

"Source: *Fear of Punishment: Deterrence, 1975.*

Department of Justice Canada.

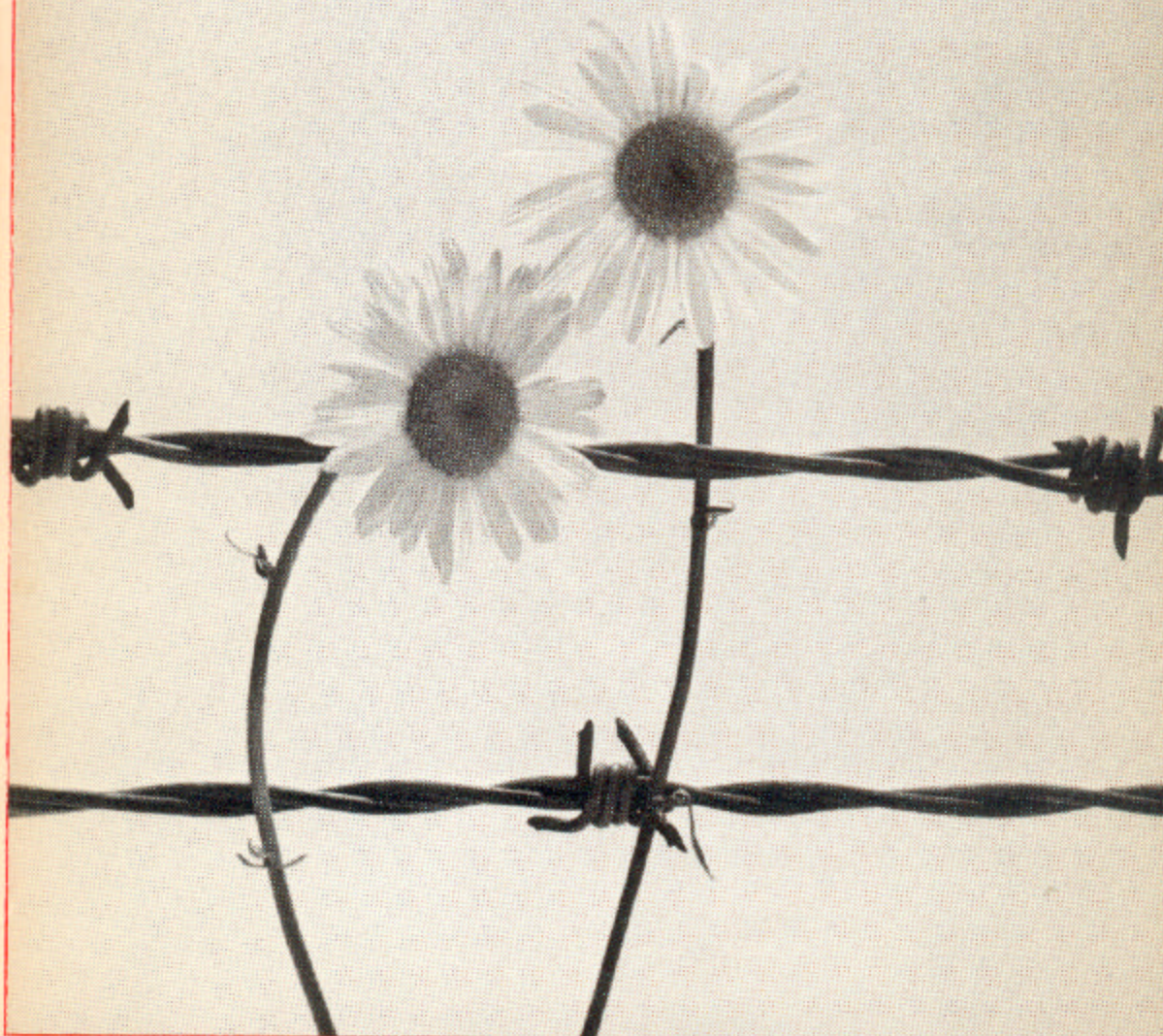
**Reproduced with the permission of the Minister of Public
Works and Government Services Canada, 2007."**

FEAR OF PUNISHMENT



Law Reform Commission
of Canada

Commission de réforme du droit
du Canada



Law Reform Commission
of Canada

FEAR OF PUNISHMENT:
DETERRENCE

© Minister of Supply and Services Canada 1976

Available by mail from

Printing and Publishing
Supply and Services Canada,
Ottawa, Canada K1A 0S9

and at Canadian Government Bookstores:

HALIFAX
1683 Barrington Street

MONTREAL
640 St. Catherine Street West

OTTAWA
171 Slater Street

TORONTO
221 Yonge Street

WINNIPEG
393 Portage Avenue

VANCOUVER
800 Granville Street

or through your bookseller

Catalogue No. J 32-4/10 - 1975

Price: Canada: \$4.00

Other countries: \$4.80

Price subject to change without notice

Table of Contents

	Page
Preface	v
Deterrence: A Review of the Literature	
by E. A. Fattah	1
Deterrent Effects of Punishment for Breaking and Entering and Theft	
by James J. Teevan, Jr	121

Preface

Sentencing in criminal courts is based on three fundamental considerations: punishment, deterrence and rehabilitation. Of these three guiding concepts, punishment is by far the oldest. It has been, and still is, first and foremost a direct response to crime, independent of extrinsic justification and rationalization. As such, punishment appears to be a rather simple concept understandable to all of us. The nature of this response to crime, however, has differed through the ages. The root of the very word "punishment" meant "monies paid in exchange for harm done", stressing an attitude that we now call restitution or reparation. Even punishment in the sense of "an eye for an eye", expresses an attitude of equalization and was meant to set the limits of what counter-harm could be inflicted, a limit which has not always been respected in the criminal law, especially if one considers that "an eye for an eye", most likely represented a tariff system with a price attached rather than a measure for inflicting the same harm.

The concept of punishment has been explored by Professor Weiler in our background volume *Studies on Sentencing* (Information Canada, 1974). The present volume now explores the concept of deterrence. Today, punishment and deterrence are closely linked in our minds; in fact deterrence has become the major justification for inflicting punishment. We have already indicated that this was not always so and therefore the relationship between punishment and deterrence needs closer scrutiny. The notion that punishment deters has been so ingrained in our common sense that for a long time it was not even seen worthy to be studied. What can be more obvious than the assumption that man seeks pleasure and avoids pain? And that, therefore, the infliction of pain would keep him from doing things which have painful consequences. Utilitarian philosophy, behaviour psychology, materialism and other strands of thought which combine to make up our common sense, our unexamined view of the world, tell us quite clearly that this is so. An examination of empirical reality, however, does not seem to uphold this notion, or at least not to the extent we have assumed. (A cursory look at human history would of course equally put this notion into question—history is hardly characterized by avoidance of pain).

The administration of criminal justice cannot be based on vague notions, as common-sensical as they may appear to be. Under present circumstances, when there is serious doubt about the efficacy of this system and its ability to influence and control human behaviour, there is even a greater need to examine received notions and to understand what we can expect from measures such as criminal sanctions.

In its working papers on sentencing, the Commission has already expressed explicitly as well as implicitly that the general notion of pun-

ishment and deterrence was not a reliable enough ground to build a new philosophy and structure of sentencing and disposition. In this background volume, we now present a comprehensive review of the literature undertaken for the Commission by Prof. E. A. Fattah and a specific study by Prof. J. J. Teevan which should serve to illustrate the problems and pitfalls experienced in research studies on deterrence. Both, the literature in general, as well as the specific study show first and foremost the strong investment which we have in the concept of deterrence and how hard it is for us to abandon this concept. On reflection, however, it should be clear to the reader that beyond the remarkable problems of research methods and strategy and beyond the "need for further research", the viability of deterrence as a basis for sanctions is severely limited. This does not mean that deterrence is no longer a consideration in the administration of justice. There is for instance good reason to believe that effective police intervention is indeed a deterrent and that certainty of detection does influence the commission of crimes. Studies on the effects of severity of punishment, on the other hand, are almost in unanimous agreement that severity has little if any impact on further commission of crimes. This can be measured more clearly in the case of specific deterrence, the effect on the individual offender, than in general deterrence, the effect on the public.

Studies on deterrence have also assisted the Commission in clarifying its thinking on the aims and purposes of criminal law. All too often criminal law is seen only as an instrument of control, control by instilling fear. Most people would concede that this is less than an ideal aim in a democratic society but most people would also feel that this is justified by the necessity of controlling crimes. Since studies on deterrence throw a considerable doubt on the practical efficacy of using the criminal law to control crimes through sanctions, they have forced the Commission to look for more positive goals for the criminal law. Our working papers on the Meaning of Guilt (#2) and the Limits of Criminal Law (#10) clearly move the clarification and demonstration of shared values into the foreground. The Commission has stressed that it is mainly the understanding of basic values and their acceptance which strengthen society and make an orderly life worthwhile. In regard to criminal sanctions, the Commission has moved towards principles such as reconciliation and undoing the harm done in its working paper on Principles of Sentencing and Disposition (#3). The Commission has attempted to widen the narrow focus on the offender to include the victim (Restitution and Compensation, (#5)) and the community (Diversion, (#7)). The focus on the community has also been emphasized by a project which was reported as Studies on Diversion (Information Canada, 1975). Even in considering Imprisonment (#11) the Commission has concentrated on what is necessary in a given situation

rather than on possible extrinsic gains, such as deterrence.

The literature on deterrence is fast expanding because of the increase in both public and academic interest in this subject. The paper by Dr. Fattah is a comprehensive review up until the completion of the research in the spring of 1975, but between that time and the present, we are sure that new material will be available to bring the reader even more up to date.

The Commission publishes these background papers not only to explain its positions but because it believes that they have their own intrinsic merit for a wider audience. There is no doubt that the goal of reducing crime is one we all share and it is clear today that considerable thought must be given by a great number of people as to how this is to be accomplished.

Deterrence

A review of the literature

EZZAT ABDEL FATTAH, Ph.D.

Table of Contents

	Page
<i>Chapter One: On Deterrence in General</i>	9
I. What is Deterrence?	9
II. Types of Deterrence	13
A. General and Special Deterrence	13
B. Absolute and Marginal Deterrence	14
C. Primary and Secondary Deterrence	14
D. Direct and Indirect Deterrence	14
III. Dilemmas of Deterrence	15
A. The Ethical Aspect	15
B. The Economic Aspect	17
C. Deterrence and the Value Concept	18
IV. The Paradoxes of Deterrence	20
V. Limits of Deterrence	21
VI. For Whom Is the Threat of Punishment Intended?	24
VII. Variables Related to the Effectiveness of Deterrence ...	26
A. Severity of Punishment as a Deterrent Influence.	27
B. Certainty of Punishment as a Deterrent Influence	28
C. Publicity of Punishment as a Deterrent Influence	29
D. Swiftiness of Punishment as a Deterrent Influence	31
E. Frequency of Punishment as a Deterrent Influence	31
<i>Chapter Two: Empirical Studies of General Deterrence</i>	33
I. Capital Punishment Research	33
A. The Effect of a Declining Rate of Executions on Homicide Rates	34
B. The Effect of Repeal and Reintroduction of Capital Punishment on Homicide Rates	34
C. Homicide Rates on Abolition and Death Penalty States	35
D. Critique of Capital Punishment Research	36
II. The Historical-Anecdotal Approach	37
III. The Ecological Approach to the Study of Deterrence ..	38
A. The Impact of Legal Sanctions on Crime Rates: Testing the Certainty and the Severity Hypotheses	38
B. General Conclusions of the Ecological Studies on Deterrence	42
C. Critique of the Ecological Approach to the Study of Deterrence	44
D. The Effect of Punishment on the Incidence of Specific Offences	47
1. Driver Behaviour	47

2. Traffic Offences	49
(a) Moving Violations	49
(b) Drunken Driving	50
(c) Violation of Parking Regulations ..	53
(d) Some Conclusions	54
3. Crimes Without Victims	55
(a) Drunkenness and Drug Addiction ..	55
(b) Prostitution	57
(c) Marijuana Offences	58
4. Property Offences	58
(a) Car Theft	58
(b) Bad Cheques	59
(c) Shoplifting	60
5. White Collar Crime	60
(a) Black Market Violations	60
(b) Income Tax Violations	61
6. Offences Against the Person	62
(a) Homicide	62
(b) Attacks on Police Officers	62
7. Sexual Offences	63
(a) Sexual Offences	63
(b) Rape	63
8. Deviant Behaviour	63
E. General Conclusions of Research Done on Specific Offences	64
F. Limitations of Research Done on Specific Offences	65
G. Deterrence by Law Enforcement	66
1. Police Immobilization	66
2. Police Strikes	66
3. Police "Crackdowns"	67
4. Improving the Technical Capabilities of the Police	69
H. Physical Deterrents to Crime	70
IV. The Perceptual Approach to the Study of Deterrence ..	73
A. Deterrence and Public Knowledge of Sanctions ..	73
B. Objective and Perceived Risks	77
1. Relationship between Perceived Certainty, Severity of Penalties and Criminal Be- haviour	79
2. How Do Delinquents and Non-Delinquents Perceive and Respond to Deterrents?	80
3. Does Previous Censure Increase Sensitivity to Punishment?	82
4. Does Previous Censure Change Risk Per- ception?	83

C. General Conclusions of Studies on Subjective Deterrence	83
D. Limitations of Subjective Studies on Deterrents	84
E. Variations in Deterredness and in Risk Perception	84
1. Differences between Societies	85
2. Differences between Types of Norms	85
3. Differences between Types of Behaviour	85
4. Differences between Types of Law	86
5. Differences between Individuals	87
6. Deterrence and Social Class	89
<i>Chapter Three: Studies of Special Deterrence</i>	91
Recidivism Literature	91
A. How High Are Recidivism Rates?	93
B. What Factors Are Usually Associated with Recon- victions?	94
C. Are Certain Punishments more Effective than Others?	94
D. Is Lengthy Incarceration more Effective than Shorter Incarceration?	95
E. Conclusion	97
Conclusions	99
Bibliography	105

The commonest technique of control in modern life is punishment. The pattern is familiar: if a man does not behave as you wish, knock him down; if a child misbehaves, spank him; if the people of a country misbehave, bomb them. Legal and police systems are based upon such punishments as fines, flogging, incarceration, and hard labor. Religious control is exerted through penances, threats of excommunication, and consignment to hell-fire. Education has not wholly abandoned the birch rod. In everyday personal contact we control through censure, snubbing, disapproval, or banishment.

*B. F. Skinner (1953)
Punishment: A Questionable Technique*

Chapter 1

On Deterrence in General

1. WHAT IS DETERRENCE?

To “deter” is defined in the Oxford Dictionary as “to discourage or restrain by fear or by consideration of danger or trouble”. Such an explanation makes it clear that deterrence is a way of achieving control through fear.

Deterrence is usually defined as “the preventive effect which actual or threatened punishment of offenders has upon potential offenders” (Ball, 1955). This definition, however, restricts the concept of deterrence to what is called “general prevention” and leaves the prevention of recidivism or “special deterrence” out of the picture. It also limits the concept to the intimidating effect achieved through the threat of punishment while leaving away the educative and moralizing effects punishment may have.

Cooper (1973) defines deterrence as “...any measure designed actively to impede, discourage, or restrain the way in which another might think or act. It is concerned with human behaviour, and the concept is based upon behavioural theories that postulate the possibility of altering or regulating human conduct by the taking of measures designed to check, change or eliminate certain behaviour”.

Wilkins (1969) notes that the word “deterrence” is itself a term that suggests a pressure toward the commission of crime which is to be offset. The need for deterrence exists only when there is an incentive toward the committing of crime. Thus he defines “deterrence” as a counterforce that makes some sort of balance in a situation which would otherwise be out of balance.

According to Zimring (1971) the deterrent effect of a particular threat is the total number of threatened behaviours it prevents. Such a

definition would make the quantitative assessment of the deterrent effect of any punishment quite impossible, since it can never be known how many persons actually refrained from committing a certain offence by threat of punishment.

Some basic postulates

The concept of deterrence is based on certain assumptions. Some of these assumptions are and some are not susceptible of empirical verification.

(1) *Man is a rational being*

Clearly the concept of deterrence is based on an assumption that "... we are rational beings, who make careful calculations of possible gain and losses before deciding upon our actions. In the Benthamite phrase... that we always act in accordance with our enlightened self-interest" (see Honderich, 1971, p. 56).

Honderich (1971) points out that individuals do not approach the law as such rational calculators. Some commit offences for the excitement, others are, because of guilt-feelings, attracted to crime, still others, in varying ways abnormal, are equally far from any prudential consideration of possible consequences of their actions.

Finally, it may be added, it is a truism that people do not choose between possible courses of action in a prudential way if the possible consequences of one course are distant in time and the consequences of the other immediate. A penalty is a distant possibility; the gain from an offence is usually immediate (Honderich, 1971).

(2) *Man is a hedonistic being, attracted by pleasure and repelled by pain.*

This assumption refers to basic goals of ordinary human motivation. According to it man's habits are developed and his conduct is oriented, in fair part at least, by the search of pleasure and the avoidance of pain. If it is so then the promised pleasure of a criminal act can be countered by the threat of pain which is a basic ingredient in any punishment.

The assumption that pain is something to be avoided cannot, however, be applied generally. Wilkins (1969) refers to a large body of psychiatric evidence to support the view that some persons may commit crimes because they *want* to be punished and wonders whether a deterrent in such cases would mean the withholding of punishment.

In some cases the challenge of punishment can be an incitation to crime. Some criminals are motivated by a certain desire to feel superior to the law enforcement machinery, to "beat the system" or to commit the "perfect crime".

(3) *Man is free to choose*

The doctrine of deterrence assumes that man is totally or at least partially free to choose between alternatives of behaviour. It implies that criminal behaviour is indeterministic. In Schafer's (1968) words

The idea of official punishment itself indicated the lawmaker's assumption that the criminal has freedom of choice. Criminal law assumes that man is free and able to form a "more or less impartial judgement of the alternative actions" and can act "in accordance with that judgement".

The assumption of "freedom of choice" which is basic to the doctrine of moral responsibility and the doctrine of deterrence has been the subject of fierce attacks over the decades from the Italian positivistic school to the modern behaviouristic school. This latter school suggests that crime is a product of forces not entirely within the control of the offender. External forces can be considered to affect one's behaviour. This behavioural position indicates free will is not an accurate conceptualization of human conduct (see Packer, 1968, p. 12).

(4) *Men know in every case what is harmful to them*

Von Hentig (1938) points out that usual methods of deterrence proceed from the assumption that:

- (a) men know in every case what is harmful to them;
- (b) men are in every case frightened by danger;
- (c) men realize in every case the correct steps to avoid peril.

All these suppositions, writes Von Hentig, assume the behaviour of the average man under average conditions of life. In many cases they do not come true. The exceptions to the rule may be classified into psychological or normal stages of non-deterrability, and pathological stages of fearlessness.

(5) *Man is able to control his behaviour*

Related to the assumption of the "free will" or the "freedom of choice" is the assumption that man is capable of controlling his behaviour. Man's ability to control his behaviour varies widely from one man to the other and according to the type of behaviour. In the case of certain acts of impulsive nature, acts where high emotions or strong motivations are involved and certain types of compulsive behaviour (gambling, drinking, drug taking) the power of control can be largely reduced or even non-existent. It is also doubtful whether certain categories of abnormal offenders are able to exercise the necessary control over their own behaviour.

(6) Man learns from his own experience and from the experience of others

Special or individual deterrence is based on the assumption that man learns from his own experience. If an offender commits an offence and is punished for it, the bad experience of punishment will deter him from further law violations. General deterrence, on the other hand, is based on the assumption that the general population (at least potential offenders) will learn from the experience of punished offenders and will thus refrain from following their example.

Logically, then, special deterrence should be, everything else being equal, stronger than general deterrence since the actual experience must be a much powerful deterrent than the theoretical knowledge of sanctions or than that of vicarious punishment. The high rates of recidivism constitute, however, a major challenge to the validity of this assumption.

(7) Man can be deterred by fear

The concept of deterrence is also based on the assumption that man can be deterred by fear. Behavioural scientists usually do not agree with the position taken by penal legislators: that the fear of punishment is the best and most effective way of controlling or curbing certain types of behaviour. Many behavioural scientists find positive reinforcement to be a superior alternative to punishment.

(8) Men are knowledgeable of laws and sanctions

The deterrence concept assumes that the public knows about acts prohibited by the law and have an idea about the penalties prescribed for such acts.

If a threat is to have an effect on the public, the public should know about it; and if the members of the public are to be deterred from committing a threatened behaviour because they fear the imposition of consequences, they must believe that the threatening agency is capable of catching and punishing some offenders (see Zimring, 1971).

The assumption of public knowledge of laws and sanctions can be empirically tested.

A correct assessment by the public of the risk involved in certain behaviour is not, however, necessary for the purposes of deterrence. People may be deterred (or more deterred) because they overestimate the risk involved or the threat of punishment.

II. TYPES OF DETERRENCE

Deterrence is a complex issue. There are several different ways in which punishment of offenders may act as a deterrent. Thus the theory of deterrence can be broken down for the sake of simplification into the following points:

(1) Because many (or at least some) criminals are punished, and because of the possibility of being punished, individuals contemplating possible offences, or driven through temptation or motivation toward the commission of certain offences, do not in fact go ahead (Honderich, 1971).

(2) Because of the threat of punishment, individuals who find themselves in situations which they did not anticipate or intend, perhaps situations where they are provoked, abstain from committing an offence. They are restrained by the prospect of a penalty (Honderich).

(3) Criminals who do commit certain offences are restrained from more serious ones because of the threat of greater penalties. They sometimes take self preserving steps, such as not carrying weapons (Honderich).

(4) When a man is punished, the sufferings of punishment will make him less likely to offend again because of fear, increased prudence or because the sufferings of punishment have helped in his reformation.

(5) According to Durkheim formal sanctions' primary effect is not through intimidation or fear but through their capacity to strengthen the normative climate of the community to reinforce and mobilize informal social disapproval.

Andenaes (1952) suggests that punishment has three sorts of preventive effects:

- (1) The deterrent effect;
- (2) The strengthening of moral inhibitions; and
- (3) The stimulation of habitual law abiding conduct.

A. General and special deterrence

Theoretical discussions on the nature of deterrence distinguish between "general deterrence" and "special deterrence".

Andenaes (1968) considers *general deterrence* to mean the threat of punishment and its restraining effect with regard to criminal conduct. Thus, it refers to the use of punishment to demonstrate to others what they can expect if they follow the offender's example.

Special deterrence or *intimidation* is, on the other hand, achieved by the actual experience of punishment. It refers to the use of punishment to prevent the offender from repeating his offence.

In other words, it can be said that the threat of punishment can have special and general effects. *Special effects* are the reaction that a threat

produces among those who have been previously punished and who, for that reason, may react differently to threats than the rest of the population. The *general effect* of a threat is the response it produces among persons who have not been punished. For this group, the threat and the example of the punishment of others, must influence behaviour independent of any personal experience with the threatened consequences (Andenacs, 1966; Zimring, 1971).

For the purpose of empirical investigation of the operation of deterrence, the distinction between general and special deterrence is fundamental. This will become clear later in this paper when the empirical studies on deterrence are examined. Hawkins (1969) notes that there are a number of obvious but significant and fundamental differences involved. Thus individual deterrence differs from general deterrence in respect of the objective nature of the sanctions employed; in respect of the subjective awareness of those sanctions on the part of the two groups; and in respect of the sociological and/or criminological significance of those groups.

Although many of the variables involved in the issue of deterrence can be related to its effectiveness regardless of whether it is general or special deterrence some variables are only related to the one or to the other.

B. *Absolute and marginal deterrence*

Zimring & Hawkins (1973) distinguish between *absolute deterrence* and *marginal deterrence*. The first relates to the question: does this particular criminal sanction deter? The second relates to such a question as: Would a more severe penalty attached to this criminal prohibition more effectively deter? In the capital punishment debate the issue is not that of absolute deterrence—whether the death penalty is a deterrent. It is that of marginal deterrence—whether it is a more effective deterrent than the alternative sanction of long imprisonment.

Studies of absolute deterrence require a comparison between a situation in which there is *no* deterrent with a situation in which there is *only that* deterrent.

Studies of marginal deterrence, on the other hand, compare a situation in which there is a deterrent (penalty) with a situation in which this penalty has been increased or decreased.

C. *Primary and secondary deterrence*

D. *Direct and indirect deterrence*

Some authors distinguish between primary or direct deterrence and secondary or indirect deterrence. The first refers to the intimidating effect of punishment (whether general or individual), while the second refers to the ability of formal sanctions to stimulate, reinforce and mobilize infor-

mal social disapproval and to their role in anchoring and buttressing the normative climate of the community.

According to Salem and Bowers (1970) this latter role (indirect or secondary deterrence) is much more substantial than the former one.

III. DILEMMAS OF DETERRENCE

A. *The ethical aspect*

While most of the controversy around deterrence is focused on the question of efficacy, some questions are also raised with regard to the morality of deterrence.

(1) Of the pertinent criticisms of the deterrence view, one advanced by Kant is that to punish a man simply because this will deter him and others from offences in the future is to treat him only as a means and not as an end.

In answering this objection Andenaes (1970) points out that societies often treat people in ways designed to promote the good of society at the expense of the individual concerned. By way of example he cites military conscription, quarantine regulations, the confinement of dangerous mentally ill patients and the detention of enemy citizens in wartime. And he concludes that "the Kantian principle, in practical application, is of doubtful value".

(2) Punishment for deterrence involves administering harsh penalties solely for deterrent motives to offenders who would otherwise receive milder ones. Judges often make declarations, while sentencing offenders, to the effect that they on purpose have made the penalty particularly severe to serve as an example for potential offenders.

This criticism is not aimed at deterrence as an objective but at the escalation of sanctions for deterrent purposes. Zimring and Hawkins (1973) note that increases in penalty for exclusively deterrent purposes are far from rare and quote the Rev. Sydney Smith as saying:

When a man has been proven to have committed a crime, it is expedient that society should make use of that man for the diminution of crime: he belongs to them for that purpose.

This view is far from being shared.

Meyer (1968) points out that it is questionable whether a criminal should be punished in excess of his just deserts, merely for the benefit of those potential criminals who in the absence of such extra punishment might themselves commit a crime. There is a limit to which a criminal can be used to benefit society at large.

Zimring and Hawkins (1973) discuss further a number of ethical problems which arise in connection with this practice:

The first problem which they call the "fair notice issue" questions the justice of increased penalties which are "markedly more severe than the norm".

The second problem deals with the efficacy of exemplary sentencing. As long as it is doubtful the morality of such practice can be questioned.

The final problem is the problem of equality. Increasing the penalties for particular offenders for deterrent purposes results in greater disparities between sentences and in Prof. Hart's words "The very ideal of justice is offended by seriously unequal penalties for substantially similar crimes".

(3) A further criticism made of the deterrence theory is that "to believe in general prevention is to accept brutal penalties".

This argument is expressed in Armstrong (1961):

If the aim is deterrence then severe punishments would be justified for minor offences for instance flogging a man for a parking offence would be justified since flogging would certainly deter him and others from unlawful parking.

It is also apparent in Zilboorg's (1954) statement that

If it is true that the punishment of the criminal must have a deterrent effect, then the abolition of the drawing and quartering of criminals was both a logical and penological mistake. Why make punishment milder and thus diminish the deterrent effects of punishment.

Andenaes (1965) answers to this argument by pointing out that it was never a principle of criminal justice that crime should be prevented at all costs. Ethical and social considerations will always determine which measures are considered "proper". In Ball's (1955) words: "A penalty may be quite effective as a deterrent, yet undesirable". Andenaes adds that even if it were possible to prove that cutting off thieves' hands would effectively prevent theft, proposals for such practice would scarcely win many adherents today.

(4) If deterrence is the sole purpose it would be justified to punish the innocent. Honderich (1971) puts it that way

If one maintains that punishment is justified by deterrence alone one seems committed to the immorality of punishing the innocent. It seems that one is committed to denying the rule that only the guilty may be punished. Surely, then, the deterrence theory is unacceptable.

In fact punishing the innocent can serve the purpose of deterrence as easily and as effectively as punishing the guilty. This criticism, however, overlooks the fact that deterrence *is* not and *cannot* be the sole objective of criminal justice.

B. *The economic aspect*

Since the deterrence concept has its origin in the utilitarian philosophy it seems strange that the question of cost is rarely raised in discussions of deterrence. Many decades ago the question of cost may have seemed irrelevant to punishment policy, but there is no doubt that in recent years this issue has gained more and more attention. In Cramton's (1969) words:

The fact that sanctions *may* produce the desired results does not mean, of course, that they *will* necessarily do so, or that the costs and possible side effects may not outweigh any benefits. The application of legal sanctions inevitably involves economic and social costs: enforcement machinery requires substantial expenditures of public funds; each individual to whom sanctions are applied suffers inconvenience, expense, and more intangible losses of self-esteem and repute; and the atmosphere created by enforcement activities may affect the tone of the society—particularly the balance between privacy and official surveillance. Moreover, sanctions may produce negative effects on some individuals from which wholly unintended—and undesirable—consequences may flow.

It should be pointed out that when talking about the economics of deterrence we do not mean only the financial costs involved in crime prevention. Wilkins (1967) warns that “we must be careful about what we mean by cost in this connection. This is not the simple accountancy term cost but a concept of a social benefit cost”.

Honderich (1971) gives three conditions which a punishment has to satisfy to be morally justified and to be considered an “economic deterrent”:

- (1) It does indeed deter;
- (2) It causes less distress than would occur if it were not imposed;
- (3) There is no other punishment that would deter as effectively at a cost of less distress.

The major problem in saying whether a certain punishment, in a certain case, satisfies these conditions is a problem of measurement: measuring the distress it causes against the distress which would occur if it were not imposed, measuring its efficacy against the efficacy of other punishments causing less distress, etc.

Zimring and Hawkins (1973) point out the difficulties of such measurement:

In this context valuation involves more than monetary worth or market value. The relative worth or utility of social services cannot be wholly computed in economic terms. . . the problem here is that such values as humanity (i.e., the quality of being humane) and justice, and such dis-values as pain and suffering, belong to a different universe of discourse and have different logic from that of economic efficiency.

The same authors stress that a rational crime control policy takes account of all program costs in determining whether programs are worth the resources necessary to administer them and in choosing between alternative methods of achieving crime prevention.

It seems clear from what is mentioned above that the economics of deterrence is an unexplored issue. Some remarks however seem in order:

(1) The first pertinent question to be answered is "At what cost is deterrence achieved?" The financial costs may be easy to calculate. However, when it comes to the moral and social costs, measuring becomes highly complicated and comparisons become difficult or even impossible.

(2) To what extent is the efficacy of deterrence dependent on its costs? It seems obvious that the most costly sanctions are not necessarily the most effective and that cheaper alternatives can be more effective than costly punishments.

The California study (1968) found that the median stay in California prisons was 30 weeks, fifth highest in the United States. Thus it was concluded that the state of California was maintaining one of the most expensive correctional systems in the country and implementing a costly penal policy of entirely unproven effectiveness.

There is also no evidence, as Wilkins (1967) has pointed out, that humanitarian treatments are any less effective than severer forms of punishment. It may also happen if infrequently, that a humanitarian treatment is cheaper than a harsher punishment (as in the case of probation versus imprisonment) (see Zimring & Hawkins, 1973, p. 54).

Zimring and Hawkins pinpoint four research areas related to the economics of deterrence:

- (1) The *types* and *amount* of program costs;
- (2) The *nature* of the program's effect on crime;
- (3) The *extent* of the program's effects, and
- (4) The *cost* of relative effectiveness of alternative methods of achieving the same objectives.

C. Deterrence and the value concept

The economic concept of "value" has not been introduced in the criminal justice system. One of the rare exceptions is the system of "day fines" used in the scandinavian countries. Yet there is no doubt that the effectiveness of a penalty is related not only to the "social value" of this pen-

alty but also to the “value” it represents to actual or potential offenders. The same punishment means different things and represents different values to different people. A month in prison for a businessman convicted of drunken driving can hardly equal a month in prison for an unemployed worker and this is regardless of the difference in their sensitivity to punishment. A fine for the rich man may be a mild punishment while the same fine for the poor man may impose severe hardships.

