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CRIMINOLOGY

GENERAL PREVENTION REVISITED: RESEARCH AND POLICY IMPLICATIONS*

JOHANNES ANDENAES**

THE REVIVAL OF INTEREST

In a paper written about ten years ago it was complained that while the general preventive effects of criminal law had occupied a central position in the philosophy of criminal law, in penal legislation and in the sentencing policies of the courts, it had been almost totally neglected in the fields of criminology and sociology. It was then stated that practically no empirical research had been carried out on the subject.¹ This was, in fact, the repetition of similar complaints expressed in a paper written about fifteen years earlier.² Between the two papers no substantial change had taken place, apart from some research into the effect of the death penalty on murder rates.

Today the situation has changed dramatically. From the middle of the 1960's a whole series of research papers on deterrence have been published, and the number seems to be increasing. Two important books have dealt extensively with this topic,³ and more are in the offing.

* This paper was prepared during the author's stay as Hill Foundation Visiting Professor at the University of Minnesota, and grew out of a seminar on "Punishment and Deterrence" in the Department of Criminal Justice Studies. The author would like to express his thanks to the faculty members and other participants in the seminar for their stimulating exchange of views. He would also like to thank his research assistant, Mr. Phil Bush, who made the work easier in many ways and helped him to avoid some of the pitfalls of the English language.

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¹ Andenaes, *The General Preventive Effects of Punishment*, 114 U. PA. L. REV. 949 (1966).

² Andenaes, *General Prevention—Illusion or Reality?*, 43 J. CRIM. L.C. & P.S. 176 (1952).

³ F. ZIMRING, *PERSPECTIVES ON DETERRENCE* (1971); F. ZIMRING & G. HAWKINS, *DETERRENCE—THE LEGAL THREAT IN CRIME CONTROL* (1973) [hereinafter cited as F. ZIMRING & G. HAWKINS].

Thus, the problem has at least received serious attention. Nevertheless, it remains a very controversial one. As Jack P. Gibbs, one of the pioneers of modern deterrence research, said in a conference in 1972:

Judges, policemen, and even lawyers have expressed puzzlement over my research on the deterrence question; they apparently view it as a needless demonstration of the painfully obvious. But some of my social science colleagues seem to view my research as an attempt to resurrect a discredited and reactionary idea. So we have two camps in the deterrence issue, and neither one appears to press for research on the subject.⁴

There is some analogy to the situation in psychological research on punishment as described by Singer.⁵ For twenty years psychologists accepted the findings of Skinner (1938) and Estes (1944) that punishment was ineffective in eliminating proscribed behavior. Later research has shown that these conclusions were wrong. According to Singer, recent work has repeatedly shown that both non-rewarded and rewarded behavior can be quickly, completely, and permanently suppressed by punishment, provided it is severe enough. It might well be asked: how could the whole world of psychologists have been wrong for so long? The answer given is that psychologists are human; they do not enjoy experimenting with punishment, especially severe punishment, nor is it to their liking to advocate punishment as a social tool. Therefore, psychologists performed very little research on punishment in the two dec-

⁴ Gibbs, in *THE ECONOMICS OF CRIME AND PUNISHMENT* 115 (S. Rottenberg ed. 1973) [hereinafter cited as *ECONOMICS OF CRIME AND PUNISHMENT*].

⁵ For further references see Singer, *Psychological Studies of Punishment*, 58 CALIF. L. REV. 405, 413-14 (1970).

ades following the work of Skinner and Estes; instead, they accepted their conclusions without serious question. In the early 1960's, however, research on punishment suddenly skyrocketed. "The reason for this upsurge is not that psychologists have suddenly become hard-boiled; rather, they have become convinced that knowledge about punishment has widespread humanitarian uses."⁶

This discussion has not been presented because it is thought that psychological research on deterrence has much to offer deterrence theory; for the opposite is true.⁷ Nevertheless, the emotional climate seems to have been much the same in both fields. For the greater part of this century a rehabilitative or treatment oriented ideology has been predominant among progressive and liberally minded people of the Western world, and most criminologists would place themselves in this category. The concepts of punishment and deterrence were looked upon with distaste as something outdated, primitive and brutal. The slogan "punishment (which in this context means threat of punishment) does not deter crime" was therefore happily accepted on the most tenuous evidence. During the last ten to fifteen years a re-evaluation of the rehabilitative concept has taken place. There has come a realization that there is a large amount of wishful thinking inherent in this idea. We do not know how to rehabilitate offenders; the evidence points unmistakably towards a conclusion that the type of treatment given them makes very little difference to the rate of recidivism.⁸ Nor do we know when to release an imprisoned offender in order to maximize his future chances for a law-abiding life. In short, the ideology of treatment and rehabilitation gives no basis for determining the kind of sanction the offender

should get, and in the case of imprisonment the length of time he should serve. Moreover, we have come to understand that arbitrariness and injustice may be the result if we try to put the rehabilitative idea into practice. This growing awareness that the concept of rehabilitation cannot serve as the basis for a system of criminal justice, makes the inquiry into other aims of the criminal law all the more crucial.

Much of the discussion on the question of general prevention has been of an emotional nature and has not separated the empirical questions from the value questions.⁹ One line of inquiry concerns whether the threat of punishment works or not, *e.g.*, whether a change in the risk of detection or the severity of sanction will make a difference in the crime rate, and if so, how much difference. Another line of inquiry concerns whether and how far it is ethically defensible or politically acceptable to make use of the threat and punishment mechanism. There may be good reasons for being emotional on some policy questions, for example, those involving capital punishment, corporal punishment, or severity of sanction. Some types of penalties will be rejected in a civilized society regardless of their effectiveness. But so far as a deterrent effect on crime is at all considered to be relevant, an attempt should be made to take an objective and dispassionate look at the available evidence before taking sides on the policy questions. Too often the approach has been the opposite: people have let their view on the empirical questions be heavily colored by their policy preferences. In this respect the research from recent years represents a new approach, and there has been a growing sophistication in research designs and interpretation of the findings.

Most of this research falls into one of three categories:

(1) Comparison between geographical areas (cross-sectional research);

(2) Comparisons over time ("before and after research"); and

(3) Survey research on knowledge and attitudes.

As a fourth category a few experimental studies of interest could be mentioned. Some re-

⁶ *Id.* at 414.

⁷ ANDENAES, *The Relevance of Psychological Research for Deterrence Theory*, in PUNISHMENT AND DETERRENCE 183-89 (1974) [hereinafter cited as PUNISHMENT AND DETERRENCE]. See also note 92 *infra*.

⁸ For surveys of the research findings see R. HOOD & R. SPARKS, *KEY ISSUES IN CRIMINOLOGY* (1970); Martinson, *What Works?—Questions and Answers About Prison Reform*, 35 PUBLIC INTEREST 22 (1974); D. LIPTON, R. MARTINSON & J. WILKS, *THE EFFECTIVENESS OF CORRECTIONAL TREATMENT: A SURVEY OF TREATMENT EVALUATION STUDIES* (1975).

⁹ See PUNISHMENT AND DETERRENCE, *supra* note 7, at 41-44.

searchers have used a combination of these methods.

This paper will not attempt to give a complete summary of the research findings.¹⁰ Rather, it shall try to give a broad outline of the developments and seek a tentative answer to two questions. First, how much new insight have we gained? Second, how useful is this insight for purposes of criminal policy? Before this is accomplished, however, some preliminary questions must be answered.

THE INVASION OF THE ECONOMISTS

A recent development of interest has been the entrance of economists into the field of deterrence discussion and research.¹¹ In particular, two aspects of their work deserve comment.

First, they introduce a general view on crime and crime motivation which contrasts sharply with the traditional view of sociologists working in the field. The economists tend to start from the assumption that crime is the outcome of a rational choice. To use the words of Meiselman and Tullock, economists tend to believe that crime "in most cases is simply a business oriented economic activity which is undertaken for much the same reasons as other types of economic activity."¹² From this point of departure often follow policy statements. Meiselman and Tullock continue: "To reduce the frequency of crime, economists generally recommend we raise the costs of crime."¹³

It is difficult to see why economists as such represent any special insight into the psychology and motivation of offenders or potential offenders. To go back to Bentham seems somewhat strange in the latter half of the twentieth century. The legal profession has often, and with some justification, been ridiculed for its simplistic, Benthamite psychology, but we feel

we have advanced toward a somewhat higher level of sophistication. The psychology of rational choice may be correctly applied to some types of crimes, for example white collar crime and organized crime, while for other types it seems wide of the mark. To speak of rational choice in regard to a murder developing out of a family conflict or a tavern brawl, or in regard to the intoxicated rapist or the juvenile gang member, does not seem to make much sense. In fact, it makes about as little sense as the opposite generalization that "punishment does not deter crime," a generalization which implies that criminal decisions—all types of such decisions—are so different from all other types of decisions that the risk of unpleasant consequences is completely left out of consideration. This is a proposition which has become increasingly unacceptable since research into unreported crime and white collar crime has demonstrated that violations of the criminal law are a widespread and normal phenomenon.

The other contribution of economists lies in their application of non-experimental, statistical models and methods developed in their own field. It seems that econometric theory may have developed more powerful statistical methods than most sociologists have at their disposal. There is every reason to welcome their work in this regard. But, it is believed that an application of these statistical methods, and the results arrived at by using them, are not dependent upon the general approach to crime and crime motivation discussed above. The same methods could be applied, and the same results arrived at, by taking a different view of criminal motivation. It is just a question of achieving enough sophistication from a statistical viewpoint. This independence of the statistical work from the general philosophical approach is essential. If the validity of statistical research were dependent upon the soundness of the author's general view of crime, any productive discussion would be foreclosed.

Unfortunately, there has not been as much interaction between sociologists and economists as might be hoped for. The sociologists have mostly discussed and criticized the research of other sociologists, and have rarely undertaken a critical assessment of the research of economists, and vice versa. These two streams of re-

¹⁰ See Tittle, *Punishment and Deterrence of Deviance*, in *ECONOMICS OF CRIME AND PUNISHMENT*, *supra* note 4, at 85; Tittle & Logan, *Sanctions and Deviance: Evidence and Remaining Questions*, 7 *LAW & SOC'Y REV.* 371.

¹¹ For an early and influential paper see Becker, *Crime and Punishment: An Economic Approach*, 50 *J. POL. ECON.* 169 (1968). For a collection of papers of economists see *ECONOMICS OF CRIME AND PUNISHMENT*, *supra* note 4.

¹² *ECONOMICS OF CRIME AND PUNISHMENT*, *supra* note 4, at preface.

¹³ *Id.*

search seem to be running side by side without ever crossing paths.

DEFINITION AND TERMINOLOGY:
GENERAL DETERRENCE OR
GENERAL PREVENTION?

In the literature of English speaking countries deterrence is used as a technical term: *general deterrence* to signify the effects of threat of punishment, *special deterrence* to signify the effects of actual punishment on the individual offender. This paper is concerned only with general deterrence.

There is one disadvantage in the use of the terminology. The term "deterrence" in ordinary usage carries the meaning of influencing by fear. However, it seems to be generally accepted that the threat and imposition of punishment may have a motivating influence apart from the creation of fear, through an expression of social condemnation of the forbidden act. Criminal law is not only a price tariff, but rather also is an expression of society's disapproval of a particular act—a disapproval which may work in subtle ways to influence behavior.¹⁴ Various labels have been used to characterize these effects—the moral influence, the educative, the socializing, the attitude shaping, the norm strengthening or norm reinforcing influence, and so on.¹⁵ Opinions vary strongly in regard to the importance of this component; it may also be of varying importance in different cultural settings. Nevertheless, few, if any, would disregard it altogether. Some of the researchers in the field explicitly state that they construe deterrence in a broad sense, so as to also include the moral effects.¹⁶ Others construe deterrence in a more narrow sense, which is in agreement with the normal usage.¹⁷ Most do not mention the problem at all, and thus we are left with an ambiguity.

In German and Scandinavian literature this difficulty is overcome by speaking about *gen-*

eral prevention instead of general deterrence. General prevention thus has two components: the fear component and what has been called the moral component. It is admitted that this terminology is not entirely satisfactory either. From a linguistic point of view general prevention is a rather broad term, which may be construed to include such measures as better education, anti-poverty programs, psychiatric counselling, and so on. In Continental discussions, however, this has not created difficulties. The vagueness disappears when the term "general prevention" is used as a kind of shorthand expression for "the general preventive effects of criminal law."

The particular terminology used is, of course, of limited importance when the meanings of the terms are made sufficiently clear. It has been my experience that the use of the term deterrence tends to focus the discussion on the motivating effects of conscious fear, to the neglect of other aspects of the problem. For this and other reasons, therefore, in this article I will speak about general prevention.

