr>
<tr>
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Kaplan, Robert. Address by Canadian Solicitor General at Fifth Annual Conference on Applied Criminology sponsored by the University of Ottawa, March, 1982.


Pelanda, Carlo. Disaster and Sociosystemic Vulnerability. Columbus, Ohio: Disaster Research Center, Ohio State University, 1981.