A sentence of life imprisonment does not have the same value (and consequently not the same deterrent effect) to someone who is 20 years old and another who is 65 years old.

Wilkins (1969) underlines the difference in the value of punishment according to the social class to which the offender belongs:

... the amount of deprivation *in* prison will differ according to the class from which the offender comes; thus, the element of punishment in the same sentence differs markedly according to the class of the prisoner in the previous environment. Similarly, it would seem necessary to argue that the deterrent effect will differ.

Moreover, the social and penological value of different punishments changes over the years and it seems logical that changes in the laws be made to bring them in harmony with the changes in values.

Christie (1968) illustrates this in the following manner:

The value of money decreases or increases as a result of inflation or deflation. But the same thing applies to the penal value of different means of punishment. When the value of an existence free from physical pain increases—when improved hygiene, medical care, and anaesthetics give better assurance of such an existence—, we can probably inflict a little less physical pain to compensate for the same crime. When the value of human life increases, we more seldom pay with it for the same type of offence. Or since life and death are dichotomies that fit badly into a graded scale of punishments, the offences that require the death penalty must be correspondingly graver when the value of life increases. When daily existence is characterized by greater security against need, more leisure, and fewer limitations on self-development, then a lesser deprivation of these benefits will compensate for the same crime. The penal value of a day in prison has increased. But, on the other hand, when the value of money goes down, one must pay an increased fine to compensate for the same offence.

The differential value of the various legal sanctions is another ignored and unexplored issue in the studies of deterrence. However, this question seems to be of undeniable importance at least on two grounds:

(1) Changes in the value of punishments over the years are likely to be accompanied by changes in the deterrent efficacy of those punishments.

(2) The deterrent effect of a particular punishment is likely to vary from one individual to the other in accordance with the differential value of this punishment for those individuals.

IV. THE PARADOXES OF DETERRENCE

Arguments around the deterrence issue has brought into light some of the paradoxes inherent in the idea of deterrence.

(1) In the mind of the public, legislators, judges and law enforcement officials, severity of punishment is always viewed as an important factor for enhancing the efficacy of deterrence. However, there seems to be some evidence that certainty of punishment is more important than severity for the sake of deterrence. There is also some evidence to the effect that these two variables cannot be reconciled. Experience shows that severity and certainty of punishment cannot go hand in hand. The point was well stated in what is known as the "Rejected Preamble" of Sir Samuel Romilly's Bill of 1808:

Whereas the extreme severity of penal laws has not been found effectual for the prevention of crimes; but, on the contrary, by increasing the difficulty of convicting offenders, in some cases affords them immunity and in most cases renders their punishment extremely uncertain.

Many studies of capital punishment have shown that the menace of the death penalty tends more to protect the accused through intimidation of the jury, than to protect society through the conviction of the murderer and through the deterrent effect upon the would-be assassin.

(2) The most severe penalties seem to be reserved for the offences least likely to be deterred by the threat of punishment. Wilkins (1969) notes that

Most of the public who call for the application of severe deterrent penalties usually desire this in respect to crimes of violence and sex cases. These types of crime would not seem to be reasonably classified as the most "normal" or rational criminal behaviour. The public must, of course, be protected from these types of offences, but it seems improbable that the concept of deterrence is of much assistance here.

This paradox is well illustrated by Kinberg (1935) in the following terms:

"...one might say of the present time, that where punishments are wanted they have no effect, and where they are effective they are not wanted".

(3) Deterrence and rehabilitation are difficult to reconcile. Many writers present both in terms of "either" "or" and indicate that criminal policy makers should choose between either deterrence or rehabilitation. Logically it would appear that if imprisonment is to be an effective deterrent, life in prison should be made worse than life outside. On the other hand to achieve rehabilitation, conditions in prison have to be improved and life in prison should be as less different as possible from life outside.

Wilkins (1969) points out that the improvement of conditions in prison, with treatment of youthful offenders (better educational facilities than those available for the lower classes), punishment or the treatment in such cases may be seen as an incentive to commit crime, not as a deterrent.

(4) Deterrence is based on the postulate that man can be deterred through fear of punishment. While such a postulate may be true for the majority of people it is not true for those who have a conscious or unconscious desire to be punished. In these cases, instead of being a deterrent, punishment can act as an incentive to crime. The same can be said of the deviant for whom the threat of punishment constitutes a strong temptation to violate the law.

(5) The communication of the threat, through the publicity of punishment, is no doubt an important factor for the efficacy of deterrence. However, publicized crimes can have contagious effects.

V. LIMITS OF DETERRENCE

Most legislators, jurists, law enforcement officers continue to place confidence in legal penalties as deterrents in spite of the innumerable examples of the failure of punishment. Although it has not yet been empirically demonstrated that the threat of punishment acts as an effective deterrent upon potential law violators (general deterrence) or that actual punishment does in fact prevent recidivism (special deterrence) the public still have confidence in fear of punishment threatened by the law as a powerful deterrent.

On the basis of research done on capital punishment some writers have tended to reject the deterrence theory altogether, but as Walker (1968) puts it:

If the death penalty is a non effective deterrent to the crime of murder, which in many cases has an impulsive character, it would be ridiculous however to say that punishment in general is no deterrent or generalize from the atypical crime which is murder to other less impulsive offences such as frauds, embezzlement, parking violations, planned robberies and other acquisitive crimes with rational motives.

Some social scientists go as far as to claim that deterrence is a myth, that it is “belied by both history and logic”. Such a position is clearly unwarranted since there seems to be no doubt that attaching unpleasant consequences to behaviour will reduce the tendency of people to engage in that behaviour. What seems necessary in view of the controversy about deterrence is to point out some simple, but often ignored facts:

The fact that capital punishment is not an effective deterrent to murder does not mean that *no* punishment can have *any* deterrent effect.

- The numerous examples in which punishment fails as a deterrent do *not* nullify the theory and do not mean that others are *not* deterred by the threat of punishment.
- The failure of punishment as a *special* deterrent does not mean that punishment is necessarily ineffective as a *general* deterrent.

If rational and common sense arguments about deterrence in general and about the deterrent effect of capital punishment in particular are contradicted by the practical failure of these punishments, it is simply because such arguments fail to take into consideration the various limits of deterrence which can be summarized as follows:

(1) Deterrence is irrelevant to the bulk of the population, to the mass of people who have interjected the moral norms of their society (and) cannot commit crimes because their self-concepts will not permit them to do so. Toby (1964) has declared that the “socialization process keeps most people from committing crimes, not the police”. Kirchwey (1911) spoke of deterrence as being inapplicable to “those of us who have high standards and much personal pride, and who are law abiding anyway”. The same idea is expressed by Sprott (1965) when he says:

“By and large most people are deterred by the effect of the socialization process which they have undergone and do not refer at all to the risk of legal punishment”. If punishment is a deterrent, then its deterrent effect is limited to a few number of people since “. . . in a well-ordered society the majority of people are unconsciously deterred from wrong doing by the very fact that laws exist which they are psychologically conditioned to accept, and would be ashamed to break, or rather, perhaps, to be caught breaking” (Sington and Playfair, 1965).

In any society, the majority of people are those highly socialized, law abiding citizens who do not need the threat of the law to keep them on the right path. However, the size of this group which needs no deterrent to refrain from violating a social norm varies largely from one society to the other, from one period to the other, and above all with regard to the different types of offences.

(2) Deterrence may not be effective in the case of certain acts of impulsive nature, acts where high emotions or strong motivations are in-

volved. A large number of homicides fall within this category. In fact homicide is considered by many to be the least deterrable of all crimes.

(3) Deterrence may not be effective for certain categories of criminals such as insane, abnormal, impulsive, or compulsive offenders. Nor can it be effective in the case of those who out of guilt feelings or masochistic tendencies or for any other reason are consciously or unconsciously seeking to be punished. It cannot be effective either for those to whom the challenge of punishment is an incitation to break the law.

(4) Deterrence may not be effective in the cases where punishment can be avoided. It follows that the uncertainty of punishment sets a serious limitation to the effectiveness of deterrence. But even if punishment were certain its deterrent effect may not be complete for various reasons:

- (a) many criminals, especially professional criminals, instead of being deterred by punishment consider it a professional risk in the way a physician considers the risk of contamination or an aviator the risk of a plane crash.
- (b) often punishment, instead of deterring, develops a sense of caution in the criminal. He will not refrain from acting but will try to contrive methods of evading the punishment or detection. In this way, punishment has neither reformed nor deterred the criminal, it has merely taught him to be more cautious and to develop practices to evade detection.
- (c) the drive toward the threatened behaviour may be so strong and the motivation so powerful that the individual may be willing to risk the consequences, no matter how certain or severe they may be. This is particularly true in the case of compulsive behaviour and can partly explain why heavier penalties or strict law enforcement are not very effective in such cases.
- (d) the degree of unpleasantness of the consequences (punishment) vary from one person to the other. Prison for one person can be a highly traumatic experience while for another it may mean food and shelter. Even death is not always an undesired or an unpleasant occurrence. Sometimes it is consciously or unconsciously longed for. Justice Charles Boeitel has pointed out:

I think there are other men, to whom the fear of death is relatively unimportant, and I am quite confident that the psychiatrists are quite correct when they say there are many men, among criminals, too, who actually have a death wish.

- (e) the subjective judgement of the risk of being detected, caught, and punished does not always correspond to the objective probability of punishment. Though the objective probability that the commission of a crime will lead to imposition of consequences is of unquestioned importance to deterrence and will

help to explain why some threats operate more effectively than others, predictions based on objective probabilities of apprehension alone may be inaccurate. Subjective judgements about personal chances of being caught, rather than the cold mathematics of crime, will determine how an individual responds to the threat of consequences—and the relationship between such judgements and objective probabilities is imperfect (see Zimring, 1971).

Zimring (1971) notes that:

people may underestimate or overestimate the probability that they will be caught because of incomplete information about impunity rates for a particular crime. In addition, factors other than objective probability, such as personal feelings of optimism or pessimism, or propaganda about the chances of apprehension, may play an important role in personal judgements about the element of risk in a specific crime.

The persistent optimism of many potential offenders is in many cases a plausible explanation for the failure of punishment as a deterrent.

Wilkins (1962) suggests that it is “probable that in most serious offences the offender is not aware of the true possibilities of being caught, nor is he aware of the likely penalty should he be caught”.

VI. FOR WHOM IS THE THREAT OF PUNISHMENT INTENDED?

When considering the effectiveness of a deterrent measure, a definite population must be specified and it is necessary to state whether the criminal or non-criminal population is referred to (see Ball, 1955). We have already mentioned that special deterrence refers only to the criminal population whose members have been actually subjected to punishment. The problem is more complicated when one tries to specify the population with regard to the concept of general deterrence. What has been said concerning the limits of deterrence clearly shows that it would be incorrect to claim that the deterrent measures are intended for the whole population regarded as potential offenders. Such measures are in fact intended only for a small group of inadequately socialized members of society who are likely to commit anti-social acts. This small group is often referred to as “would-be offenders”, “possible offenders”, “potential criminals”, or the “prospective offenders”, etc.

Since deterrence is based on the assumption that human behaviour can be influenced through fear, a deterrent measure can only be intended to those who:

- (a) are likely to commit the undesirable act;
- (b) are likely to be deterred by the threat of punishment.

This excludes two major groups from the realm or the perspective of deterrence:

(1) Those who do not need a deterrent to refrain from a certain anti-social behaviour. This refers to the members of society who are unconsciously deterred by the mere fact of the law's disapproval and who fear the mere disgrace of being caught out in violation of the law more than they fear the punishment itself.

(2) Those who are not or cannot be deterred by the threat of punishment or even by the experience of actual punishment. The fact that we have crime in spite of the threat of punishment and the fact that some people repeat their offences in spite of the application of punishment, indicate that in every society there is a group of people who are neither deterred by the threat nor by the actual punishment.

Between the group of law abiding citizens for whom deterrence is not necessary and the group of undeterrable citizens for whom deterrence is ineffective, exists a third group or the "*marginal group*", so called by Zimring and Hawkins, 1968. This group consists of the entire class of persons who are objectively on the margin of a particular form of criminal behaviour, or, in other words, the class of persons "next most likely" to engage in the criminal behaviour in question.

According to Zimring and Hawkins there are at least five respects in which the "*marginal group*" concept is directly related to the operation of criminal sanctions:

(1) The concept of a group of people on the margin of criminal activity (smaller than the general population) suggests that the utility of severe threats designed to prevent specific serious crimes depends on the effect of the threat on that limited marginal group.

(2) The predication of the existence of criminal and marginal groups significantly different from the general population suggests as a corollary that normal patterns of response to threats should not necessarily be anticipated from such groups.

(3) Insofar as the concept of marginal groups focuses attention on the crucial differences between criminal and marginal groups, it also provides insight into the likely effects of changes in punishment policy.

(4) In the postulation of criminal and marginal groups, the existence of a susceptibility to criminal behaviour is implied, which has significant penological implications.

(5) By focusing attention on particular categories of offenders and potential offenders, this approach provides a specificity and definition hitherto lacking in discussions of this subject.

As with the other two groups, the size of the marginal group varies from one society to another, from one period to another and from one offence to another. Although the determination of the size of the marginal group is by no means easy, the concept makes it clear that deterrence is limited to a small group of the population and that any change in policy

regarding punishment can only affect the members of this group and not the entire population as it is often asserted: any increase or decrease in the incidence of offences for which there has been penalty changes will depend only on the size of the marginal group.

A hypothetical example may help in clarifying what has just been said. Let us suppose that in a given population at a given time the number of the marginal group with regard to murder (those who are susceptible to or most likely to commit murder) is one hundred persons. This means that any changes in the punishment prescribed for murder either by rendering it more lenient or more severe can only influence, if at all, the behaviour of these one hundred persons. It will not affect the behaviour of those who refrain from killing regardless of punishment and will not interfere with the behaviour of those who are not deterred by punishment, be it mild or severe.

VII. VARIABLES RELATED TO THE EFFECTIVENESS OF DETERRENCE

Acts punishable by the criminal law are by no means homogenous. They may have nothing in common except that they are all threatened by legal sanctions. Motivations and temptations to commit crimes vary in strength from one person to the other, from one offence to the other and from one situation to the other. It follows that the deterrent effect of punishment cannot be the same in all cases and it is logical to presume that there is no uniform response to the threat of punishment and that deterrent threats function differently with respect to various types of threatened behaviours.

Even the most ardent advocates of the deterrent effect of punishment admit that general deterrence works well in some fields and works poorly or not at all in other fields (Andenaes, 1968);

The number of variables which may affect the efficacy of deterrence seems unlimited. Some of the most important are:

(1) The social structure and the value system, the normative climate and the degree of norm acceptance among the population under consideration; the degree of social cohesion: "The foundation of deterrence is group intimidation. The more isolated people are from the group the smaller the impact of deterrence" (Tappan, 1962);

(2) The specific characteristics of the particular population being studied;

(3) The specific characteristics of the particular area in question: degree of industrialization, degree of urbanization, size of population, etc.;

(4) The type of behaviour prohibited, the circumstances motivating transgression in each particular type as well as the emotional climate of different crimes, public attitude towards the offence, etc.;

- (5) The nature and the magnitude of the prescribed penalty;
- (6) The applicability and credibility of the threat (certainty and celerity of apprehension and punishment);
- (7) Differences among potential offenders: age, sex, education, intelligence, social class, life experience, moral training, degree of response to punishment, to threats in general, etc.;
- (8) The knowledge of sanctions and sanction outcomes among the population, how these sanctions and the risks of incurring them are perceived.

It is no wonder that empirical research on deterrence is hindered by the need to control such a large number of variables.

In the following, we will try to examine briefly some of the variables which are said to affect the deterrent effect of punishment. These factors are:

- (A) Severity of punishment;
- (B) Certainty of punishment;
- (C) Publicity of punishment;
- (D) Celerity of punishment;
- (E) Frequency of punishment.

A. Severity of punishment as a deterrent influence

Cruel punishments have an inevitable tendency to produce cruelty in the people.

Samuel Romilly

It is certain that severity of punishment when carried too far defeats its purpose and tends to impunity.

His Majesty's Commission on Criminal Law

Although Beccaria has insisted over two hundred years ago that the real deterrent is not the severity of punishment but its certainty, one still hears many arguments about the need for heavier penalties and for exemplary sentences. When confronted with a crime problem legislators often agree that the best hope of control lies in "getting tough" with criminals by increasing penalties. When yielding sentences judges often make declarations emphasizing the need for exemplary and harsh penalties to counteract the mounting rate of crime. When the police fail in reducing crime or in controlling a certain type of criminality, they put the blame on mild penalties, on the leniency of judges or they attribute it to the present conditions in prisons and penitentiaries, which, according to them, have become places for comfort instead of repentance. If crime is murder and if capital punishment is still in existence, then it is not applied as frequently as it should be, if it has been abolished or suspended then it is this abolition or suspension which is responsible for the increase in murder!

People seem to believe that the severity of a punishment is relevant to its degree of deterrence in some sort of mathematical equation.

Zimring (1971) has very well described this common belief in the following way:

... People more often seem to think in a straight line about the deterrent effect of sanctions: if penalties have a deterrent effect in one situation, they will have a deterrent effect in all; if some people are deterred by threats, then all will respond; if doubling the penalty produces an extra measure of deterrence, trebling the penalty will do still better. Carried to what may be an unfair extreme, this style of thinking imagines a world in which armed robbery is similar to illegal parking, burglars think like district attorneys, and the threat of punishment produces an orderly process of elimination which diminishes the crime rate as the penalty scale increases by degrees from small fine to capital punishment, with each step upward as effective as its predecessor.

A fact which is commonly ignored is that there is a "critical point" in punishment beyond which increasing severity is unnecessary because it has no effect on the crime rate. Once this critical point of severity is passed any excessive punishment is tyrannical and pointless.

It is absurd to present high penalties combined with low crime rates as proof of deterrence. On the other hand increased crime rates, after harsher penalties have been introduced, are not necessarily a proof that these new penalties are of no deterrent effectiveness since we have no way of knowing what the increase rate would have been had the new penalties not been introduced.

B. Certainty of punishment as a deterrent influence

The chief deterrent to crime is not barbarity of punishment but certainty of conviction. The former only results in decreasing the latter and is therefore futile.

Samuel Romilly

Criminologists agree that in the field of deterrence the degree of prospect of conviction is of much more importance than the degree of punishment. Temple (1934) has pointed out that "the effectiveness of a deterrent is derived less from its severity than from its certainty".

For this reason police are often advised by criminologists to put less emphasis on the degree of punishment and more emphasis on strict law enforcement. For we have reason to believe that there is a strong positive correlation between the certainty of punishment and lower crime rates. However this correlation varies according to the type of offence.

The findings of Tittle (1969) suggest:

that certainty of punishment may have a general deterrent effect but may be operative primarily in those situations in which negative sanctions are most likely to have implications for the total life circumstances and patterns of interpersonal interaction.

However in his interpretation of the data Tittle notes that it is possible that the two factors are not related to each other but are both caused by a third factor such as consensus about norms.

Thus greater agreement about norms might produce lower crime rates and greater certainty of punishment in case of violation, as well as more citizen participation in the enforcement process. The negative association between urbanization and certainty of punishment does point up this possibility.

Tittle concludes that since the data show that greater certainty of punishment is, in almost all cases he examined, associated with lower offence rates, it would seem that proposals to reduce crime by improving law enforcement are reasonable.

The probability of detection and apprehension varies widely with the degree of urbanization, police efficiency, public attitudes, and, above all, with the nature of the offence. For many offences (such as the so-called crimes without victims - prostitution, gambling, abortion, homosexuality, etc.) the probability is very low and it can be fairly assumed that deterrence in these fields is at its lowest level.

There are also reasons to believe that deterrence is equally low with regard to impulsive crimes and crimes of passion even if the certainty of punishment is high.

Jaffary (1963) affirms that:

Certainty of arrest on commission of a crime and certainty of conviction would be strong deterrents to certain kinds of crime; it is doubtful, however, even with these certainties, whether crimes of passion would be much affected. But the gap is very wide between the commission of an offence and the conviction for it. The offence has first to be known, and many offences are not known. If known, the victim or the observer of the offence has to report it to the police; this step occurs in only a part of offences committed and known. The offence then has to be sufficiently serious and have sufficient evidence available to make prosecution justifiable.

C. Publicity of punishment as a deterrent influence

The more publicity punishments have, the more they may avail as an admonition and warning.

Seneca

There is no doubt that the communication of the threat is of importance to its effectiveness. Such a communication involves two things:

- Information about the threat: if threats are to have any effect on members of an audience, information about the threat must be communicated to that audience (Zimring, 1971).
- Information about the application of the threat: if audience members are to be deterred from committing a threatened behaviour because they fear the imposition of consequences, they must believe that the threatening agency is capable of catching and punishing some offenders (Zimring, 1971).

Publicity of punishment was always thought to be an important factor in deterring people from crime. The death penalty as well as corporal punishment used to be given great publicity in the belief that the more people witnessed them, the greater would be their salutary effect.

But so far from fulfilling this high purpose, they developed, in many cases into scenes of profligacy and impiety, properly described as "saturnalia of the gallows". They proved to be degrading spectacles, occasions of vulgar witticisms and coarse ribaldry, in which not infrequently the condemned man became the hero of the crowd. To many, an execution was the most attractive of entertainments. It did not reform; it brutalised. It became the parent, and not the destroyer of crime. It proved inefficacious, demoralising, contaminating. Even when pocket-picking was a capital offence, pick-pockets plied their trade in the crowd around the gallows, for they accounted executions their best harvest.

Little empirical research has been done to assess the impact of publicity on deterrence. In 1935 a special study was made in Philadelphia on the problem. Professor Dann who conducted the research argued that if the death penalty is a deterrent, its greatest effect should be shown through executions which are well publicized. Furthermore, the effect should be more noticeable in the community where the offence occurred, where the trial aroused wide publicity and the offender lived and had relatives, friends and acquaintances. Neither of both hypotheses was confirmed by the data.

Another more recent study, also in Philadelphia, was undertaken by Professor L. D. Savitz (1958). The study predicated on the assumption that at the point of maximum publicity, through the various media of mass communication, the greatest deterrence occurs, and in capital cases at least since 1944, the greatest publicity came with the trial, conviction and sentencing to death. The execution itself, in recent years, usually takes place a year or more after the sentencing and receives rather perfunctory notice in the newspapers.

Professor Savitz concluded that from his study, no pattern emerges that would indicate deterrence and that the assumption that the deterrent

effect of the imposition of the death penalty might be felt shortly after the date of sentencing is not borne out by the data. He further concludes that on the basis of his data "there was no significant decrease or increase in the murder rate following the imposition of the death penalty on four separate occasions".

D. Swiftess of punishment as a deterrent influence.

... le châtime est plus utile quand il est prompt, parce que moins il se passe de temps entre le délit et la peine, plus forte et plus durable est dans l'esprit l'association de ces deux idées de *délit* et de *peine*, si bien qu'insensiblement l'un est considéré comme la cause et l'autre comme l'effet nécessaire et infaillible.

C. Beccaria

The swiftness of punishment is another factor which is strongly correlated with the effectiveness of punishment as a deterrent. The argument goes that if the actual application of the legal threat is to be associated in the minds of potential offenders with the type of behaviour threatened, then such infliction of punishment has to be prompt and to take place immediately or a short time after the crime has been committed.

Mattick (1966) points out that the basic notion underlying the deterrent effect of the death penalty is that the stimulus or awareness of capital punishment will elicit the response of non-murder in the mind of a would-be murderer, or in the minds of the general public. Such a result can be achieved through the mechanism of conditioning and such conditioning is brought only if the stimulus and response are closely and invariably related.

Psychological research on variables determining the effectiveness of punishment have shown that maximum effectiveness can only be insured if the punishing stimulus is delivered immediately after the reference response. Under non-immediate conditions response recovery can occur. With immediate punishment, indefinite reduction and even complete suppression has been reported. (See Estes, 1944, Hunt and Brady, 1955, Azrin, 1956, 1958; Kelleher and Cook, 1959; Chopra, 1969).

E. Frequency of punishment as a deterrent influence

Ne remarquez-vous pas que les pays où la routine de la loi étale les plus affreux spectacles, sont ceux où les crimes sont le plus multipliés? N'êtes-vous pas persuadés que l'amour de l'honneur et la crainte de la honte sont de meilleurs moralistes que les bourreaux? Les pays où l'on donne des prix à la vertu ne sont-ils pas mieux policés que ceux où l'on ne cherche que des prétextes de répandre le sang, et d'hériter des coupables?

Voltaire

If punishment is really a deterrent, then a wide use of it would certainly be more effective than a scarce or sporadic use.

In fact, special deterrence can be greatly reduced or annihilated by the repetition of punishment as often observed in the case of habitual offenders or drunkenness offenders. But sometimes it is argued that the frequent use of punishment though it may reduce the special deterrent effect does enhance the effectiveness of general deterrence.

Psychological studies show that for punishment to be effective its frequency should be as high as possible. With only some responses punished, a positive acceleration of response rate is reported in the period between successive deliveries of the punishing stimulus (Azrin, Holz and Hake, 1963). The frequency of responding appears to be an inverse function of the frequency of punishment. The greater the proportion of responses punished the greater the response reduction (Zimmerman and Ferster, 1963).

However, with regard to criminal punishment and penal sanctions the situation is completely different. Here, again, the above mentioned distinction between special deterrence and general deterrence becomes important.

The frequency of criminal punishment applied to the same person reduces to a minimum if not eliminates its effectiveness as a special deterrent. This is mainly due to the fact that one of the most powerful factors associated with the deterrent effect of legal penalties is the risk of stigmatization. This risk is usually eliminated after the first penalty has been applied. This explains why in many cases the experience of punishment, instead of strengthening the offender's fear of the law, works the other way. Once convicted, he may have less to fear from a new conviction since his reputation is already tarnished. It has often been claimed that the offender's fear of imprisonment is much reduced once he has become acquainted with it (Andenaes, 1968).

Aschaffenberg (1913) in explaining the reasons why punishment fails pointed out that one of the main reasons is in the execution of the sentence itself, which, looked at closely, loses much of its horror.

Chapter 2

Empirical Studies of General Deterrence

1. CAPITAL PUNISHMENT RESEARCH

Until a few years ago most of the research on deterrence was limited to the question of the deterrent effect of capital punishment. Researchers were criticized as having gathered evidence which has been collected to support the view of the abolitionists rather than to address the deterrence issue as an open question.

The deterrent effect of capital punishment has been thoroughly investigated by Professor Sellin. Sellin hypothesized that if the death penalty exercises a deterrent or a preventive effect on prospective murderers, the following propositions would be true:

- (a) An inverse relationship should exist between executions and homicides in death penalty jurisdictions: that is, homicide should become less frequent as executions become more frequent and should go up as executions become less frequent.
- (b) Jurisdictions which abolished the death penalty should show an increased annual rate of criminal homicide after abolition while jurisdictions which reintroduced the death penalty should show a decreased annual rate of criminal homicides after reintroduction.
- (c) Death penalty jurisdictions should have a lower annual rate of criminal homicides than abolition jurisdictions; given two contiguous jurisdictions differing chiefly in that one has the death penalty and the other does not, the latter should show a higher annual rate of criminal homicide.

A. The effect of a declining rate of executions on homicide rates

If capital punishment is a deterrent to murder, then a declining use of it, reflected by a decrease in the number of executions (which necessarily means an increase in the chances of escaping it), should be followed or accompanied by an increase in the rates of murder (homicide). However, statistics available from many countries, and particularly the United States, provide evidence that this is not true. In fact they indicate that murder rates have remained constant or declined despite trends away from the use of capital punishment.

A study in Ohio tested the relationship between execution rates and homicide rates. Both executions and homicide death rates for the entire state for the period 1909-1959, a half-century, were computed. The statistical analysis provided no evidence that executions have any discernible effect on homicide rates.

Another study in Australia by Barber and Wilson (1968) showed that although Queensland had had a higher execution rate than the other Australian states over a long period of time (1860-1915) the murder rate in Queensland during the preabeyance period (1901-1914) was also considerably greater than in the New South Wales and South Australia.

B. The effect of repeal and reintroduction of capital punishment on homicide rates.

If capital punishment is a deterrent to murder then its abolition or suspension should be followed by an increase in murder rates. These rates should also show a decrease when capital punishment is restored. However, statistics available from certain countries which abolished capital punishment, whether definitely or to be restored later, show clearly that this is not the case.

Professor Sellin (1969) examined statistics for eleven American states which have experimented with abolition for periods of time varying in duration in an attempt to assess the impact of the reintroduction of capital punishment on homicide rates. He concluded that "... there is no evidence that the abolition of the death penalty generally causes an increase in criminal homicide or that its reintroduction is followed by a decline. The explanation of changes in homicide rates must be sought elsewhere".

New Zealand abolished capital punishment in 1941, restored it in 1950 and again abolished it in 1961. During the 1961 debate on the Crimes Bill, the Minister of Justice noted that although the penalty for murder changed three times, in 1935, in 1950, and in 1957, the figures for murder were not affected. During seven years of capital punishment (1951-1957) 22 murderers were convicted. Eight of the murderers were hanged. In the nine years following the suspension of capital punishment the figures were 24.

C. Homicide rates in abolition and death penalty states

If capital punishment is a deterrent to murder, then death penalty jurisdictions should have a lower annual rate of criminal homicide than abolition jurisdictions. But this is not the case. In fact it appears that the reverse is true.

Comparisons between different countries have been severely criticized because of differences of cultures, character, behaviour, because of varying legal definitions of murder and criminal homicide as well as varying methods of compiling statistics. Because of all these reasons it is agreed that comparisons between states in the same country yield better results.

Professor Sellin (1961, 1969) has undertaken the task of comparing homicide rates for states with similar outlook in the United States. He selected five sets of three states each and compared crude homicide death rates. Brought down through 1963, these comparisons cover a 43 year span for each set of states, extending from 1920. In each set, at least one of the three states did not provide death penalty for all or a part of the period, while the others did provide it. The figures showed clearly that homicide death rates in all the states have followed the same trends, whether or not the death penalty was provided. In all of the fifteen states covered by these comparisons, homicide rates reached peaks in the 1920's and early 1930's, then followed a general downward trend, leveled out in the 1940's and continued through 1960 at about that level. Comparisons of trends and rates reveal no differences among adjacent states with and without the death penalty which can be ascribed to either its presence or absence. In Sellin's words

The important thing to be noticed is that, whether the death penalty is used or not, or whether executions are frequent or not, both death penalty States and abolition States show rates which suggest that these rates are conditioned by other factors than the death penalty.

A more recent study in Canada (Fattah, 1972) revealed that the Canadian provinces show homicide rates which suggest that these rates are conditioned by other factors than the death penalty. They suggest that the cause of homicide and murder cannot be found in any single factor but in a total social situation in which a special law or a particular punishment can have little or no effect.

Another study based on Canadian data (Jayewardene, 1973) examined the relationship between criminal homicide rates and expectancies of punishment: death, life imprisonment, other terms of imprisonment, probation or suspended sentence, as well as no punishment during the period 1965-1970.

Significant correlation was found to exist between the homicide rate

and (a) the expectancy of death (negative) and (b) the expectancy of term imprisonment (positive) suggesting, first, that the death penalty does have some deterrent power and, second, that the change in the homicide rate rests not on the moratorium on the death penalty but its substitution with term imprisonment. The term of imprisonment expected correlates positively though insignificantly with the homicide rate, suggesting that there is a minimum threshold value below which punishment is meaningless and useless in deterrent terms.

1D. Critique of capital punishment research

Much criticism has been made of investigations of the deterrent effect of capital punishment. Most of the criticism deals with the data used and the methodology employed while some of it was made of the interpretations made by the researchers.

Recently Van Den Haag (1969) has suggested that it is incorrect to take the lack of evidence for deterrence as evidence for the lack of deterrence. "It means that deterrence has not been demonstrated statistically—not that non-deterrence has been". Further criticism by Van Den Haag can be summarized as follows:

(1) The "similar" areas compared are not similar enough; the periods are not long enough; many social differences and changes, other than the abolition of the death penalty, may account for the variation (or lack of) in homicide rates with and without, before and after abolition; some of these social differences and changes are likely to have affected homicide rates. There has been no statistical analysis making up for such changes and differences.