It is suspected that the power of the word over thought is responsible for a neglect of the moral effects of criminal law in deterrence research. Obviously, it is difficult in research to distinguish between the two types of effect. But an awareness of the distinction calls for the inclusion of other dimensions into the discussion and interpretation. In this regard, two points should be mentioned.

First, the consideration of moral effects calls for a long-term perspective. "[T]he legislation of one generation may become the morality of the next."¹⁸ If a substantial part of the impact of the law is believed to lie in its power to support and reinforce social norms, one would not expect rapid changes in crime rates as a result of less than drastic changes in law or law enforcement.¹⁹

Second, deterrence research has been mainly concerned with the effects of severity and certainty of sanction. When discussing the moral effects a third variable may be just as impor-

¹⁴ See F. ZIMRING & G. HAWKINS, *supra* note 3; Andenaes, *The Moral or Educative Influences of Criminal Law*, 27 J. Soc. Issues 17 (1971); Hawkins, *Punishment and Deterrence: The Educative, Moralizing and Habitual Effects*, 1969 Wis. L. Rev. 550 (1969).

¹⁵ For convenience the expression "moral effects" will be utilized in this article.

¹⁶ F. ZIMRING & G. HAWKINS, *supra* note 3, at 77.

¹⁷ Gibbs, *supra* note 4, at 115.

¹⁸ Walker, *Morality and the Criminal Law*, 11 How. L.J. 209, 214 (1964).

¹⁹ For a discussion of the long-term effect of removing the stigma of criminalization from abortion see Zimring, *Of Doctors, Deterrence, and the Dark Figure of Crime—A Note on Abortion in Hawaii*, 39 U. CHI. L. REV. 699, 716-21 (1972).

tant: the perceived *legitimacy* of the criminal justice system and of the particular statute under examination. To exert a moral influence the law and the machinery for enforcement of it must be looked upon as wielding legitimate authority. An absence of such perceived legitimacy may operate on different levels. It may amount to a wholesale rejection of the present society, which is viewed as unjust and oppressive. It may refer to the functioning of the criminal justice system, which is considered arbitrary and discriminatory. Or it may refer to the specific criminal prohibition in question; one can think about the attitudes of college students towards the marijuana laws or the attitudes of organized labor towards anti-strike legislation. The enforcement of prohibitions which are looked upon by great segments of society as illegitimate might provoke anger, resentment and violence instead of the desired conformity. The "prestige of the law," to use a phrase coined by the Polish sociologist Podgorecki,²⁰ may vary from one country to another. There is much to indicate that it is at a low ebb in present-day America.

The reasons for this can be traced in part to the racial tensions and feelings of alienation and frustration found in a large segment of the black community. In such an atmosphere of antagonism, any instrument of law enforcement, even a well-justified and lawful arrest, may be the spark which precipitates an outbreak of violence and disorder, as was the case with the Watts riot of 1965.²¹ This lack of respect for the law can also be traced to a widespread distrust of the integrity of political leadership and law enforcement. For example, the President's Crime Commission mentions this in connection with organized crime:

As the leaders of Cosa Nostra and their racketeering allies pursue their conspiracy unmolested, in open and continuous defiance of the law, they preach a sermon that all too many Americans heed: The government is for sale; lawlessness is the road to wealth; hon-

esty is a pitfall and morality a trap for suckers.²²

A theory which does not take factors of this type into account lacks something essential, and provides a poor basis for policy decisions.

At this point, it should be noted that the *habituative* effects of criminal law will not be discussed in this paper. This is not to deny that much law-abiding conduct is habitual and that the threat of punishment plays a role in this habit formation; it clearly does.²³ It is sufficient to mention the response of drivers to traffic signals. The process of habit formation is not on a par with the process of deterrence and moral persuasion. Habit formation is a secondary phenomenon. For a habit to be established there must first be compliance based upon other sources, which may be fear of or respect for the law; the habit is eventually formed through repetition of the law-abiding conduct.

Another point of definition and terminology should also be mentioned here. General deterrence (or general prevention) is sometimes defined as the restraining impact which the punishment of offenders has *on others*.²⁴ This is an unfortunate definition, since it concentrates upon actual punishment in isolation from the threat of the law. The threat of the law is the point of departure; from a general deterrence perspective the main function of actual punishment is to make the threat of the law credible. If the threat itself is 100 per cent effective, there will be no place for actual punishment because there will be no violation, and the case would fall outside the above-mentioned definition of deterrence. Moreover, there will always be a time lag between the enactment of new penal provisions and the imposition of actual punishment. For example, take the much discussed British legislation on drunken driving which went into effect on October 9, 1967.

²² THE PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE, TASK FORCE REPORT: ORGANIZED CRIME 24 (1967) [hereinafter cited as TASK FORCE REPORT: ORGANIZED CRIME].

²³ See PUNISHMENT AND DETERRENCE, *supra* note 7, at 7-9, 36; Hawkins, *Punishment and Deterrence: The Educative, Moralizing, and Habitual Effects*, 1969 WIS. L. REV. 550 (1969).

²⁴ See, e.g., Van den Haag & Martinson, Book Review, 3 CONTEMPORARY SOCIOLOGY 454 (1974).

²⁰ Podgorecki, *The Prestige of the Law*, 10 ACTA SOCIOLOGICA 81 (1966).

²¹ See THE PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE, TASK FORCE REPORT: CRIME AND ITS IMPACT—AN ASSESSMENT 119-20 (1967) [hereinafter cited as TASK FORCE REPORT: CRIME AND ITS IMPACT].

There was an immediate drop in accident rates before any criminal proceedings for a violation could be instituted.

When objections are made to this definition of general deterrence as the effect of punishment *on others*, it is not only because the definition is found to be analytically misleading, but also because it tends to engender a feeling that somebody is being sacrificed for the purpose of instilling fear in others; that the use of the deterrence mechanism is, therefore, in some way unjust or improper. While there are certainly ethical problems involved in deterrence,²⁵ the answers should not be biased by the use of inaccurate terminology.

THE DEATH PENALTY CONTROVERSY

Capital punishment was the first and, up to recently, the only field where research efforts were made in order to obtain a statistical assessment of the deterrent effect of punishment. The research in this field goes back to about 1920. It has relied largely on two methods: comparison of homicide rates in death penalty and abolitionist states, and comparison of homicide rates in a state before and after abolition or reintroduction of the death penalty. Recently Bailey has reviewed the previous research and added his own.²⁶ Despite the methodological objections which can be made against much of the research, it has convinced most students of the subject that capital punishment as opposed to life imprisonment has no discernible effect on the homicide rates. This means that if there is such an effect, a possibility which it is hard to disprove, it is not of such magnitude that it is statistically distinguishable from all the other factors which influence homicide rates. Research in other parts of the world has led to the same conclusion.²⁷

Two methodological points should be made here. If a simple comparison between abolitionist and retentionist states is undertaken, the murder rates are much higher in the latter. Few

would ascribe this to the use of capital punishment; it is hard to believe that the possibly brutalizing effect of capital punishment has a major impact on murder rates. Obviously, then, other factors influence the picture, for example a more violent culture in the South, accounting both for higher murder rates and less inhibition against the use of capital punishment. The accepted method has, therefore, been to compare murder rates of abolitionist states with neighboring capital punishment states. The comparisons show no consistent pattern in favor of the death penalty states; if anything, the death penalty states seem to have higher homicide rates than the abolitionist states.

Most of the research has been concerned only with the legal possibility of capital punishment. It can be argued that frequency of application may be of greater importance than such legal possibility. Only Schuessler and Bailey have tried to relate homicide rates to the frequency of executions in death penalty states.²⁸ They both found a slight, but (with one exception) not statistically significant negative correlation between execution rates and homicide rates. This leaves open the possibility, but far from establishes, that a more extended use of capital punishment might have an influence on the murder rate.

The capital punishment studies have been very important as arguments in favor of the movement to abolish the death penalty for murder. Sometimes they have been used as the starting point for sweeping generalizations about the futility of punishment as a deterrent. Such generalizations are obviously unjustified. For one thing, the studies do not tell about the deterrent effect of the death penalty as such, but only about the difference in deterrent effect between the death penalty and life imprisonment, which would be the usual alternative. When the alternative is so severe, it seems understandable that the difference may have little motivating effect, even in the case of premeditated murder. In either case, the murderer puts his whole future at stake; he gambles on non-detection. If he is caught, the game is lost. Moreover, murder is a very special crime, sur-

²⁵ See Andenaes, *The Morality of Deterrence*, 37 U. CHI. L. REV. 649 (1970); F. ZIMRING & G. HAWKINS, *supra* note 3, at 35-50.

²⁶ Bailey, *Murder and the Death Penalty*, 65 J. CRIM. L. & C. 416 (1974).

²⁷ For the British Commonwealth see N. WALKER, *CRIME AND PUNISHMENT IN BRITAIN* 237-41 (2d rev. ed. 1968).

²⁸ Schuessler, *The Deterrent Influence of the Death Penalty*, 284 ANNALS 54 (1952); Bailey, *supra* note 26, at 421-23.

rounded by strong moral and social taboos, and often committed in passion or as a way of relieving personal tensions which have become unbearable. Differences in types of legal punishment may, therefore, be of less consequence here than in most other crimes. In addition a certain contradiction between ends and means may counteract the moral effect of the supreme penalty for murder: it seems somewhat inconsistent to inculcate sanctity of life by killing the offender.

For these and other reasons the findings of the capital punishment research have no validity outside the investigated field, that is, capital punishment for murder under present-day conditions. There is much historical evidence to show that capital punishment in war, revolution and similar situations may have a much stronger effect than any other measure.²⁹ The main reason is probably that execution is definitive, whereas a threat of life imprisonment under the uncertainty of future developments lacks its normal credibility. That the capital punishment research does not tell anything about the relative general preventive effects of fines, probation or prison sentences for offenses like car theft, drunken driving, tax cheating or anti-trust offenses is too obvious to merit any further elaboration.³⁰

It should be noted that the value of these death penalty studies has recently been questioned by economists. Tullock describes the earlier studies as "extremely primitive statistically," and without articulating his reasoning, concludes that their findings should not be given much weight.³¹ He further reports that Ehrlich, by using a much more sophisticated method, has recently demonstrated "a very sizable deterrence payoff to the death penalty for murder."³² Ehrlich's figures, according to Tullock, indicate that each execution prevents be-

tween eight and twenty murders. Tullock adds, however, that the data available for Ehrlich's study were somewhat inadequate, so not as much reliance can be put upon his results as would normally be given to work by such a sophisticated econometrician.³³ Since at the time of this writing the study itself had not yet been published a detailed assessment cannot be made. Some comments in regard to the unsolved problems of the cross-sectional research, which is the favorite method of the economists, are made in the following section.

RECENT COMPARATIVE RESEARCH

In recent years, the favorite method of research has been to compare geographical units, mostly the individual states of the United States, for the purpose of determining the relation between crime rates and the certainty and severity of punishment. While classical deterrence theory mentioned celerity of punishment as well as certainty and severity, there appears to be no research investigating the effects of celerity on crime rates. On a common sense level celerity seems to be less important than certainty and severity in general prevention. To the public at large the important thing may be that the machinery of justice grinds, that the guilty do not escape punishment; whether it grinds quickly or slowly is of less consequence.³⁴

The pioneers in the sociological field were Gibbs and Tittle, who conducted independent investigations at about the same time. Gibbs compared homicide rates in the various states with certainty and severity of imprisonment.³⁵ As a measure of *certainty* he used the ratio between the number of persons admitted to a state prison during 1960 on a sentence for homicide and the average number of homicides

²⁹ See PUNISHMENT AND DETERRENCE, *supra* note 7, at 26-27, 58-59; Meehl, *Law and the Fireside Inductions; Some Reflections of a Clinical Psychologist*, 27 J. Soc. ISSUES 65, 73-74 (1971).

³⁰ For a discussion on the need to differentiate between various types of offenses see PUNISHMENT AND DETERRENCE, *supra* note 7, at 10-22, 84-109; F. ZIMRING & G. HAWKINS, *supra* note 3, at 128-41.

³¹ Tullock, *Does Punishment Deter Crime?*, 36 PUBLIC INTEREST 103 (1974).

³² *Id.* at 108.

³³ Tullock tells of an earlier work using a quite different set of statistics and a different method, in which he arranged to have a graduate student do a preliminary study of the same issue. His results showed that each execution prevented two murders. Here again, however, the data were bad and the methods were suitable only for a preliminary explanation. If anything, the great variation between the figures of Ehrlich and the figures of Tullock's graduate student indicate the difficulties of coming to a reliable assessment.

³⁴ For a more detailed discussion see F. ZIMRING & G. HAWKINS, *supra* note 3, at 247.