(2) Homicide rates do not depend exclusively on penalties any more than do other crime rates. Therefore variation or constancy cannot be attributed to variations or constancy of the penalties unless we know that no other factor influencing the homicide rate has changed. Usually we don't.

(3) A constant homicide rate, despite abolition, may occur because of unawareness and not because of lack of deterrence: People remain deterred for a lengthy interval by the severity of penalties used in similar circumstances nearby.

(4) Deterrence will not cease in the particular areas of abolition or at the particular times of abolition. Rather, general deterrence will be somewhat weakened, through local (partial) abolition. Even such weakening will be hard to detect owing to changes in many offsetting, or reinforcing, factors.

In view of these arguments Van Den Haag doubts whether the presence or absence of a deterrent effect of the death penalty can be demonstrated by statistical means.

Chambliss (1967), is on the other hand, of the opinion that in spite of

the serious limitations of studies on the deterrent effect of capital punishment it is still safe to conclude that capital punishment does not act as an effective deterrent to murder. He cautions, however, that this conclusion about capital punishment does not apply to punishment generally since, as is well recognized, murder and other capital offences are usually shrouded with a great deal of emotional involvement on the part of the offender. Thus, one might well expect punishment to be less effective precisely because such offences are less dictated by "rational" considerations of gain or loss.

II. THE HISTORICAL-ANECDOTICAL APPROACH

Some authors, in an attempt to prove the inefficacy of capital punishment as a deterrent, have used the historical-anecdotal approach. They often cite real stories showing that capital punishment does not deter. Thus in his testimony before the mixed committee on Capital Punishment, Lottery and Corporal Punishment, Professor A. Morris supported his argument by the story of three English hangmen from the period 1714 to 1750 who later were found guilty of criminal acts. At least in the case of two of them, if not of all three, the crimes committed were ones punishable by death.

Among the most frequently quoted stories is the one of a Ohio convict named Charlie Justice who devised the clamps that held the condemned man in the electric chair. After his release, he was convicted of murder and electrocuted.

A similar fate befell Alfred Wells, who helped install San Quentin's gas chamber in 1938. It was his conversational cachet around the prison yard, usually with the moral: "That's the closest I ever want to come...". Four years later, back at San Quentin for a triple killing, he was sealed in the chamber to die.

Another frequently cited story is that of pickpockets who actively plied their trade in the shadow of the gallows from which their fellow knaves were strung.

In 1705, a house-breaker in London, England, was sentenced to death, carried to Tyburn, and hanged. Some minutes after he had been strung up, word came that he was reprieved, and he was cut down and soon recovered. From that moment on he was called "half-hanged Smith". Yet he returned to his former practices.

Other authors use the same approach to claim that punishment in general is no deterrent. Thus Barnes and Teeters (1951) state that

The claim of deterrence is belied by both history and logic. History shows that severe punishments have never reduced criminality to any marked degree.

Tappan (1962) argues that such assertions have a superficial relevance but that they do not dispose of the issue of deterrence by any means.

III. THE ECOLOGICAL APPROACH TO THE STUDY OF DETERRENCE

A. *The Impact of Legal Sanctions on Crime Rates*

Testing the certainty and the severity hypotheses

Many scholars have tried to verify the deterrence hypothesis by measuring the impact of legal sanctions on crime rates. With the help of indexes constructed from data derived from official police, court or prison statistics they tried to establish whether a positive or negative association do exist between the *certainty* or the *severity* of punishment and crime rates.

Cousineau (1972) calls this approach the *ecological approach* since these studies generally control for such basic ecological variables such as age and sex composition, educational characteristics of the population, industrial character, level of urbanization, etc..

One of the earlier studies in this field is the study by Rusche and Kirchheimer (1939). The authors analyzed rates of a number of different crimes in England, France, Italy and Germany from 1910 to 1928. In England, the authors noted a small decrease in crime together with a trend toward greater leniency. In France, rates of most crimes remained stable while punishment levels decreased. In Italy and Germany, punishment for major crimes increased, but the crime rate fluctuated without any apparent relation to punishment levels. The authors recognized that the countries being compared differed substantially in attributes other than punishment policy, so that it was impossible to draw positive conclusions about the effect of higher penalties on crime rates. But the figures from the study "provide no basis for assuming that the policy of punishment affects criminality".

In an attempt to test the severity hypothesis a study was prepared for the California Committee on Criminal Procedure by the Assembly Office of Research (1968). It was hypothesized that "If lengthy incarceration operated as a deterrent, crime rates should be lowest in states where the time served by convicts is highest". On the basis of data published by the FBI and the Federal Bureau of Prisons it was found that the median time served in the 50 states runs from 9 months in New Hampshire to 39 months in Hawaii. No evidence was found to show that more severe penalties deter crime more effectively than less severe penalties. High and low crime rates were found at both ends of the scale of median time served.

The data demonstrated the absence of any consistent relation between severity of penalties and crime rates.

It was found that the states which yearly support the greatest number of prisoners (per 100,000 population) in state institutions at state expense show no lower crime rates than the states which support the smallest number.

The authors concluded that variations in crime rates cannot be explained by differences in average length of incarceration.

Gibbs (1968) and Tittle (1969) analyzed crime statistics and punishment data from the various states in the United States in an effort to determine whether variations in the *certainty* or the *severity* of punishment were related to variations in the rate of particular crimes. The Gibbs study related only to homicide, while the Tittle study involved the seven index crimes: homicide, assault, sex offences, robbery, larceny, burglary and auto theft.

Gibbs hypothesized that the more *certain* and *severe* the penalties for homicide in a state, the lower the state's homicide rate would be. Estimates of the severity and certainty of punishment and offence rates were constructed from official police and prisoner statistics. The degree of certainty was based on the number of persons in each state sent to prison for homicide in 1960, divided by the total number of homicides reported to the police in that state for 1959-1960. The severity of punishment was operationalized as "the number of months served on a homicide sentence by all persons in prisons on December 31, 1960." The dependent variable was defined as the average annual homicide rate per one hundred thousand population for each state from 1959-1961. The average homicide rate for a three year period was used to allow for sufficient time for the deterrent effect and to provide greater stability to the rate.

Gibbs found inverse relationships between rates of homicide and the severity ($\phi = -.25$) and certainty ($\phi = -.48$) of punishment. Both these correlations are in the hypothesized direction and consistent with the deterrence theory. Furthermore, Gibbs also concluded that the effects of the severity and certainty of punishment are additive as deterrence theory would predict.

Gray and Martin (1969) reexamined Gibbs data using other statistical techniques. Their findings differ from those of Gibbs'. Where he found certainty of punishment to be the more important factor, Gray and Martin found the reverse to be true. They also concluded that contrary to Gibbs' assertion, the severity and certainty of punishment do not appear to be additive in their effect on the homicide rate.

Tittle (1969) employed official statistics to construct indexes of certainty and severity of imprisonment for each of seven major offence categories and for a total category of felonies.

His principal measure of severity was provided by the "mean length of time served for felony prisoners released from state prisons in 1960".

Certainty of punishment for the several felonies was given by the following ratio:

$$\frac{\text{\# of state Prison Admissions for "X" offence in 1960 and 1963}}{\text{\# of "X" crimes known to the Police in 1959 and 1962}}$$

The results of the analysis led to a conclusion that high probability of imprisonment was associated with lower crime rates. The efficiency of severity of punishment, however, appeared to be limited to the offence of homicide. Further analysis suggested a complex interaction between certainty and severity of punishment in their influence on various offence rates. In general it appeared that certainty of imprisonment was associated with lower crime rates independently of severity while severity was associated with lower crime rates only for particular levels of certainty.

Tittle's findings were called into question by Chiricos and Waldo (1970) who extended a similar mode of analysis to additional points in time and to measures of change in the levels of certainty, severity, and criminality.¹

Their data showed little consistent support for the assumption that the rates of crime are inversely related to the certainty and severity of punishment. The authors raised several methodological issues which cast doubt upon the appropriateness of findings derived from this approach to deterrence research.

Logan (1971 and 1972) reanalyzed Tittle's data using more rigorous and demanding techniques. In all instances the original findings were confirmed except that Logan's results suggested that severity of punishment was more important than originally thought.

Bailey, Martin and Gray (1973) further examined the relationship between the severity and certainty of punishment and offence rates. Their approach is similar to that of Gibbs, Tittle and Chiricos & Waldo with certain additions:

(1) Police and prisoner data are examined in their original ratio scale form, and not as nominal (Gibbs, 1968; Chiricos and Waldo, 1970) or ordinal (Tittle, 1969).

(2) The question of the additive effects of the severity and certainty of punishment on offence rates are examined for eight index offences, where this question has previously been addressed only for homicide (Gibbs, 1968; Gray & Martin, 1969).

(3) The relationship between the severity, certainty and offence rate variables for all eight index crimes are examined by way of both a rectilinear and logarithmic statistical model. Only homicide has been examined in the past by the way of these two models (Gray & Martin, 1969).

The findings indicated that "certainty of punishment is the chief deterrent for most crimes. Homicide, however, is influenced by severity, possibly reflecting the differences between homicide and other offences."

The authors also stress the difficulties involved in the use of official data for the study of deterrence and suggest as alternative methods survey research, longitudinal analysis of limited populations and experimentation.

Logan (1971 a) examined original arrest data provided by the FBI and found a general negative relationship between crime rate and probability of arrest for all offences except homicide.

Phillips (1972) standardized a measure of crime rate to take account of varied etiological factors and employed a probability model for analysis. His work showed that a major portion of the variance in homicide rate is attributable to certainty and severity of punishment.

Tittle and Rowe (1973 a) analyzed the relationship between arrest clearance rates and crime for all the counties and municipalities in Florida. Their findings seem to support the deterrence argument, although the effect was found to be contingent upon the probability of arrest reaching a certain minimal level (about 30 per cent).

Antunes and Hunt (1973) extended further the analysis of criminal justice data for 1960 using again the seven index crimes. The dependent variable in the analysis was the crime rate, a per capita measurement of the number of crimes per 100,000 inhabitants of each of forty-nine states. Two independent variables, certainty of imprisonment and severity of sentence, were computed for each of the crime categories.

A series of bivariate regressions between certainty and severity and crime rates was computed for the seven index crimes. Additional comparisons of crime rates and severity were made. The combined predictive effects of certainty and severity considered simultaneously were explored through a series of linear multiple regressions.

No support was found for severity of sentence alone as a deterrent to crime, but a consistent, moderate effect was found for certainty of punishment. Deterrence was improved slightly when severity was combined with certainty. The authors suggest that increasing the severity of incarceration is likely to seriously undermine the goal of specific deterrence. Increasing the certainty of arrest and prosecution, on the other hand, increases general deterrence and facilitates specific deterrence. The authors suggest further that their data support a criminal justice policy that increases the certainty of detection and prosecution.

A recent study in California (Kobrin, 1972) aimed to measure the relationship between the sanctioning activities of criminal justice and the magnitude of crime problem. Two types of measures were constructed in order to examine the relationship between the sanction response of criminal justice agencies and the control of crime. At each of four key stages of the justice process—arrest, pretrial, conviction, and sentencing—the level of the sanction response was measured as the proportion of the potential sanction available at the given stage that was imposed. Next, three mea-

asures of crime were devised; the customary crime rate; the seriousness of crime; and the crime level. All measures were calculated for the fifty-eight county jurisdictions of the state of California and for the entire state, and most were obtained for each year of the eleven-year period, 1960-1970.

Findings indicated gross differences between the more and the less urbanized counties, with the higher sanction levels at the police and pre-trial stages in the less urbanized counties. The analysis further indicated that higher sanction levels were almost uniformly associated with the lower crime levels; that social factors had considerably greater effect on crime levels than did the operations of criminal justice; but that, of the share of influence in crime control that was exercised by criminal justice agencies, the greatest contribution, particularly in the jurisdictions with a high crime rate and a large population, came from sanction at the police and sentencing stages.

The authors of the study insist that because of the many limitations to the data, the findings should be regarded as highly tentative. They underline the following limitations:

- (1) The data were derived from a single state (California).
 - (2) The deterrent effect of sanctioning activity was examined with reference to all felony crimes treated as a single category. This procedure was bound to obscure the differential effects of sanction on specific types of felony offence.
 - (3) Included in the offence pool were felonious drug law violations, which constituted approximately one-third of the total. The contaminating effect of their inclusion was bound to be substantial.
- Using Canadian statistics of crimes known to the police, Teevan (1972) tried to assess the general deterrent effects of increasing and decreasing certainty and severity of punishment on crime rates. Certainty of punishment was operationally defined as the ratio of court convictions to the number of reported crimes: "The higher the ratio, the greater is the objective certainty of punishment". Specific offences examined were "murder", rape, robbery, breaking and entering. For the last three offences severity of punishment was operationally defined as the median length of sentence served for each crime.

Teevan concluded that certainty but not severity of punishment, as they have been measured for the study, appears to be related to variations in crime rates. Specifically, there is a relationship between decreasing certainty and increasing crime rates. The author notes, however, that the data available do not allow any final conclusions and that models which incorporate deterrent effects of punishment with other variables known to be related to criminality are needed.

B. General conclusions of the ecological studies of deterrence

As the authors themselves admit, the findings of ecological studies of

deterrence are far from conclusive. These authors stress, almost without exception, the methodological problems involved in this approach to deterrence, the limitations of the official data as well as the tentative character of the interpretations.

In spite of the problems, limitations and shortcomings some general conclusions can be drawn on the basis of the results reported in the different studies:

(1) *Certainty of punishment* appears to be related to variations in crime rates. In fact, most of the studies reported an inverse relationship between certainty of punishment (measured by the ratio of either police arrests, court convictions or prison admissions to the total number of reported crimes) and crime rates. The degree of this inverse association varies according to a number of variables including the type of offence and the level of urbanization.

This finding however is far from being a final confirmation of the deterrence hypothesis. Many authors do not exclude the possibility that the degree of certainty of punishment and lower crime rates are both caused by a third factor. (See for example Tittle (1969) and Bowers (1972).)

(2) *Severity of punishment* does not appear to be significantly related to variations in crime rates. This is expressed quite clearly in the California study (1968).

Tittle (1969) concluded that "In general it appears that the greater the severity of punishment, the greater the crime rate is likely to be. But since controlling for levels of urbanization practically destroys any association, it would seem that severity alone simply is irrelevant to the control of deviance". On the other hand Gibbs (1968) reported an inverse association between the severity of punishment and the rates of homicide. This was confirmed by Tittle (1969) as well as by Bailey, Martin and Gray (1969) but contested by Chiricos and Waldo (1970). Logan (1971 a) suggests that severity is even more important than originally thought while the opposite opinion is sustained by Teevan (1972).

(3) *The level of urbanization* appears to have some influence on the extent to which certainty of punishment is associated with offence rates. However, the nature of such an influence and the direction in which it operates are not quite clear.

Tittle (1969) found the inverse association between certainty and crime rates to be strongest (-.36) where the level of urbanization is relatively low and much weaker (-.16) in more highly urbanized states. Relying on this he suggests that certainty of punishment as a general deterrent may be operative primarily in less urbanized states where the fact of being imprisoned may carry with it a greater possibility of long-range stigmatizing effects.

On the other hand, Kobrin et al (1972) on the basis of their study of the different counties in California, report that the inverse relationship be-

tween sanction and crime was more pronounced in the large population counties.

(4) On the basis of the findings reported in the different studies it is still impossible to conclude whether the effects of the certainty and severity of punishment are *additive* or not, whether they act jointly or independently to produce whatever deterrent effects they may have.

(5) *Criminal homicide* seems to be a quite particular offence varying considerably from the other offences studied and obeying somewhat different rules.

(6) *Social factors* seem to have considerably greater effect on crime levels than do the operations of criminal justice. No proper assessment of the impact of legal sanctions can be made unless these social factors affecting crime rates are controlled for.

C. Critique of the ecological approach to the study of deterrence

Studies aimed at measuring the impact of legal sanctions on crime rates are no doubt a first and a promising step toward the empirical investigation of deterrence. However, these studies are still in the early stages of development. Their findings are highly tentative and quite often contradictory and inconsistent. This is mainly due to the nature and limitations of the data used and the shortcomings of the methodology employed. Deterrence is such a complex issue that it cannot be tackled simply by measuring correlations between imposed sanctions and crude crime rates. No conclusive results can be attained until more accurate data are available and until more sophisticated and refined methods are used.

In the following we will try to give a brief summary of the limitations and the shortcomings of the ecological studies of deterrence:

(1) While most of the studies control for certain basic ecological variables such as age, sex, education, industrialization and urbanization, other social factors most likely to affect crime rates are ignored. Thus when a direct or inverse association between criminal sanctions and crime rates is observed, it cannot be safely concluded that the sanctions examined are effective or ineffective nor can such a finding be taken as a confirmation or negation of the presence or absence of deterrence.

Bowers (1972) advances the hypothesis that "common causes of crime and punishment may be responsible for an association between the two which is not due to causal links between them".

The same social factors such as social disorganization, social deprivation, intergroup conflict, variations in cultural values toward persons and property may contribute to both crime and punishment.

(2) The inverse relationship reported between certainty of punishment and crime rates may be the product of correlated bias existing in the measures of certainty and criminality.

Among the reproaches made to Tittle's study was that the numerator

of criminality index was almost identical to the denominator of the certainty index. Thus, any computed relationship between such variables would have to be inverse. (See Chiricos and Waldo, 1972.)

(3) Most of the studies, if not all, have used official crime rates which are sensitive to changes in the levels of enforcement, in the reporting of crime to the police and in the recording of crime by the police.

The well known unreliability of official crime statistics, the lack of comparability between different data sources and missing data or incomplete sequences of figures are all factors which can have a considerable effect on the results obtained. Unfortunately, most of the time, the defects of the data can neither be assessed nor minimized.

(4) American studies based on official crime rates are necessarily limited to the seven "crime index" offences in as much as "crimes known to the police" are unavailable for additional specific crimes. Official statistics are of little use for the study of deterrence for minor offences such as victimless crimes or for certain crimes with a high dark figure such as white collar crime. For this reason, more recent studies trying to examine other than the "crime index" offences had to use the survey method instead of crime statistics.

(5) Studies of deterrence based on aggregate data preclude an examination of situational differences that could affect an individual's response to threats of punishment. Chiricos and Waldo (1972) explain this criticism in the following manner

... one cannot ask whether some people are deterred from some crimes in certain situations by particular set of deterrents, or whether different persons, in different situations may be differentially affected by threats of penal sanctions. Further, the possibility that the *same* individual would respond to different deterrents for different crimes in different situations, must be ignored when dealing with these data.

(6) Present studies of the impact of legal sanctions on crime rates fail to differentiate between general and specific deterrence. The crime rates considered are typically based on the criminal convictions of all known offenders, regardless of their previous offence records. Cousineau (1972) points out that

The rates of crime among first offenders in a population are valid indicators of general deterrence in that population, whereas the rates of crime among recidivists are indicators of the effectiveness or lack of it of specific deterrence. When the categories are combined, it is no longer justifiable to use the resulting crime rate as a measure of general deterrence.

(7) Another criticism Cousineau (1972) makes of the ecological studies of deterrence is their failure (at least some of them) to allow for an ap-

appropriate time lag between sanction and effect. He notes that deterrent effects of the punishment of offenders (penalties actually imposed as distinct from penalties existing on the books) will require some period of time to become manifest in the behaviour of the general public. Thus it is possible that an increased severity of sanctions during one year may not have an impact on crime rates during the same year but may have a measurable impact in the following year or in next years.

(8) Cousineau (1972) adds to the previous reproach the failure of the studies to select appropriate base populations. He reminds that certain groups of society because of age or sex are not eligible to commit certain crimes and thus their rates of being charged with these crimes or convicted of them will be zero regardless of how lenient or how severe the legal sanctions are. A typical example is the case of women who can neither be charged with nor convicted of rape. It is then important for assessing the deterrent effects of sanctions for specific offences to consider the crime rates for the population eligible to commit or to be convicted of these crimes in other words the "population at risk". Ecological studies of deterrence should thus consider the impact of sanctions not on the population *in toto*, but on the marginal group who are most vulnerable to involvement in the behaviour.

(9) A further limitation of the aggregate data approach is the researcher's inability to take into consideration the degree of public knowledge and public awareness of sanctions and sanctioning outcomes. When correlating official crime rates with the severity of statutory provisions for punishment or with actual punishments the researcher has no idea of how knowledgeable are the people about penalties (statutory and actual) for various crimes. Indeed one of the weakest points of studies based on official police, court and prison data is their inability to control for such an important and basic variable. The studies seem to presume public knowledge and public awareness. In view of surveys² which have shown that the public were extremely ignorant of penalties for crimes and that a huge gap exists between objective reality and public belief, such an assumption does not seem to be justified. It seems then that except for states, cities and areas where public knowledge and public awareness of sanctions and sanctioning outcomes are rather high, the validity of the findings of the ecological studies can be challenged.

(10) Related to the above weakness is also the failure to control for the gap between objective and perceived risks. Again there can be a wide gap between objective risks, measured on the basis of arrests, convictions or prison admissions and risks as individually or collectively perceived by the public. It seems obvious that the effectiveness of deterrence is more influenced by the latter than by the former. Indexes of severity and certainty constructed on the basis of official data are necessarily limited to objective risks. Only where objective risks are correctly perceived by the public in general and by the marginal group in particular do the studies based on

objective risks allow for a correct appraisal of the effectiveness of sanctions on crime rates.

(11) Most of the studies treat the seven "crime index" offences used in the uniform crime reports as being of equal gravity. That is, they are treated as though the public perceives crimes against the person like homicide or forcible rape as being equivalent in seriousness to burglary, auto theft, or armed robbery. An exception is the study undertaken in California by Kobrin et al (1972) in which an attempt was made to devise a means of assessing the seriousness and not only the frequency of the different offences.

(12) While most of these studies come to the conclusion that legal sanctions do act as a deterrent, they fail to tell us what element in these sanctions actually acts as a deterrent or which element does have the most powerful deterrent effect. What does in fact deter people from crime? Is it the fear of being arrested by the police? Is it the fear of being detained? Is it the fear of possible publicity surrounding the arrest and trial? Is it the fear of the sentence to be imposed by the court? Is it the fear of "prison" as such? Is it the fear of a lengthy prison sentence? Is it the fear of the social stigma attached to criminal punishment and the social and economic effects which are likely to result from such a stigma? Almost all of the studies do not give answers or do not even try to answer these questions. Of course there are some exceptions. The California study of 1968 seemed to indicate that fear of arrest, conviction and imprisonment deter many persons from many types of crimes, but there was no evidence to indicate that fear of lengthy imprisonment affects a significant number of criminal decisions. In view of this it would appear that the social stigma attached to punishment is more powerful as a general deterrent than the length of incarceration.

The more recent California study (Kobrin et al, 1972) found that it is the level of sanction imposed at the police and sentencing stages that seemingly accounts for whatever crime control effect the justice system exerts.

D. The Effect of Punishment on the Incidence of Specific Offences

Many empirical studies have attempted to assess the effect of punishment on the incidence of specific offences. Most of the studies were based on situations in which changes of the laws were made thus allowing to measure the corresponding changes in the incidence of offences.

1. DRIVER BEHAVIOUR

Driver behaviour offers a fertile though complex ground for studies on deterrence for many reasons:

(1) Deterrence is thought to be more effective in controlling rational

behaviour than it is in curbing impulsive behaviour. Some of the traffic violations are types of rational behaviour (ex. parking violations).

(2) Deterrence is thought to be more effective when motivation to engage in the prohibited behaviour is low and less effective when the motivation is high. Most of traffic behaviour has no intense motivation behind it.

(3) Deterrence is thought to be less effective in controlling or curbing habitual, unthinking behaviour. Driving is a very complex activity that soon becomes habitual. One would wonder whether the main function of legal sanctions with regard to drivers behaviour is intimidation (curbing or modifying the behaviour through the fear of punishment) or education (by instilling habitual modes of performance in compliance with traffic standards and regulations).

(4) Deterrence is thought to be more effective in controlling intentional behaviour than it is in curbing negligent behaviour. Some of the prohibited forms of driving behaviour are intentional while some others are negligent.

(5) With regard to drivers behaviour there is besides the legal sanctions another important controlling force in action. The risks of accidents, the danger to the personal safety of the driver and the passengers should have some deterrent effect on his behaviour making it difficult to separately assess that of legal sanctions. It is difficult to say,

(a) To what extent a driver respecting a certain traffic rule has done it out of fear of legal sanctions and to what extent he has done it out of fear to his own safety or the safety of the passengers in his car?

(b) If a driver is not deterred by a concern for his own safety or for that of his passengers, (to say nothing of the property interest in their vehicles) can he be deterred by the prospect of the minor penalties exacted for traffic violations?

Cramton (1969) argues that a serious accident is an extraordinarily infrequent event from the point of view of the individual driver. A personal injury accident occurs only once in every 225,000 vehicle miles; a fatality only once in every 18,000,000 vehicle miles. He argues that in the driving context the odds of an unpleasant occurrence are more influential in shaping driver behaviour than the potential severity of the occurrence. Thus, although the consequences of a traffic accident could be staggering, the risk of its occurrence may be so remote as to have little impact on driver conduct. By contrast, even though the chances of detection for particular violations may be low, the public is more aware of the risk of being apprehended for a traffic violation. The consequences of apprehension—confrontation with a police officer, appearance in court, and possible licence suspension—are much more visible and immediate than the relatively remote possibility of an accident. Thus, traffic regulation may play a significant role in shaping driver behaviour.

Cramton is of the opinion that the deterrent role of legal sanctions in controlling traffic cannot be rejected, although there is a basis for skepticism concerning the performance of the present system of traffic regulation on two grounds:

- (1) extremely low apprehension rates and enforcement levels may dilute the potential deterrent effect;
- (2) the causal relationship between behaviour that results in violations and accidents has not been clearly established.

2. TRAFFIC OFFENCES

(a) *Moving violations*

The Lackland Accident Countermeasure Experiment

In Texas a controlled experiment was conducted to reduce serious highway accidents involving servicemen at the Lackland Air Force Base. Military authorities were troubled by the large number of personal-injury accidents involving servicemen driving privately owned automobiles in the vicinity of their stations. A study revealed that excessive drinking was a contributing factor in approximately two thirds of these accidents. After considering and rejecting alternative countermeasures, such as advance screening and counselling of drivers, a prevention program was designed that involved two administratively imposed sanctions; a driver involved in a personal-injury accident was called in for a review of his service record and for a psychiatric examination. An accompanying educational effort tried to portray driving after drinking as disturbed or "sick" behaviour. The effects of the program were studied by comparing accident rates before and after its institution and by comparing the experience at Lackland with the accident rate in the general community and at other bases at which the program was not adopted.

In the year following the introduction of the program personal-injury accidents involving the affected group declined over fifty percent. Before concluding that this effect had been caused by the prevention program, Professors Barmack and Payne, examined and rejected plausible rival hypotheses such as other influences operating in the same direction or a general decline in servicemen's accidents. In fact, during the period in question, accidents continued to rise in the general community and at other military bases.

The 1956 Connecticut speeding crackdown

In late 1955, Governor Ribicoff of Connecticut announced as part of a crackdown on speeders a plan whereby a convicted speeder would have his driver's licence suspended for a minimum period of thirty days. Dur-

ing the first year of the crackdown, highway fatalities in Connecticut declined about twelve percent, and Governor Ribicoff hailed the program as a success. Professors Ross and Campbell examined the Connecticut experience in detail and concluded that plausible rival hypotheses probably explained the changes hailed by Ribicoff. When the fatality rates in Connecticut and in nearby states were plotted over a longer period, it became evident that 1955 (the year prior to the crackdown) was an extremely bad year; the lower fatality rate in 1956 would have been expected in any event as a regression to the mean, since the modest change noted in 1956 was well within normal yearly variation of fatality rates. Moreover, nearby states experienced a similar decline of fatality rates during the same period. Thus it cannot be conclusively established that the Connecticut speeding crackdown reduced highway fatalities. But the data does indicate that the crackdown had other unforeseen consequences, including a dramatic reduction in speeding convictions, a dramatic increase in licence suspensions due to speeding, and increased incidence of driving under suspension. The Connecticut legal system apparently made adjustments that reflected the greater seriousness of the speeding offence: fewer drivers were arrested on speeding charges, and of those arrested a substantial number were found not guilty (See Cramton, 1969).

In Israel, Shoham (1974) examined a random sample of drivers (N=1,638) whose first offence was registered during and after the year 1966 and up to the end of 1971. These drivers had a registered total of 4,063 offences. The offences covered a wide variety of traffic violations ranging from failure to obey traffic signs to speeding.

The author made an attempt at assessing the deterrent effect of punishment with regard to traffic offences. It was found that the large volume of traffic offences is not related to the light punishment generally incurred. The severity of punishment was found to be ineffective in this particular area of law violations, both for preventing additional offences and for reducing their gravity. Severity of punishment proved to be effective only in increasing the period of time between the punished offence and the following one. Furthermore, severe punishment was found to be positively correlated with recidivism and, surprisingly 42.5% of drivers who received light punishment for the first offence did not commit additional offences.

(b) Drunken Driving

Arguments about the ineffectiveness of deterrence on the behaviour of alcoholics or problem drinkers cannot be automatically extended to drunk driving, since

- (1) many of those who drive while drunk are neither alcoholics nor problem drinkers;
- (2) prohibition against driving after drinking does not require an al-

coholic to stop drinking, but merely to do his drinking under circumstances in which it is not necessary for him to use an automobile. The choice, made prior to the commencement of drinking may be consciously influenced by the imposition of legal sanctions (see Cramton).

This justifies the study of the deterrent effect of sanctions on drunk driving separately from other prohibited behaviour related to drinking such as drunkenness.

The British Experience

The impact of the Road Safety Act of 1967 on drunk driving in Great Britain

Andenaes (1968) gives the following account of the British experience:

The Road Safety Act 1967 went into effect on October 9, 1967. In addition to the old provisions on drunk driving, which only led to conviction in cases with a high degree of intoxication, the law created a new offence, driving with an undue proportion of alcohol in the blood. The prescribed limit is defined as 80 milligrammes of alcohol in 100 millilitres of blood (0.08%). The police may ask for a breath test if the constable has reasonable cause to suspect the driver of having alcohol in his body or of having committed a traffic offence while the vehicle was in motion. Even without such cause for suspicion the police may ask for a breath test if the driver has been involved in an accident. If the breath test indicates that the driver is probably above the legal limit, he may be arrested and taken to a police station. In the police station he will be asked to submit to a blood test, or if he refuses, to provide two specimens of urine for analysis. A failure to co-operate at this stage renders the driver liable to the same penalties as if the sample had been taken, analyzed and found to be above the limit. Drivers convicted of the new offence are liable to a fine of 100 pounds or four months' imprisonment or both. Disqualification from driving for a minimum of one year is automatic, except in the most special circumstances. The new law was accompanied by a large publicity campaign, beginning two weeks before the new law came into force and running until the end of the year. The campaign, which was estimated to cost nearly 350,000 pounds, was particularly intensive at the beginning and during the Christmas/New Year period.

Statistics of road accidents were carefully compiled to gauge the effect of the new legislation. According to the official figures given by the Ministry of Transport a substantial decrease in road traffic accidents took place after the new statute came into effect.

In the first nine months of 1967 there was no consistent trend in total road accidents, some months being worse than the previous year and some being better; overall there was a two percent decrease in casualties as

compared with 1966. Overall traffic compared with the previous year was estimated to have increased by 5 percent in October, 2 percent in November, and to have decreased one percent in December.

That the reduction is greater for serious accidents than for the less serious is in harmony with the findings of previous traffic research which shows that when drivers with blood alcohol levels over .08 percent have accidents they tend to be more severe than the average accident.

A striking pattern emerges if the accidents are related to the hourly period when they took place. During working hours (8 a.m. to 6 p.m.) the reduction is slight (2 percent of fatal and serious accidents in October and November, 7 percent in December). Between 8 p.m. and 4 a.m. the figures were 36, 38 and 41 respectively; for the hours after midnight they were still higher. Andenaes concludes that in this socially important area it has proved possible, through new legislation, to influence people's conduct to a considerable degree, at least temporarily.

The German Experience³

On January 2, 1965, the Second Road Traffic Act came into force in the Federal Republic of Germany and its harsh penalties were widely reported in the press. In the following months a strong shock effect was apparent. In Lower Saxony the number of blood samples taken from drunken drivers in January and February 1965 was thirty-five percent below the 1964 figure for those months, and in Münster, the drop was about thirty percent. However, the public sense of shock was followed by such a marked habituation effect that by June 1965 the figures were again the same as those for 1964. "No doubt one important factor was that at first it was thought that the risk to the driver would be considerably higher due to an increase in police strength... when it became apparent that these suppositions were not correct, many drivers put aside the caution they had shown for a while."

The Finnish Experience⁴

Drunken driving is considered a serious problem in Finland and this explains why the typical penalties for such behaviour are very harsh (3 to 4 months of unconditional imprisonment in cases where no harm or damage has occurred). Drunken driving also places a heavy burden on the Finnish penal system since every second prisoner arriving to Finnish prisons is a drunken driver.

The present harsh penalties are the product of a policy which has relied on steep increases in the legal punishment latitudes whenever the drunken driver figures have caused public concern.

The Institute of Criminology in Helsinki has tried to analyse the impact of the increased penalties on the proscribed behaviour in question.

The results of the study suggest that the rate of offence has decreased temporarily each time—but only temporarily.⁵ The authors found a strong evidence for the existence of a “self-regulatory mechanism” in the control of drunken driving; as the punishment increase, the attitude towards marginal cases becomes more permissive. On the other hand they found no evidence for any individual-preventive effect (special deterrent effect) of sanctions used. An almost constant rate of recidivism is always obtained. A strong correlation was found between cases of drunken driving and the number of motor vehicles.

In conclusion the authors note that a “a reappraisal of the policy against drunken driving seems necessary in the light of the available data. The policy of long prison sentences seems to have become too expensive, as these sentences have not proved to have any demonstrable deterrent effect (when compared with e.g. other scandinavian countries)”.

The Chicago Experience

Robertson, Rich and Ross (1973) used the interrupted time series to study the effect on fatalities in Chicago of the highly publicized use of 7-day jail sentences as a countermeasure against driving while intoxicated during the winter and spring of 1971. Arrests and processing of cases were also examined.

The authors concluded that the change in motor vehicle fatalities that occurred during the Chicago crackdown on drivers convicted of driving while intoxicated was only a chance variation from the fatality rate over the preceding five years. They also concluded that if the publicity received by the crackdown was effective in reaching those who subsequently were involved in fatal crashes, then the punitive threat of 7-day jail sentences did not deter them from getting into crashes. These findings led the authors to suggest that a strictly punitive approach to persons convicted of driving while intoxicated and persons involved in crashes after excessive drinking, is not likely to be successful in deterring many of these persons from repeat performances.

In spite of this Andenaes believes that for several reasons, a stronger deterrent effect may be expected from drunken driving laws than from laws against many other types of offences:

- (1) Driving under the influence of alcohol is not restricted to a criminal subculture, and it is not subject to severe moral condemnation.
- (2) Drunken driving is not a behaviour triggered by strong emotions.
- (3) The law interferes only slightly with personal liberty. It asks the citizen neither to stop drinking nor to stop driving. It merely prohibits combining the two activities.

(c) *Violation of Parking Regulations*

Chambliss (1966) made a study of the violation of parking regu-

lations on a midwestern university campus. He found that the propensity to violate these rules is directly related to the likelihood that offenders will be punished. In this study, a sample of faculty members was interviewed, with records being checked to establish the validity of the interview data. Information was gathered on the sample's tendency to violate the regulations during a two and one-half year period when the sanctions that could be imposed were slight and when the regulations were only sporadically enforced. Significantly, during this period over one-third of the sample reported complying with the regulations despite the mild and rarely enforced sanctions. The other members of the sample, however, reported varying degrees of rule violations, ranging from one recalcitrant who parked illegally daily (even on the lawn beside his office) and who "saved the tickets to play solitaire with", to persons who violated occasionally in order to deliver a package on campus.

There was a dramatic shift in the tendency to violate the regulations when official policies changed. In January 1956 the campus police force was greatly increased in size, thus enabling adequate coverage of all parking areas. Fines were increased from the previously established figure of 1 dollar for every offence to 1 dollar for the first offence, 3 dollars for the second offence, and 5 dollars for the third and subsequent offences during any 12 month period. Most importantly, during this second period of more severe sanctions, illegal parking could (and did) result in the violator's car being towed away at his own expense. These changes were sufficient to alter considerably the faculty's compliant behaviour. Where there had been 13 frequent violators during the light sanctioning period, there were only 2 after the change. Even these 2 violators had changed their patterns of violations considerably. One reported violating frequently, but only for a few minutes while he delivered something to a building, thus minimizing his chances of being ticketed. The other reported violating only by illegally parking in a place where he had never received a ticket, and he further commented that had he received a ticket he would have stopped parking there. Thus, in effect, all 13 frequent violators showed a reduction in the propensity to violate the laws after sanctions were imposed.

(d) *Some conclusions*

- Stricter law enforcement and increased certainty of punishment (increased likelihood of being arrested, punished) seem to have a deterrent effect. This deterrent effect is likely to be stronger with regard to the more rational forms of traffic offences (ex. violation of parking regulations) than it is with regard to less rational forms of traffic offences (ex. drunken driving).
- The introduction of more severe penalties (usually accompanied

by an increased and stricter enforcement) usually results in a *temporary* decrease in the incidence of the proscribed behaviour. General deterrence is not to be confused with the shock that often occurs after the passing of severe laws and after new increased penalties. This shock quickly disappears (as has been demonstrated in the British, German and Finnish experiences) as a result of a habituation effect due to some kind of self-regulatory mechanism.

- As punishments increase the attitude towards marginal cases becomes more permissive.
- Long prison sentences for drunken driving do not seem to have any demonstrable deterrent effect. An almost constant rate of recidivism is always obtained regardless of the sentences imposed (see in particular the Finnish study).

3. CRIMES WITHOUT VICTIMS

(a) *Drunkenness and drug addiction*

There seems to be much agreement among social scientists that crimes without victims cannot be effectively controlled nor eliminated by legal penalties (see Bailey, W. C., 1971).

The few studies done in this area have either dealt with the issue of special deterrence (the effect of punishment on problem drinkers or drug addicts) or with general deterrence in such fields as prostitution or marijuana offences.

It is sometimes argued that sanctions will not have the intended deterrent effect with problem drinkers, since they are supposedly incapable of rational or conscious choice (see Cramton p. 444). Empirical studies tend to confirm these arguments and to negate the assumption that imprisonment acts as a deterrent to the chronic public inebriate. However, these studies deal with specific deterrence (special deterrence) and not with the issue of general deterrence.

In their study of chronic police court inebriates, Pittman and Gordon (1958) found that the majority of these offenders were persons who had been through the "revolving door" of the police station and jail innumerable times.

The results of our investigation negate completely the assumption that incarceration acts as a deterrent to the chronic public inebriate. . . Of the 1,357 men committed to the Monroe County Penitentiary in 1954 on charges of public intoxication or allied offences, only 5 were newcomers to prison life. About one-third of these men—455 to be exact—were there for their second to tenth round. Nearly 6 out of 10 (80 men)

had been committed from 10 to 25 times to a penal institution, and 96 men had served 25 or more jail terms. Our study group, a random sample of their kind, included some men who have been arrested 81, 90 and 110 times for public intoxication. There is no question about it: jailing has not deterred them from further public drunkenness.

Another study by Keith and Holger⁶ (1968) examined the reactions to various degrees of punishment meted out to 1,649 Minneapolis skid row recidivists. Data were gathered from the police department and the court, rather than from prison records.

The most striking fact revealed by the findings was that, regardless of the number of arrests, court fines have a greater deterrent effect than workhouse sentences. Five of six comparisons showed larger periods of time between arrests when offenders were given fines compared to workhouse or suspended sentences.

It seems thus that financial loss among skid row alcoholics deters further drunkenness episodes more effectively than does incarceration.

The authors suggest that the economic status of the skid row resident may provide one reason why the workhouse or suspended sentence is less of a deterrent than a fine to future drunkenness behaviour. Another reason may be that skid row resident attach no particular stigma to serving time in jail.

Drug addiction is another form of this habitual, irrational behaviour less likely to be curbed or controlled by legal sanctions. The rates of recidivism among punished drug addicts as well as rates of relapse among treated drug addicts tend to show that criminal sanctions do not have any demonstrable special deterrent effect.

In the Lindesmith (1957) study of 800 addicts who were followed after treatment, it was found that 81.6 percent of them had relapsed within the first year, 93.9 percent within three years and 96.7 percent within five years.

The federally run hospitals at Lexington and Fort Worth report similar recidivism rates among persons treated at these hospitals. The President's Commission on Law Enforcement and Administration of Justice (1967) has also concluded that there is a high relapse rate among drug addicts.

Chambliss (1967) points out that even among persons who are presumably the most likely to be rehabilitated through treatment, the recidivism rate is exceedingly high. He cites Synanon which accepts only those addicts who volunteer for treatment as an example. In addition to volunteering, the addicts must agree to undergo rather severe "hazing" policies in order to demonstrate the sincerity of their desire to abstain from drug use. Given these conditions, it is reasonable to presume that Synanon treats only those persons whose desire to "kick the habit" is very strong. But even with these persons, the proportion who fail to complete the

treatment program is in excess of 70 percent of all those who initially apply.

An interesting controlled field experiment was conducted in Finland a few years ago. The prosecution policy as regards public drunkenness was changed by agreement with the police authorities in three middle-sized towns. Drunken people were arrested as before, but the average prosecution percentage was brought down from 40-50% to 9-24%. A comparison of drunkenness arrest trends in the three experiment towns and in three control towns of the same size revealed no systematic differences over a three year period.

Anonymous interviews of police officers in the experiment towns indicated that:

- (1) most officers thought that the policy change had produced no change in the number of behaviour of drunken people;
- (2) most officers felt that the experiment had produced about as many positive as negative effects; and
- (3) those who thought the experiment has produced more positive effects clearly outnumbered those who thought it had produced more negative effects.

By participant observation and by questioning the police officers it was established that not even the chronic drunkenness offenders had noticed the policy change.

The author, P. Tornudd (1968) concludes that the assumption that there is a strong causal relationship between drunkenness prosecution policy and the state of public order in a town is not supported by the results of the experiment. He further notes that the results suggest that negative consequences of abolition of fines for drunkenness could be minimized by making the change gradual and leaving large discretionary powers in the hands of the local police.

(b) *Prostitution*

When the penalties for soliciting were drastically increased in Great Britain in 1959 a sharp fall in prostitutes' convictions for this offence followed. Walker (1971) notes however that following the increase in penalties, many police forces adopted a practice of cautioning women for soliciting on the first and even the second occasion;⁷ and since no central records of women so cautioned were kept, a prostitute could usually escape prosecution by moving to another police district when she knew that she could not expect another caution. Another factor, not mentioned by Walker, which may have been at least partially responsible for the drop in the number of convictions may be a higher acquittal rate resulting from the increase in the severity of punishment.

(c) Marijuana offences

In 1961 the California Legislature, alarmed by an increase in the use of marijuana, removed the sentence of 0 to 12 months in the county jail as an *optional* penalty for the possession of marijuana and required that possessors serve 1 to 10 years in the state prison. Penalties for the sale of marijuana and for offenders with prior convictions were also increased. The changes in marijuana penalties and the jump in arrest rates received much press coverage.

In 1961, almost 3,500 persons, in 1966, over 18,000 persons and in 1967, over 37,000 persons were arrested for marijuana offences.

The California experience with increasing penalties for marijuana offences is often quoted as a proof that increasing the severity of punishment is ineffective, such a conclusion is of course unwarranted since the same factors that may have been at work increasing the initial rate may still have been at work increasing the subsequent rate (see Zimring & Hawkins, 1972, p. 276).

However, if the California experience is no proof that severe punishments are no deterrent, it shows without any doubt that the increase in the incidence of these offences is related to factors other than punishment no matter how severe it is.

4. PROPERTY OFFENCES

(a) Car theft

In Finland car theft (including both larceny and illegal use) increased at approximately the same rate as the number of motor vehicles. Alarmed by the constant increase, the public made demands for a tougher policy against car thieves. In response to public demand the law was amended in 1964 and harsher punishments for illegal use of another person's motor vehicle were provided. The punishment for actual theft (larceny) remained the same. After the law amendment the maximum punishment for illegal use is 2 years prison (earlier 6 months), or in the case of aggravating circumstances 3 years penitentiary (earlier 2 years).

The Institute of Criminology in Helsinki tried to assess the effect of the increased penalties on car theft criminality.

It was found that the rate of increase of motor vehicle thefts slowed down in the whole country and finally came to a halt in 1966. In Helsinki, the rate of increase dropped immediately after the law amendment so that the number of car thefts in 1964 was only two-thirds of the 1963 figure.

In 1967, the number of motor vehicle thefts increased markedly both in Helsinki and in the whole country. The number of motor vehicles has not increased to such an extent as to explain this increase in criminality. Since 1967, the number of motor vehicle thefts seem to have remained on the level reached in 1967.

The researchers observed a definite change in police practices following the changes in the law (stricter attitude in dealing with offenders especially young or first offenders). They further observed that sentences given by courts of first instance were radically influenced by the new law as soon as it entered force (sentences were more severe).

The authors offer three ways in which the diminishing rate of increase of motor vehicle thefts can be explained:

(1) by *the increased risk of being punished*

(2) by *the change in the police arrest and detention practices* - by arresting and isolating gang leaders the police were able to rather effectively break up the gangs and prevent so-called chain-thefts

(3) and by the abundant *public attention* given to car thefts which made the potential car thief reconsider. By focusing public attention on a certain group of criminal acts the mass media also provided potential offenders with information about the severity of punishment for these acts, but this attention also concerns the other party involved—here it can be assumed that public discussion caused many car-owner to supply their cars with more effective locks and other protective devices.

(b) *Bad cheques*⁸

A study by Beutel (1957) of this offence in Nebraska, where bad cheques over \$35 establish a felony, found that in some counties, the felony provisions of law were rarely invoked, while in other counties, there was a high incidence of criminal sentences for bad-cheque offences. But no correlation between felony sentences and the number of bad cheques written per capita in the various counties was found. "In Nebraska itself there is no evidence that felony provisions deter bad-cheque writing".

Research in Colorado, where the offence is only a misdemeanor, also demonstrated no correlation between the strictness of the penalties actually imposed and the number of bad cheques per capita. Comparison of four counties of Nebraska with four Colorado counties matched for similar social and economic conditions also indicated no significant difference in bad-cheque-writing rates. In Colorado, where penalties were more lenient, there were fewer short-cheque losses.

Beutel concluded that "the severity of the penalties has nothing to do with the number of bad cheques. This ratio seems to be determined by factors wholly outside the law or its methods or its enforcement". Beutel also found that the statistics "... showed almost conclusively that the fact that the charge against a bad cheque writer may be a tort, a misdemeanor or a felony will have no appreciable effect upon the size of the cheque he writes. He is going to get all that he thinks he can for his immediate purpose, and even the professional seems to pay no attention to the state of the penal law".

Lemert's (1958) study of the systematic cheque forger suggests that

receiving an occasional jail sentence is merely part of the life of being a professional thief; it is accepted as one of the "hazards of the business", just as other occupational groups accept certain undesirable characteristics of their work as inevitable hazards. It can thus be assumed that jail sentences do not have a strong "special deterrent effect" at least on the systematic cheque forger.

(c) *Shoplifting*

Cameron's (1966) findings suggest that the amateur shoplifter, or the *Snitch* is more likely to be deterred from further shoplifting by the imposition of punishment, while the professional shoplifter, the *Booster* will be little affected by it. In Cameron's terminology the *Booster* is a professional thief whose principal form of theft is shoplifting. The *Snitch* (or pilferer), in contrast, is generally a respectable citizen (usually a middle-class housewife) who shoplifts in order to obtain goods she could not otherwise afford.

5. WHITE COLLAR CRIME

White collar crime is for the most part rational behaviour of the type likely to be influenced by the deterrent effect of legal sanctions. If the social stigma attached to punishment does have a deterrent effect on criminal behaviour, such an impact should be, other things being equal, stronger with regard to white collar crime. Unfortunately, the high dark figure and the low risk involved in most types of white collar crime is likely to weaken any deterrent effect penal sanctions may have. Few empirical studies addressed themselves to measuring the impact of criminal sanctions on the incidence of different types of white collar crime. An older study dealt with black market violations while a more recent one addressed itself to income tax violations.

(a) *Black market violations*

Clinard (1952) summarized the findings from his study of black market violations during World War II as follows:

(During the first stage of enforcement). . . the public and business had been developing an attitude that the OPA did not mean business, that violations would be followed with minor actions, usually simply a warning letter, and that the penalties described in the regulations were virtually meaningless. New types of violations were rapidly being devised and spreading from business concern to business concern and from consumer to consumer. . .

As the economy was rapidly getting out of hand with this slow hit-and-miss method of price control, the government on April 28, 1942,

froze the prices on nearly all uncontrolled commodities. . . This regulation provided: "Persons violating any provision of this Regulation are subject to the criminal penalties, civil enforcement actions, and suits for treble damages provided by the Emergency Price Control Act of 1942. . ."

. . . The penalty of imprisonment, even for a short period of time, was the punishment most feared by businessmen, according to their own statements; yet it was seldom invoked as a deterrent for others. A survey of wholesale food dealers' opinions, for example, revealed that they considered imprisonment a far more effective penalty than any other government action, including fines. In fact, some 65 percent of them made such a statement. They made remarks such as the following about jail sentences: "Jail is the only way; nobody wants to go to jail". "Everybody gets panicky at the thought of a jail sentence". "A jail sentence is dishonourable; it jeopardizes the reputation". . . These expressions are in marked contrast to the attitudes of the same men toward the imposition of fines and other monetary penalties: "They don't hurt anybody." . . "People are making enough money nowadays to pay a fine easily".

Clinard also reports that in districts where the OPA regulations were enforced, compliance with the rules was much more prevalent than where enforcement was lax.

(b) Income tax violations

With the help of the United States Internal Revenue Service, Schwarz and Orleans (1967) tried to assess the effect of formal sanctions on income tax violations. Nearly 400 taxpayers were divided into four matched groups. Members of the "sanction" group were interviewed and asked questions designed to remind them indirectly of the penalties which they might suffer if they tried to evade taxes. Members of the "conscience" group were interviewed with questions designed to arouse their civic sense and feelings of duty. The third, or "Placebo" group were asked only neutral questions, which avoided both sorts of stimulus. The fourth group were not interviewed at all, in order to test the possibility that even a "placebo" interview produced some effect. The interviews took place in the month before the taxpayers were due to file their returns for 1962. Without disclosing information about individuals, the Internal Revenue Service compared the returns of the four groups for the year before the experiment and the year 1962. The reported gross incomes of both the "sanction" and the "conscience" groups showed an increase, compared with small decreases in the "placebo" and "uninterviewed". By comparing the increases Schwarz and Orleans concluded that appeals to conscience were more effective than threat of sanctions. Walker (1971) however, finds such a conclusion unjustified. He notes that such inference assumes that the appeal and the threat were of equal potency, whereas it is conceivable that unintentionally they had made their "conscience" interview a

more powerful stimulus.

Schwarz (1969) has pointed out that the threat of formal sanctions generates what he calls "resistant side effects". While most people increased their compliance with income tax laws under threat of sanctions, a minority responded with substantially increased claims for deductions, as if they had been provoked to "beat the system".

6. OFFENCES AGAINST THE PERSON

(a) *Homicide*

Crimes against the person are usually considered to be less responsive to the threat of punishment than other crimes since this type of behaviour usually involves a minimum (if any) of rational deliberation. Criminal homicide, attempted murder, assault usually occur as a result of the culmination of intense emotions and it is hard to conceive how the fear of punishment can exercise a major or a decisive role in controlling the incidence of these offences.

Criminal homicide has been, in particular, singled out as a typical form of irrational behaviour on which the most severe punishment (the death penalty) can have no deterrent effect. The results obtained from empirical studies on the effectiveness of capital punishment were generalized not only to other offences against the person but to punishment in general. The results of these empirical studies on capital punishment have been summarized earlier in this paper.

Assault has been examined among other "index crime" offences in an attempt to test the severity and the certainty hypotheses.

A special experiment dealing with attacks on police officers remains to be mentioned.

(b) *Attacks on police officers*

In the city of Los Angeles (which contains one seventh of the population of California) the rate of attacks on police went from 2.5 per 100 policemen in 1952, to 8.4 in 1961, to 15.8 in 1966—an increase of 528 per cent. In 1961 the first special penalties for attacks on the police were enacted by the Legislature, and such penalties were further increased in the session of 1963 and 1965.

Before 1961, a person who committed assault with a deadly weapon could receive a fine up to \$5,000 and/or up to one year in jail, or up to ten years in a state prison. By 1966, all sentences for attacks on peace officers required commitment to the state prison, and persons using a deadly weapon received a mandatory sentence—ranging in extent from five years to life—of commitment to a state prison. The state of California has thus experienced more than five years of increased penalties for attacks on law

enforcement officers. During this same period, 1961 to 1966, the rate of attacks on Los Angeles policemen went from 8.4 to 15.8 per 100 officers per year, an increase of 90 percent.

After five years of increasing penalties, a Los Angeles policeman was almost twice as likely to be attacked as he was before increases.

Four officers were killed in the four years preceding the increase in penalties. Four officers were killed in the four years after the increase.

7. SEXUAL OFFENCES

(a) *Sexual offences*

Professor Andenaes (1952) reports that following an upward shift in the penalties for sexual offences in Norway in 1927 a striking *increase* in the number of reported sex offences occurred. He states that "comparing the five-year period before the change with the five-year period after the change, the average rose. . .68%".

Professor Andenaes attributes this increase to the fact that

... the discussion and agitation that went with the revision (in the penal code) and the stricter view that the new provisions gave expression to, doubtless caused many sex offences that would not have been reported to be reported now and perhaps the police now investigated such cases more energetically as well.

(b) *Rape*

A study of the incidence of rape in Philadelphia was undertaken to analyze the effectiveness of a new law which has increased sanctions. Statistical data from the period before and after the enactment of the new law indicated no decrease in the commission of this type of offence by adults or juveniles, and no diminution of violence accompanying the offences committed. The study concluded that since intensified police control would hardly affect the incidence of rape, which is typically committed on private premises, social prevention appeared as the only means of combating the crime (Schwarz, 1968).

8. DEVIANT BEHAVIOUR

Bowers (1968) found a strong negative relationship between the climate of disapproval of a given action at a college and the incidence of that action. The study indicates that the climate of disapproval has a deterrent effect on behaviour in two distinct ways: through "the effect of the individual's own sense of disapproval, and the effect of the *normative* feelings of others in his social context".

In another study Salem and Bowers (1970) tried to assess the deterrent effect of formal sanctions on certain types of misconduct by college students (drinking, library and cheating offences).

Little evidence was found of a direct deterrent effect of severe formal sanctions. More substantial was their role in anchoring and buttressing the normative climate. For most of the offences studied, the level of formal sanctions appears to influence students' attitudes and thus to affect the normative climate that develops at a college. This "conversion effect" is not, however, uniform in pattern or extent. For drinking-related offences it is strong and clear; for cheating offences it is altogether absent.

Tittle and Rowe (1973) compared the effect of a sanction threat and a moral appeal on classroom cheating. The experiment demonstrated that moral appeal had no effect, but a clear and substantial impact was observed for the sanction threat. The sanction threat was found to be most effective in deterring cheating among females and least effective among those who had the greatest incentive to cheat.

E. General conclusions of research done on specific offences

As with research measuring the impact of legal sanctions on crime rates, studies of specific offences do not offer an ultimate proof for or against the deterrence hypothesis. However, the results of the different studies allow some general conclusions:

(1) The rates of the various offences seem to be determined and influenced by factors wholly outside the law or its methods. Many examples can be given to support this argument: the incidence of bad cheques does not seem to be the least influenced by its being considered a felony or a misdemeanor, the incidence of drunken driving and car theft seems to follow closely the increase in the number of motor vehicles, neither the incidence of rape nor the violence accompanying the offence seem to be affected by increased sanctions, etc., etc.

(2) Increasing the penalties provided by the law for a certain offence, the publicity and the stricter law enforcement which usually accompany such an increase may in certain cases, lead to a drop in the incidence of that offence. Such a decline, however, is usually temporary. The shock leading to the decrease is likely to wear off after a short period of time and the rate of the offence is likely to return to its initial level before the change in sanctions.

(3) On the other hand, if the incidence of the offence has started to increase before the change in penalties, it is likely that this increase will continue after the new harsher penalties have been introduced since the same factors that may have been at work increasing the initial rate may still have been at work increasing the subsequent rate: (ex. marijuana offences and attacks on police officers in California).

(4) Harsher penalties may even lead to an increase in the rate of the offence in question. This increase is likely to be more apparent than real. It usually results from more reporting, stricter law enforcement and increased police attention given to that offence.

(5) Stricter law enforcement seems to have a deterrent effect on certain offences. The offences more likely to decrease as a result of stricter law enforcement are those which are constituted by types of rational behaviour: parking violations, income tax violations, black market violations, etc.

(6) Legal sanctions do not seem to have a strong individual deterrent effect on certain types of offenders such as the professional thief, the "booster", the systematic cheque forger, the drug addict and skid row alcoholic. The latter group "problem drinkers" seem to be more deterred by fines than by jail sentences.

(7) On the other hand, business men and white collar workers seem to fear jail sentences much more than they fear fines or other monetary penalties (see Clinard, 1952).

(8) The increase in penalties for certain offences is likely to result in a more permissive attitude towards marginal cases and towards first offenders.

(9) The threat of formal sanctions may generate "resistant side effects" in a small group of people. This group is likely to respond with more violations of the law in defiance of the new sanctions and in an effort to "beat the system".

(10) The final conclusion is that the impact of legal sanctions on criminal offences is not uniform. It varies according to a number of factors which include the nature of the offence and the type of offender.

F. Limitations of deterrence research done on specific offences

Most of the criticism made of the studies of legal sanctions and crime rates can also be addressed to the studies focusing on specific offences. The latter studies usually suffer from the same limitations and the same shortcomings. The following points can be added:

(1) Crime rates may rise for various reasons and such rise may lead to more severe sanctions. If the tide continues in spite of the increased penalties it may be erroneously concluded that increasing the severity of punishment is ineffective.⁹ If crime rates go down following the introduction of harsher penalties it would also be incautious to causally link the two phenomena. It can simply be that factors which contributed to the increase in the rates were only temporary and would have ceased to work anyway even if no change in criminal sanctions had taken place.¹⁰

Zimring and Hawkins (1973) explain this situation in the following manner:

We should always bear in mind that rates of crime may fluctuate independently of any change in crime prevention policy; that the conditions leading to changes in penalties or enforcement techniques may themselves independently influence the crime rate; and that the special social conditions leading to a change in penalty levels may produce other social responses which influence the crime rate.

(2) Zimring and Hawkins (1973) also point out that pressures leading to the penalty changes may lead to a greater effort on the part of the police to discover such crimes and the rates may thus go up. Intensified enforcement efforts may result in a greater ratio of arrests to offences. The greater number of arrests may create the illusion of a crime wave when, in fact, the crime rate may have diminished.

G. Deterrence by Law Enforcement

If certainty of arrest and punishment has a strong impact on the efficacy of deterrence, then such efficacy would vary widely according to variations in law enforcement. Proponents of deterrence usually refer to waves of crime taking place in situations of police immobilization while others quote experiments of stricter law enforcement as a proof of improved deterrence.

1. POLICE IMMOBILIZATION

Ball (1955) states, "There is ample evidence to support the position that a complete breakdown in law enforcement is quickly followed by widespread crime and social chaos".

Andenaes (1965) points out that lawlessness may flourish when the probability of detection, apprehension and conviction is low. He refers to the Danish experience with police immobilization during the second world war. The entire police force was arrested in September 1944 by the German occupation forces. During the remainder of the occupation period all policing was performed by an improvised unarmed watch corps, which could not do much except when the criminal was caught red-handed. As a result of police immobilization the general crime rate rose immediately, but there was a great discrepancy between the various types of crime. In 1939 only ten cases of robbery were reported in Copenhagen, but by 1943 about ten robberies were committed each month, as a result of war-time conditions. But after the German occupation action against the police, the figure rose to over a hundred per month and continued to rise. Larcenies reported to the insurance companies quickly increased ten-fold or more. The fact that penalties were greatly increased for criminals who were caught and brought before the courts did not offset the fact that most crimes were going undetected. Crimes like embezzlement and fraud, where the perpetrator is usually known if the crime itself is discovered, do not seem to have increased notably.

2. POLICE STRIKES

During 1919 the Liverpool police went on strike starting at midnight

on July 31st. Nearly half of the *Liverpool* policemen were out of service. An official report describes the situation which developed as follows:

In this district the strike was accompanied by threats, violence and intimidation on the part of lawless persons. Many assaults on the constables who remained on duty were committed. Owing to the sudden nature of the strike the authorities were afforded no opportunity to make adequate provision to cope with the situation. Looting of shops commenced about 10 p.m. on August 1st, and continued for some days. In all about 400 shops were looted. Military were requisitioned, special constables sworn in, and police brought from other centres.¹¹

In contrast, the *London* police strike of August 1918, which lasted only twenty-four hours was not accompanied by any outbreak of lawlessness (see Mannheim, 1940).

A police strike in *Boston* in 1919 was also accompanied by looting and violence.

On October 7th, 1969 the police of *Montreal* went on strike. Nearly 1,600 policemen and 600 officers out of a total of 3,833 were involved. The issue was wages as the *Montreal* police sought wage parity with police in *Toronto*. The work stoppage lasted for 16 hours. There were nine hold-ups in banks and 17 robberies in commercial establishments. Many stores on St. Catherine St. in the commercial sector of the city were looted. It was reported that property crime was four times higher in that district than usual. In some other districts there was an increase varying from 20% to 300%. On the other hand there was a decline in property offences in some districts as store and house owners increased their surveillance and as some stores closed their doors earlier than usual.

Another police strike took place in *Sydney*, Nova Scotia, on Thursday, August 19, 1971. Several acts of vandalism were reported, 22 persons were injured. Heavy rains on Friday cooled off the wave of vandalism.

In July 1974 *Baltimore* was hit by a police walkout. It was the first official strike by police in a major U.S. city since 1919 in *Boston*. Estimates of the number of policemen who joined the walkout varied from 600 to 1,300. *Baltimore* has 2,300 patrolmen. The police walkout brought on sporadic looting and arson (*Time Magazine*, July 22, 1974).

3. POLICE "CRACKDOWNS"

Empirical studies of the relation between law enforcement capability and crime rates are scarce and fragmentary. However available information suggests that changes in the allocation of police enforcement resources can substantially increase the probability that street criminals will be apprehended, and by doing so, significantly reduce the number of

street crimes experienced in a particular area (Zimring and Hawkins, 1973, p. 348).

During the first year of World War II the number of bicycle thefts in Copenhagen increased substantially. By April 1942 the number of cases was three times the average annual number in the years before the war. The police decided to strike on several fronts so as to reduce criminality in this field. The police division which dealt with bicycle thefts was expanded. The courts were asked to be strict with bicycle thieves. At the same time, the press was mobilized to assist by requesting citizens to secure their bicycles properly and to notify the police about anything which might be connected with bicycle stealing. The newspapers then published daily notices about bicycle thefts, emphasizing at the same time the severity of the sentences. As a result of all this the number of complaints during the subsequent months was less than half the number in April, and the decline proved lasting.

Andenaes (1965) notes that it is difficult to say which conditions were decisive in achieving the result. It may have come about because of the increase of the police force, because of the intensification of the penalties, or because of the change of attitude and the growing awareness of the public, or because of some combination of these.

During the last four months of 1954 the New York police made an attempt to show the effectiveness of strict law enforcement and the utility of increasing police forces:

In a precinct containing about 165,000 people, the police quadrupled the size of the foot and motor patrol, added a special squad of sixteen patrolmen for the evening and early morning hours, almost doubled the detective squad and set up a special unit of the Juvenile Aid Bureau; this saturation of the area by the police had some interesting effects on the frequency of crimes of various kinds during the experimental period when compared with what had occurred during the corresponding months of the previous year. Assaults, robberies, burglaries, auto thefts and grand larcenies known to the police declined, while certain other offences rose (carrying of offensive weapons, drugs, disturbing the peace). Eight persons were murdered in the precinct during the saturation period compared with six only during the same period the year before.