³⁵ Gibbs, *Crime, Punishment, and Deterrence*, 48 Soc. Sci. Q. 515 (1968).

reported to the police in the years 1959 and 1960 (based on the *Uniform Crime Reports*). As a measure of severity he used the median months served on a homicide sentence by persons in a state prison on December 31, 1960. Utilizing a chi-square analysis he found that both certainty and severity of imprisonment, as thus defined, were negatively related to homicide rates. For example, the average homicide rates for the states which were low both in certainty and severity of punishment were over three times the average for states with high certainty and severity. A comparison between the relations of certainty and severity to homicide rates showed that the association was much greater for certainty. Gibbs was well aware of the defects of the data and the difficulties of interpretation. He did not, therefore, consider his findings conclusive, but thought that they placed in doubt the common assertion that no evidence exists of a relationship between legal reactions to crime and the crime rate.

Tittle used an approach similar to that of Gibbs, but extended his analysis to include all seven index crimes (homicide, assault, sex offenses, robbery, burglary, larceny and auto theft).³⁸ He also used different statistical techniques in his computations. One important difference in design was that Tittle tried to control the etiological factors, such as level of urbanization and education, age and sex composition of the population. He found a negative relation between certainty of imprisonment and offense rate for each of the offense categories, but the magnitude of the associations ranged from almost zero (-.08) in the case of auto theft to a substantial association in the case of sex offenses (-.57). With regard to severity no associations with crime rates were found with the exception of homicide. This exception aside, "it would seem that severity alone is simply irrelevant to the control of deviance," concludes the author.³⁷

The exception for homicide was somewhat confusing, since homicide generally is believed to be an offense where severity of sanction plays a minor role. Zimring has later shown that when the United States is divided into re-

gions and comparisons are made between states within the same region, the apparent relation between severity of sanction and homicide rates disappears.³⁸

The studies of Gibbs and Tittle were the catalysts for a whole series of papers. Gray and Martin, in a reanalysis of Gibbs' data using multiple correlation and regression techniques, found confirmation for the suggestion that punishment does deter crime, but not that certainty of punishment is more important than severity.³⁹ They summarized their findings in this way:⁴⁰

Our model suggests that halving either certainty or severity of punishment will tend to double the crime rate, and vice versa; halving both will quadruple the crime rate, and doubling both will cut the crime rate to one fourth its previous value—provided causality holds, a matter which is not testable with these data.

This proviso is, of course, crucial.

Chiricos and Waldo, on the other hand, found according to their own interpretation "little consistent support for the hypothesis that rates of crime and the certainty and severity of punishment are inversely related."⁴¹ Using the same approach as Gibbs and Tittle they extended the analysis to three points in time (1950, 1960, and 1963), and tried in addition to relate changes in rates of crime to prior changes in the certainty and severity of

³⁸ F. ZIMRING & E. HAWKINS, *supra* note 3, at 260-62; Zimring, *Perspectives on Deterrence*, *supra* note 3, at 86-87. Bean and Cushing, on the other hand, by using multiple regression techniques found significant effects of severity as well as certainty when correcting for regional differences by analyzing southern and non-southern states separately. See Bean & Cushing, *Criminal Homicide, Punishment, and Deterrence: Methodological and Substantive Reconsiderations*, 52 Soc. Sci. Q. 277 (1971). Two different explanations of this contradiction can be advanced. It may be that Bean and Cushing's method of dividing the states into only two regions (south and non-south) is too primitive. Alternatively, it may be that their regression analysis gives more information (as they themselves state), and therefore is able to uncover relations which do not show up with other methods.

³⁹ Gray & Martin, *Punishment and Deterrence: Another Analysis of Gibbs' Data*, 50 Soc. Sci. Q. 389 (1969).

⁴⁰ *Id.* at 394-95.

⁴¹ Chiricos & Waldo, *Punishment and Crime: An Examination of Some Empirical Evidence*, 18 SOCIAL PROBLEMS 200 (1970).

³⁸ Tittle, *Crime Rates and Legal Sanctions*, 16 SOCIAL PROBLEMS 409 (1969).

³⁷ *Id.* at 416.

punishment. The authors found negative correlations between certainty of imprisonment and the crime rates, but the strength and statistical significance of the associations varied greatly not only over offense, but also over time. Moreover they suspected that the negative correlations found by Tittle and themselves could be a statistical artifact, since the denominator of the certainty index and the numerator of the deviance index were almost identical ("crimes known to the police"). In conclusion the authors suggested that the data applied in their own studies, as well as those of Gibbs and Tittle (*Uniform Crime Reports* and *National Prisoner Statistics*) may be inadequate for use in the testing of deterrence hypotheses.

These methodological misgivings were promptly refuted in commentaries by various authors.⁴² And Logan, in a reanalysis of Tittle's data using other statistical methods,⁴³ confirmed his findings: there is for all index crimes a moderate negative relation between certainty of imprisonment and the crime rate; this relation may be curvilinear, the curve being steep at lower levels of certainty and flat at upper levels of certainty. For severity a general pattern is more difficult to establish. There seems to be a negative relation between certainty and severity, which might conceal any deterrent effect of severity as such.

In this regard, Bailey and Smith made a specific effort to examine whether there is, in fact, an inverse relation between severity and certainty.⁴⁴ For the death penalty such an inverse relation is indicated by historical evidence and common sense, and the well known Connecticut crackdown on speeding shows the same effect in the field of traffic law.⁴⁵ Bailey and Smith found a slight but fairly consistent

inverse relation between severity and certainty also for other offenses, as well as between changes in the levels of these two variables.

Gibbs himself together with Erickson has reanalyzed his own data using unconventional techniques.⁴⁶ Again negative correlations between severity of punishment and homicide rates were found. A new discovery was that these correlations are stronger with smaller variations in certainty. The inverse was not true, however; the negative correlations between certainty of punishment and homicide rates were not stronger when variations in severity were smaller. How these findings can be reconciled in a meaningful way remains an unsolved problem.

Leaving aside for the moment the question of direction of causality it is important to emphasize two other points which often seem to get lost in the discussion.

First, the research has not tried to differentiate between the *incapacitative* and the *deterrent* effect of imprisonment. Imprisonment prevents new crimes for the period of incarceration. The magnitude of this effect depends on the length of imprisonment and the criminal propensity of the particular prisoners. The impact on crime rates by taking out of circulation a number of offenders who would have committed new crimes if they were left in liberty has nothing to do with deterrence. Unless we have an estimate of this incapacitative effect of imprisonment we run the risk of ascribing to deterrence an effect which in fact is due to incapacitation.

Greenberg has made an attempt to assess the incapacitative effect of imprisonment.⁴⁷ Using two different methods he came to the conclusion that cutting the prison population down to half of its present size (from 200,000 to 100,000) would increase crime rates due to less

⁴² Logan, and Bailey, Gray & Martin, *On Punishment and Crime (Chiricos and Waldo, 1970): Some Methodological Commentary*, 19 *SOCIAL PROBLEMS* 280, 284 (1971). See also Bean & Cushing, *supra* note 38.

⁴³ Logan, *General Deterrent Effects of Imprisonment*, 51 *SOCIAL FORCES* 64 (1972).

⁴⁴ Bailey & Smith, *Punishment: Its Severity and Certainty*, 63 *J. CRIM. L.C. & P.S.* 530 (1972).

⁴⁵ Campbell & Ross, *The Connecticut Crackdown on Speeding: Time Series Data in Quasi-Experimental Analysis*, 3 *LAW & SOCIETY REV.* 33 (1968).

⁴⁶ Erickson & Gibbs, *The Deterrence Question: Some Alternative Methods of Analysis*, 54 *Soc. Sci. Q.* 534 (1973).

⁴⁷ D. Greenberg, *The Incapacitative Functions of Imprisonment: Some Estimates*, August 1974 (paper presented at the meeting of the Society for the Study of Social Problems, Montreal, Canada, August, 1974). Ehrlich also came to the conclusion that the incapacitative effect of imprisonment may be small for less serious crimes. See Ehrlich, *Participation in Illegitimate Activities: A Theoretical and Empirical Investigation*, 81 *J. POL. ECON.* 521, 535-37, 553 (1973).

incapacitation by only a small percentage (somewhere between 0.6 and 4 per cent). If these estimates are accepted, the incapacitation factor would not appear to be an important disturbing factor in deterrence research, although a complete study would require that the effects of jail terms also be taken into account.

Second, it is important to note that the concepts of "certainty" and "severity" in the research initiated by Gibbs and Tittle are different from the same concepts as used in deterrence theory. In deterrence theory certainty indicates *the risk of being punished*, whatever the sanction might be (a fine, probation, jail, prison, death). Gibbs, and others following him, have concentrated exclusively on *the risk of imprisonment*, measured by the ratio between persons admitted to state prisons and the number of crimes reported to the police. In Gibbs' study of homicide this was probably of no great importance, since the penalty here almost invariably will be imprisonment (apart from the relatively few cases which result in the imposition of the death penalty). For offenses like larceny, burglary and auto theft, on the other hand, the discrepancy will be very great, since other dispositions here are so common. The average risk of imprisonment for these offenses is very small. Tittle places the figures at 3.6 per cent, 3.4 per cent, and 1.5 per cent respectively.⁴⁸ Differences between states in regard to this risk may reflect severity in sentencing as much, or even more, than certainty of detection and conviction. From the present data an answer to this cannot be given. It can only be said that imprisonment rates are a type of combined measure of certainty and severity.

Likewise, the definition of severity in the reviewed research is not in accord with the same concept in deterrence research. A comparison between the length of prison terms served in different states does not give an overall picture of the severity of sanction. In one state there may be a wide use of probation and fines, and long prison sentences in the few cases where prison is used. In another state there may be a greater use of short jail or prison sentences. It can be added that the

practice of indeterminate sentences, leaving to the parole boards the decision on how much of a prison sentence will be served, creates a low visibility of this factor, and therefore probably a low correspondence between actual and perceived severity.

For these reasons it would be a serious misinterpretation of the findings to say that they indicate that certainty of punishment has a deterrent effect whereas it seems doubtful that severity has such effect. What the research does suggest is, first that the use of *imprisonment* acts as a deterrent for traditional crimes and, secondly that differences in the *length of imprisonment*, at the *levels of use in the United States*, do not seem to have much impact on crime. It would be quite unjustified to extend this analysis to a choice between, for example, fines or probation and imprisonment. This would be the same type of error as extrapolation of the research involving death penalty for murder to other penalties and other offenses.

The rates of clearance by arrest no doubt give a better approximation to certainty of sanction than do the rates of imprisonment. Moreover, arrest in itself, although not a penalty in any legal sense, in fact acts as a kind of sanction, carrying both unpleasantness and some social stigma. Such arrest rates have been used in research by Logan and by Tittle and Rowe.

Logan based his study on arrest rates for the various states, using unpublished data supplied by the F.B.I. for the years 1964 through 1968.⁴⁹ He found that certainty of arrest has a low to moderate negative correlation with the crime rate for every index crime except homicide. Since the probability of arrest within each crime category is fairly uniform from state to state, he justifiably believed that it would be unreasonable to expect high correlations. Moreover, it is not known how high a correlation there is between actual risk of arrest and the perceived risk. Modest differences or changes in risk may go unnoticed. For some crime categories the probability of arrest has a higher negative correlation with crime

⁴⁸ See Tittle, *supra* note 36, at 416; Logan, *supra* note 43, at 69.

⁴⁹ Logan, *supra* note 43, at 40; C. Logan, Arrest vs. Imprisonment, August 1974 (paper presented to the American Sociological Association, Montreal, Canada, August, 1974).

rates than does probability of imprisonment, while for others there is a lower correlation. A search for an explanation of these differences yields only tentative answers.

Tittle and Rowe compared arrest data for counties and cities in the state of Florida.⁵⁰ They found negative correlations between certainty of arrest and the crime rate, but this was largely attributable to variations that occurred above a 30 per cent certainty. In the view of the authors these findings suggest that certainty of punishment has an important influence on the degree of conformity that can be expected in a political unit, but that this influence does not produce noticeable results until certainty has reached at least a moderate level. Since the authors give only aggregate figures for all index crimes, implying that the deterrence mechanism works in the same way for the different types of crime, one may be doubtful about the interpretation. Moreover, from the point of view of the offender the arrest rate for reported crimes will be less important than the much lower arrest rate for all committed crimes.