In response to an escalating crime rate the Long Beach, California police department dispatched two plain-clothes patrolmen on bicycles into two high crime areas. In one year, the two policemen made arrests in eight strong-arm robberies, five armed robberies, eight burglaries.

Street crimes were reported to have been reduced markedly, supporting the general assumption that increasing the apprehension probability tends to deter crime, or at least to displace it.
(President's Crime Commission, 1967—The Police)

In New York City in 1966, the rate of taxicab robberies increased sharply. As a result of the sharp increase, the police department authorized off-duty police officers to take after-hour jobs driving taxicabs, and just subsequent to the introduction of this new preventive measure the taxicab robbery rate fell sharply, although it remained higher than it had been prior to the sharp increase in 1966 (see Zimring and Hawkins, 1973, pp. 273-274).

Zimring and Hawkins (1973) caution against the assumption that the introduction of countermeasures motivated by a sharp upward shift in a general crime rate is necessarily responsible for a subsequent decrease in the crime rate that does not move below normally experienced historical levels of crime.

The same authors also warn against the conclusion that reduction in street crime rates following increased police enforcement is necessarily due to a direct cause-and-effect relation between the probability of apprehension and the amount of street crime.

In the first place, when the number of police patrolling an individual area is greatly increased, this leads not only to an increased objective probability of apprehension, but also to recognition on the part of potential offenders of increased police presence in the area. Independent of the actual increase in the chances of apprehension, the increased police presence may persuade potential criminals either to forego criminal intentions, or to transfer their attention to areas less saturated with law enforcement personnel. Thus, increases in the degree of police patrol may influence the rate of street crime by altering potential offenders' perceptions of enforcement chances, independent of an objective shift in probability of apprehension.

There is also some indication of displaced crime activities following increased police enforcement. Press (1971)¹² analyzed the results of a more recent experiment in intensified enforcement in New York. Prior to the study period, the Police Department had increased the manpower assigned to a single precinct (the 20th precinct in Manhattan) by approximately 40%. Crime rates were analyzed not only for the 20th precinct where the experiment was conducted but also in adjacent precincts. There was a significant decrease in the amount of street crime in the 20th precinct. However, a "strong suggestion" of displacement was found in one neighbouring precinct (Central Park) where major crime types increased during the experiment, but generally by an amount less than the decrease observed in the 20th precinct.

4. IMPROVING THE TECHNICAL CAPABILITIES OF THE POLICE

A study of response time and arrest rates in Los Angeles indicates

that increasing the technical capability of the police may result in more effective control.¹³

A one-month study in Los Angeles in 1966 of 4,704 incidents (of which 1,905 were "reported crimes") demonstrated a close relation between speed of police response and effective enforcement. When response time (by the police) was one minute, 62% of reported crimes ended in arrest. When all cases with response time up to 14 minutes were grouped together, only 44% led to arrest. This led to the conclusion that reducing the total response time in the apprehension process can lead to a marked increase in arrest rates.

H. *Physical deterrents to crime*

Techniques of deterrence are of two kinds:

(1) *Punitive deterrents*: the most commonly used technique is that of punishment, the threat of which presumably forestalls criminal acts. These punitive deterrents can be extended to include efforts by authorities to make the threat of punishment more evident or more credible.

(2) *Physical deterrents*: techniques aimed at hardening criminal targets, placing obstacles in the way of the potential offender that make it difficult or impossible for him to commit the offence. They can also be extended to include measures taken by the authorities or by the potential victims to make the commission of crime less profitable and more risky while increasing the criminal's awareness of these risks.

The use of physical deterrents is sometimes called *mechanical prevention or technical prevention* to distinguish it from general or special prevention based on the threat of punishment.

Kinberg (1935) relates a story told to him by Ferri to illustrate the importance of *technical prevention* as a means of dissuading potential offenders:

In the well-known peristyle round the Piazza San Pietro, Rome, a great many robberies with violence used at one time to occur. Thanks to the forest of pillars forming the peristyle the robbers almost invariably escaped. The police supervision was increased without results. A practical criminologist then got the idea of providing the peristyle and adjoining square with powerful electric lights: whereupon the neighbourhood ceased to be a favourite hunting ground for robbers.

Modern physical deterrents include mechanical and electronic devices in the form of more and better locks, alarms, electronic visual and auditory sensors.

There is no doubt that in many of the cases where punishment fails or is likely to fail as a deterrent, physical deterrents can be an effective means

of dissuasion. This contention is supported by the fact that the vast majority of property offences are committed because security measures are lax or nonexistent. The findings of the President's Commission on crime for the District of Columbia illustrates the situation: It was found that in the case of commercial burglaries the following means of entering existed:

- 7% unlocked doors
- 22% unlocked windows
- 35% broken windows
- 30% locks forced

Of the establishments surveyed, only thirty-three percent had burglary-proof locks installed.

In the case of residential burglaries, the following means of entry were used:

- 9% unlocked doors
- 10% unlocked windows
- 11% broken windows
- 52% locks forced

A survey revealed that 42% of car thefts involved unlocked ignitions. The National Auto Theft Bureau in the U.S. reports that 80% of those cars stolen were unlocked (see Jeffery, 1972). Berkeley reported that 49% of the autos stolen in 1965 had a key in the ignition or the ignition open. The FBI observes that, nationwide, 42% of the autos stolen had the key in the ignition or the ignition unlocked. Even of those taken when the keys were out, at least 20% are stolen by merely shorting the ignition circuit with tools as simple as jumper wires, paper clips, tinfoil and coins (see Leonard, V. A., 1972).

These findings suggest that the easy opportunity to take a car may contribute significantly to auto-theft and that thefts by the relatively casual or marginal offender would be reduced by making theft more difficult than merely starting the car.

Changes in the ignition system, in lock design and other automobile components are important physical deterrents likely to prevent a large number of car thefts.

Efficient control and detection system are effective deterrents against embezzlement and employee theft. Banks, trust companies and other commercial establishments do not rely solely upon the threat of punishment to protect them against embezzlers. They try to develop systems which make embezzlement difficult to carry out and more certainly detected.

Bank hold-ups and taxicab hold-ups have been pointed out as areas

where dissuasion by means of physical or mechanical deterrents can be achieved.

Many authors feel that the threat of punishment is no effective deterrent for potential hold-up men

... the attractiveness of the prize and the ease of taking the money from the victim or custodian by the use of the threat or force, appears to make the crime so inviting that large numbers of offenders fail to be deterred by presumed deterrents.
(Sagaly & Little, 1971)

In a study involving convicted robbers, Camp (1967) found that the only significant deterrent to bank robbers examined appeared to be the closeness of a police station to the bank. Neither police patrols nor the capability of a police response was found to be considered a deterrent by those engaged in bank robberies. The large amount of cash available, the ease of access and of getting away from the crime scene seemed to outweigh other considerations.

Many police departments have found some sort of signal system atop the taxicab was a valuable aid in alerting passersby and police and serving as a deterrent.

Other examples involve developments to reduce or eliminate the opportunity factor in robberies, such as the exact change and scrip system to minimize the monetary gain for a would-be robber; the use of inexpensive vaults in commercial establishments, delivery trucks, and other vulnerable targets of the robber (Sagaly & Little, 1971).

The AC Transit Company in the San Francisco Bay Area, in order to prevent bus robberies, has pioneered an exact change fare system, in which the driver carries no cash. This has reduced the incidence of bus robberies to zero.¹⁴

Recently it was reported in the news that taxis in Budapest, Hungary are being bugged to protect their drivers. Concealed microphones will transmit conversation to a control centre and a series of spotting stations which will track the taxi's movements in case of trouble (Reuter, January 7th, 1974).

Electronic visual sensors seem to have a deterrent effect on potential shop-lifters and bank hold-up men.

Some hotels in the U.S. are using an electronic security system aimed at making thefts from hotel rooms more difficult. The system replaces the room key by a plastic card to be inserted in a slot in the room door. Should anyone insert a card-key that does not fit the room or tamper with the door in any way, a tamper signal flashes in the control centre.

A recent study in New York (Newman, 1973) examined the possibility of developing a model for residential environments using physical design which have crime-inhibiting qualities. The study shows how residential complexes can be designed to deter robbery, vandalism and other

building crime. Newman, basing his study on the concept of "defensible space" makes concrete suggestions as to how the grouping of dwelling units, the definition of grounds, the provision of natural surveillance opportunities, the design of public interior areas and the positioning of routes can significantly discourage criminal action.

Another study in New York City (Decker, 1972) makes it quite clear that physical deterrents are far more effective than punitive deterrents in preventing certain types of offences. The study compared the effect of a slug-rejector device, coin-view window and warning labels on slug usage in parking meters. Using various methods of analysis, it was shown that the federal warning labels had no noticeable effect, while the state and city warning labels had a noticeable, although short-lived, effect. (Can the higher probability of apprehension by state and city agents compared to the probability of apprehension by federal agents account for the difference?) It appeared that warning potential offenders that slug use is a violation of the law and punishable by substantial sanctions had little deterrent value. It was obvious that the parking meters with the coin-view window and slug rejector device were more effective in reducing illicit slug use than use of warning labels. The minimal deterrent value of the labels can probably be attributed to the slim chance a slug user will be apprehended, much less convicted and subjected to the maximum penalty. This might indicate, the author notes, that potential slug users are not greatly deterred by the coin-view window either, since the object of the window is also to instill fear of apprehension. Hence, it seems that a mechanical device, such as a slug-rejector, which makes law violation difficult, is superior to a scheme or device which is dependent upon the potential violator's fear of apprehension.

IV. THE PERCEPTUAL APPROACH TO THE STUDY OF DETERRENCE

A. Deterrence and public knowledge of sanctions

The basic postulate underlying the concept of general deterrence is that people will refrain from committing crimes out of fear of criminal sanctions. This fear cannot be instilled in the public's mind unless the threats of punishment and their concrete exemplifications are communicated to that public. It follows that public knowledge and public awareness of sanctions are essential both for the threat element (general deterrence) as well as for the educative habituating element (moralizing effect of criminal sanctions). Although the nature and extent of public knowledge and public awareness of legal sanctions are important parameters for the effectiveness of deterrence, this dimension has been largely ignored in research done on the subject. Most studies on deterrence seem to assume

that people have an adequate knowledge of the criminal law, of penal sanctions and of the variations in the severity and certainty of penalties. The few available studies do not seem to justify or to support such an assumption.

It seems obvious that if a deterrent is to be effective then those to whom this deterrent is intended (potential criminals, marginal groups) must know which penalties go with which crime. Such a knowledge is, no doubt, essential in the process of weighing consequences. This has been stressed by some authors. Ball (1955) points out that

... a deterrent effect of a law obviously depends upon the individual's knowledge of the law and the punishment prescribed. A law can have no deterrent influence upon a potential criminal if he is unaware of its existence. The same is the case with respect to particular penalties.

In 1962 Wilkins wrote that

For any such effects to be realized at all... the prospective offender must have a reasonably clear idea of the sentence he is likely to incur, should the contemplated crime be detected.¹⁵

In view of this it is really hard to understand the penury of studies dealing with this question. The lack of information has been deplored recently by Hawkins (1969):

There can be no doubt that we need to obtain information about public knowledge of punishment policy and practice before we can speak with any confidence about the effectiveness of general deterrence in the regulation of conduct.

There can be a substantial difference between legal possibilities of penalties (e.g. penalties as they exist on the books), penalties actually imposed (e.g. sentences handed by the courts) and public perception of these penalties. Thus penalties actually inflicted for certain offences can be much more lenient than those which are legally possible for these offences while public perceptions of those penalties can correspond either to the former, or to the latter or to neither. There can be wide variations in public knowledge of sanctions along differences in age, sex, education, social class, occupation, etc. etc.

Furthermore, there can be a considerable gap between the objective risks of incurring certain penalties and the subjective risks of these sanctions as they are conceived by the public. There can as well be large differences in the risk perception among different members or among different groups within the same society.

The California Study (1968)

Empirical studies on all these aspects are rather scarce. The most quoted study of public knowledge of criminal sanctions is, no doubt, the one undertaken in California in the late sixties at the request of the Assembly Committee on Criminal Procedure. The Committee commissioned a survey to discover how knowledgeable Californians were about penalties for crimes and what relationship may exist between knowledge of penalties and criminal behaviour.

The representative sample surveyed included 3,348 male registered California voters selected from six California counties; the total number of questionnaires returned was 1,567. The sample of the general public used in the research totaled 1,024 completed questionnaires while the rest of the sample belonged to the following groups:

College men	54
Low-delinquent high school boys	96
High-delinquent high school boys	113
Youth authority	165
Adult corrections	115
Total	543 + 1,024 = <u>1,567</u>

Results showed that Californians were extremely ignorant of penalties for crime: of 11 possible items the mean score was only 2.6 correct answers. Most people underestimated the severity of current penalties.

The study hypothesized that "if the deterrent theory is valid, persons with the most knowledge of the penalty would engage in the least amount of the crime, as the knowledge of the penalty would prevent the criminal act. It follows, therefore, that knowledge about a penalty would decrease that crime". This hypothesis was not confirmed. While the general population had the least amount of knowledge of penalties, prison inmates had the greatest, but this knowledge did not deter at least half from criminal action. Even with the knowledge of penalties, the more criminal the behaviour, the less likely were subjects to be deterred. Penalties appeared to be important to the criminal group not as a deterrent, but as a bargaining tool after arrest.

Public ignorance of penalties for crimes can either enhance or weaken the efficacy of general deterrence depending upon the tendency of the public to overestimate or to underestimate those penalties. When the tendency is to overestimate the severity of the penalties, the efficacy of those penalties as deterrents may increase. As Tittle and Logan (1973) put it:

It is entirely possible that ignorance of sanction characteristics constitutes the major deterrent mechanism (if such mechanism is operative).

at least with respect to legal norms. After all, the probability of sanction is in reality very slight and the severity of punishment frequently turns out to be relatively light. Yet the general anxiety that stems from uncertainty may influence the behaviour of some in a very powerful way.

Public beliefs about sanctions may thus be more important than what the sanctions really are. This would mean that the former variable (public beliefs) can be manipulated in cases or in situations where it is difficult or impossible to change the latter (actual sanctions). Wilkins (1967) seems to be of this opinion:

It may be possible to change behaviour in desired directions, not only by changing situations, but by changing *beliefs* about situations.

Some authors have claimed that a sanction of an unknown severity or certainty may be a better deterrent than a specifically defined punishment.

Thus, according to Morris (1951) "frequently it is the unpredictable quality of punishment that conditions its deterrent force". While Wilkins (1962) notes that "It might perhaps be argued that a measure of uncertainty is necessary to maximize the effect of deterrence to crime. In terms of the theory of strategy, this means that an element of randomness may be necessary to achieve the maximum social control of deterrence."

Other studies

A study by Rose and Prell (1955) showed that there is a significant discrepancy among three things:

- (1) the punishment specified in law for given crimes;
- (2) the punishments actually meted out for these crimes; and
- (3) the popular judgement as to what punishments should be assigned to these crimes.

In other words it was found that there is a significant discrepancy among the law, the application of the law, and popular judgement as to how the law should be applied in assigning punishment and this for 13 selected minor felonies.

A study of shoplifters conducted by the Institute of Criminology in Helsinki, Finland (1970) showed that 62% of the questioned shoplifters did not have the faintest idea of what kind of punishment to expect for their offence.

In a survey in the country-side in the Netherlands, Buikhuisen (1971) found that 43% of a sample of adults did not know using marijuana was illegal. Even in a sample of drug users 21% thought it to be legal to smoke marijuana or hashish.

In view of the limited number of studies on public knowledge of sanctions and in view of the fact that further research is urgently needed in this field it is impossible at the moment to draw any final conclusions. The studies have succeeded however in bringing to light certain points:

- (1) The public, in general, seems to be highly ignorant of criminal sanctions;
- (2) Public ignorance combined with an overestimation of the severity of penalties *may* enhance the effectiveness of general deterrence;
- (3) An increase in punishment cannot be effective unless the knowledge of the increase is adequately communicated to potential perpetrators;
- (4) The hypothesis that "the persons with the most knowledge of the penalty are those less likely to engage in the prohibitive behaviour" does not appear to be founded.
- (5) There seems to be a discrepancy among the law, the application of the law, and popular judgement as to how the law should be applied in assigning punishment.

B. *Objective and perceived risks*

Formal sanctions are extremely remote to most people. There is evidence that most people, notably those who have had little contact with the law, are neither aware of the prescribed legal sanctions for various criminal offences nor of the chances of being caught and the probabilities of conviction.

In spite of this, most empirical studies of deterrence have concentrated on objective legal sanctions thus neglecting the question of how these sanctions are conceptualized by the population, or how actual and potential offenders perceive the risks of arrest and punishment. There are reasons to believe that the efficacy of deterrence is related to the perceptual rather than the objective reality of the threats. Thus it would seem that only where public awareness of penalties is reasonably high, and where objective risks of apprehension and conviction are correctly perceived, can studies based on actual sanctions allow an accurate measure of the effectiveness of deterrence.

Henshel and Carey (1972) criticize deterrence studies in the following words:

... They ignore the central theoretical conception that deterrence is in the mind of the beholder. Deterrence when and if it exists, is a state of mind. If the mind in question holds no cognition relative to the punitive sanction (e.g. it had not heard of, believed in, or felt applicable), then the *objective existence* of sanctions with specified levels of severity, certainty, swiftness is of no consequences. ... deterrence cannot exist for this person, but not because deterrence does not exist. By concentrating

on the objective properties of the legal sanction, studies have presumed that these objective properties are actually correctly conceptualized by the people, or at least by a sufficient number of them. . . .

There can be no doubt that people vary in their appreciation of the risks of apprehension and in their calculation of the probabilities of incurring a certain punishment. Different people also have differing perceptions of the personal costs to them that would be entailed by different sanctions.

Some people may be deterred by an overestimation of risks and costs while others may fail to be deterred by the same sanction because they underestimate the risks and the costs involved.

Still, for some people the low risk of a high penalty may, for some reason, be more worthy of avoiding than a higher risk of a lower penalty. Thus, in estimating the deterrent effect of legal sanctions, a distinction should be made between objective and subjective calculations of the risks and costs involved, for it is the latter rather than the former, which are likely to influence the behaviour.

Subjective perception of certainty and severity of punishment may be quite different from the actual certainty and severity of punishment. The relation of the subjective to the objective risk will vary according to age, sex, education, social class, individual temperament, past experience, perceived legitimacy of the criminal act, motivation to engage in the prohibited behaviour, etc., etc.

Besides these individual factors risk perceptions may be influenced by variables related to law enforcement and to the publicity given to legal threats.

Andenaes believes that

If it were possible to convince people that crime does not pay, this assumption might act as a deterrent even if the risks, viewed objectively, remained unchanged.

Zimring and Hawkins (1973) write that

... it seems unlikely that, in an area where the crime rate is low and examples of undetected crime are not widely known, the façade of enforcement may be able to establish permanent impressions of threat credibility in excess of actual clearance rates.

The same authors cite five stimuli that may condition the perceived credibility of legal threats:

- (1) Publicity about crime detection rates;
- (2) Publicity about the apprehension or conviction of criminals (e.g. round up of drug sellers underway or bank cashier jailed for embezzlement);

- (3) Publicity about new enforcement methods (e.g. computers enlisted in war against false alarms);
- (4) Direct or word-of-mouth experience of enforcement presence (e.g. more policemen on the street);
- (5) Direct or word-of-mouth experience of actual enforcement (e.g. being checked or arrested by police).

1. *Relationship between perceived certainty, severity of penalties and criminal behaviour*

If the deterrence theory is correct one would expect that:

(1) The more punishment is perceived as a certain and inevitable consequence of the criminal act the less would be the likelihood that the person will engage in this criminal behaviour. It follows that the frequency of a specific criminal offence would be lowest for those who perceive the greatest likelihood that those committing that offence will be caught by the police and punished for it.

(2) The more punishment is perceived as being severe and costly for a certain criminal act the less would be the likelihood that the person will engage in this criminal behaviour. It follows that the frequency of a specific criminal offence would be lowest for those who perceive the most severe penalties for that offence.

Some studies have tried to check the validity of the above-mentioned hypotheses:

Claster (1967) asked a sample of delinquent boys and a sample of non-delinquent boys to estimate: (a) the general chances of being apprehended and punished, and (b) their personal chances of being apprehended and punished, in relation to a variety of offences.

Claster set out, among other things, to test the hypothesis that "delinquents perceive their chances of apprehension and conviction... to be less than non-delinquents perceive their chances".

The two samples gave similar answers about the general chances of being apprehended and convicted, and about their personal chances of being convicted of offences if apprehended. But the delinquent boys perceived their personal chances of arrest if they committed crimes to be significantly lower than the personal chances estimated by non-delinquents.

Claster concludes that a "mechanism of perceptual distortion leads delinquents to perceive themselves invulnerable to arrest." But since there was no corresponding significant difference in perceived immunity from conviction Claster suggests that "if a magical belief in immunity from arrest serves to neutralize fear of punishment, a simultaneous belief in immunity from conviction is unnecessary."

While the delinquent sample of Claster's study consisted of boys who had been admitted to a training school, Jensen (1969) tried to improve his sample by using self-reported delinquents as well. But while Claster exam-

ined the deterrence hypothesis for specific offences, Jensen used a crude and general measure of deterrence. Jensen's measure of "probability belief" consisted of the expressed agreement with a statement concerning high probability of apprehension/punishment for delinquent offences generally.

Jensen's data revealed a negative relationship between perceived certainty and delinquency: as perceptions of certainty of punishment decrease, both self-reported and officially recorded delinquency increase.

Waldo and Chiricos (1972) surveyed a random sample of undergraduates at the Florida State University. The survey consisted of 321 interviews representing 82.3% of an original sample of 390 students. The study examined possible relationship between perceptions and knowledge of sanction characteristics and two types of criminal behaviour: marijuana use and theft. Besides examining the relationship between perceptions of certainty and severity of penalties and self-reported delinquency, the authors tried to find out whether deterrence relationships (if they exist) are any stronger for crimes that are *mala prohibita* (e.g. marijuana use) than they are for crimes that are *mala per se* (e.g. larceny).

Waldo and Chiricos found that perceived certainty of apprehension and penalty were strongly related in an inverse direction with both forms of self-reported illegal behaviour, although they were more strongly related to marijuana use than theft. They were unable to find support for deterrence ideas concerning perceived severity of sanctions. They comment that this latter finding "... runs counter to deterrence theory, but is in accord with several earlier studies of deterrence. . . while these and the earlier findings cannot be held conclusive, they strongly question the assertion that crime may be deterred by increasing penalties".

Teevan (1973) conducted a similar study in a Canadian university. However instead of personal certainty, respondents were asked for their perceptions of the certainty and severity of punishment for friends and for all Canadians concerning marijuana use and shoplifting. Teevan found a negative relationship between perception of certainty of being caught and self-reported deviance. The relationship is weak for marijuana and not significant for shoplifting. He found no support for the hypothesis that perception of severity of punishment is negatively related to deviance. Testing other hypotheses, Teevan found that perception of severity of punishment is not a deterrent unless the individual perceives a certainty high enough to make punishment seem likely. He further found that the experience of a friend's being caught is not associated with lessened amounts of deviant behaviour.

2. How do delinquents and non-delinquents perceive and respond to deterrents?

In 1963, the Home Office asked the Government Social Survey to in-

terview a sample of youths whose ages ranged from 15 to 22.¹⁶ The sample obtained was 808. Sixteen percent had been in court, accused of an offence of some kind, serious or trivial; three out of four had met someone to whom this had happened. Whether or not they had been brought to court for it, 17% admitted at least one theft, 20% admitted having taken part at least once in vandalism or gang fighting, and 84% admitted traffic offence.

The sample was questioned about a wide range of offences. When asked whether it was the feeling that breaking the law was wrong, or the chances of being found out by the police, which "put them off" it, half chose the former, a third the latter. Asked how they rated their chances of detection in relation to a number of offences, the majority thought that their chances of 'getting away with' housebreaking and stealing from shops were less than fifty-fifty; but they were more optimistic about such offences as taking and driving away cars, stealing from coats or breaking into locked shops. When asked to say which of eight possible consequences of being found out by the police would worry them most, next and so on, they tended to rank their family's opinion highest, and the prospect of losing their jobs next. Third was the shame of appearing in court, the actual punishment was fourth. The great majority expected either a fine or probation for any of the offences. Probation was usually regarded as a slightly more severe penalty than a fine.

While most of the sample overestimated their chances of being caught, there was some evidence that the more experience a youth had of committing offences the more optimistic he tended to be about the chances of getting away with them.

A study¹⁷ carried out by the Bureau of Social Research, Inc. in Washington, D.C. was designed to investigate the deterrent value of crime prevention measures as perceived by criminal offenders.

The study was based on interviews with a sample of 124 inmates drawn from the population of the Lorton reformatory for men. Nearly all of the inmates in the sample were serving time for some kind of property offence. Besides the inmates a number of chronically unemployed men served as a control group.

Asked whether they ever thought about committing some offence and then decide not to go ahead with it, 95 of the 124 respondents answered affirmatively. Asked about the reason only 3 mentioned the police specifically; 52 others gave answers which implied anxiety about the police (fear of apprehension, of imprisonment, of death); the remaining 40 (42%) did not mention the police either directly or by implication.

The hypothesis that offenders who perceive a large police force (who make exaggeratedly high estimates) will exhibit more anxiety than those who believe the force to be relatively small was not borne out by the data.

Since the amenability to police deterrence was not particularly pronounced among the prisoners in the sample, the authors concluded that

"except under certain highly specific conditions, deterrence does not work for these kinds of offenders in the ways in which law enforcement theory would have us believe". They also concluded that few inmates regard imprisonment as a deterrent (in career terms) and, more or less independently of this fact, few believe that other inmates are deterred by it.

Although the authors seem to be aware of the limitations of their study and the tentative nature of their findings, Zimring and Hawkins (1973) are highly critical of the interpretations.

3. Does previous censure increase sensitivity to punishment?

Salomon Rettig tried to answer this question. Together with Pasamanick (1964) he administered a questionnaire to students who had one year previously participated in an experiment where they were required to perform an essentially impossible task for pay. Any reported success represented unethical conduct. The authors found that previously identified cheaters were far less sensitive to punishment as a determinant of behaviours by the hypothetical individuals mentioned in the questionnaire. Based on the assumption that the subjects were reflecting their own sensitivities in judging the behaviour of the hypothetical persons, Rettig and Pasamanick concluded that "the reinforcement value of a censure is the most significant determinant which predicts unethical behaviour".

In another study Rettig (1964) explored whether experience with severe public censure, such as imprisonment, and the fear associated with such experience would in any way alter the attention paid to the censure in the future. The study compared the "ethical risk sensitivity" of a sample of young male prisoners at a federal reformatory in Ohio with that of a sample of students at a nearby state university of similar age, sex, and socio-economic status. The subjects were requested to make predictions as to whether a hypothetical bank teller would embezzle funds under the following varying circumstances: that the embezzlement would bring great or little gain to the teller, that he would or would not be caught, and would or would not be censured.

It was hypothesized that prisoners would vary their predictions more with the severity of censure than with the remaining determinants. It was also hypothesized that prisoners would be more sensitive to censure than students since they themselves were experiencing the effect of severe censure. While the first prediction was fully supported, the latter was not.

Rettig concluded that having experienced severe censure once and having been defined as criminals by society, inmates saw little risk in further engagement in crime.

Such a finding if confirmed by future research would, no doubt, raise serious questions about the efficacy of imprisonment as a deterrent to recidivism.

4. Does previous censure change risk perception?

At least one study has demonstrated that the experience of being caught may lead the offender to perceive the risk of detection and apprehension as greater than he did previously. In a study of drunk driving in Sweden, Klette (1966)¹⁸ asked a sample of automobile owners about their estimate of the risk for a drunk driver to be arrested under various circumstances. The result was that drivers who had themselves been arrested for drunk driving had an estimate of risk many times higher than other drivers.

C. General conclusions of studies on subjective deterrence

If deterrence research is still in its infancy, the perceptual approach is only beginning. The few studies undertaken up to date suffer from serious limitations. No final conclusions have been reached and the way is long before any can be drawn. Yet a summary of the general conclusions of the different studies can be useful in pinpointing the main findings.

(1) Most members of society depend solely or heavily on secondary sources for their information about legal sanctions, changes in these sanctions, and risks of apprehension and conviction. Thus it does not seem surprising that the public in general is usually not well informed about penalties and risks. It follows that objective sanctions and objective risks are not correctly perceived by the majority of the citizens with a tendency on their part either to overestimate or underestimate these risks.

(2) Since the efficacy of deterrence is related to the perceptual rather than the objective reality of the threats, it would seem that public beliefs about sanctions are more important than what the sanctions really are. It would also seem possible to enhance the efficacy of those sanctions simply by changing public beliefs about them.

(3) Certain studies report a negative relationship (strong or weak) between perceived certainty and delinquency (actual or reported). On the other hand, it seems, on the basis of existing studies, that perceived severity of punishment does not affect delinquency to any considerable degree.

(4) At least one study report that delinquent boys seem to perceive their chances of arrest if they committed crimes to be significantly lower than the personal chances estimated by non-delinquents. This may explain, at least in part, why they were not deterred by the threat of apprehension and punishment.

(5) According to one study, young people (15-22 years old) seem to worry more about the family's opinion than about punishment. They tend also to regard probation as a slightly more severe penalty than a fine.

(6) The same study indicates that the more experience a youth had of committing offences, the more optimistic he tends to be about the chances of getting away with them.

(7) A study based on a sample of property offenders report that amenability to police deterrence does not seem to be especially pronounced among this group. It further reports that this type of offenders are not likely to regard imprisonment as a strong or powerful deterrent.

(8) Another study concluded that severe censure, particularly censure of a permanent and irreversible nature such as imprisonment, does not seem to increase sensitivity to censure.

(9) A study of drunken driving shows that, at least for this particular offence, previous apprehension may change risk perception by increasing the awareness of the risk. Thus if a man is apprehended by the police while driving under the influence of alcohol, this experience is likely to increase his estimate of the risk of apprehension in case he repeats such an offence.

D. Limitations of subjective studies on deterrence

Subjective studies on deterrence suffer in general from the usual limitations and shortcomings of survey and attitude research. It is difficult to say to what extent opinions and attitudes expressed on the basis of hypothetical situations and hypothetical individuals correspond to what really takes place in actual life situations. Furthermore, the sincerity of the answers is difficult to control and the results leave the door open to different interpretations.

Zimring and Hawkins (1973) point to the following weaknesses:

(1) Attitude surveys elicit verbal responses which may be regarded as indices of attitude in the sense of sentiments or feelings.

(2) Many factors tend to render responses unreliable as indices of sentiments. Among these factors:

- (a) the fact that questionnaires are inevitably selective and may thus condition the nature of the responses;
- (b) lack of candor on the part of respondents;
- (c) the influence of competing emotional or psychological components which may not be conscious.

The authors note, however, that carefully constructed questionnaires designed to present situations in their full complexity, coupled with conservative principles of interpretation rigorously applied, could render such surveys useful for sentiment sounding.

E. Variations in deterredness and in risk perception

The degree of responsiveness to legal threats varies from one society to the other, from one individual to the other. It also varies according to the type of behaviour for which the legal sanction is prescribed and the type of norm protected by the law.

1. Differences between societies

Andenaes (1965) points out that the criminal laws do not operate in a cultural vacuum. Their functions and importance vary radically according to the kind of society which they serve. In a small, slowly changing community the informal social pressures are strong enough to stimulate a large measure of conformity without the aid of penal laws. In an expanding urbanized society with a large degree of mobility this social control is weakened, and the mechanisms of legal control assume a far more basic role. Even in countries which have reached equivalent stages of economic development, the cultural atmosphere may differ.

The degree of respect for the criminal laws, the degree of responsiveness to legal deterrents thus vary from one society to the other. This variation is likely to be related to the degree of commitment to the norms and norm integration, the degree of social cohesion, homogeneity, and norm conflict, the degree of alienation from the political and social system, etc., etc.

2. Differences between types of norms

There seems to be no doubt that the efficacy of the threat and the degree of response to that threat do vary according to the type of norm being protected by the threat. Some types of norms are likely to be obeyed irrespective of sanctions while others are likely to be disobeyed frequently despite provisions for sanctions (see further).

Tittle and Logan (1973) stress the fact that norms vary in the degree of their generality, their importance, their legitimacy, and their legal status. They deplore the lack of empirical data on the question and suggest that research be done to establish:

- (1) Whether sanctions are more likely to be successful in producing conformity to rules that are widely shared or to those that are specific to a given situation;
- (2) The relative effectiveness of sanctions in deterring violations of rules generally felt to be very important and in deterring those of less importance;
- (3) The extent to which "legitimate" as opposed to "arbitrary" rules are subject to enforcement by sanctions;
- (4) Whether deterrence is more likely with legal norms than for other norms; and
- (5) Whether rules that have moral support are more enforceable by sanctions than are those that lack such moral support.

3. Differences between types of behaviour

The efficacy of deterrence varies according to the type of behaviour

prohibited by the law.¹⁹ Variations along this dimension include the perceived intrinsic or utilitarian rewards of different types of behaviour as well as rationality, emotionality or impulsiveness of each type. Furthermore, deterrence may be more or less effective depending upon the perceived legitimacy of the criminal act, the strength of motivation to engage in the prohibited behaviour etc. etc.

Tittle and Logan (1973) write:

Thus one could imagine that acts of rebellion, acts designed to create martyrdom, or acts for the purpose of reinforcing deviant identities would be less deterrable than acts that have private utility for the actor. By the same token, deviance that stems from a sense of injustice may be less deterrable than deviance that stems from attempts to exploit others. Another possibly important distinction in this regard concerns the position of the act in a series of potential deviant acts. Thus a first offence may be more sensitive to sanctions than are repeated offences. Some experimental evidence suggests that once a sanction threat has failed to deter, its potency as a deterrent to further rule-breaking is eroded.

4. *Differences between types of law*

An important distinction in this respect is suggested by Andenaes. Referring to the variations in the effect of the criminal law on individual motivation according to the character of the norm being protected by the threat of punishment, he concludes that there is a substantial difference between actions which are immoral in their own right, *mala per se*, and actions which are illegal merely because they are prohibited by law: *mala quia prohibitum*. In the case of the former the law supports the moral codes of society while for the latter the law stands alone. In the case of *mala per se* if the threats of legal punishment were removed, moral feelings and the fear of judgement passed by the social environment would remain as powerful crime prevention forces. In the case of *mala quia prohibitum*, inspiration to conformity to norms is essentially a matter of effective legal sanctions.

Andenaes notes further that there are variations within each of these two main groups. As a moral code, the law against incest is nearly universal, but violations are not punishable everywhere. It is rather doubtful that the absence of the threat of punishment would seriously influence the incidence of incest. The moral code against incest is so closely integrated with family structure that there is little need for the support of the criminal law. But stealing or tax-dodging are quite different in this respect from incest. As Wilkins (1962) puts it "The average normal housewife does not need to be deterred from poisoning her husband, but possibly does need a deterrent from shoplifting". In Andenaes' view, the more rational and normally motivated a specific violation may appear, the greater

the importance of criminal sanctions as a means of sustaining lawfulness.

Certain empirical studies, such as the ones already mentioned: Waldo and Chiricos (1972) and Teevan (1973) have tried to find out whether deterrence relationships to delinquency are any stronger for *mala prohibita* offences (marijuana use) than they are for offences that are *mala in se* (for ex. larceny, shoplifting). These studies hypothesized that "the effectiveness of deterrence varies in inverse proportion to the moral seriousness of the crime".

Waldo and Chiricos found that "for each of the certainty indices, marijuana use seems more related than admitted theft activity to perceptions of the certainty of punishment". They concluded that marijuana use appears more likely than theft to be deterred by perceptions of the certainty of punishment. This was considered to be a confirmation of Andenaes' suggestion.

Teevan also found that "... perception of certainty of punishment is more negatively related to incidence of *mala prohibita* marijuana use than for *mala in se* shoplifting".

5. *Differences between individuals*

It seems superfluous to say that the degree of amenability to police deterrence, the degree of responsiveness to legal threats vary from one individual to the other and from one group to the other. Variations along this dimension include age, sex, race, education, social class, etc. plus variations in character and personality, degree of commitment to the moral norms of society or to the conflicting norms of a particular group, attitudes toward life and toward risks, degree of acceptance of authority, degree of personal alienation from the political and social system, past experience, etc. etc.

As Andenaes (1965) puts it:

Citizens are not equally receptive to the general preventive effects of the penal system. The intellectual prerequisites to understanding and assessing the threat of punishment may be deficient or abstract. Children, insane people and those suffering from mental deficiency are, for this reason, poor objects of general prevention. In other cases, the emotional preconditions are missing; some people more than others are slaves of the desires and impulses of the moment, even when realizing that they may have to pay dearly for doing so.

While it is impossible here to examine in detail all the variables which are known to affect the degree of deterredness or deterrability a distinction between certain types of personalities can be made.

(1) *The present-oriented versus the future-oriented*

This distinction refers to those individuals for whom the future plays an important part in present thinking, and those whose thinking is mainly centered around the present. For the present-oriented, an immediate gain (no matter how small) may outweigh a future loss (no matter how great). In relation to deterrence the future-oriented is more likely to be deterred by the threat of sanctions than the present-oriented. The gratification derived from the criminal act is in most cases *immediate* while the prospect of punishment is quite *remote*.

(2) *The optimist versus the pessimist*

As already have been mentioned, objective sanctions and objective risks of apprehension and conviction are rarely (if ever) correctly perceived. People tend either to overestimate or to underestimate the risks involved. Thus the optimists who are likely to underestimate the chances of apprehension and conviction will be less deterred by the threat of punishment than the pessimists who are likely to overestimate those chances.

(3) *The risk-taker versus the risk-avoider*

Certain personalities enjoy taking risks (eg. the adventurer) while other personalities do not like to take chances. In relation to deterrence the first group is likely to be over-confident, to overestimate the chances of apprehension and conviction and even to be stimulated by the risk involved in the criminal behaviour. For the extreme types in this group, the higher the risk, the greater is the attraction and the motivation to violate the law. On the other hand, risk-avoiders are likely to overestimate the risks to be more responsive to the threat of punishment.

(4) *The reflective versus the impulsive*

Zimring and Hawkins (1973) find the distinction between impulsive and reflective persons to some degree analogous to the distinction between present-oriented and future-oriented persons. They further note that human beings cannot be divided into two discrete classes: the impulsive and the reflective. Some people are more apt to be moved by sudden impulse or swayed by emotion than others but they can hardly be wholly unreflective all the time. At the opposite extreme infinitely protracted reflection about possible consequences would result in a complete passivity. Most people are content with less thorough deliberation than that.

In relation to deterrence, it can be assumed that persons guided by impulse rather than judgement, premeditation, or reflection are by definition less likely to be restrained by threats because they are less likely to reflect on the consequences of their act (see Zimring and Hawkins, 1973).

(5) The normal versus the abnormal

It is also difficult to divide human beings into two discrete classes: the normal and the abnormal. It is not easy to define what is normal and what is abnormal or to draw a concrete line between normality and abnormality. It is much easier to describe certain deviations from the norm. Human beings in general tend to avoid punishment and pain, however some persons can suffer from guilt feelings and consciously or unconsciously seek to bring punishment on themselves. Such persons are of course unlikely to be deterred by the threat of punishment. We have also mentioned earlier that certain types of insanity and mental deficiency can render those suffering from them unresponsive or less responsive to criminal sanctions.

6. Deterrence and social class

There seems to be strong evidence that points to the existence of a certain association between deterrability and social status. Social status can influence the responsiveness to legal threats in many different ways:

(1) There are reasons to believe that some of the personality types mentioned earlier are more frequent among the lower classes of society than among the upper ones, for example the "present-oriented type".

(2) The knowledge of sanctions, of sanctioning outcome, of the risks of being apprehended and convicted varies widely among the different classes of society. There are also reasons to believe that estimations of these risks vary from one social class to the other. It seems that the tendency in the upper classes is to overestimate the risks while the tendency in the lower classes is to underestimate them.

Tittle and Logan (1973) think that

... it seems likely that the lesser propensity of middle class people to engage in ordinary crime may stem partly from a gross over-estimate of the likelihood of apprehension for them personally and a conception of punishment as more severe than it really is. They typically have little personal contact with legal processes and therefore have no realistic basis for judgement. Lower class persons, on the other hand, usually have enough contact with the legal system to know that the likelihood of apprehension and punishment is slight and to know that typical punishments are not unbearable.

(3) If the fear of punishment is a deterrent, then it is natural that this fear should be stronger among those who enjoy high socio-economic status (and thus have much to lose) than among those with a low socio-economic status (and thus have nothing to lose). The personal cost of a criminal sanction like imprisonment (loss of job, social stigma, loss of community and family esteem, etc.) varies according to social class.

Packer (1968) has noted that "Deterrence does not threaten those whose lot in life is already miserable beyond the point of hope".

Thus the subjective assessment of the risks involved and of the personal costs of punishment (what the individual stands to lose) may vary not only from one person to the other but from one social class to the other.

(4) Zimring and Hawkins (1973) suggest that personal success makes an individual more susceptible to the influence of threats because success determines the amount of investment in society an individual puts at risk when committing a threatened behaviour.

In this sense it could be said that the man who has everything also has everything to lose, as well as little to gain, from the commission of forbidden acts. . . . It follows that those with a greater stake in life's continuing as it has been will have more to fear from the legal threat of unpleasantness and social disapproval .

Chapter 3

Studies of Special Deterrence

RECIDIVISM LITERATURE

Measuring the *special* deterrent effect of punishment seems to be easier than measuring its *general* effects. The problem is usually stated in the following terms: to what extent did the actual experience of punishment deter the punished offender from future offences? Reconviction is taken as a criterion for the failure of punishment as a deterrent while the absence of it is considered a proof of its success. Typical of this logic is the statement by Jaffary (1963):

... on examination, the deterrent effect of punishment on the offender himself appears to be less sure than the doctrine assumes. The high degree of recidivism among Canadian offenders is in point. The magistrate experiences, day after day, the return of familiar names and men who have done their time in prison and are again before him on a new charge. Of prisoners in Canadian penitentiaries, four-fifths have served at least one prison sentence in a penal institution; many have served repeated terms. In large cities with mobility of population and division of courts, this parade of repeaters may be less apparent, but the magistrate cannot overlook the growing length of the previous record sheet from the Bureau of Criminal Identification presented to him before sentence is pronounced. This obvious failure of deterrence on the offender himself must be recognized by the law. The constantly repeated fact of recidivism negates much of the legal theory of the effect of punishment in deterrence. Yet the doctrine continues without being seriously challenged on its validity.

Recidivism is not necessarily an indication that punishment is ineffective as a special deterrent. Many other factors, rather than the ineffi-

cacy of punishment, may be responsible for the repeating of the offence or for the commission of other offences.

On the other hand, the absence of recidivism does not necessarily mean that punishment has been effective. The non repeating of the offence can be due to many factors other than the experience of punishment. It is possible that the offender would not have repeated his offence anyway even if he had not been punished. In fact, studies of hidden delinquency tend to show that many of those who during adolescence have committed delinquent acts and have never been detected nor arrested cease to commit these offences without having ever been punished for them. Gold and Williams (1969)²⁰ concluded on the basis of their study "that what legal authorities now commonly do upon apprehending a juvenile for his delinquent behaviour is worse than not apprehending him at all". The authors claim to have demonstrated "that apprehension itself encourages rather than deters further delinquency" and that the "non-apprehension of juvenile offenders" would be "likely to effect a reduction in their delinquency".

Similar findings have given birth to a new popular approach in criminology: "the labelling approach" and to "the interactionist theories".

On the other hand, when the punished offender has been subjected to a certain treatment or to some rehabilitative measures the assessment of the efficacy of punishment as a special deterrent becomes more complicated since it would be difficult to say whether he refrained from future offences because of fear of punishment or as a result of the treatment.

Walker (1968) seems to be of the opinion that the absence of recidivism is usually the result of the experience of punishment:

... a man who refrains from committing further offences after he has been subjected to some penal measure may do so because he wishes to avoid the same or a more severe penal measure in the future, because he now resists temptation from other motives, or because he no longer feels temptation. Common sense and experience tell us that the last of these is a very rare transformation; we are entitled to assume that in all but the exceptional case the efficacy of a penal measure is attributable either to individual deterrence or to some more subtle process of learning to resist temptation to which I have applied the term 'reform', in an attempt to beg no questions to its nature. Such evidence as there is suggests very strongly that both processes take place. It is highly unlikely that the after effects of, say, six months spent in an overcrowded local prison can be anything more than a deterrent, just as it is highly unlikely that the influence of probation is mainly deterrent.

Researchers studying recidivism have generally failed to distinguish between the deterrent and reformative aspects of individual prevention.

There have been a few attempts to discover the extent to which penal

measures have succeeded in changing the attitudes of offenders. But most researchers have been content merely to count the numbers of offenders who, having been dealt with by the penal system, have apparently succeeded in staying out of trouble for a fairly short period afterwards—without investigating the extent to which those offenders were actually 'reformed' by the treatment or punishment they received. (Hood and Sparks, 1970).

Hood and Sparks (1970) underline some of the methodological problems involved in research on special deterrence:

(1) Definitions of success and failure: All studies of the effectiveness of punishments and treatments use reconviction as a criterion of failure, whether or not they use other criteria as well. A simple dichotomy of 'success' and 'failure' is obviously too crude to take many important differences into account.

(2) What should be the length of the follow-up period? The follow-up should neither be too short nor too long. A five year period seems long enough in view of the many studies which have shown that almost all of those offenders who will ever be reconvicted after punishment or treatment are reconvicted within five years.

(3) Many follow-up studies have been concerned with a single form of punishment or treatment while few have tried to compare the relative effectiveness of two different penal measures.

(4) Punished offenders may commit crimes during the follow-up period without being caught. Even when they are caught the criterion of reconviction can be elusive since many offences (such as many non-indictable offences, offences by juveniles) are difficult to trace (see Walker, 1968).

A. How high are recidivism rates?

In most countries basic information about recidivism is not routinely collected, and there may thus be widespread misconceptions about the number of persons reconvicted. Even in the United States, statistics of the after-conduct of federal prisoners are not published (Hood and Sparks, 1970).

Estimates of recidivism rates in countries where no official data is available, vary from 50% to 80%.

Glaser's (1964) study of the American federal prison system based on over a thousand men released in 1956 showed that in a follow-up period of four years only 31% were re-imprisoned, and another 4% were reconvicted but not re-imprisoned.

Canadian court statistics for 1967 show that 40% of those convicted had previous convictions, while 27% were not previously convicted. For the remaining 33% the information was not available.

B. What factors are usually associated with reconviction?

Broadly speaking, most researchers have found that an offender's chances of recidivism are greater, the more previous convictions he has, the shorter the time since his last conviction, the younger he is, and the younger he was when first convicted; men have higher reconviction rates than women, and offenders against property generally have higher reconviction rates than those committing offences of violence (Hood and Sparks, 1970).

In short, variables related to the offender and variables related to the offence seem to be far more important than variables related to punishment itself.

C. Are certain punishments more effective than others?

As we have mentioned earlier the differential impact of various punishments can be related to a large number of variables. The difficulty of controlling for such variables makes it difficult to give a definite answer to the question. The best way to measure and compare the differential effects of various punishments is by means of controlled studies. However the major barrier to such controlled studies of different punishment regimes, other than inertia, is the objection that such methods require treating groups of similar offenders in different ways—a practice that many see as ethically obnoxious (see Morris, 1966; Zimring and Hawkins, 1973).

In spite of this some general conclusions can be based on the findings of research done up to date:

(1) For many offenders, probation is likely to be at least as effective in preventing recidivism as an institutional sentence.

Wilkins (1958) found no significant difference in the reconviction rates (in a three year follow-up) of a group of 31 offenders placed on probation in an English higher court, and a group of 31 individually matched controls most of whom received institutional sentences.²¹

Babst and Mannering (1965) followed up 5,274 adult male offenders in Wisconsin, and compared the reconviction rates (in a two year period) of those placed on probation, with those put in prison and paroled. When type of current offence, criminal record and marital status were held constant, it was found that the success rate of probation was about the same as that of imprisonment for recidivists, and was significantly better for the first offenders.²²

In his study for the British Home Office Research Unit, Hammond (1969) found that the reconviction rates of offenders placed on probation were broadly comparable to those of offenders given institutional treatment, when expected reconviction rates were taken into account. In a reassessment of the earlier Cambridge study of probation, Hammond suggested that it showed that when expected reconviction rates were taken

into account, the effectiveness of probation was about the same as that of other treatments for first offenders, but slightly better than expected for recidivists; in his own study, recidivists also did relatively better on probation than first offenders.²³

(2) Some authors report that fines and discharges are more effective than either probation or imprisonment for first offenders and recidivists of all age groups. This was one of the findings in Hammond's study. Hood and Sparks (1970) cite other evidence suggesting that many of those now placed on probation, in both England and the United States, could be dealt with by a nominal measure such as a fine or discharge without increasing the risk of reconviction.

Nancy Goodman (1965)²⁴ investigated the effectiveness of commitment to the Manchester Senior Attendance Centre and compared it with the efficacy of fines. She found that "little difference appears in the relative effectiveness of the two penalties as regards subsequent offending except the delaying of minor reoffending in the centre boys".

D. Is lengthy incarceration more effective than shorter incarceration?

It seems that longer institutional sentences are no more effective in preventing recidivism than shorter ones. Thus time served can be reduced without increasing recidivism.

Numerous studies support this statement.

Morris studied the question whether the length of the periods of imprisonment imposed on 302 confirmed recidivists had any effect on the duration of their subsequent periods of freedom. The entire group were failures, in the sense that they were in the convict prisons of England; all had lengthy criminal records. It emerged that the length of each period of penal confinement had no measurable effect on the subsequent interval between discharge and reconviction (Morris and Zimring, 1969).

A British study (1960) reported in the Council of Europe publication "Juvenile Delinquency in Post-war Europe" examined the results of various methods of treatment. It was found that "a short prison sentence produced the same results, in terms of recidivism, as a prolonged period of Borstal training, on the same type of boys of the same age group".

"One is driven to the conclusion that all forms of penal treatment give exactly the same result on the same kind of individual" (Halmos, Keele eds. 1965).

Mannheim and Wilkins (1955) found that above average periods of detention in Borstal seemed to yield no better results than a period of about a year, for boys of all risk groups.

Benson (1959) and Banks (1964) have found no differences in reconviction rates among boys aged 17-21, as between imprisonment or detention lasting three or four months, and Borstal training lasting on average over a year. Supportive evidence for this view also comes from Week's

study (1958) of the Highfields experiment in New Jersey, in which it was found that sentences of 3 to 4 months in an open institution, with a liberal regime and group counselling, produced about the same results as a two-year reformatory sentence (Hood and Sparks, 1970, p.190).

Hammond and Chayen found very little difference in the reconviction rates of persistent offenders given sentences of under four years, and those given preventive detention lasting in most cases seven or eight years; they also found that it made no difference whether the offenders were given five, six, seven or eight years' preventive detention, or were released after two-thirds or five-sixths of their sentences (Hood and Sparks, 1970).

A study by Taylor, at the Prison Department in England, found that three-year sentences of corrective training produced results which were slightly (though not significantly) *worse* than two-year sentences (ibid, p. 190).

The U.S. Supreme Court Gideon decision required the State of Florida to discharge 1,252 prisoners long before the normal release dates. These were indigents who had been tried for felonies without counsel.

The Florida Department of Corrections selected for the study 110 of these early released and 110 full-term releases matched in great detail for equally serious criminal histories and other significant factors. None of these persons were placed under parole supervision. Twenty-eight months after discharge, 13.6% of the Gideon early release group had returned to criminal activity compared to 25.4% of the full-term release group.²⁵

In 1959 The California Women's Board of Terms and Paroles changed parole policies. The median time served each year from 1957-1959 was 24 months. By 1965 the median stay was reduced to 12 months. The prison return rate in 1959 for those paroled 2-3 years earlier (who had served 24 months) was 35.3%. The prison return rate in 1964 for those paroled 2-3 years earlier (who had served only 17-20 months) was 28.8%.²⁶

In 1958 Washington decided to reduce the median time served in the state prison. In three years median stay was reduced from 30 months to approximately 20, and this policy has been maintained since 1961.

The recidivism rate in Washington since 1961 has not changed significantly. The failure rates (after two to three years parole) continue to vary from year to year within a small range.²⁷

The California Department of corrections compared 315 parolees who had served jail sentences and were then reinstated on parole, with 194 who were returned to prison as technical violators following their jail sentences. The two groups were well matched with regard to commitment offence, age, race, and narcotic history.

The jail group served an average of seven months. The prison group served an average of 20 months. The ultimate parole success of both groups after reparole was the same: 45 percent.²⁸

Since most studies showed that lengthy incarceration is not more ef-

fective in preventing recidivism than shorter one or than other penal measures, The California Assembly Committee on Criminal Procedure (1968) concluded that

Incarceration, especially lengthy incarceration, for many offenders is a misuse of public funds better allocated for local law enforcement and local rehabilitation. . .

The State of California may be spending \$30 million each year for the lengthy incarceration of lesser offenders whose rehabilitation could be better accomplished elsewhere at much less expense. Prison cost savings from earlier parole could also be used in the improvement of local law enforcement—a more effective deterrent to crime.

E. *Conclusion*

Recidivism rates appear to vary greatly for different types of crime and for different types of offenders. More research is needed to establish what types of offences or what types of offenders are relatively immune to the influence of intimidation.

On the basis of existing evidence it appears that there are persistent offenders who are very likely to be reconvicted whatever is done to them. On the other hand there are offenders who have relatively good chances of avoiding reconviction no matter what penal measure they were subjected to. Between these two extremes there is a group of offenders, probably the largest group, for whom differential sentencing is needed and for whom the choice of sentence makes a difference.

Walker (1968) enumerates the following groups:

- (a) those who will go straight whatever the sentence;
- (b) those who will not go straight whatever the sentence;
- (c) those who will go straight if given a certain sentence but not any of the others;
- (d) those who will go straight if given one of two sentences, but not the others;
- (e) and so on, until the group is reached for whom there is only one ineffective sentence.

The development of a typology of crime and of the criminal would, no doubt, be very useful in selecting appropriate deterrent measures.

Although evidence gathered up till now would justify a certain skepticism regarding the special deterrent effects of punishment, it does not allow us to completely discard the concept as having no utility.

Even if more studies in the future would cast more doubt on the efficacy of legal punishment as a special deterrent, the general deterrent effect would still have to be confirmed or disproven, since it is possible that legal punishment may not be an effective individual deterrent (or may even have a crime-inducing effect on the punished offender) yet have a retaining effect on others.

Conclusion

Deterrence remains the corner stone of our penal system although its efficacy has not yet been scientifically proven. The scientific study of deterrence is only beginning. Research on deterrence, especially general deterrence, is in an early stage of development and has a long way to go before the basic issues are clarified and before major hypotheses are verified. More research is needed to gain insight into the dynamics of deterrence. Deterrence is a very complex process. Sophisticated methodology and complex research design are needed. The most adequate methodology, that is controlled experiments, is not only difficult but also raises serious ethical questions.

The doctrine of deterrence is based on many assumptions. Many of these assumptions are seriously challenged and have never been adequately verified. Some of the assumptions are not even susceptible of scientific validation.

There are several ways in which punishment of offenders may act as a deterrent. Thus there exist different types of deterrence. Students of deterrence usually distinguish between *general deterrence*: the impact of the threat of punishment on the general population or on potential offenders, and *special or specific deterrence* by which is meant the impact of the actual experience of punishment on the punished offender.

Opponents of deterrence challenge the doctrine not only on grounds of efficacy but also on grounds of *morality* and *economics*. They also point out to the difficulty in reconciling the severity of punishment with its certainty, to reconcile deterrence with rehabilitation and finally note that the most severe penalties seem to be reserved for offences and offenders least likely to be deterred by the threat of punishment.

There seems to be no doubt that *deterrence has its limits*. It cannot be very effective in certain situations, with regard to certain types of offences and certain types of actual or potential offenders.

Deterrence seems to be irrelevant to the bulk of the population, to the mass of people who have adequately introjected the moral norms of their society. If it is effective it will only be so with regard to the "marginal group" which consists of the entire class of persons who are objectively on the margin of a particular form of criminal behaviour.

The *efficacy of deterrence* depends on a very large number of variables. This makes research on the problem all the more difficult since every effort has to be made to control each of the different variables.

There have been two different approaches to the study of general de-

terrence: the ecological approach and the perceptual approach. Studies of *the ecological approach* have tried mainly to test the severity and the certainty hypotheses. Studies of *the perceptual approach* have tried to assess the degree of public knowledge of criminal sanctions as well as the gap between objective risks and subjective risks as perceived by offenders and non-offenders.

Studies of the impact of legal sanctions on crime rates suffer from many weaknesses and shortcomings. In spite of their limitations, they tend to show that certainty of punishment is related to variations in crime rates while severity of punishment is not. The level of urbanization also appears to have some influence on the extent to which certainty of punishment is associated with offence rates. The studies show that criminal homicide is quite different from other offences. Finally, they demonstrate that social factors have a considerably greater effect on crime levels than does the threat of punishment.

Studies of the impact of sanctions on the incidence of specific offences do not offer an ultimate proof for or against the deterrence hypothesis. Some offences are more likely to be deterred than others by the threat of punishment. Stricter law enforcement seems to have a deterrent effect on certain offences. Finally, physical deterrents which render the commission of certain crimes more difficult and less tempting seem to be more effective in reducing the incidence of these offences than is the threat of punishment.

The public, in general, seems to be highly ignorant of criminal sanctions. However, the hypothesis that "the persons with the most knowledge of the penalty are those likely to engage in the prohibited behaviour" does not appear to be founded.

There are reasons to believe that the efficacy of deterrence is related to the perceptual rather than the objective reality of the threats. There seems to be a negative relationship between perceived certainty of punishment and delinquency. Again, there is no support for the hypothesis that perception of severity of punishment is negatively related to deviance.

Delinquent boys seem to perceive their chances of arrest if they committed crimes to be significantly lower than the personal chances estimated by non-delinquents.

The degree of sensitivity and of responsiveness to legal threats varies from one society to the other. It also varies according to the type of norms being protected by the threat and according to the type of behaviour prohibited by the law. Finally the sensitivity to punishment as a deterrent varies from one individual to the other. Variations along this dimension include age, sex, race, education, social class, plus variations in character and personality, degree of commitment to the norms of society or to the conflicting norms of a particular group, attitudes toward life and toward risks, degree of acceptance of authority, degree of personal alienation from the political and social system, past experience, etc.

Studies on special or specific deterrence include *studies of recidivism* and experimental research on punishment.

Recidivism rates appear to vary greatly for different types of crimes and for different types of offenders. More research is needed to establish what types of offences and offenders are relatively immune to the influence of intimidation and what types are the most likely to be intimidated.

There do not seem to be a considerable difference in the effectiveness of different types of sanctions. Furthermore, lengthy incarceration does not seem to be more effective than shorter incarceration in preventing recidivism.

Experimental studies on punishment show that punishment administered under certain conditions can be an effective technique to suppress or control behaviour. The effectiveness of punishment is dependent on many variables. Among the important variables is the timing of the punishment (contingency between response and punishment), severity and intensity of punishment, frequency and certainty of punishment, the degree and the type of motivation behind the punished behaviour and the availability of an alternative response. Other variables related to the effectiveness of punishment are the affective bond between agent and recipient and the attitude of the recipient of punishment towards the norms underlying the punishment.

Punishment can have serious side-effects or *undesirable by-products*. For this reason many behaviour scientists recommend that punishment, as a technique for modifying, suppressing or controlling behaviour, be replaced by other alternatives. Among other things, they suggest extinction and the provision of viable alternative responses as effective alternatives to punishment.

Limitations of experimental studies of punishment are mainly due to the type of organisms used in the experiments, to the types of punishment administered and to the differences between controlled conditions in the laboratory and actual life situations.

In spite of their limitations, findings of these studies can have certain important *implications for the criminal policy*. They show that the necessary conditions for the effectiveness of punishment are very different from those under which punishment is currently administered by the legal system. Moreover, they show that the ideal punishment situation, that is a situation in which the misbehaviour is invariably detected and reliably evokes appropriate and immediate punishment, is probably one which can never be achieved in actual life.

Notes

¹Certainty of punishment was calculated for three time periods, 1950, 1960, and 1963. The general format for certainty measures is given by the 1950 index:
1950 Admissions to Prison "X" offence

Mean of "X" crimes known to the Police in 1949 and 1950
Severity of punishment for 1960 and 1964 were given by the "median length of sentence served by state prisoners released in 1960 and 1964 respectively".

²A good example is the California study "Public knowledge of criminal penalties".

³See Middendorf, 1968, pp.64-65

⁴Risto Jaakkola & Hannu Takala (1971) *The problem of drunken driving in Finland* Helsinki: Institute of Criminology.

⁵This is quite similar to what has happened in Britain, in Germany and in certain other countries.

⁶Lovald, Keith & Stud, Holger R. (1968) *The revolving door: reactions of chronic drunkenness offenders to court sanctions*. *Journal of Criminal Law, Criminology and Police Science*, 59 (4) 525-530.

⁷This again indicates that a change in attitudes usually accompanies the change in penalties, the more severe penalties become, the more permissive the attitude becomes at least towards marginal cases or towards first violations.

⁸Bad-cheque writing qualifies as a "typical" property crime. Property crimes constitute the bulk of criminality. According to the California Study (1968) 14% of yearly admissions to California State Prison are bad-cheque offenders while in Wisconsin 16% of yearly admissions are for the same offence.

⁹A good example is that of increasing penalties for marijuana offences and for attacks on police officers in California.

¹⁰The 1956 Connecticut speeding crackdown is a good example.

¹¹Quoted by Mannheim, *Social Aspects of Crime in England between the Wars*, 1940, pp. 156-157.

¹²J. S. Press (1971) Some effects of an increase in Police manpower in the 20th precinct of New York City. New York: Rand Institute.

¹³President's Crime Commission. *The Police* (75), p. 58.

¹⁴Singer, B. F. (1970) Psychological Studies of Punishment. *California Law Review* Vol. 58, pp. 405-443.

¹⁵See also Wootton, B. (1963) *Crime and the Criminal Law*. London: Stevens. p. 98

¹⁶Willcock, H. D. and Stokes, J. (1968) *Deterrents and Incentives to crime among youths aged 15-21 years*. Government Social Survey. The data given here is based on Nigel Walker's review of the study in his two books: *Crime and punishment in Britain* (1965) second edition (1968) Edinburgh: Edinburgh University Press, page 242 and *Crimes, Courts and Figures* (1971) Penguin Books, pp. 98-103.

¹⁷Goodman, L. H., Miller, T., De Forrest, P. (1966) *A study of the deterrent value of crime prevention measures as perceived by criminal offenders*. Bureau of Social Science Research, Inc.

¹⁸Klette, (1966) *On the functioning of the Swedish legislation concerning drunken driving*. Unpublished, quoted in Andenaes (1968) p. 90 and in Zimring & Hawkins (1973) p. 163-164.

¹⁹This point will be discussed in more detail in the next chapter.

²⁰Gold and Williams (1969) National study of the aftermath of apprehension. 3 *Prospectus* 11.

²¹See Hood and Sparks (1970) p. 186

²²*Ibid*

²³*Ibid*

²⁴Nancy Goodman (1965) Manchester Senior Attendance Centre, 5 *British Journal of Criminology* pp. 275, 288.

²⁵California Assembly Committee in Criminal Procedure (1968) Deterrent effect of Criminal sanctions.