The really crucial question which has so far been left aside, is whether the correlations between sanctions and crime rates can be correctly considered as evidence of causality. The problem had been raised by Gibbs,⁵¹ and has later been discussed by Tittle,⁵² Logan⁵³ and others, but has not yet been solved. Punishment has an impact on crime, but crime also has an impact on punishment, and this two-way process may either create a false impression of a deterrent effect or, on the contrary, serve to conceal such effects. If crime rates, for some reason, have increased, this may, for example, lead to greater use of probation or fines to reduce overcrowding in prisons, and thus create an impression that leniency in dealing with offenders is responsible for high crime rates. But increased crime rates may as well lead to increased severity in sentencing as a countermeasure; thus, high crime rates and high severity may go together, and although

the increased severity may have had a deterrent effect this will not show up in the comparative analysis.

Furthermore, a third factor, difficult to identify and measure, may influence both the rate of crime and the indices of certainty or severity of sanction. One such intervening variable is what has been called the *normative climate* in society.⁵⁴ If community condemnation of certain criminal acts is strong, this may lead to lower crime rates and at the same time to a greater severity of punishment, thus creating an impression that the lower crime rate is due to the severity of punishment. Similarly with regard to certainty of sanction: a strong community condemnation could lead to active support of law enforcement from the citizens and consequently a higher certainty of detection and conviction, thus giving the impression that the high certainty of sanction was the cause of the low crime rate, whereas the real cause might be the normative climate as such. But a severe normative climate may have quite different effects: it may lead to a high percentage of committed crimes being reported to the police, thus concealing the possible deterrent effect of certainty and severity of sanctions. All these interactions between variables greatly complicate the interpretation of the findings. It is not possible on a common sense basis to state with confidence which way causality goes, much less to quantify the possible interactions. As long as these problems are not solved, conclusions in regard to deterrent effects can only be of a tentative nature.

Having reviewed the research of the sociologists it is now necessary to discuss the econometric research. The literature has assumed considerable proportions. In a survey dated February 1974, Morris Silver summarized and discussed nineteen recent econometric studies.⁵⁵ Some of them use the different states as units,

⁵⁴ Bowers & Salem, *Severity of Formal Sanctions as a Repressive Response to Deviant Behavior*, 6 LAW & SOC'Y. REV. 427 (1972); Salem & Bowers, *Severity of Formal Sanctions as a Deterrent to Deviant Behavior*, 5 LAW & SOC'Y REV. 21 (1970). Tittle, *supra* note 36, and Logan, *supra* note 43, speak about *normative consensus*.

⁵⁵ M. Silver, *Punishment, Deterrence, and Police Effectiveness: A Survey and Critical Interpretation of the Recent Econometric Literature*, February, 1974 (a report prepared for the Crime Deterrence and Offender Career Project).

⁵⁰ Tittle & Rowe, *Certainty of Arrest and Crime Rates: A Further Test of the Deterrence Hypothesis*, 52 SOCIAL FORCES 455 (1974).

⁵¹ Gibbs, *supra* note 35, at 527-28.

⁵² Tittle, *supra* note 36, at 419-21.

⁵³ Logan, *supra* note 43, at 72-73; C. Logan, *Arrest vs. Imprisonment*, *supra* note 49.

others use smaller units (cities, counties, police precincts) within one state. All of them discuss the impact of certainty of punishment, and a few also discuss the impact of severity. Because of the technical complexity of the statistical methods it is difficult for a non-statistician to form a personal opinion on the content and soundness of the built-in assumptions and the strength of the findings.

The basic technique of these econometric studies consists of constructing a *Crime Generation Function*, expressing the crime rate as a function of a set of explanatory variables, including the risk of punishment. Actual or estimated figures from available statistics are inserted into the equation and coefficients for the different variables are computed. Among the factors included may be, for example, the percentage of non-whites in the population, income inequality, police density and other factors which the author considers important. The methods of statistical manipulation vary from one study to another. The technique offers some possibilities for studying the interaction between crime and law-enforcement activities through simultaneous estimation techniques.

Only two especially elaborate and interesting papers will be mentioned here. Ehrlich compared the different states in the United States, and used measures of certainty and severity of imprisonment similar to those of Gibbs and Tittle.⁵⁶ He found, with virtually no exception, that the rate of specific crime categories varies inversely with the probability of imprisonment and the average length of time served in state prisons. He tried to separate the effect of incapacitation from the effect of deterrence, and concluded that an independent deterrent effect of law enforcement appears to be confirmed.⁵⁷ Ehrlich further attempted to assess the effectiveness of law enforcement in combating

crime by asking: is there too much or too little enforcement (based on 1965 figures)?⁵⁸ His tentative estimate was that a 1 per cent increase in expenditure on direct law enforcement would result in about a 3 per cent decrease in all felony offenses. Comparing the total social loss from these crimes with the cost of law enforcement, this would mean that expenditure on law enforcement was less than optimal: each extra million dollars spent on law enforcement would reduce the loss from crime by several million dollars. Ehrlich states, however, that this result cannot be considered very reliable—a statement with which it is easy to agree.

Kobrin and associates used counties within one state (California) as units of measurement.⁵⁹ In their analysis of the relationship between crime rates and severity and certainty of sanction, the fifty-eight counties were divided into four categories according to size, and seven factors indexing social characteristics of the county (poverty, ethnic composition, age composition, etc.) were taken into account. The methodology used was simple correlation analysis. Besides the *crime rate* (ratio of felonies to population) a *crime level* index was computed, using the Sellin and Wolfgang scale for weighting the seriousness of various offenses. As a result of their analysis it was found that about half of the variation in crime rates between the counties could be charged to the social factors which were taken into account, and approximately one-third to the activities of the criminal justice system, with the balance contributed by unknown factors. Further, it was found that the relative effect of justice agency operations on crime was greater in counties with larger rather than smaller populations. The meaning of these findings, if accepted, is that the activities of criminal justice agencies "remain a substantial and significant force in determining the rate and seriousness of felony offenses, the more so the larger the population of the jurisdiction."⁶⁰

⁵⁶ Ehrlich, *Participation in Illegitimate Activities: A Theoretical and Empirical Investigation*, *supra* note 47. See also Ehrlich, *The Deterrent Effect of Criminal Law Enforcement*, 1 J. LEGAL STUDIES 259 (1972).

⁵⁷ Ehrlich, *Participation in Illegitimate Activities: A Theoretical and Empirical Investigation*, *supra* note 47, at 535-37, 553; Ehrlich, *The Deterrent Effect of Criminal Law Enforcement*, *supra* note 56, at 267-69. But see the criticism by M. Silver, *supra* note 55, at 19-20, 49: this evidence "is much too tenuous to justify conclusions concerning an issue so vital."

⁵⁸ Ehrlich, *Participation in Illegitimate Activities: A Theoretical and Empirical Investigation*, *supra* note 47, at 556-59.

⁵⁹ S. Kobrin, E. Hansen, S. Lubeck & R. Yeaman, *The Deterrent Effectiveness of Criminal Justice Sanction Strategies*. Summary Report, September, 1972. (Public Systems Research Institute, University of Southern California).

⁶⁰ *Id.* at 16.

The most interesting feature of the research is the attempt to refer the variation to different stages of the criminal process (the police, pre-trial, conviction and sentencing stages). The three first stages refer to the certainty of sanction, whereas the sentencing stage refers to severity. For each stage a formula for sanction level was devised. For the police stage the computation was based on the ratio of arrests to the number of felonies reported. For the sentencing stage the various alternatives were weighted, somewhat arbitrarily, in a gradient from a fine, carrying a weight of 0; probation, 1; jail plus probation, 2; jail only, 3; prison, 4; and death penalty, 5. Data on length of sentence were not available and hence were not included. It is worth noting that the measure of severity of sanction in this research was quite different from the measure of severity in the comparative studies which used the various states as units. There, length of prison term was the only measure of severity, whereas this factor is not included at all in the California study. This is, of course, a weakness, but on the whole the measure of severity in the California study gives a better measure of severity in sentencing practice for the less serious felonies. For crimes like homicide and rape, where imprisonment is almost always applied, the reverse may be true.

The analysis ascribes the greatest explanatory power to the police and the sentencing stage, but the pattern varied markedly with the size of the county. "This suggests at a minimum that jurisdictions of different social composition may distribute the responsibility of sanction imposition among their justice agencies in quite different ways."⁶¹

The study shows that comparisons of units within one state offer possibilities of analysis which the state figures of the *Uniform Crime Reports* and the *National Prison Statistics* do not provide; nevertheless, there are aspects of the research which create doubt about these conclusions. For example, the study operates with aggregate figures for all index crimes and not figures for the different crimes; it has not addressed itself to the problem of separating deterrence and incapacitation. Further, it has not

discussed the problem of the direction of causality.

Morris Silver, after reviewing the econometric research, concludes: "Taken as a whole, the evidence convincingly demonstrates that crime rates are reduced by higher probabilities of punishment."⁶² Since simultaneous estimation techniques have been employed, the negative relationship cannot be attributed to the possibility that unanticipated increases in the crime rate, caused by spreading law enforcement resources too thinly, will bring about a decline in the probability of arrest and conviction. "The results for length of sentence point in the same direction as those for probability of punishment, but not as convincingly. Greater caution is justified for a number of reasons."⁶³

With regard to future research, Silver believes that the major obstacle to the further advancement of knowledge in the area of criminal behavior is the absence of refined data rather than the absence of refined theoretical models. The growing availability of data, for example, on actual as opposed to recorded offenses, subjective as opposed to recorded probabilities of apprehension and severity of punishment, and the criminal records and histories of population groups, will make it possible to accurately estimate parameters and test hypotheses regarding incapacitation, rehabilitation, general prevention, anti-poverty programs, etc. From this will follow an increase in the number of meaningful policy recommendations.

It is difficult to feel convinced that this optimism is justified. For one thing, the data Silver is asking for may be extremely difficult and costly to obtain. Further, a convincing method of separating incapacitative effects from general preventive effects has not been established. It is also hard to believe that parameters will be the same in states of very different social composition and cultural traditions, and that they will remain constant over time in a society undergoing rapid change. Perhaps even more important, it seems as if

⁶² M. Silver, *supra* note 55, at 30.

⁶³ *Id.* at 30. In the interpretation of these statements it should be born in mind that in the econometric as in the sociological research punishment mostly stands for imprisonment. See note 48 *supra*.

⁶¹ *Id.* at 24.

the causality problem has been only partially solved, and that for this reason competing explanations of covariation cannot be ruled out.

In a previous paper it was said about comparisons between geographic areas: "In order to draw definite conclusions we need areas with similar social conditions but drastic differences in legal systems, and such areas are difficult to find."⁶⁴ This was probably an underestimate of the potentialities of modern statistical methods. Nevertheless, an uneasy doubt remains in the mind of the non-statistician about the meaningfulness of comparing units so fundamentally different as rural states like South and North Dakota with states dominated by great metropolitan areas.

Two limitations of the comparative research of the sociologists and economists should be mentioned. The research has been confined to the seven index crimes. This covers the bulk of what is generally called "the crime problem," but it does not touch on such important issues as narcotics, public drunkenness, white collar crime, and organized crime. The findings can hardly be generalized in regard to such offenses, and these other offenses would be difficult to reach with the same techniques.

Another inherent limitation is this: The comparative research takes advantage of geographical variations in the functioning of the criminal justice system. In an ideally working criminal justice system there would be no disparities in sentencing. Severity of sanction would, under similar circumstances, be uniform across the different jurisdictions in the same political unit. If this were the case, differences, for example, between counties in California with regard to severity of sentence, would be ascribable to unknown differences in the composition of convicted offenders. Thus, in a perfectly functioning system we can expect a zero correlation between severity of sanction and crime rates. Whatever positive or negative correlations might be found would be spurious. To a certain degree, this would be true also for certainty of sanction, since it seems reasonable to adjust the input in law enforcement so as to achieve a similar certainty of punishment in different jurisdictions. It would, of course,

be a mistake to conclude from such zero correlations that severity or certainty of sanction has no impact on crime. In the United States today, discrepancies both across state borders and within the same states seem to be of such magnitude that they can be used as the basis of research. On the other hand, within countries with less disparity in sentencing and law enforcement, such as the Scandinavian nations, comparative studies using, for example, cities or counties as units, could not be expected to yield interesting results.

The planning and interpretation of comparative research is a difficult enterprise. The ideal qualifications of the researcher would be threefold: a high degree of statistical sophistication, a similarly high degree of knowledge of the theories and facts of criminal behavior, and thorough knowledge of how the machinery of criminal justice works. Since these qualifications can hardly be expected to be present in a single individual, teamwork seems essential, with each member of the team being sufficiently familiar with other aspects of the problem to participate in a productive exchange of information and viewpoints.