²⁶*Ibid*

²⁷*Ibid*

²⁸*Ibid*

Bibliography

- ACTON, H. B., (1969) (ed) *The Philosophy of Punishment*. London: Mcmillan
- ACTON, H. B. et al (1971) *Punishment: For and Against*. N.Y.: Hart Publishing Co.
- ALEXANDER, F. and STAUB, H. (1931) *The Criminal, The Judge and the Public*. N.Y.: Macmillan.
- ANDENAES, J. (1952) "General Prevention—Illusion or Reality?" *Journal of Criminal Law, Criminology and Police Science*. Vol. 43, pp. 176-198.
- ANDENAES, J. (1965) *Punishment and the Problem of General Prevention*. Paper presented to the V International Congress of Criminology—Montreal, 62 pages.
- ANDENAES, J. (1966) The General Preventive Effects of Punishment. *University of Pennsylvania Law Review*. Vol 114, (7) pp. 949-983.
- ANDENAES, J. (1968) Does Punishment Deter Crime? *The Criminal Law Quarterly*. Vol. 11, (1), pp. 76-93.
- ANDENAES, J. (1970) The Morality of Deterrence. *University of Chicago Law Review*. Vol. 37, (3), pp. 649-664.
- ANDENAES, J. (1971) "Deterrence and Specific Offences". *University of Chicago Law Review*. Vol. 38, (3), pp. 537-553.
- ANTILLA, I. (1971) Conservative and Radical Criminal Policy in the Nordic Countries. In Niles Christie (ed) *Scandinavian Studies in Criminology*, Vol. 3, pp. 9-21. Oslo, Universitetsforlaget.
- ANTUNES, G. and HUNT, A. L. (1973) *The Impact of Certainty and Severity of Punishment on Levels of Crime in American States: An Extended Analysis*. Evanston, Northwestern University Center for Urban Affairs. 17 pages, Appendix.
- ANTUNES, G. and HUNT, A. Lee (1973) The Impact of Certainty and Severity of Punishment on Levels of Crime in American States: An Extended Analysis. *The Journal of Criminal Law and Criminology*, Vol. 64, No. 4, Dec. 1973, pp. 486-493.
- ANTUNES, G. and HUNT, A. Lee (1973) The Deterrent Impact of Criminal Sanctions, Some Implications for Criminal Justice Policy. *J. of Urban Law*, Vol. 51, p. 145.
- APPEL, J. B. (1961) Punishment in the Squirrel Monkey *Saimiri Sciurea*. *Science*, Vol. 133, (36).
- APPEL, J. B. (1963) Punishment and Shock Intensity. *Science*, Vol. 141, pp. 528-9.
- APPEL, J. B. and PETERSON, N. J. (1965) What is Wrong with Punishment? *Journal of Criminal Law, Criminology and Police Science*. Vol. 56, (4) pp. 450-453.
- ARMSTRONG, K. G. (1961) The Retributive Hits Back. *Mind*, October.
- ARONFREED, J. and LEFF, R. (1963) *The Effects of Intensity of Punishment and Complexity of Discrimination Upon the Generalization of an Internalised Inhibition*. Unpublished manuscript. University of Pennsylvania.
- ARONFREED, J. and REBER, A. (1965) An internalized Behavioural Suppression and the Timing of Social Punishment. *J. Person. Social Psychol.* Vol. 1, pp. 3-14.
- ARONSON, and CARLSMITH, (1962) The Effect of Severity of Threat on the Devaluation of Forbidden Behaviour. *American Psychologist*, p. 300.

- ASCHAFFENBERG, G. (1913) *Crime and Its Repression*. Boston: Little, Brown and Co.
- AZRIN, N. H. (1956) Effects of Two Intermittent Schedules of Immediate and Non-Immediate Punishment. *Journal of Psychology*, Vol. 1, pp. 3-21.
- AZRIN, N. H. (1958) Some Effects of Noise on Human Behaviour. *J. of Experimental Analysis and Behaviour*, Vol. 1, pp. 183-200.
- AZRIN, N. H. (1959) Punishment and Recovery During Fixed-Ratio Performance. *J. of Experimental Analysis and Behaviour*, Vol. 2, pp. 301-305.
- AZRIN, N. H. (1960) Effects of Punishment Intensity During Variable Interval Reinforcement. *Journal of Experimental Analysis and Behaviour*, Vol. 3, pp. 123-142.
- AZRIN, N. H. (1961) Punishment During Fixed-Interval Reinforcement. *Journal of Experimental Analysis and Behaviour*, Vol. 4, pp. 343-347.
- AZRIN, N. H., HOLZ, W. C. and HAKE, D. F. (1963) Fixed Ratio-Punishment. *Journal of Experimental Analysis and Behaviour*, Vol. 6, pp. 343-347.
- AZRIN, N. H., HUTCHINSON, R. R. and SALLERY, R. D. (1964) Pain-Aggression Toward Inanimate Objects. *Journal of Experimental Analysis and Behaviour*, Vol. 7, pp. 223-228.
- AZRIN, N. H., HOLZ, W. C., HAKE, D. F. and HUTCHINSON, R. (1965) Motivational Aspects of Escape from Punishment. *Journal of Experimental Analysis and Behaviour*, Vol. 8, pp. 31-44.
- AZRIN, N. H. and HOLZ, W. C. (1966) Punishment. In Werner K. Honig (ed) *Operant Behaviour Areas of Research and Application*. N.Y. Appleton-Century-Crofts.
- BABST, D. V. and MANNERING, J. W. (1965) Probation vs. Imprisonment For Similar Types of Offenders—A Comparison by Subsequent Violations. *Journal of Research in Crime and Delinquency*, Vol. 1, p. 60.
- BAILEY, W. C., GRAY, N. L. and MARTIN, D. (1970) *Models of Deterrence*. Paper presented to the A.S.A. Meetings. Washington.
- BAILEY, W. C. (1971) *Models of Deterrence*. Ann Arbor, Mich., University Microfilms, Ph.D. diss. Washington State University, 1971.
- BAILEY, W. C., GRAY, N. L. and MARTIN, D. J. (1971) On Punishment and Crime: Some Metological Commentary. *Social Problems*, Vol. 19, pp. 284-289.
- BAILEY, W. C., GRAY, N. L. and MARTIN, D. J. (1971) *Punishment and Crime: A Comment on Some Existing Evidence*. Unpublished paper.
- BAILEY, W. C., GRAY, N. L. and MARTIN, D. J. (1973) *Crime and Deterrence: A Correlation Analysis*. Unpublished paper.
- BALL, J. C. (1955) The Deterrence Concept in Criminology and Law. *Journal of Criminal Law, Criminology and Police Science*, Vol. 46, pp. 347-354.
- BALL, R. A. (1969) Why Punishment Fails. *American Journal of Corrections*, Vol. 31, (1) pp. 19-21.
- BANDURA, A. and HUSTON, A. (1961) Identification As A Process of Incidental Learning. *J. Abnorm. Soc. Psychology*, Vol. 63, pp. 311-318.
- BANDURA, A., ROSS, D. and ROSS, S. (1961) A Transmission of Aggression Through Imitation of Aggressive Models. *J. Abnorm. Soc. Psychology*, Vol. 63, pp. 575-582.
- BANDURA, A. (1962) Punishment Revisited. *Journal of Consulting Psychology*, Vol. 26, pp. 298-301.
- BANDURA, A., ROSS, D. and ROSS, S. (1963) Imitation of Film-Mediated Aggressive Models. *J. Abnorm. Soc. Psychology*, Vol. 66, pp. 3-11.
- BANDURA, A. and WALTERS, R. H. (1963) Aggression. In *Child Psychology*, 62nd yearbook of the National Society for the Study of Education, Part I, pp. 364-415.

- BANDURA, A. and WALTERS, B. H. (1963) *Social Learning and Personality Development*. Holt, Reinhart and Winston.
- BANDURA, A. (1965) Influence of Model's Reinforcement Contingencies on the Acquisition of Imitative Responses. *J. of Personality and Social Psychology*, Vol. 1, (6), pp. 589-595.
- BANDURA, A. (1969) *Principles of Behaviour Modification*. N.Y. Holt, Reinhart and Winston.
- BANKS, C. (1964) Reconviction of Young Offenders. In G. W. Keeton and E. N. Schwarzenburger (eds.) *Current Legal Problems*.
- BANKS, R. K. and VOGEL-SPROTT, M. (1965) The Effect of Delayed Punishment on an Immediately Rewarded Response in Humans. *J. Exper. Psychology*, Vol. 70, pp. 357-9.
- BARBER, R. N. and WILSON, P. R. (1968) Deterrent Aspect of Capital Punishment and Its Effect on Conviction Rates: the Queensland Experience. *Aust. and N. Z. J. Criminology*, Vol. 1, (2), pp. 100-108.
- BARMARK and PAYNE, (1964) The Lackland Accident Countermeasure Experiment. *Accident Research, Methods and Approaches*. p. 665.
- BARNES, H. E. and TEETERS, N. (1951) *New Horizon in Criminology*, 2nd edition. Prentice Hall.
- BEACH, F. A., CONORITZ, M., STEINBERG, F. and GOLDSTEIN, A. C. (1956) Experimental Inhibition and Restoration of Mating Behaviour in Male Rats. *J. Genet. Psychology*, Vol. 89, pp. 165-181.
- BEAN, F. D. and CUSHING, R. G. (1971) "Criminal Homicide, Punishment and Deterrence: Methodological and Substantive Reconsiderations". *Social Science Quarterly*, Vol. 52, (Sept.) pp. 269-289.
- BEDAU, H. A. (1971) Deterrence and The Death Penalty: A Reconsideration. *Journal of Criminal Law, Criminology and Police Science*, Vol. 61, (4), pp. 539-548.
- BENNETT, J. V. (1965) *Our Penal System: Does It Deter Violence?* Helmsley Lecture, Brandeis University, Waltham, Massachusetts. Oct. 26, 23 pages.
- BENSON, G. (1959) Prediction Methods and Young Prisoners. *British Journal of Delinquency*, Vol. 9, pp. 192-199.
- BERG, C. (1945) The Psychology of Punishment, *British Journal of Medical Psychology*, Vol. 20, pp. 295-313.
- BEUTEL, F. (1957) *Some Potentialities of Experimental Jurisprudence as a New Branch of Social Science*. Lincoln: University of Nebraska Press.
- BIDDLE, C. W. (1969) A Legislative Study of the Effectiveness of Criminal Penalties. *Crime and Delinquency*, Vol. 15.
- BIXENSTEIN, V. E. (1956) Secondary Drive as a Neutralizer of Time in Integrative Problem Solving. *J. Comp. Psychol. Psychol.* Vol. 49, pp. 161-166.
- BLAKE, J. and KINGSLEY, D. (1964) Norms, Values and Sanctions. In Robert E. L. Faris (ed) *Handbook of Modern Sociology*, Chicago: Rand McNally.
- BOE, E. and CHURCH, R. M. (1968) *Punishment: Issues and Experiments*. N.Y. Appleton-Century-Crofts Corp.
- BOWERS, W. J. (1968) Normative Constraints on Deviant Behaviour in the College Context. *Sociometry*, Vol. 31, pp. 370-385.
- BOWERS, W. J. (1972) *A Causal Framework for the Analysis of Deterrence and Related Process*. Paper presented to the meeting of the American Society of Criminology, Caracas, Venezuela, Nov. 1972.
- BOWERS, W. J. and SALEM, R. (1972) Severity of Formal Sanctions as a Repressive Response to Deviant Behaviour. *Law and Society Review*, Vol. 7, pp. 427-441.
- BRACKBILL, Y. and O'HARA, J. (1958) The Relative Effectiveness of Reward

- and Punishment for Discrimination Learning in Children. *J. Comp. Psychol. Psychol.* Vol. 51, pp. 747-751.
- BRENNER, B. (1934) Effect of Immediate and Delayed Praise and Blame Upon Learning and Recall. *Teachers' College Contrib. Education*, Vol. 620.
- BRETHOWER, D. M. and REYNOLDS, G. S. (1962) A Facilitative Effect of Punishment on Unpunished Behaviour. *J. of Experimental Analysis and Behaviour*, Vol. 5.
- BROMBERG, W. (1970) Is Punishment Dead? *American J. of Psychiatry*, Vol. 127, (2) pp. 245-248.
- BROOKER, F. (1972) The Deterrent Effect of Punishment. *Criminology*, Vol. 9, (4) pp. 469-490.
- BROWN, J. S. (1948) Gradients of Approach and Avoidance Responses and Their Relation to Level of Motivation. *J. Comp. Psychol. Psychol.* Vol. 41, pp. 450-465.
- BROWN, J. S. (1965) A Behavioural Analysis of Masochism. *Journal of Experimental Research in Personality*, Vol. 1 pp. 65-70.
- BROWN, R. T. and WAGNER, A. R. (1964) Resistance to Punishment and Extinction Following Training With Shock and Non-Reinforcement. *J. of Experimental Psychology*, Vol. 68, pp. 503-507.
- BUIKHUISEN, W. (1972) *General Deterrence: Research and Theory*. The Netherlands, Crim. Inst. Groningen University.
- CALDWELL, R. C. (1944) The Deterrent Influence of Corporal Punishment Upon Prisoners Who Have Been Whipped, *American Sociological Review*, Vol. 9, pp. 171-177.
- CALIFORNIA-STATE LEGISLATURE, (1968) *Deterrent Effect of Criminal Sanctions*. Progress Report of the Assembly Committee on Criminal Procedure.
- CAMERON, M. (1964) *The Booster and the Snitch: Department Store Shoplifting*. N.Y. The Free Press.
- CAMP, M. G. (1967) *Nothing to Lose: A Study of Bank Robbery in America*. Yale University: Unpublished PH.D. Thesis.
- CAMPBELL, B. A. and CHURCH, R. (ed.) (1969) *Punishment and Aversive Behaviour*. Appleton-Century-Crofts.
- CAMPBELL, D. T. and ROSS, L. H. (1968) The Connecticut Crackdown on Speeding: Time Series Data in Quasi-Experimental Analysis. *Law and Society Review*, Vol. 3, pp. 33-35.
- CARLSMITH, J. M. (1961) *The Effect of Punishment on Avoidance Responses: The Use of Different Stimuli for Training and Punishment*. Paper Read at Eastern Psychological Association Philadelphia (April).
- CHAMBLISS, W. J. (1966) The Deterrent Influence of Punishment. *Crime and Delinquency*, Vol. 12, (1) pp. 70-75.
- CHAMBLISS, W. J. (1967) Types of Deviance and the Effectiveness of Legal Sanctions. (U. Wisconsin, L. R.), *Wisconsin Law Review*, Vol. 3, pp. 703-719.
- CHANG, D. H. (1968) Police Reorganization as a Deterrent to Crime. *Police*, Vol. 12, (4) pp. 72-79.
- CHEYNE, J. A., GOYECHE, J. R. and WALTERS, R. H. (1969) Attention, Anxiety and Rules in Resistance-to-Deviation in Children. *Journal of Experimental Child Psychology*, Vol. 8, pp. 127-139.
- CHEYNE, J. A. and WALTERS, R. H. (1969) Intensity of Punishment, Timing of Punishment and Cognitive Structure as Determinants of Response Inhibition. *J. Exper. Child Psychology*, Vol. 7, pp. 231-244.
- CHEYNE, J. A. and WALTERS, R. H. (1970) Punishment and Prohibition: Some Social Origins of Self-Control. In T. E. Newcomb (ed.) *New Direc-*

- tions in *Psychology*, Vol. 4, Holt, Reinhart and Winston. pp. 281-366.
- CHEYNE, J. A. (1971) Direct and Vicarious Reinforcement: A Note on Punishment and Negative Instances, *J. Ed. Psychol.*, Vol. 63, pp. 63-68.
- CHEYNE, J. A. (1971) Some Parameters of Punishment Affecting Resistance to Deviation and Generalization of a Prohibition. *Child Development*, Vol. 42, pp. 1249-1261.
- CHIRICOS, T. G. and WALDO, G. P. (1970) Punishment and Crime: An Examination of Some Empirical Evidence. *Social Problems*, Vol. 18, (Fall) pp. 200-217.
- CHOPRA, P. (1969) Punishment and the Control of Human Behaviour. *The Australian and New Zealand Journal of Criminology*, Vol. 2, (3), September.
- CHRISTIE, N. (1968) Changes in Penal Values. In. *Scandinavian Studies in Criminology*, Vol. 2, London: Tavistock. pp. 161-172.
- CHURCH, R. M. (1963) The Varied Effects of Punishment on Behaviour. *Psychological Review*, Vol. 70, (5) pp. 369-380.
- CHURCH, R. M. (1966) *The Role of Fear in Punishment*. A Paper Read at the American Psychological Association's Symposium. N.Y. Sept. 6, 1966 Reproduced in *Punishment*, Walters et al (ed.) 1972, Penguin books.
- CHURCH, R. M., RAYMOND, G. A. and BEAUCHAMP, R. D. (1967) Response Suppression as a Function of Intensity and Duration of Punishment. *J. Compar. Psychol. Psychology*. Vol. 43, pp. 351-357.
- CLARK, G. (1969) Black Tuesday in Montreal: What Happens When the Police Strike. Nov. 16, *N.Y. Times Magazine*.
- CLASTER, D. (1967) Comparison of Risk Perception Between Delinquents and Non-Delinquents. *J. of Criminal Law, Criminology and Police Science*. Vol. 58, (March) pp. 80-86.
- CLINARD, M. B. (1952) *The Black Market: A Study of White Collar Crime*. N.Y.: Rinehart.
- CONSEIL de l'EUROPE, (1966) *The Effectiveness of Punishment and Other Measures of the Law Relating to Traffic Offences*. Report prepared by W. Middendorf, Strasbourg: Conseil de l'Europe.
- COOPER, H. H. A. (1973) Crime Control and the Deterrence Perspective. *Criminology*, Vol. 11, (2), pp. 161-182.
- COSER, L. A. (1967) *Continuities in the Study of Social Conflict*. N.Y. Free Press.
- COUSINEAU, D. F. (1972) *A Critique of the Ecological Approach to the Study of Deterrence*. Paper presented at the second International Congress of Criminology, Caracas, Venezuela.
- CRAMTON, R. C. (1969) Driver Behaviour and Legal Sanctions: A Study of Deterrence. *Michigan Law Review*. Vol. 67, (3), pp. 421-454.
- CRANDALL, V. J., ORLEANS, S., PRESTON, A. and RABSON, A. (1958) The Development of Social Compliance in Young Children. *Child Development*, Vol. 29, pp. 429-443.
- CRESSEY, D. R. (1955) Hypotheses in the Sociology of Punishment", *Sociol. Soc. Res.*, Vol. 39, (6) July-August, pp. 394-400.
- CRESSEY, D. (1956) The Nature and Effectiveness of Correctional Techniques. *Law and Contemporary Problems*. Vol. 23, pp. 754-771.
- CROWTHER, C. (1969) Crime, Penalties and Legislature. *The Annals of the American Academy of Political and Social Science*. Vol. 381 (January) pp. 147-158.
- CRUTCHFIELD, (1955) Conformity and Character. *Amer. Psychologist*, Vol. 10, p. 191.
- CUSHING, R. G. (1969) *The Relative Impact of Changing Urban Characteristics*,

- Adequacy of Law Enforcement Resources, and Punishment on the Incidence and Nature of Major Crime*. Proceeding, Annual Convention, Southwestern Sociological Association, pp. 205-209.
- DANN, R. H. (1933) The Deterrent Effect of Capital Punishment. *Friends's Social Science Series, Bulletin, No. 29*.
- DAVITZ, J. R., MASON, D. J., MOWRER, O. H. and VICK, P. (1957) Conditioning of Fear: A Function of Delay of Reinforcement. *American Journal of Psychology*. Vol. 70, pp. 69-74.
- DECKER, J. F. (1972) Curbside Deterrence? An Analysis of the Effect of a Slug-rejector Device, Coin-View Window and Warning Labels on Slug Usage in N.Y. City Parking Meters. *Criminology*, Vol. 10, (2) August, pp. 127-142.
- DELGADO, J. M. R. (1963) Cerebral Heterostimulation in a Monkey Colony. *Science*, Vol. 141, pp. 246-262.
- DELUDE, L. A. (1969) The Vicious-Circle Phenomenon: A Result of Measurement Artifact. *Journal of Comparative and Physiological Psychology*, Vol. 69, pp. 246-262.
- DINSMOOR, A. (1954) Punishment: I. The Avoidance Hypothesis. *Psychological Review*, Vol. 61, pp. 34-46. Punishment: II. An Interpretation of Empirical Findings. *Psychological Review*, Vol. 62, pp. 96-105.
- DINSMOOR, J. A. (1962) A Discrimination Based on Punishment. *Quarterly Journal of Experimental Psychology*, Vol. 4, pp. 27-45.
- DOLESCHAL, E. (1969) The Deterrent Effect of Legal Punishment. *Informative Review on Crime and Delinquency*, Vol. 1, (7), pp. 1-17.
- DOLLARD, J., DOOB, L. W., MILLER, N. E., MOWRER, O. H., and SEARS, R. R. (1939) *Frustration and Aggression*. Yale University Press.
- DREW, G. C. (1938) The Function of Punishment in Learning. *J. Genet. Psychol.* Vol. 52, pp. 257-266.
- DUNHAM, P. J. (1971) Punishment: Method and Theory. *Psychol. Review*. Vol. 78, pp. 58-70.
- DURKHEIM, E. (1893) *The Division of Labor in Society*. (Division du Travail Social) Paris: Alcan.
- ENNIS, P. H. (1967) *Criminal Victimization in the United States: A Report of a National Survey*. Washington, D. C.: U.S. Government Printing Office.
- ENNIS, P. H. (1967) Crime, Victims and the Police, *Trans-Action*, June, pp. 36-44.
- EHRLICH, I. (1972) The Deterrent Effect of Criminal Law Enforcement. *Journal of Legal Studies*. Vol. 1, (2) pp. 259-276.
- ESTES, W. K. (1944) An Experimental Study of Punishment. *Psychological Monographs*, Vol. 57, (3) (whole no. 263).
- FALEY, Th. and TEDESCHI, J. T. (1971) Status and Reactions to Threats. *Journal of Personality and Social Psychology*. Vol. 17, pp. 192-199.
- FATTAH, E. A. (1972) *A Study of the Deterrent Effect of Capital Punishment With a Special Reference to the Canadian Situation*. Ottawa: Information Canada.
- FEELEY, M. (1970) Coercion and Compliance: A New Look at An Old Problem. *Law and Society*, Vol. 4, (4) May, pp. 505-519. Published also in *Compliance and the Law*, ed. Samuel Krislow and others, Russell Sage Publications, 1972.
- FERSTER, C. B. and SKINNER, B. F. (1957) *Schedules of Reinforcement*. New York: Appleton-Century-Crofts.
- FLEW, A. (1954) The Justification of Punishment, *Philosophy*, Vol. 29, (3).
- FLORIDA--Department of Corrections (1966) *Impact of the Gideon Decision Upon Crime and Sentencing in Florida*.
- FORLANO, G. and AXELROD, H. C. (1937) The Effect of Repeated Praise of

- Blame on the Performance of Introverts and Extroverts. *J. Educ. Psychol.*, Vol. 28, pp. 92-100.
- FRIEDLANDER, K. (1947) *Psycho-Analytical Approach to Juvenile Delinquency*. London: Routledge.
- GAHAGAN, J., TEDESCHI, J. T., FALEY, Th. and LINDSKOLD, S. (1970) Patterns of Punishment and Reactions to Threats. *Journal of Social Psychology*, Vol. 80, pp. 115-116.
- GANTT, W. H. (1944) *Experimental Basis for Neurotic Behaviour*. Hoeber.
- GARDINER, G. (1956) *Capital Punishment as a Deterrent: and the Alternative*. London: Victor Gollancz Ltd.
- GENDIM, S. (1967) The Meaning of Punishment, *Philosophy and Phenomenological Research*, Vol. 28, (2), Dec. pp. 235-240.
- GERSONY, C. (1967) Punishment and Redress in a Modern Factory, *Social Quarterly*, Vol. 8, (1), pp. 63-70.
- GIBBS, J. P. (1968) Crime, Punishment and Deterrence. *Southwest Social Science Quarterly*, Vol. 48, (4) pp. 515-530.
- GIBBS, J. P. (1966) Sanctions, *Social Problems*, Vol. 14, pp. 147-159.
- GLASER, D. (1964) *Effectiveness of a Prison and Parole System*. N.Y. Bobbs-Merril.
- GLASS, G. V. (1968) Analysis of Data on the Connecticut Speeding Crackdown as a Times-Series Quasi-Experiment. *Law and Society Review*, Vol. 3, pp. 55-76.
- GOLD, and WILLIAMS, (1969) National Study of the Aftermath of Apprehension. *Prospectus*, 3, 11.
- GOODMAN, L. H., MILLER, T. and De FORREST, P. (1966) *A Study of the Deterrent Value of Crime Prevention Measures as Perceived by Criminal Offenders*. Bureau of Social Science Research, Inc., Washington, D.C.
- GOODMAN, N. (1965) Manchester Senior Attendance Center. *British Journal of Criminology*, Vol. 5, pp. 275-288.
- GRAY, L. N. and MARTIN, J. D. (1969) Punishment and Deterrence: Another Analysis of the Gibbs' Data. *Social Science Quarterly*, Vol. 50, pp. 289-395.
- GRUPP, S. E. (1972) *Theories of Punishment*. Bloomington: University of Indiana Press.
- GWINN, G. T. (1949) The Effects of Punishment on Acts Motivated by Fear. *J. Exp. Psychol.* Vol. 39 pp. 260-269.
- HAKE, D. F. and AZRIN, N. H. (1963) An Apparatus for Delivering Pain-Shock to Monkeys. *J. of Experimental Analysis and Behaviour*. Vol. 6, pp. 297-298.
- HAKE, D. F. and AZRIN, N. H. (1965) Conditioned Punishment. *J. of Experimental Analysis and Behaviour*. Vol. 8 pp. 279-293.
- HAMMOND, W. H. and CHAYEN, E. (1963) *Persistent Criminals*. Home Office Research Unit Report. London: HMSO.
- HAWKINS, G. (1969) Deterrence: The Problematic Postulate. *Australian and New Zealand Journal of Criminology*, Vol. 2, pp. 132-148.
- HAWKINS, G. (1969) Punishment and Deterrence: The Educative, Moralizing, and Habitutive Effects. *Wisconsin Law Review*. Vol. 2, pp. 550-565. (Also in Grupp, S. E., *Theories of Punishment*, Bloomington: Indiana University Press, pp. 163-180).
- HENSHEL, R. and CAREY, S. (1972) *Deviance, Deterrence and Knowledge of Sanctions*. Paper presented at the annual meeting of the Eastern Sociological Society, Boston, Massachusetts.
- HENSHEL, L. R. (1972) *Deterrence and Knowledge of Sanctions*. Unpublished Paper Presented at the Eastern Sociological Society Meetings, Boston (April).

- HENTIG, H. VON. (1938) The Limits of Deterrence. *The Journal of Criminal Law and Criminology*, pp. 551-561.
- HERMAN, R. L. and AZRIN, N. H. (1964) Punishment by Noise in an Alternative Response Situation. *J. of Experimental Analysis and Behaviour*. Vol. 7, pp. 185-188.
- HOLZ, W. C. and AZRIN, N. H. (1961) Discriminative Properties of Punishment. *J. of Experim. Anal. Behaviour*. Vol. 4, pp. 225-232.
- HOLZ, W. C., and AZRIN, N. H. (1962) Inner Actions Between the Discriminative and the Aversive Properties of Punishment. *Journal of the Experimental Analysis of Behaviour*. Vol. 5, pp. 229-234.
- HOLZ, W. C. AZRIN, N. H. and AYLLON, T. (1963) A comparison of several procedures for eliminating behaviour. *Journal of Experimental Analysis and Behaviour*. Vol. 6, pp. 399-406.
- HONDERICH, T. (1969) *Punishment: the Supposed Justifications*. London: Hutchinson. Also published as a Pelican book in 1971.
- HOOD, R. (1964) *Research on the Effectiveness of Punishments and Treatments*. Report presented at the European Council.
- HOOD, R. and SPARKS, (1970) *Key Issues in Criminology*. London: World University Library.
- HORAI, J. and TEDESCHI, J. T. (1969) Effects of Credibility and Magnitude of Punishment on Compliance to Threats. *Journal of Personality and Social Psychology*, Vol. 12, pp. 164-169.
- HUNT, H. F. and BRADY, J. V. (1955) Some Effects of Punishment and Inter-current Anxiety on a Simple Operant. *Journal Comp. Physiology and Psychology*, Vol. 48, pp. 305-310.
- HURLOCK, E. G. (1924) The Value of Praise and Reproof as Incentives for Children. *Arch. Psychology*, (N.Y.) Vol. 11, (71).
- HUTCHINSON, R. R., ULRICH, R. E. and AZRIN, N. H. (1965) Effects of Age and Related Fact on the Pain-Aggression Reaction. *Journal of Comp. Physiol. Psychol.*, Vol. 59, pp. 365-369.
- HUTCHINSON, R. R., AZRIN, N. H. and HUNT, G. M. (1968) Attack produced by intermittent reinforcement of a concurrent operant response. *J. of Experimental Analysis and Behaviour*. Vol. 11, pp. 316-319.
- IMADA, M. (1959) The Effects of Punishment on Avoidance Behaviour. *Jap. Psychol. Res.* Vol. 1, pp. 27-38.
- INBAU, F. E. and CARRINGTON, F. G. (1971) The case of the so-called hard line approach to crime, *Annals of the American Academy of Political and Social Science*, Vol. 397, pp. 19-21.
- JAAKKOLA, R. and TAKALA, H. (1971) *The Problem of Drunken Driving in Finland*. Helsinki: Institute of Criminology.
- JAFFARY, S. (1963) *Sentencing of Adults in Canada*. Toronto: Toronto University Press.
- JAYEWARDENE, C. H. S. (1972) *Homicide and Punishment: A Study in Deterrence*. Paper presented to the Canadian Sociology and Anthropology Association. Montreal, (May).
- JAYEWARDENE, C. H. S. (1973) Life or Death—Society's Reaction in Murder? *Canadian Journal of Criminology and Corrections*. Vol. 15, (3) pp. 265-273.
- JEFFERY, C. R. (1965) Criminal Behaviour and Learning Theory. *Journal of Criminal Law, Criminology and Police Science*, Vol. 56, pp. 295-300.
- JENSEN, G. F. (1969) Crime Doesn't Pay: Correlates of a Shared Misunderstanding. *Social Problems*, Vol. 17, pp. 189-201.
- JOHNSTON, S. (1971) Imprisonment and Deterrence. *W. Australian Law Journal*, Vol. 45, pp. 305-312.
- KAMIN, L. J. (1959) The Delay-Of-Punishment Gradient. *Journal Comp. Phys-*

- iol. Psychol.*, Vol. 52, pp. 434-437.
- KARSH, E. B. (1963) Change in Intensity of Punishment: Effect of Runway Behaviour of Rats. *Science*, Vol. 140, pp. 1084-85.
- KELLEHER, R. T. and COOK, L. (1959) An Analysis of the Behaviour of Rats and Monkeys on Concurrent Fixed-Ratio Avoidance Scheduled. *Journal Exp. Analysis and Behaviour*. Vol. 2, pp. 203-211.
- KINBERG, O. (1935) *Basic Problems in Criminology*. Copenhagen: Levin and Munksgaard.
- KIRCHWEY, G. W. (1911) Crime and Punishment, *Journal of Criminal Law and Criminology*, Vol. 1, pp. 718-734.
- KLETTE, (1963) Effects of Legislation Concerning Drunken Driving in Sweden. In *Proceedings of Third International Conference on Alcohol and Road Traffic*.
- KOBRIN, S. et al (1972) *The Deterrent Effectiveness of Criminal Justice Sanction Strategies*. (summary report) LEAA--U.S. Department of Justice. 38 pages.
- KUYKENDALL, H. K. (1969) *The Deterrent Efficacy of Punishment*. Unpublished masters thesis, The University of Texas.
- LEFKOWITZ, M. M., WALDEN, L. O. and ERON, L. D. (1963) Punishment, Identification and Aggression. *Merrill-Palmer Quarterly*, Vol. 9, pp. 159-174.
- LEMERT, E. (1958) An Isolation and Closure Theory of Naive Check Forger. *Journal of Criminal Law, Criminology and Police Science*. Vol. 44, pp. 296-308.
- LEONARD, V. A. (1972) *Crime Prevention*. Springfield, Ill.: Charles C. Thomas.
- LEVENTHAL, SINGER and JONES, (1965) Effects of Fear and Specificity of Recommendation Upon Attitudes and Behaviour. *Journal Pers. and Soc. Psychology*, 2, 20.
- LEWIN, K. (1951) *Reward and Punishment*, A Dynamic Theory of Personality Selected Papers of Kurt Lewin.
- LICHENSTEIN, P. E. (1950) Studies of Anxiety: 1. The Production of a Feeding Inhibition in Dogs. *J. Comp. Physiol. Psychol.*, Vol. 43, pp. 16-29.
- LINDESMITH, A. (1947) *Opiate Addiction*. Evanston, Ill.: Principia Press.
- LITWACK, E. (1956) Three Ways in Which Law Acts as a Means of Social Control: Punishment, Therapy and Education. *Social Forces*, Vol. 34 (3), pp. 217-223.
- LOGAN, F. A. and WAGNER, A. R. (1965) *Reward and Punishment*. Allyn and Bacon.
- LOGAN, C. H. (1971a) *Legal Sanctions and Deterrence From Crime*. PH. Dissertation. University of Indiana. Ann Arbor, Mich., University Microfilms, 164 pages.
- LOGAN, C. H. (1971b) On Punishment and Crime (Chiricos and Waldo 1970): Some Methodological Commentary. *Social Problems*, Vol. 19, pp. 280-284.
- LOGAN, C. H. (1972) General Deterrent Effects of Imprisonment. *Social Forces*, Vol. 51, pp. 64-73.
- LOVAAS, O. I. (1961) Effect of Exposure to Symbolic Aggression on Aggressive Behaviour. *Child Development*, Vol. 32, pp. 37-44.
- LOVALD, K. and STUB, H. R. (1968) The Revolving Door: Reactions of Chronic Drunkenness Offenders to Court Sanctions. *J. of Criminal Law, Criminology and Police Science*, Vol. 59, (4) pp. 525-530.
- MAIER, W. R. F. (1949) *Frustration: The Study of Behaviour Without a Goal*. McGraw-Hill.
- MANNHEIM, H. (1940) *Social Aspects of Crime in England Between the Wars*. London: Allen and Unwin.