COMPARISON OVER TIME

The most straightforward method of exploring the effects of a change in legislation or enforcement on the rate of crime is the "before and after" research. It is a reasonable proposition that no major change of policy should be undertaken without an effort to ascertain the effects of the change. But this task is not as easy as it may sound.⁶⁵ First, of course, there is the difficulty in identifying the impact of the change among all the other factors which have been involved at the same time. Only abrupt and major changes can be expected to give clear statistical evidence of the effects, and preferably, there should be high enough figures to rule out the confounding effect of chance. Even so there are many pitfalls. One is the so-called phenomenon of regression to mean. A change in legislation or enforcement can be the response to a rising crime rate. If the crime rate decreases after the change in policy, this

⁶⁴ PUNISHMENT AND DETERRENCE, *supra* note 7, at 67.

⁶⁵ For a detailed discussion see E. ZIMRING & G. HAWKINS, *supra* note 3, at 270-91; Campbell, *Reforms as Experiments*, 24 AM. PSYCHOLOGIST 409 (1969); Campbell & Ross, *supra* note 45.

is easily attributed to the change in policy, whereas the study of a longer time series may suggest that what has happened is the return to a more normal rate which might have happened anyway.

A second pitfall is related to the large volume of unreported crime. The publicity accompanying the change in policy may have an impact on the tendency of the public to report the crime in question, thus making the number of reported crimes a misleading measure of the effect on crime rates. This difficulty can, to some degree, be overcome by the use of careful victimization studies undertaken both before and after the reform is put into effect. In other cases there may be available a measure of the effects which is independent of reported crime rates, for example, accident rates following changes in traffic legislation.

Having pointed out the possible pitfalls, it is now necessary to discuss a few important before-and-after studies from recent years. For example, Barry Schwartz examined the effect in Philadelphia of increased penalties for rape.⁶⁶ On Palm Sunday, 1966, Philadelphia was shaken by an exceptionally brutal case of rape. Three men broke into a house, raped and mistreated an eighty-year-old widow, her forty-four-year-old daughter and fourteen-year-old granddaughter. After the rape the house was ransacked and looted. The grandmother later died from her wounds. The legislature acted quickly to increase penalties for rape, with both political parties trying to gain political advantage from the issue in the upcoming May elections. On May 12, 1966, the new statute was signed by the governor. For rape without injury the maximum penalty was raised from fifteen to twenty years, for rape with bodily injury the maximum sentence was increased from fifteen years to life imprisonment, and there was set a minimum sentence of fifteen years. During the preparation of the bill high expectations were expressed with regard to deterrent effects on potential rapists.

So far the pattern was a rather familiar one. What was unusual was that a sophisticated research effort was made to assess the effects of

the legislation. The findings were very clear: in the months after enactment of the law there were the usual variations in rape rates from month to month, but nothing to indicate a decrease due to the new legislation or the publicity accompanying it. Though the author is very cautious in his findings, and does not make any sweeping generalizations, he states that we are "bound to conclude that Pennsylvania's new deterrent strategy against rape was a failure as far as Philadelphia is concerned."⁶⁷

Before drawing any conclusions from this study, a few caveats should be made. First, the research was directed towards short term effects. This does not rule out the possibility of a long term effect. Second, it is not known how far the new legislation has changed the actual pattern of sentencing. Third, it is not known whether the publicity concerning the Palm Sunday rape and the subsequent legislation has led to an increased tendency among the victims of rape to report the crime. If this were the case unchanged figures of reported rapes would mean a smaller number of committed rapes. Since victimization studies indicate that only one out of four rapes is reported to the police,⁶⁸ a change of attitude in the victims could easily conceal even a strong deterrent effect.

Despite these theoretical possibilities the study strongly suggests that for a crime like rape, an increase in the already very severe threat of punishment cannot hope to achieve much in the way of deterrence. Those who are not deterred by a threat of fifteen years, but will be deterred by a threat of twenty years, must be a very small group indeed. It would, however, be unjustified to apply this generalization to other crimes and other levels of punishment. This would be a mistake similar to previous generalizations made in the death penalty research.⁶⁹

Other recent "before and after" studies relate to the important problem of driver behavior.⁷⁰ Chambliss interviewed faculty

⁶⁷ *Id.* at 514.

⁶⁸ TASK FORCE REPORT: CRIME AND ITS IMPACT, *supra* note 21, at 12.

⁶⁹ See text accompanying notes 28 and 29 *supra*.

⁷⁰ For an excellent discussion of the previous research see Cramton, *Driver Behavior and Legal Sanctions: A Study of Deterrence*, 67 MICH. L. REV. 421 (1969).

⁶⁶ Schwartz, *The Effect in Philadelphia of Pennsylvania's Increased Penalties for Rape and Attempted Rape*, 59 J. CRIM. L.C. & P.S. 509 (1968).

members to find out how they reacted to an increase in fines and more stringent enforcement of parking regulations on a University campus.⁷¹ He found, not surprisingly, that for some of the faculty members severity and certainty of sanction had an impact on their behavior. The most important and well studied experience in deterrence of undesirable driver behavior is represented by the British Road Safety Act of October 1967, which made it an offense to drive with a blood alcohol concentration of .08 per cent or more.⁷² The penalty is normally a fine and loss of license for one year on the first offense. From the day the new legislation went into effect there was a considerable drop in highway casualties as compared with previous years. For the first three months casualties were 16 per cent lower than the preceding year, and deaths were down by 23 per cent. Especially impressive were the figures for late night hours, weekends and Christmas days—in short, the periods where the combination of drinking and driving is most frequent. Between 8 p.m. and 4 a.m. the reduction of casualties compared with the same months in 1966 was 36 per cent in October, 38 per cent in November and 41 per cent in December. Moreover, the proportion of deceased drivers, who by post mortem examination were found to have blood alcohol concentrations above the limit, dropped sharply. In short, there could be no reasonable doubt that the law had a considerable effect on driver behavior and traffic accidents.

Unfortunately it seems that most of the effects have gradually been lost. Of course, as time passes, it becomes increasingly difficult to isolate the effects of the law, and the evidence is not entirely unambiguous in this regard. The official commentaries to the British Road Accident statistics mention that casualties between 10 p.m. and 4 a.m. in 1971 were down by 18 per cent from the 1966 level compared with 8 per cent at all other hours, and that this suggests

that the drinking and driving legislation was still having a very substantial effect in 1971.⁷³ But it is difficult to disagree with Ross's conclusion that the benefits produced by the legislation had largely been canceled by the end of 1970.⁷⁴ Strong support for this conclusion is found in the fact that the proportion of drivers killed in road accidents with more than the prescribed limit of blood alcohol, which had gone down from 25 per cent prior to the law to 15 per cent after the law, in 1971 had regained its former 25 per cent level. Even for the hours between 10 p.m. and 4 a.m. the figures have returned to their pre-law level.⁷⁵

The explanation for this declining effect can be traced to lack of enforcement, according to Ross. The publicity accompanying the law had given the public exaggerated and quite unrealistic ideas about the risk of apprehension and conviction. But little effort was made to enforce the law; the police did not perceive the law as defining an important task, and gradually, the public learned that they had overestimated the risk.⁷⁶ Thus, the experiences with the British drunken driving law have demonstrated first that it is possible, at least in some fields, to change behavior by the threat of punishment, and secondly that an initial success will not endure if there is not sufficient enforcement to make the threat credible.⁷⁷

⁷³ HER MAJESTY'S STATIONERY OFFICE, ROAD ACCIDENTS IN GREAT BRITAIN XII (1973).

⁷⁴ Ross, *supra* note 72, at 77.

⁷⁵ See P. COLLING & P. SAMSON, BLOOD-ALCOHOL IN ROAD FATALITIES BEFORE AND AFTER THE ROAD SAFETY ACT, 1967 (1974).

⁷⁶ Ross, *supra* note 72, at 76. See also PUNISHMENT AND DETERRENCE, *supra* note 7, at 100-102.

⁷⁷ The Dutch professor Buikhuisen, who is extremely critical of the use of official crime data in research, made an interesting experimental study choosing, as a type of offense which was easy to observe, the violation of the prohibition against driving a car with worn tires. Buikhuisen, *General Deterrence: Research and Theory*, 14 ABSTRACTS ON CRIMINOLOGY AND PENOLOGY 285 (1974). The design was simple: through cooperation with the police and press, a much publicized police drive to control cars with worn tires took place in the Dutch town of Groningen. A similar town, Leeuwarden, was used as a control where no extra police activity on publicity took place. After a campaign lasting two weeks, previously observed cars with worn tires were sought out and inspected to see how many now had new tires. The result was 54 per cent renewal in Groningen compared with 27 per cent in Leeuwarden. The difference could

⁷¹ Chambliss, *The Deterrent Influence of Punishment*, 12 CRIME & DELINQUENCY 70 (1966); Chambliss, *Types of Deviance and the Effectiveness of Legal Sanctions*, 67 WIS. L. REV. 703 (1967).

⁷² For a detailed and informative discussion of the law, its enforcement and effects see Ross, *Law, Science, and Accidents: The British Road Safety Act of 1967*, 2 J. LEGAL STUDIES 1 (1973). See also Andenaes, *Deterrence and Specific Offenses*, 38 U. CHI. L. REV. 537 (1971).

SURVEY RESEARCH

Survey research can be of interest to the theory of general prevention in several respects. Perhaps the simplest is to collect data on public knowledge and beliefs about the system of criminal justice. The motivating effects of criminal law do not depend upon the objective realities of law and law enforcement, but upon the subjective perception of these realities in the mind of the citizen. A change which is not noticed can have no effect. A Finnish research experiment gives a good illustration.⁷⁸ In three middle-sized towns in Finland the police agreed to reduce the number of fines for public drunkenness from a level of 40 per cent to 50 per cent of arrested drunken persons to a level of about 10 per cent to 25 per cent. In three similar towns, which served as controls, previous practice went unchanged. It was found that the reduced application of fines did not seem to have any influence on the amount of public drunkenness, as measured by arrests. By participant observation and police questioning it was established that even the chronic offenders had not noticed the policy change. Those who were not fined had just praised their good luck. The lack of any effect on arrest rates thus had a very natural explanation: the change in police practices had been of such low visibility that it went unnoticed even among those most affected by the change.

This aspect did not attract much attention in the classical theory of deterrence. It seemed to be tacitly assumed that there would be an accord between objective facts and subjective perceptions. Recent research has tried to shed some light on this question. The relationship between facts and perceptions may be more complex in the United States than in most other countries due to the great mobility of the population and the extensive mass media cov-

erage of crime and the criminal justice system across state borders. These circumstances tend to lower the probability that the general public will have a clear perception of the situation in one particular state. Also the plea-bargaining practice and the wide use of indeterminate sentences make it difficult for the average citizen to know how the criminal justice system really works.

One of the best known and most often quoted studies on public awareness of criminal penalties was conducted in California by Dorothy Miller and associates.⁷⁹ They found that the level of awareness in the general population concerning the maximum penalties for different crimes was very low. Using this fact and starting from an assumption that, "*If penalties are to deter, we must assume that members of society know what the penalties are,*"⁸⁰ they attempt to demonstrate that since knowledge of penalties is so poor, deterrence cannot work. They found that criminals have a better knowledge of penalties than does the general population, inferring from this that penalties become of interest to a person only after he engages in criminal behavior. People engage in crime and learn of the penalties not as deterrents but only as factors of a criminal career to be faced *after* the act.

Even apart from the fact that knowledge of maximum penalties probably is less important than knowledge of actual levels of sentencing, these inferences are clearly unjustified. It is necessary to distinguish between the scope of a criminal provision and the penalties prescribed for violation. The penal provision must be known, or at least suspected, if it is to have a deterrent effect. But with regard to the penalties no exact knowledge is required. When a man moves to another state, he will normally have no knowledge either of maximum penalties or of the sentencing practices in that state, but this does not mean that he is less motivated to abstain from crime. He has a general idea of the seriousness of different crimes and a vague feeling of what unpleasant consequences can be expected in case of arrest and

be ascribed to the general preventive effect of the action.

Buikhuisen considers the controlled experiment as the only way to test hypotheses on general prevention, with the main problem being to persuade criminologists to collect their own data. However, there are few fields where experiments of the worn tire type can be made in a criminal justice setting. And other experiments are more often than not so far from real life as to be of little relevance.

⁷⁸ Törnudd, *The Preventive Effects of Fines for Drunkenness*, 2 SCANDINAVIAN STUDIES IN CRIMINOLOGY 109 (1968).

⁷⁹ Miller, Rosenthal, Miller & Ruzek, *Public Knowledge of Criminal Penalties: A Research Report*, in *DETERRENT EFFECTS OF CRIMINAL SANCTIONS*, PROGRESS REPORT OF THE ASSEMBLY COMMITTEE ON CRIMINAL PROCEDURE (1968).

⁸⁰ *Id.* at 11.

conviction. Whether a lack of precise knowledge of penalties increases or decreases the deterrent effect depends on whether the person in question overestimates or underestimates the severity of sanction.

More important are the findings in the Miller study about the awareness of a *change* in penalties. The California legislature had in 1967 increased penalties for rape, robbery, and burglary, where great bodily injury was involved. The minimum for all these crimes was increased to fifteen years imprisonment. It was found that the great majority of the population was unaware of these changes. This clearly demonstrates that the lack of public knowledge puts limits on the ability of the legislator to increase the general preventive effects through increased rates of penalties.

Two observations should be made, however. First, the level of awareness in the general public is not a reliable indicator of the level of awareness among those who need the message most: the potential violators. The knowledge of the average housewife or the middle-aged employee about penalties for robbery and burglary is only of theoretical interest. The findings suggest that those groups who might be most likely to commit a certain offense have the best knowledge of changes in the law. Thus, 76 per cent of the population in adult correctional institutions gave correct answers to the question about robbery with bodily injury, while 65 per cent of college students could correctly state the penalty for possession of marijuana (where no change had been made). Second, since most people probably get their knowledge through the reporting of criminal cases in the news media, there may be a gradual dissemination of the information over time, even though the action of the legislature in raising the penalty has gone unnoticed. There is a common sense presumption that public perception will, however imperfectly, reflect the actual severity level and changes in same.

The law and the sentencing practices of the court provide information about *severity* of sanction—although plea bargaining practices may lead to a mitigation of what would theoretically be expected. None of these sources give any indication of the objective *certainty* of sanction. The criminologist can compute fig-

ures on average risk for various offenses. Victimization studies show, for example, that about one out of three burglaries are reported to the police.⁸¹ And the *Uniform Crime Reports* show that about 20 per cent of the reported burglaries are "cleared by arrest", and that for adult offenders about half of the arrests lead to conviction.⁸² This adds up to an average risk of conviction of about 3 per cent, but it does not tell much about the risk in individual cases.

The general public, or even the average criminal, do not have such sources at their disposal. They may take their clues from a variety of sources: folklore about crime, knowledge about crimes which have or have not been solved, information about police routines, and so on. Most people probably give very little thought to the problem before they are challenged by the interviewer from a public survey institute. Moreover, a person thinking about committing a crime is not interested in average risks, but in the risk he will himself encounter. If, for example, a man contemplates committing a burglary, he will try to assess the risk of being heard or seen by the neighbors, or observed by a casual passer-by or cop on the beat, or that there may be a burglar alarm in the house, or that he will be identified at a later time by his fingerprints. And he will try to adjust his selection of victim and *modus operandi* in order to minimize all these risks. For a professional criminal this kind of preparation ("casing") will play an important part in his activity.⁸³

Thus, it can be seen that great caution must be exercised in interpreting survey research on perceptions of risk. For example, a British Government Social Survey interviewed young men in the ages between fifteen and twenty-two.⁸⁴ Most of them greatly over-estimated their chances of being caught, when their answers were compared with average clearance rates, but the criminally more experienced tended to

⁸¹ TASK FORCE REPORT: CRIME AND ITS IMPACT, *supra* note 21, at 17.

⁸² FBI, UNIFORM CRIME REPORTS 1972, at 31, 35 (1972).

⁸³ See, e.g., P. LETKEMANN, CRIME AS WORK 137-57 (1973).

⁸⁴ H. WILCOCK & J. STOKES, DETERRENTS TO CRIME AMONG YOUTHS AGED 15 TO 21 (1968), as quoted in N. WALKER, SENTENCING IN A RATIONAL SOCIETY 63-68 (1969).

be more optimistic, that is, Nigel Walker comments, more realistic.⁸⁵ Walker makes this the starting point of some comments on the possibility of improving the crime rate by increasing the probability of detection:

So far as shop-breakings (and most other acquisitive crimes) are concerned this is a visionary's hope. The clear-up rate is so low that it is *over-estimated* by all but a small minority. To alter the estimates of a realistic minority would require an enormous increase in police efficiency; and to raise still further the over-estimates of the majority seems almost out of the question.⁸⁶

This conclusion may be too pessimistic. As with severity there is a common sense presumption that the perception of risk will, however imperfectly, reflect actual police efficiency and changes in such efficiency. Experiences with the British drunken driver legislation provides an example.⁸⁷ To put it another way: if people over-estimate the risk under present conditions they may continue to over-estimate the risk to the same degree if actual clearance rates were changed.

Comparative survey research could be used to explore how perceptions of severity and certainty of punishment vary with actual severity and certainty. If a high degree of covariation were found it would tend to disprove the hypothesis that lack of information is a major obstacle to the achievement of general preventive effects. If, on the other hand, the research showed that perceptions of severity and certainty, for all or some crimes, vary independently of the objective facts, this would provide good reason for looking with scepticism towards the current research on the effects of severity and certainty on crime rates. Thus, comparative survey research would represent an important supplement to current comparative studies—a supplement which has not yet been undertaken.

⁸⁵ Whether there is an over-estimate of risk in the individual case is hard to tell, since the risk is so dependent on ability and caution. It has been said that one of the striking things about offenders is that they have "a magical belief in their own cleverness, luck, or whatever they call it—often in obvious contrast to the facts." Schmideberg, *The Offender's Attitude Toward Punishment*, 51 J. CRIM. L.C. & P.S. 328, 332 (1960).

⁸⁶ N. WALKER, *supra* note 83, at 65.

⁸⁷ See text accompanying note 76 *supra*.

On common sense grounds one would expect that individual perceptions of the severity and certainty of sanction play a role in the decision to commit or abstain from crime. Some research has been conducted on this question using a comparison of (registered or non-registered) offenders with non-offenders.⁸⁸ Some correlations have been found, but they are difficult to interpret, since the question of temporal sequence has not yet been solved. If we find differences in the perceptions of offenders and non-offenders, it is difficult to know whether such differences preceded the offense and thus entered into the process of motivation, or whether they are the result of the experience of the offenders.

Henshel has attacked previous comparative research on deterrence because it has not taken into consideration the necessary link between criminal justice and deterrence: the perceptions of the public. "Logic would seem to require the position that most earlier deterrence research must either be reanalyzed (where this is still possible), interpreted far more narrowly than its originators intended, or reluctantly, in some cases, disregarded."⁸⁹

This would be correct if the main purpose of the research had been to explore the potentialities of general prevention under conditions of perfect public knowledge, or to find out how much of this potential effect gets lost because of lack of knowledge. These are certainly interesting research goals, and may also have some policy implications. But for legislators and criminal justice agencies, the most important question is what they can achieve under the conditions of this world as it is presently constituted. Imperfect public knowledge of the criminal justice system is a factor that must be accepted and taken into consideration. Research concerning the effects of *A* (threat of punishment) on *C* (crime rates) is not invalid

⁸⁸ Claster, *Comparison of Risk Perception Between Delinquents and Non-Delinquents*, 58 J. CRIM. L.C. & P.S. 80 (1967); Jensen, "Crime Doesn't Pay": Correlates of a Shared Misunderstanding, 17 SOCIAL PROBLEMS 189 (1969); Chiricos & Waldo, *Perceived Penal Sanction and Self-Reported Criminality: A Neglected Approach to Deterrence Research*, 19 SOCIAL PROBLEMS 522 (1972).

⁸⁹ Henshel, *Deterrence and Knowledge of Sanctions*, in CRIME PREVENTION AND SOCIAL CONTROL 51, 59 (1974).

because of ignorance of the intermediate link *B* (public perception). But comparative survey research of the type mentioned above may serve to support or weaken the findings.

EXPERIMENT

"Experiments" of interest to the theory of general prevention can be of several different types. Law enforcement agencies, perhaps persuaded by a researcher, sometimes make experimental changes in their practice in order to study the effects of the change.⁹⁰ Such field experiments may give valuable insight, especially on the effects of variations in police activities. Such experiments have been made in order to assess the effects of different types of traffic control or the effect of an increase in the number of policemen or car patrols in a given district.⁹¹ This is in fact a type of "before and after" research, differentiated only by the research purpose underlying the change in practice. In regard to variations in severity, conceptions of evenhanded justice set narrow limits for this approach.⁹²

In contrast to the field experiment there is the traditional laboratory experiment, with animals or humans. As a rule this is too far removed from the live setting of criminal justice to be relevant for questions concerning the general preventive effects of criminal law.⁹³

As a third category we have experiments which are specifically designed to test theories about general prevention in settings which are sufficiently similar to the realities of the criminal justice system to justify some inferences. Not much has been done of this kind, but one recent study by Tittle and Rowe deserves mention.⁹⁴ Three sociology classes were orga-

nized around a series of eight weekly quizzes worth ten points each. After the correct answers had been explained the students were allowed to calculate their own grades. Upon return of the fourth quiz the two experimental groups were reminded that they were trusted to grade their quizzes honestly and that they had a moral obligation to be accurate. After return of the seventh quiz they were told that complaints about cheating had been lodged, so it was necessary for the instructor to spot check some of the quizzes for accuracy. Before the self-grading of the last quiz began the classes were told that the spot check had revealed a case of cheating and that the person was to be penalized. In fact all quizzes had been graded by the instructor before the self-grading, without the students knowing this.

The results can be summarized as follows. There was a considerable amount of cheating going on all the time; only five of 107 subjects totally refrained from cheating during the entire quarter. The moral appeal made upon return of the fourth quiz apparently had no effect on the level of cheating. The threat of being caught and punished did have a significant effect, and this effect was increased by the information that one cheater had been caught and would be penalized. Females were influenced far more by the sanction threat than were males. And students most in need of points were least responsive to the sanction threat; apparently their motivation for cheating was so strong that they were willing to take greater risks.

STATISTICAL AND NON-STATISTICAL EVIDENCE

American research from the last decade represents the first great effort to attack the problem of general prevention by refined statistical methods. This does not mean that there was a total lack of evidence up to then. Although there had been practically no systematic research conducted, there were other sources of information for anybody who was willing to collect and make use of them: for example, historical experience, day to day observations, psychological introspection.

There has been a tendency among social scientists to dismiss as "anecdotal," "impressionistic," or "speculative," evidence which cannot

⁹⁰ See text accompanying note 77 *supra*.

⁹¹ For a survey see Wilson, *Do the Police Prevent Crime?*, N.Y. Times, Oct. 6, 1974, § 6 (magazine).

October 6, 1974, § 6.

⁹² See Morris, *Impediments to Penal Reform*, 33 U. CHI. L. REV. 629, 649-53 (1966); Zimring, *Measuring the Impact of Pretrial Diversion from the Criminal Justice System*, 41 U. CHI. L. REV. 224, 235-41 (1974).

⁹³ Even Barry F. Singer, in his highly informative essay on psychological studies of punishment (Singer, *supra* note 5), underestimates the dangers of drawing analogies from laboratory research to real life.

⁹⁴ Tittle & Rowe, *Moral Appeal, Sanction Threat, and Deviance: An Experimental Test*, 20 SOCIAL PROBLEMS 488 (1973).

be treated statistically and presented in nice tables with computed percentages and tests of significance. In my view such evidence can be perfectly convincing, although it does not lend itself to broad generalization. In previous writings many examples have been presented,⁹⁵ but for present purposes only two will be mentioned.

The first is taken from Jerome Hall's classical treatise *Theft, Law, and Society*.⁹⁶ It relates to the risk of detection and conviction for automobile thefts. In Chicago the number of automobiles reported stolen dropped sharply in 1934, and continued to drop in the following years so that the annual average for the decade 1940-1950 was almost 90 per cent less than it was in 1933. This fantastic decrease was preceded by important changes in legislation and law enforcement. The Uniform Motor Vehicle Anti-Theft Act, which introduced a system of registration certificates and a system of identification based on serial and motor numbers, made the trade in stolen cars much less attractive. At the same time a specialized Auto Theft Court was established, and the activities of the police department and state's attorney in this field were expanded. Is there any reason to doubt that the changes in legislation and law enforcement were a dominant factor in the extraordinary decrease in this kind of crime? Of course, the decrease in car thefts did not necessarily mean a corresponding decrease in the total amount of crime. Some offenders may have turned to other, supposedly safer, kinds of crime.

The second example is taken from the field of white collar crime, and relates to the severity of sanction. In 1961 the federal government obtained jail sentences against a number of high level business executives who had engaged in a conspiracy to fix prices in the heavy electrical equipment business. Competent observers testify that these sentences had a profound impact in the business world, both as a deterrent and as a moral eye-opener. The Director of Operations in the Antitrust Division of the Justice Department said in an often quoted statement:

No one in direct contact with the living reality of business conduct in the United States is unaware of the effect the imprisonment of seven high officials in the Electrical Machinery Industry in 1960 had on the conspiratorial price fixing in many areas of our economy; similar sentences in a few cases each decade would almost completely cleanse our economy of the cancer of collusive price fixing and the mere prospect of such sentences is itself the strongest available deterrent to such activities.⁹⁷

This may be somewhat of an overstatement. "White collar crime" is a vague label and it cannot be taken for granted that criminal sanctions are of the same importance for all offenses comprised under the label. But at least for much white collar crime it would be difficult to deny that the threat of punishment will work if there is a *significant risk* of detection and conviction and a *stern sanction*, especially imprisonment with its moral stigma. The problems in this field are of a different kind. First, are we able to create a significant risk of detection without hiring and training an army of highly qualified agents of control? Second, are we really willing to use the heavy sword of criminal justice against otherwise respected members of society in cases of this kind, for example, price fixing or tax fraud? It is much easier for prosecutors and judges to overcome their scruples against inflicting suffering and disgrace when the offender comes from a world different than theirs.

Introspection and general life experiences are unreliable sources of knowledge when we apply them to situations far from our own life experiences, for example, where we speculate about the motivational processes of murderers or rapists. In other situations they may be quite reliable. For example, there is little doubt that the size of the parking fine and the efficiency of enforcement has an influence on the frequency of parking violations. This was true even before Chambliss made his interviews with faculty colleagues and thus provided "scientific" or "empirical" evidence for the proposition.⁹⁸

⁹⁵ See PUNISHMENT AND DETERRENCE, *supra* note 7, at 10-28, 48-62, 74-76, 90-102.

⁹⁶ J. HALL, *THEFT, LAW AND SOCIETY* 282-88 (1952).

⁹⁷ Spivack, as quoted in TASK FORCE REPORT: CRIME AND ITS IMPACT, *supra* note 21, at 105. See also Geis, *Criminal Penalties for Corporate Criminals*, 8 CRIM. L. BULL. 377 (1972).

⁹⁸ Chambliss, *The Deterrence Influence of Punishment*, 12 CRIME & DELINQUENCY 70 (1966).

As a corollary of the tendency to underestimate non-statistical evidence has gone a tendency to place too much reliance on such statistical studies as there may be, and to generalize uncritically from their findings. The classical example is the early studies on the death penalty for murder, and the sweeping generalizations which were made on the basis of them. We may commit the same error in regard to current research, if we do not make clear the limitations inherent in the various methodologies.

For example, the interrupted time series analysis is one of the most reliable research methods, provided one has the necessary data. The method has been applied with great success by Ross and others to explore the effects of the British drunken driving legislation of 1967 on traffic accidents.⁹⁹ The situation provided ideal conditions for using the method: excellent accident statistics, specifying week-day and hour of accidents, an extraordinary amount of publicity before the law went into effect, representative figures on blood alcohol in deceased drivers before and after the law, and surveys on knowledge and attitudes among drivers. Recently, Ross has used the same method in determining the effects of the Norwegian drunken driving law of 1936 and the Swedish drunken driving law of 1941. Since he is not able to find evidence for an effect by analyzing the accident rates, he questions the widespread belief that Scandinavian drunken driving laws have an effect on driver behavior and thus have contributed to road safety.¹⁰⁰ The evidence for such effects is considered "scientifically unacceptable." This, in my view, is an attempt to utilize a certain research method in a situation where conditions for its application are unfavorable. When the drunken driving legislation of the Scandinavian countries was enacted, none of the circumstances which favored the use of the interrupted time series analysis in the case of the British law were present. In Norway in 1936 the number of traffic fatalities was low (about 100 a year)

and only reported in the statistics on causes of death. There were no statistics referring accidents to week-day and hour. It is not known how much publicity there was about the new law, *i.e.*, whether the new provisions were common knowledge to drivers from the outset or whether knowledge of the law, which today is very high, developed gradually. There were no representative post mortem examinations of deceased drivers before and after the law, nor, of course, were there any surveys on knowledge and attitudes.

In 1941 the situation in Sweden was much the same, and in addition there were the irregularities in traffic accidents due to the war. Under these circumstances it would have been surprising if a deterrent effect could have been proved through analysis of traffic deaths. In a discussion of the impact of the British law it was stated that since the Scandinavian legislation dates so far back, it is impossible to demonstrate statistically the impact it has had.¹⁰¹ If, as many people believe, much of the effect of the drunken driving legislation in Scandinavia is due to the moral impact of the law, this is something which depends on a long time process which would not be discernible in accident statistics.

A further point should be mentioned here. It may be that the type of people who normally participate in public discussions on traffic safety, tend to generalize from the effect they know the drunken driving law has on their own behavior and on the behavior of those in their social circle, therefore overestimating the impact of the law on other segments of the population. Perhaps the effect of the law is particularly strong among persons who would in any case have limited their alcohol consumption to moderate quantities and shown responsibility in their driving habits after drinking.

The above should not be interpreted as a position in favor of a common sense approach as compared to a statistical approach. It is recognized that both approaches have their limitations. Under favorable conditions statistical methods can yield more reliable and detailed information than the common sense approach.

¹⁰¹ PUNISHMENT AND DETERRENCE, *supra* note 7, at 95.

⁹⁹ See notes 72-76 *supra*.

¹⁰⁰ H. Ross, The Scandinavian Myth: The Effectiveness of Drinking-and-Driving Legislation in Sweden and Norway, September, 1974 (paper presented to the Sixth Conference on Alcohol, Drugs, and Traffic Safety, Toronto, Canada, September 8-13, 1974).

But we do not always have the kind of data which make use of statistical methods appropriate.¹⁰²

For policy-making purposes, it would, of course, be of great benefit if statistical research could give some quantitative measure of what effect a given change in certainty or severity of sanction has on the crime rate. Tables of correlation and regression coefficients and the like do not convey any meaning to legislators, judges and others who have to make the policy decisions; the research has to be translated into more understandable language. Some such estimates have been offered in research papers on cross-sectional research, and are mentioned above. Gray and Martin suggested that halving either certainty or severity of punishment will tend to double the crime rate, and vice versa.¹⁰³ Ehrlich suggested that a 1 per cent increase in expenditure on direct law enforcement would result in about a 3 per cent decrease in all felony offenses,¹⁰⁴ and that one execution would save somewhere between eight and twenty lives.¹⁰⁵ But it is obviously too early to attach much weight to such estimates. Application of different statistical techniques gives different figures, and we have the problem of causality versus correlation. Until these problems are discussed in detail and a reasonable degree of consensus between competent research workers has been achieved, any policymaker would justifiably be reluctant to base his decisions on such figures.

DETERRENCE, POLICE CORRUPTION, AND ORGANIZED CRIME

Police corruption and organized crime in the United States have become matters of great national concern.¹⁰⁶ Police corruption can, of course, exist independent of organized crime, for example, when a policeman takes a bribe

for closing his eyes to an individual offense.¹⁰⁷ Likewise, organized crime can exist without corruption. But normally the two go hand in hand. The President's Crime Commission stated: "All available data indicate that organized crime flourishes only where it has corrupted local officials."¹⁰⁸ Other committees have come to the same conclusion.¹⁰⁹ When police corruption exists in connection with organized crime it is often only one aspect of a more widespread pattern of corruption in the criminal justice agencies and the political life of the community. A distinguished observer has stated that "corruption by organized crime is a normal condition of American local government and politics."¹¹⁰ Neither politicians, nor prosecutors or even judges are immune from temptation.¹¹¹ The more widespread the corruption has become, the more difficult it is obviously to combat. Anybody reporting corrupt activities may merely be telling his story to one of the corrupted.

Police corruption and organized crime represent the most glaring failure of criminal law in its general preventive function. The police officer, the supposed guardian and enforcer of the law, is himself involved in criminal transactions. And the crime syndicate is engaging in crime, not occasionally or yielding to sudden impulse, as many offenders do, but in a premeditated and systematic manner.

But looked upon from a different angle these phenomena, and especially the combination of

¹⁰⁶ See *Task Force Report: Organized Crime*, *supra* note 22; D. CRESSEY, *THEFT OF THE NATION* (1969); 11 NATIONAL COMMISSION ON THE CAUSES AND PREVENTION OF VIOLENCE, *CRIMES OF VIOLENCE* ch. 4 [hereinafter cited as *CRIMES OF VIOLENCE*]; 13 M. FURSTENBERG, *VIOLENCE AND ORGANIZED CRIME* app. 18 (1969).

¹⁰⁷ Roebuck & Barker, *A Typology of Police Corruption*, 21 *SOCIAL PROBLEMS* 423 (1974).

¹⁰⁸ TASK FORCE REPORT: ORGANIZED CRIME, *supra* note 22, at 6.

¹⁰⁹ 11 *CRIMES OF VIOLENCE*, *supra* note 104, at 200; 12 *CRIMES OF VIOLENCE*, *supra* note 104, at 785-86.

¹¹⁰ Moynihan, *The Private Government of Organized Crime*, *The Reporter*, July 6, 1961, at 14 (as quoted in TASK FORCE REPORT: ORGANIZED CRIME, *supra* note 22, at 6).

¹¹¹ See, e.g., the case mentioned in TASK FORCE REPORT: ORGANIZED CRIME, *supra* note 22, at 6, in which a state judge, a federal prosecutor, and a racketeer were involved in a conspiracy to obstruct justice in connection with the sentencing of a federal law violator.

¹⁰² To mention one other example, few will doubt that the Watergate affair will have an impact on American political life, both as a deterrent and as a moral "eye-opener." Whether the effects will be transitional or establish a new tradition, we do not yet know. But, while an historical follow-up in the future will perhaps be able to shed some light on the problem, cross-sectional research as well as statistical time series analysis will be out of the question.

¹⁰³ Gray & Martin, *supra* note 39.

¹⁰⁴ Ehrlich, *Participation in Illegitimate Activities: A Theoretical and Empirical Investigation*, *supra* note 47.

¹⁰⁵ As quoted by Tullock, *supra* note 31.

the two, offer an impressive demonstration of the general preventive impact which the criminal law has when the machinery of justice is working normally and properly. Why is it that organized crime can only flourish in combination with corruption? Obviously because the corruption of law enforcement takes the teeth out of the law and makes the criminals feel immune to investigation, prosecution and conviction.

In addition organized crime has another method to achieve immunity from punishment. The criminal law is a system of threats. The crime syndicates create their own threat system in order to keep discipline within the organization and intimidate possible informers and witnesses outside the organization. This threat system is competing with that of the criminal law, and is often more efficient, because it is more ruthless and not hampered by legal technicalities and ideas about due process of law. The sanction is swift, certain and severe, as called for by classical deterrence theory. This further immunizes the higher ranks of the organization who do not themselves take a hand in the dirty work. The point is well illustrated by the answer of a drug peddler to a state's attorney in Chicago who was trying to get information on upper level peddlers: "Well, Judge, what can you do? You can give me a couple of years. I have been there before. You can give me time. If I tell you and it gets out, I would be dead before the week is over."¹¹²

Former Attorney General Robert F. Kennedy testified before a Senate subcommittee in 1963 that the physical protection of witnesses who had cooperated with the federal government in organized crime cases often required that those witnesses change their appearances, change their names, or even leave the country.¹¹³ In planning the fight against organized crime, measures to safeguard prosecution witnesses from retaliation therefore has an important place. It seems as if the crime syndicate has become increasingly sophisticated in regard to the use of force. The wholesale gangland killings belong to the days of the

past. Today, they rely on the threat of force and the occasional use of force as a lesson for everyone to see. "Such inducement of fear has gained the syndicate its ends just as effectively as widespread force."¹¹⁴

To sum up: organized crime has succeeded in achieving immunity from punishment by bribing law enforcement agents and by establishing its own system of deterrence. According to Cressey, despite the recent improvement in the techniques of American police work, the chances that a Cosa Nostra member will be jailed for a crime are still much less than the chances that he will be injured in an automobile accident.¹¹⁵ Even people who may be hesitant to give an affirmative answer to the question, "Does punishment deter crime?" will hardly dispute the crime promoting effect of this neutralization or nullification of law enforcement. This, in fact, is just another way of stating that a credible threat of punishment *does* deter crime—at least some forms of crime.¹¹⁶ For the theory of general prevention experience about police corruption and organized crime has a similar demonstrative value as situations where law enforcement is temporarily paralyzed by police strikes or other events (as the arrest of the Danish police by the German occupation forces during World War II).¹¹⁷

RESEARCH AND CRIMINAL POLICY

Research alone does not lead to a policy. Policy making involves judgments that may be conscious or unconscious, and more or less articulated. To form a policy means to apply a

¹¹⁴ 13 CRIMES OF VIOLENCE, *supra* note 104, at 201-02.

¹¹⁵ D. CRESSY, ORGANIZED CRIME AND CRIMINAL ORGANIZATIONS 20 (Churchill College Overseas Fellowship Lecture No. 7, 1971).

¹¹⁶ The greatest source of income for organized crime in the United States seems to be illegal gambling. Gambling on a large scale is an activity of considerable visibility, which cannot for long remain unknown to the police; moreover, it is a victimless crime, where enforcement is dependent upon police initiative. For these reasons caution should be shown in generalizing from present experiences to forms of organized crime which restrict themselves to crimes of lower visibility, or with victims who might bring complaints.

¹¹⁷ See PUNISHMENT AND DETERRENCE, *supra* note 7, at 16-17, 50-51, 128; Clark, *What Happens When the Police Strike*, N.Y. Times, Nov. 16, 1969, § 6 (magazine).

¹¹² See A. LINDESMITH, THE ADDICT AND THE LAW 40 (1965).

¹¹³ See TASK FORCE REPORT: ORGANIZED CRIME, *supra* note 22, at 1.

set of value judgments to a set of factual assumptions about the effects of alternative policies. In rare cases scientific research is able to give clear answers in quantitative terms about the consequences of our choices. This is a state which we are far from reaching and perhaps never will reach in the field of general prevention. Up to now the factual assumptions in this field have been based on common sense psychology about how categories of people will react under certain conditions—what Paul Meehl has termed “fireside inductions.”¹¹⁸ Such fireside inductions can be more or less well grounded. Factual knowledge of the practices and attitudes in the business world is, for example, essential for an assessment of the effects of different criminal policies on white collar crime, in the same way as knowledge of lifestyles and attitudes among young ghetto males may be important in other fields of crime.

Systematic research on the general preventive effects of punishment is still in its infant stage, and up to now it has not fundamentally changed the basis for policy decisions. But some findings have evolved which may support or weaken traditional assumptions or assist us in making a choice between competing common sense assumptions.

With regard to *certainty* of punishment the research up to now, seen in its totality, has given support to the common sense assumption that increased certainty of sanction will tend to reduce the amount of crime. But the research does not give us reliable estimates of what we could expect in return for a greater investment in law enforcement. Nor does it tell us whether investment in law enforcement will yield greater or smaller returns than a similar investment in social measures directed towards eliminating the causes of crime. Given the lack of reliable data one is free to follow his own inclinations.

The discussion has led to an emphasis on perceptions of certainty rather than objective certainty as the decisive factor. This suggests that for law enforcement to achieve maximum effectiveness, thought should be given to those

clues which potential offenders make use of in assessing the risk. But direct misinformation should be avoided for ethical reasons, as well as the potential backfire effect when exposed. In a democratic society with a free press it is difficult to regulate the flow of information in such a way as to serve the ends of criminal justice. The British drunken driving legislation gives an example where a high perception of risk was created through great publicity without any use of misinformation, but the effects wore off since enforcement lagged behind expectations.

In regard to *severity* the common sense assumption is that general preventive effects will increase with increasing severity, until the point is reached where the punishment is considered out of proportion to the crime and therefore lacks community support. The research gives some support for the view that imprisonment has a general preventive effect above that of other measures, not only for white collar crime, but also for traditional crime. On the other hand, the research suggests that very long prison sentences give a small pay-off. Both propositions are easy to accept from a common sense view. It seems likely that increasing severity yields diminishing returns and that a given number of prison years will produce more by way of general prevention if distributed as short sentences to a greater number of offenders rather than as long sentences to a small number of offenders.

For severity of sanction as well as for certainty the decisive factor is perceptions, not the objective facts. A combination of providing great publicity to legislation which increases severity, and as little publicity as possible to legislation in the opposite direction, therefore, would tend to maximize the general preventive effect. But a conscious policy in this direction would meet with the same difficulties as mentioned above in regard to certainty.

With the collapse of the rehabilitative ideology and the acceptance of the reality of general prevention, the perspective on criminal law and law enforcement changes. In my view, rehabilitation as well as incapacitation has a legitimate place in the criminal justice system, but the primary foundation is general prevention, combining the components of fear and

¹¹⁸ Meehl, *Law and the Fireside Inductions: Some Reflections of a Clinical Psychologist*, 27 J. Soc. Issues 65 (1971).

moral persuasion, and keeping within the limits prescribed by considerations of justice, decency, and compassion. An appropriate statement of the English jurist and philosopher H. Hart, states this point clearly:

[The] primary operation [of punishment] consists simply in announcing certain standards of behaviour and attaching penalties for deviation, making it less eligible, and then leaving individuals to choose. This is a method of social control which maximizes individual freedom within the coercive framework of law in a number of different ways.¹¹⁹

What I miss in this statement is an indication of the community condemnation inherent in the criminalization, and the ensuing stigma attached to the act.

It is often said that a belief in general prevention leads to excessive severity. Recently, this point of view has been expressed by Cooper. He who sees crime control from a deterrence perspective, has no real choice: "The way ahead is ever on and upward, in a word: escalation. No matter that the deterrent is seen not to work; the answer is always more and bigger doses of the same."¹²⁰ Even when deterrence is viewed in a narrow sense, the logic of this statement is less than convincing. In policy decisions one must weigh costs against benefits. The costs in this case consist of the economic expense for society and the suffering inflicted on lawbreakers and their families. The benefits consist of the inhibition of the socially undesirable acts labeled criminal. We do not want to suppress crime at any cost. We have to strike some balance on the basis of our factual assumptions and our value judgments. Of course, a deterrence perspective can be combined with callousness towards the suffering of other people, or with strong retributive feelings, or even serve as a convenient cloak for hostility and aggression. But the quality of the motives tells nothing about the validity of the perspective; by the same token the good intentions and warm hearts of many proponents of the rehabilitative ideals do not tell anything about the validity of their views.

Since our knowledge of the effects of various levels of severity is so limited, it seems reasonable in sentencing to attach much weight to the feeling of what is a fair sentence for this offense; fair in proportion to the gravity of the offense and fair in proportion to the sentences handed out for other offenders and other offenses. It may be that a more lenient system, which is accepted as fair and consistent, has a stronger impact than a more severe system which creates the impression of inconsistency and arbitrariness.¹²¹ The disparities in sentencing, together with the vagaries of plea bargaining and the impossible task of the parole boards in a system of indeterminate sentences may be the most serious weaknesses of criminal justice in the United States today.

It is difficult to say whether the unpredictability of such a system has a greater or lesser fear-inspiring effect than does a more predictable system of fixed sentences, meted out by the court in accordance with an established practice. A system of fixed and fairly uniform sentences presupposes judicial review of sentencing and the ensuing development of a kind of case law in sentencing. The main justification for a system of this type, which is well established in European countries, would be to eliminate the fortuitiveness and injustice of the present system, which has come under heavy attack from American scholars and practitioners.¹²² But perhaps, as a side effect, the increased feeling of legitimacy under a more consistent and uniform system, might enhance the general preventive impact of the system.

We know that authoritarian regimes with high police density and ruthless criminal justice are able to achieve a high degree of social control, but other models may still be more attractive. After a study tour in the Soviet Union some years ago with two colleagues of mine we came to accept the fact that the Soviet rulers have been quite successful in combating traditional crime, but also came to the conclusion that we in the West

must face the fact that if we wish to have a society with political democracy, free discus-

¹¹⁹ H. HART, PUNISHMENT AND RESPONSIBILITY 23 (1968).

¹²⁰ Cooper, *Crime Control and the Deterrence Perspective*, 11 CRIMINOLOGY 161, 173 (1973).

¹²¹ See notes 20-22 *supra*.

¹²² See, e.g., FRANKEL, CRIMINAL SENTENCES. LAW WITHOUT ORDER (1973).

sion, high tolerance towards deviant opinions and deviant behavior, maximum safeguards against unjustified interference with the individual, and humane sanctions if intervention is unavoidable—if we wish to have all this, part of the price we have to pay may be a higher crime rate than in an authoritarian society.¹²³

In the Scandinavian countries, and even more in the Netherlands, prison sentences are generally much shorter than in the United States, and there is much less disparity in sentencing. In the Netherlands out of the 13,000 prison sentences handed down in 1970 only 346 were for one year or more and only thirty-five for three years or more; more than two-thirds were for less than three months.¹²⁴ The number of prison sentences was slightly higher in 1970 than in 1963, but a tendency towards shorter sentences brought the prison population down about 20 per cent. In the same period there was a 160 per cent increase in reported property crimes, but only a 7 per cent increase in crime against life and person. What the figures would have been with unchanged severity we do not know. It will be a fascinating experience to watch how far one can go towards leniency without having a serious effect on crime rates. Social condemnation can probably be expressed as well in a system of short sentences as in a system of long sentences, just as marks in school can be graded as efficiently on a scale from 1 to 10 as on a scale from 1 to 100.¹²⁵ But the direct hardship and suffering obviously increases with the length of the term as does the incapacitative effect. For dangerous or professional criminals it may be difficult to dispense with long periods of incarceration. And, of course, what works in the Netherlands or the Scandinavian countries will not necessarily work in the United States.

¹²³ Andenaes, Bratholm, & Christie, *Inntrykk fra Kriminologi og Strafferetti Sovjetunionen*, 57 NORDISK TIDSSKRIFT FOR KRIMINALVIDENSKAB 105, 122 (1969).

¹²⁴ These figures were provided by Professor Alfred Heyder, University of Amsterdam. In addition to those included in the figures listed above, several hundred deviant offenders (psychopaths) were treated in special institutions. For a more complete discussion see L. HULSMAN, *Criminal Justice in the Netherlands*, in DELTA—A REVIEW OF ART, LIFE AND THOUGHT IN THE NETHERLANDS 7-19 (1974).

GENERAL PREVENTION AND DEVIANCE THEORY

To a member of the legal profession it has always seemed odd that textbooks and readers on criminology and deviance traditionally have given so little attention to the general preventive effects of the criminal law and criminal justice. Concepts such as labeling and prisonization have been treated in great detail, thus stressing the possible adverse effects of criminal justice, but criminal law as a restraining factor has either been denied ("punishment does not deter crime"), or more often, ignored. Thorsell and Klemke have criticized the failure of labeling analysts to examine the possibility that labeling may result in deterrence as well as in reinforcement of the deviant behavior.¹²⁶ The point is well taken; as stated by the authors it "seems fair to say that, at this time, the validity of the currently accepted hypothesis that the labeling process typically reinforces deviant behavior seems to rest more upon its repeated assertion by labeling analysts than upon a substantial body of empirical evidence and carefully reasoned conclusions."¹²⁷ But Thorsell and Klemke discuss the problem only in relation to the future conduct of the individual deviant, that is, in terms of special deterrence. They do not enlarge the perspective to encompass the labeling and stigmatizing process, both within and without the criminal justice system, as a general deterrent.¹²⁸

Recently Tittle and Rowe have observed that an adequate explanation of social behavior requires attention to the pushes as well as the restraints that govern conduct, but that most work in the field of deviance within the past four decades has placed a disproportionate emphasis on the push, or motivation, half of the formula.¹²⁹ They even suggest that the major factor in human behavior may be fear of sanction, and that many theories of behavior could be integrated within a deterrence framework. "Differential association" might be considered

¹²⁵ PUNISHMENT AND DETERRENCE, *supra* note 7, at 24-25, 56-57.

¹²⁶ Thorsell & Klemke, *The Labeling Process: Reinforcement and Deterrent*, 6 LAW & SOC'Y REV. 393 (1972).

¹²⁷ *Id.* at 396-97.

¹²⁸ ANDENAEES, *The Future of Criminal Law*, in PUNISHMENT AND DETERRENCE, *supra* note 7, at 164.

¹²⁹ Tittle & Rowe, *supra* note 50, at 455.

a condition which reduces fear of sanction; being labeled could represent a condition diluting fear of sanctions, and so on.

This theory may place too high an expectation on the deterrence perspective as an explanatory tool. However, deterrence is, no doubt, *one* of the perspectives which can and ought to be used in explaining human behavior, with all of us on the receiving end. Our surroundings (family, friends, colleagues, bosses) will punish us with disapproval or even rejection and isolation if we do not live up to their standards. Nature will punish us with physical hardship and even death if we do not heed her warnings and take proper precau-

tions. The law will punish us with legal sanctions, from the small parking fine to severe penalties implying disgrace and suffering, if we transgress its boundaries. This does not mean that we go around in an eternal struggle between desire and fear. We adjust. We take into consideration the possibility of adverse consequences. We acquire habits and lifestyles which keep us reasonably within the prescribed limits without any feeling of conflict and coercion. In a word: we become socialized; and law is one of the socializers. Only in situations of crisis, or extreme temptation or provocation, do most of us feel the conflict and the necessity of making a conscious choice.