- MANNHEIM, H. and WILKINS, L. T. (1955) *Prediction Methods in Relation to Borstal Training*, London: HMSO.
- MARSHALL, H. H. (1965) The Effects of Punishment on Children: A Review of the Literature and A Suggested Hypothesis. *Journal of Genetic Psychology*, Vol. 106, pp. 23-33.
- MASSERMAN, J. H. (1943) *Behaviour and Neurosis*. University of Chicago Press.
- MASSERMAN, J. H. (1946) *Principles of Dynamic Psychiatry*. Philadelphia: Saunders.
- MATTICK, H. W. (1966) *Unexamined Death: An Analysis of Capital Punishment*. Center for Studies in Criminal Justice—University of Chicago.
- MAYER, H. (1936) *Das Strafrecht des deutschen Volkes*. Stuttgart.
- MEAD, G. H. (1918) The Psychology of Punitive Justice. *American Journal of Sociology*, Vol. 23, pp. 577-602.
- MEYER, W. J. and OFFENBACH, S. I. (1962) Effectiveness of Reward and Punishment as a Function of Task Complexity. *Journal of Comp. Psychol. Psychol.*, Vol. 58, pp. 512-534.
- MEYER, J. (1968) Reflections on Some Theories of Punishment. *Journal of Criminal Law, Criminology and Police Science*, Vol. 59, pp. 595-599.
- MIDDENDORF, W. (1968) *The Effectiveness of Punishment Especially in Relation to Traffic Offences*, South Hackensack, N.J.: Fred. E. Rothman and Co.
- MIKA, S. (1968) The Social Aspects of Punishment: Some Research Results. *Psychological Wychowawega, (Warsaw)* Vol. 25, (1) pp. 31-50.
- MILLER, N. E. (1960) Learning Resistance to Pain and Fear: Effects of Over-learning, Exposure and Rewarded Exposure in Context. *J. Exp. Psychol.*, Vol. 60, pp. 137-145.
- MOBERLY, W. (1968) *The Ethics of Punishment*, Connecticut: Archon Books.
- MORRIS, N. (1951) *The Habitual Criminal*. London: Longmans.
- MORRIS, N. (1966) Impediments to Penal Reform, *University of Chicago Law Review*, Vol. 33, (3), pp. 627-656.
- MORRIS, N. and ZIMRING, F. (1969) Deterrence and Corrections. *The Annals of the American Academy of Political and Social Science*, Vol. 381, pp. 137-146.
- MORTON, D. (1962) *The Function of the Criminal Law*. Toronto: CTC.
- MOWRER, O. H. and ULLMAN, A. D. (1945) Time as a Determinant in Integration Learning. *Psychol. Review*, Vol. 52, pp. 61-90.
- MOWRER, O. H. (1947) On the Dual Nature of Learning. *Harvard Educat. Rev.* Vol. 17, pp. 102-148.
- MOWRER, O. H. (1950) *Learning Theory and Personality Dynamics*, Ronald Press.
- MOWRER, O. H. (1960) *Learning Theory and Behaviour*, N.Y. J. Wiley.
- MOWRER, O. H. (1960) *Learning Theory and the Symbolic Processes*. J. Wiley and Sons.
- MUSSEN, P. H. and RUTHERFORD, E. (1961) Effects of Aggressive Cartoons on Children's Aggressive Play. *J. Abnorm. Soc. Psychol.*, Vol. 62, pp. 461-465.
- NEWMAN, O. (1973) *Architectural Design for Crime Prevention*, Washington, D.C.: U.S. Dept. of Justice.
- NORMANDEAU, A. and SCHWARTZ, B. (1968) Evaluation de l'effet intimidant de la peine. (le cas du viol à Philadelphia). Extrait de la *Revue de Droit Pénal et de Criminologie*, Vol. 48, (4), pp. 457-465.
- NUTTIN, J. and GREENWALD, A. C. (1968) Reward and Punishment in Human Learning, *Academic Press*.

- O'CONNOR, D. (1971) Punishment and Crime, *Australian and New Zealand Journal of Criminology*, Vol. 4, p. 168.
- OSBORNE, H. W. (1968) On Crime, Punishment and Deterrence. *Social Science Quarterly*, Vol. 49, pp. 157-160, Replay pp. 161-162.
- PACKER, H. L. (1968) *The Limits of the Criminal Sanction*, Stanford University Press.
- PALMER, J. W. (1967) Punishment A Field for Experiment. *British Journal of Criminology*, Vol. 7, (4) pp. 434-441.
- PARK, R. D. and WALTERS, R. H. (1965) *Some Factors Influencing the Efficacy of Punishment Training to Induce Response Inhibition*. Monograph of the Soc. for Research in Child Development, Vol. 63, (7).
- PENNEY, R. K. and LUPTON, A. A. (1961) Children's Discrimination Learning as a Function of Reward and Punishment. *Journal of Comp. Physiol. Psychol.*, Vol. 54, pp. 449-451.
- PHILLIPS, L. (1972) *Crime Control: The Case for Deterrence*. Paper presented at the American Enterprise Institute Conference on the Economics of Crime and Punishment, Washington, D.C. July 17-18.
- PITTMAN, D. J. and GORDON, C. W. (1958) *Revolving Door: A Study of the Chronic Public Inebriate*, Glencoe, Ill., Free Press.
- POSTMAN, L. (1962) Reward and Punishment in Human Learning, in L. Postman (ed.) *Psychology in the Making*, Knopf.
- POTTER, E. H. (1943) The Effect of Reproof in Relation to Age in School Children, *Journal of Genet. Psychology*, Vol. 63, pp. 247-258.
- PRESS, S. J. (1971) *Some Effects of An Increase in Police Manpower in the 20th Precinct of New York City*, N.Y.: Rand Institute.
- RACHLIN, (1967) The Effect of Shock Intensity on Concurrent and Single-Key Responding in Concurrent Chain Schedules. *J. of Experimental Analysis and Behaviour*, Vol. 10, (87).
- RENNER, K. E. (1964) Delay of Reinforcement: A Historical Review. *Psychol. Bull.*, Vol. 61 pp. 341-361.
- RETTIG, S. and PASAMANICK, B. (1960) Difference in the Structure of Moral Values of Students and Alumni. *American Sociological Review*, Vol. 25.
- RETTIG, S. (1964) Ethical Risk Sensitivity in Male Prisoners, *The British Journal of Criminology*, Vol. 4, (6), pp. 582-590.
- RETTIG, S. and PASAMANICK, B. (1964) Differential Judgement of Ethical Risk by Cheaters and Non-Cheaters. *Journal of Abnormal and Social Psychology*, Vol. 69, pp. 109-113.
- ROBERTSON, L. S., RICH, R. F. and ROSS, H. L. (1973) Jail Sentences for Driving While Intoxicated in Chicago: A Judicial Policy That Failed. *Law and Society Review*, Vol. 8, No. 1, Fall 1973 pp. 55-59.
- ROSE, A. M. and PRELL, A. E. (1955) Does the Punishment Fit the Crime? A Study in Social Valuation. *American Journal of Sociology*, Vol. 61, pp. 247-259.
- ROSS, H. and CAMPBELL, D. (1968) The Connecticut Speed Crackdown: A Study of the Effects of Legal Change. In H. Lawrence Ross (ed.) *Perspectives on the Social Order*, N.Y. McGraw-Hill.
- ROSS, H. L., CAMPBELL, D. T. and GLASS, G. V. (1970) Determining the Social Effects of a Legal Reform: The British Breathalyzer Crackdown of 1967. *American Behavioural Scientist*, Vol. 13, pp. 493-509.
- RUCHE, G. and KIRCHHEIMER, O. (1939) *Punishment and the Social Structure*. N.Y.: Columbia University Press.
- SACHER, E. J. (1963) Behaviour Science and Criminal Law. *Scientific American*, Vol. 209, (5), pp. 39-45.
- SAGALYN, A. and LITTLE, A. D. (1971) *The Crime of Robbery in the United*

- States. Washington, C.D.: U.S. Dept. of Justice.
- SALEM, R. G. and BOWERS, W. J. (1970) Severity of Formal Sanctions as a Deterrent to Deviant Behaviour, *Law and Society*, Vol. 5, (1), pp. 21-40.
- SALEM, R. G. and BOWERS, W. J. (1969) The Deterrent Effects of Formal Sanctions. Paper presented to the American Sociological Association Meetings, San Francisco.
- SATTEN, J. (1963) Effects of Present Correctional Practices on Offenders, Extract from: *Academy of Medicine of New-Jersey Bulletin*, Vol. 9, (2) pp. 83-94.
- SAVITZ, L. D. (1958) Study in Capital Punishment. *Journal of Criminal Law, Criminology and Police Science*, Vol. 49, pp. 328-341.
- SCHAFER, S. (1968) *The Victim and His Criminal*. N.Y.: Random House.
- SCHMIDEBERG, M. (1968) Re-evaluating the Concepts of Rehabilitation and Punishment. *International Journal of Offender Therapy*, Vol. 12, (1), pp. 25-28.
- SCHOHAM, G. S. (1974) Punishment and Traffic Offences. *Traffic Quarterly*, January, pp. 61-73.
- SCHUESSLER, K. F. (1952) The Deterrent Influence of the Death Penalty. *Annals of the American Academy of Political and Social Science*, Vol. 284, pp. 54-62.
- SCHWARTZ, B. (1968) The Effect in Philadelphia of Pennsylvania's Increased Penalties for Rape and Attempted Rape. *Journal of Criminal Law, Criminology and Police Science*, Vol. 59, (4) pp. 509-515.
- SCHWARTZ, R. F. and ORLEANS, S. (1967) On Legal Sanctions, *University of Chicago Law Review*, Vol. 34, pp. 274-300.
- SCHWARTZ, R. F. (1969) *Sanctions and Compliance*. San Francisco: Presented at the American Sociol. Assoc. Meetings.
- SEAGRAVES, R. W. (1972) Is Punishment an Adequate Deterrent to Crime. *Judicature*, Vol. 55, (6), pp. 236-238.
- SEARS, R. R. (1950) Relation of Fantasy Aggression to Interpersonal Aggression. *Child Development*, Vol. 21, pp. 3-4.
- SEARS, R. R., MACCOBY, E. E. and LEVIN, H. (1957) *Patterns of Child Rearing*, Evanston, Ill.: Row Peterson.
- SEARS, R. R. (1961) Relation of Early Socialization Experiences to Aggression in Middle-Childhood. *J. Abnorm. Soc. Psychology*, Vol. 63, pp. 466-492.
- SELLIN, T. (1960) L'effet Intimidant de la Peine. *Revue de Science Criminelle et de Droit Pénal Comparé*, Vol. 4, pp. 579-593.
- SELLIN, T. (1961) Capital Punishment, *Federal Probation*, Vol. 25, (3), pp. 3-11.
- SELLIN, T. (1966) Effect of Repeal and Reintroduction of the Death Penalty of Homicide Rates. *The Death Penalty in America*, H. A. Bedau (ed.), Chicago: Aldine.
- SELLIN, T. (1967) *Capital Punishment*. N.Y. Harper and Row.
- SEWARD, J. P. (1954) Learning Theory and Identification: II. The Role of Punishment. *J. Genet. Psychology*, Vol. 84, pp. 201-220.
- SIEGEL, A. E. (1959) Film-Minded Fantasy Aggression and Strength of Aggression Drive. *Child Development*, Vol. 27, pp. 365-378.
- SINGER, B. F. (1970) Psychological Studies of Punishment. *California Law Review*, Vol. 58, (2), pp. 405-443.
- SINGTON, D. and PLAYFAIR, G. (1965) *Crime Punishment and Cure*. London: Secker and Warburg.
- SKINNER, B. F. (1938) *The Behaviour of Organisms*. Appleton-Century-Crofts.
- SKINNER, B. F. (1953) Punishment: A Questionable Technique. In *Science and Human Behaviour*, Free Press, pp. 182-193.
- SKOLNICK, J. H. (1967) *Coercion to Virtue: A Sociological Discussion of the*

- Enforcement of Morals*. Submitted to the President's Commission on Law Enforcement and Administration of Justice. Washington, D.C. 80 pages.
- SMITH, S. (1965) Delinquency and the Panacea of Punishment, *Federal Probation*, Vol. 29 (3) pp. 18-23.
- SOCIAL PSYCHOLOGY RESEARCH ASSOCIATES, (1968) *Public Knowledge of Criminal Penalties*, A Research Report, San Francisco, 20 pages.
- SOLOMON, R. L. (1964) Punishment *American Psychologist*, Vol. 19, pp. 239-253.
- SPARKS, H. (1964) *The Crime of Punishment*. (Part I). *Presidio*, Vol. 31 (9) pp. 14-16.
- SPROTT, W. J. H. (1965) *Sentencing Policy*. In: University of Keele (Great Britain) Sociological Studies in the British Penal Services, Edited by Peter Halmos, Keele, Stratfordshire, pp. 31-48. (Sociological Review: Monograph, No. 9).
- STEPHENS, J. M. (1934) Further Notes on Punishment and Reward. *J. Genet. Psychology*, Vol. 44, pp. 464-472.
- STEPHENS, J. M. (1941) The Influence of Symbolic Punishment and Reward Upon Strong and Weak Associations. *J. Genet. Psychology*, Vol. 25, pp. 177-185.
- STEPHENS, J. M. and BAER, J. A. (1944) Factors Influencing the Efficacy of Punishment and Reward: the Opportunity For Immediate Review and Specific Instructions Regarding the Expected Role of Punishment. *J. Genet. Psychology*, Vol. 65, pp. 53-66.
- STEVENSON, H. W., WEIR, M. and ZIGLER, E. F. (1959) Discrimination Learning in Children as a Function of Motive-Incentive Conditions. *Psychol. Rep.* Vol. 5, pp. 95-98.
- STORMS, L. H., BOROCZI, G. and BROEN, W. E. (1962) Punishment Inhibits and Instrumental Response in Hooded Rats. *Science*, Vol. 135, pp. 1133-1134.
- SUTHERLAND, E. and CRESSEY, D. (1964) *Principles of Criminology* Lippincott.
- TAPP, J. T. (1969) *Reinforcement and Behaviour*. N.Y. Academic Press.
- TAPPAN, P. W. (1960) *Crime, Justice and Correction*, N.Y.: McGraw-Hill Co.
- TEEVAN, J. Jr. (1972) Deterrent Effects of Punishment: The Canadian Case. *Canadian Journal of Criminology and Corrections*, Vol. 14, (1), pp. 68-82.
- TEEVAN, J. Jr. (1972) *Deterrent Effects of Punishment: Toward Subjective Measures*, Paper presented at Eastern Sociological Meetings, Boston, Massachusetts.
- TEEVAN, J. Jr. (1973) *Deterrent Effects of Punishment: Subjective Measures Continued*, Paper read at SSSP meetings, N.Y. August 1973.
- TEMPLE, (1934) *The Ethics of Penal Action*, First Clark Hall Lecture.
- TERRELL, G. Jr. and KENNEDY, W. A. (1957) The Discrimination Learning and Transposition in Children as a Function of the Nature of the Reward. *J. Exper. Psychology*, Vol. 58, pp. 257-260.
- THORNBERRY, T. P. (1972) *Punishment and Crime: The Effect of Legal Dispositions on Subsequent Criminal Behaviour*, PH.D. Thesis, Ann Arbor, Michigan, University Microfilms.
- THORNDIKE, E. L. (1913) *Educational Psychology*, Vol. 2, *The Psychology of Learning*, Teachers' College, University of Columbia.
- THORNDIKE, E. L. (1932) *Rewards and Punishments in Animal Learning*, Comparative Psychology Monograph, Vol. 8, pp. 1-65.
- TITTLE, C. R. (1969) *Crime and Deterrence*, Paper Presented to the American Sociological Association Meetings, San Francisco.
- TITTLE, C. R. (1969) Crime Rates and Legal Sanctions, *Social Problems*, Vol.

- 16, (4), pp. 409-422.
- TITTLE, C. R. and ROWE, A. R. (1973a) Certainty of Arrest and Crime Rates: A Further Test of the Deterrence Hypothesis. *Social Forces*.
- TITTLE, C. R. and ROWE, A. R. (1973b) Moral Appeal, Sanction Threat and Deviance: An Experimental Test. *Social Problems*, Vol. 20, (4) pp. 488-498.
- TITTLE, C. R. and LOGAN, C. H. (1973) Sanctions and Deviance Evidence and Remaining Questions. *Law and Society*, Vol. 7 (3), pp. 371-393.
- TOBY, J. (1964) Is Punishment Necessary? *Journal of Criminal Law, Criminology and Political Science*, Vol. 55, (3), pp. 332-337.
- TORMUDD, P. (1968) The Preventive Effect of Fines for Drunkenness. In: *Scandinavian Studies in Criminology*, Vol. 2, Oslo, Universitetsforlaget, pp. 109-124.
- ULRICH, R. E. and AZRIN, N. H. (1962) Reflexive Fighting in Response to Aversive Stimulation. *J. of Experimental Analysis and Behaviour*, Vol. 5, pp. 511-520.
- ULRICH, R. E., WOLFF, P. C. and AZRIN, N. H. (1964) Shock as an Elicitor of Intra- and Inter- Species Fighting Behaviour. *Animal Behaviour*, Vol. 12, pp. 14-15.
- VAN DEN HAAG, E. (1969) On Deterrence and the Death Penalty, *J. Criminal Law, Criminology and Police Science*, Vol. 60, pp. 141-147.
- VERMEUL, P. K. (1963) *A Socio-Criminological Study of the Effect of the Threat of Punishment on the Commission of Crime*. Criminological Institute, State University, Groningen, 1963-1967.
- VOGEL-SPROTT, M. and BANKS, R. K. (1966) The Effects of Delayed Punishment on an Immediately Rewarded Response in Alcoholics and Non-Alcoholics. *Behav. Res. Therapy*, Vol. 3, pp. 69-72.
- VOLD, G. B. (1932) Can the Death Penalty Prevent Crime? *The Prison Journal*, pp. 3-8.
- WAITE, (1958) The Legal Approach to Crime and Correction, *Law and Contemporary Problems*, Vol. 23, pp. 594-596.
- WALDO, G. and CHIRICOS, T. (1972) Perceived Penal Sanctions and Self-Reported Criminality: A Neglected Approach to Deterrence Research. *Social Problems*, Vol. 19, pp. 522-540.
- WALKER, N. and ARGYLE, M. (1964) Does the Law Affect Moral Judgements? *British Journal of Criminology* Vol. 4, pp. 570-581.
- WALKER, N. (1965) *Crime and Punishment in Britain*, Edinburg.
- WALKER, N. (1968) *Crime and Punishment in Britain*, (Revised Edition) Edinburg: the University Press.
- WALKER, N. (1971) *Sentencing in a Rational Society*, N.Y.: Basic Books.
- WALKER, N. (1971) *Crimes, Courts and Figures*, A Penguin Book.
- WALTERS, G. C. and ROGERS, J. V. (1963) Aversive Stimulation of the Rat: Long Term Effects on Subsequent Behaviour. *Science*, Vol. 142, pp. 70-71.
- WALTERS, R. H., LEAT, M. and MEZEI, L. (1963) Inhibition and Disinhibition of Responses Through Emphathetic Learning. *Canadian Psychology*, Vol. 17, pp. 235-243.
- WALTERS, R. H. (1964) Delay of Reinforcement Gradients in Children's Learning. *Psychol. Science*, Vol. 1, pp. 307-308.
- WALTERS, R. H. and PARKE, R. D. (1968) The Influence of Punishment and Related Disciplinary Techniques on the Social Behaviour of Children; Theory and Empirical Findings. In: B. A. Maher (ed.) *Progress in Experimental Personality Research*, Vol. 3, Academic Press. pp. 179-228.
- WALTERS, H. R., CHEYNE, J. A. and BANKS, K. R. (eds) (1972) *Punishment — Selected Readings*. Penguin Modern Psychology Readings, Middlesex: Penguin Books.

- WEEKS, H. A. (1958) *Youthful Offenders at Highfields*, Ann Arbor: University of Michigan Press.
- WEEKS, H. A. (1962) The Highfields Project and Its Success. In: Johnston et al (eds.) *The Sociology of Punishment and Correction*, pp. 203-213. N.Y.: J. Wiley.
- WHITEIS, U. E. (1955) *A Study of the Effects of Punishment on Avoidance Behaviour*, Unpublished Doctoral Thesis -- Harvard University.
- WHITING, J. W. and CHILD, I. L. (1953) *Child Training and Personality: A Cross-Cultural Study*, Yale University Press.
- WILKINS, L. (1958) A Small Comparative Study of the Results of Probation. *British J. of Delinquency*, Vol. 8, pp. 201-209.
- WILKINS, L. (1962) Criminology: An Operational Research Program. In: *Society, Problems and Methods of Study*, (ed. Welford et al) p. 322.
- WILKINS, L. (1964) *Social Deviance*, London: Tavistock.
- WILKINS, L. (1967) *Social Policy, Action, and Research*, London: Tavistock.
- WILKINS, L. (1969) *Evaluation of Penal Measures*, N.Y.: Random House.
- WILLCOCK H. D. and STOKES, J. (1968) *Deterrence and Incentives to Crime Among Youths aged 15-21 Years*. London: Government Social Survey.
- WISNER, G. J. (1947) The Effects of Punishment on Discrimination Learning in a Non-Correction Situation. *J. Exp. Psychol.*, Vol. 37, pp. 271-284.
- WISNER, G. J., FOWLER, H. and KUSHNICK, S. A. (1963) The Effect of Strength of Punishment for "Correct" and "Incorrect" Responses on Performance. *J. Exp. Psychology*, Vol. 65, pp. 131-138.
- WOOTTON, B. (1963) *Crime and the Criminal Law*, London: Stevens and Sons, 18 pages.
- WRIGHT, D. (1972) The Punishment of Children: A Review of Experimental Studies, *Journal of Moral Education*, Vol. 1, (3), pp. 221-229.
- ZILBORG, G. (1954) *The Psychology of the Criminal Act and Punishment*.
- ZIMBEROFF, S. J. (1968) Behaviour Modification With Delinquents. *Correctional Psychologist*, Vol. 3, (6), pp. 11-25.
- ZIMMERMAN, J. and FERSTER, C. B. (1963) Intermittent Punishment of S. Responding in Matching to Sample, *Journal of Exp. Animal Behaviour*, Vol. 6, pp. 349-356.
- ZIMRING, E. F. and HAWKINS, J. G. (1968) Deterrence and Marginal Groups. *J. of Research in Crime and Delinquency*, Vol. 5 (2), pp. 100-115.
- ZIMRING, F. E. (1971) *Perspectives on Deterrence*, Center for Studies on Crime and Delinquency, National Institute of Mental Health, Washington, D.C., U.S. Government Printing Office, 109 pages.
- ZIMRING, F. E. (1972) Of Doctors, Deterrence, and the Dark Figure of Crime. A Note on Abortion in Hawaii. *The University of Chicago Law Review*, Vol. 39, No. 4, Summer 1972, pp. 699-721.
- ZIMRING, E. E. and HAWKINS, J. G. (1973) *Deterrence: The Legal Threat in Crime Control*, Chicago: The University of Chicago Press.

Deterrent effects
of punishment
for
breaking and entering
and theft

JAMES J. TEEVAN Jr., Ph.D.

Introduction

The traditional argument of those who believe in the social deterrent effects of punishment contends that the example set by a criminal getting punished will discourage other persons from committing similar crimes. This conception is one of vicarious punishment, that is, other individuals will not commit such crimes because they will anticipate that they will be punished similarly. As a corollary to the main hypothesis, it is argued further that the more severe the punishment meted out to the criminal, the greater the deterrent effects for others. Individuals are more threatened by severe than lenient punishment. With such logic, many citizens ask for the return of capital punishment and for heavier sentences handed down in order to control crime.

Several studies have attempted to test these notions, that is, the question of whether punishment does deter. The research seeks to discover whether changes in *severity* of punishment, measured perhaps by length of sentence served, or *certainty* of punishment, measured by the proportion of criminals imprisoned out of the total number of crimes, show any consistent relationship to changes in crime rates (see Fattah, 1972; Teevan, 1972). Such investigators usually attempt to test the long standing hypotheses of Bentham (1843) that celerity, certainty and severity of punishment are inversely related to the incidence of crime. The quicker, the more certain, and the more severe the punishment, the less crime there will be. The less often stated obverse is that the slower, the less certain and less severe the punishment, the more crime there will be.

Other researchers, especially social psychologists, have examined how the potential or actual criminal *perceives* the probability of punishment, how *he* defines certainty, or severity, if indeed he does perceive such variables. The type of punishment, how it is perceived, or perhaps even more importantly, if it is perceived, are among the issues posed by researchers concerned with subjective measures of deterrent effects.

This report subscribes to this latter position, that subjective perceptions of the certainty and severity of punishment must be examined in order to demonstrate deterrent effects. Data on subjective perceptions of punishment and subsequent incidences of theft and breaking and entering are presented. The overall purpose is to study the question: will increasing the punishment meted out to convicted thieves deter other potential thieves?

The report contains four sections. Part one discusses recent studies on subjective measures of deterrence, the second section describes the methodology of the current research. In part three are the data. Section four concludes the paper with a discussion, a summary and implications of the research. A brief bibliography follows.

1 *Subjective Measures of Deterrence*

Increasing numbers of sociologists have taken the position that the individual's *subjective* perceptions of certainty and severity of punishment may be different from the *actual* or objective certainty and severity and further, that these subjective perceptions are more important than actual conditions in the deterrence of deviance.

Henshel and Carey (1971) argue for instance, that between actual sanctions and offence rates there is an individual who first may or may not perceive sanctions, second, may or may not calculate the risks involved and third, makes a decision to commit or not to commit an offence. For the threat of punishment to be an effective deterrent it *must exist for that individual*. If the individual "holds no cognition relative to the punitive sanction (i.e. it has not been heard of, believed in, or felt applicable), then the *objective existence* of sanctions with specified levels of severity, certainty, swiftness is of no consequence..." (Henshel and Carey, 1971, p.5).

Several sociologists recently have made empirical tests of these notions. Each will be discussed in chronological order. First, Claster (1967) tested the hypothesis that perceptions of increasing certainty of punishment should deter deviance. Briefly, to summarize, he found that: (1) although incarcerated, delinquents do not underestimate certainty of punishment *for others* more than do non-delinquents, thus no relationship between general certainty of punishment and delinquency; (2) they, more than non-delinquents, perceive that it is unlikely in a hypothetical situation that *they themselves* (personal certainty) would be caught for committing certain offences. Claster interprets the first finding as evidence against, and the second finding as evidence for the deterrence hypothesis. We would argue, however, that Claster's first finding may be irrelevant to the deterrence hypothesis. If the delinquents perceive *for themselves* a lower certainty of punishment, then their perceptions concerning the certainty of punishment for anonymous others may not be salient for them. Their actions are determined by their perceptions of the risks to themselves and not by their perceptions of the risks to others. In this case the calculations of the two risks are not positively related.

Jensen (1969) attempted to improve Claster's study both by using *self-reported* delinquents and a general measure of deterrence rather than Claster's institutionalized sample and deterrence for specific offences. His study was an advance because of his wider sample but perhaps a step backward because of his deterrence measure. In effect he was relating the broad certainty of punishment for all offences to specific offence rates. It could be argued that the potential criminal thinks of the certainty of punishment *for the specific crime he is planning* and not the certainty of punishment for all crimes. This lack of comparability, however, should reduce any deterrent effects and bias results against the research hypothesis.

Briefly, Jensen found that as perceptions of certainty and punishment decrease, both self-reported and officially recorded delinquency increase. The deterrence hypothesis thus is supported again.

Both studies thus give some support to a deterrence hypothesis, and more importantly, they do so using different populations and different measures of deterrence. To reexamine perceived certainty of punishment for a different population and for different offences and to examine severity, Waldo and Chiricos (1972) collected data from university students on their perceptions of: (1) maximum prison sentences both for possession of marijuana and theft under \$100 (severity); (2) the likelihood that someone like them would be caught by the police for those offences (personal certainty); (3) the probability of anyone being caught by the police for those offences (general certainty); (4) personal marijuana use and theft.

Waldo and Chiricos, unlike Claster, found that individuals who perceive a higher certainty of punishment even for anonymous others are slightly less likely to smoke marijuana and to engage in theft than those who perceive a lower certainty. These data support the deterrence hypothesis and this support is even stronger using the personal certainty measure of perceived likelihood that "someone like them would be arrested". The great majority of the students, however, feel that it is unlikely that someone like them would be caught. Again, we would argue that the more important measure of certainty is what the individual perceives to be *his* probability of punishment as measured by the personal certainty questions. That general deterrence in this instance is also negatively related to crime may be a function of a positive relationship between personal deterrence and general deterrence, that is, an individual who perceives it as likely that someone like him would be punished may also perceive it likely that anonymous others similarly would be punished.

Waldo and Chiricos found self-reported marijuana use and theft unrelated to variations in perception of severity of punishment. Those respondents who perceive a higher severity of punishment do not report significantly fewer offences than those who perceive a lesser severity.

Waldo and Chiricos also reasoned that if perceptions of certainty of punishment do deter, then the effects of that deterrence should be greater for marijuana use than for theft. Offences wrong in themselves, *mala in se*, such as theft, should be avoided first because they are wrong in themselves and only second because of fear of punishment. Offences wrong because they are prohibited, *mala prohibita*, such as marijuana use, however, should be avoided less because they are wrong in themselves and more because of fear of punishment. Waldo and Chiricos found limited support for this hypothesis.

Thus three independent studies had shown that a higher perceived certainty of punishment was associated with a lower deviance rate. The only one to study severity showed it to be unimportant. Why was severity not important? It was to answer this question and others that Teevan

(1973) collected data from a sample of Canadian university students on their: (1) perceptions of certainty of punishment for all Canadians for marijuana use and shoplifting; (2) perceptions of severity of punishment for all Canadians for marijuana use and shoplifting; (3) how the individual felt about going to prison; (4) personal marijuana use and shoplifting.

The students were not asked for their perceptions of the certainty and severity of punishment for themselves or "someone like them" because of a possible contamination effect of their past deviance on these perceptions. If they had been deviant previously, then their punishment or lack of punishment for that deviance would bias their perceptions of punishment. Those caught and punished might perceive a higher certainty of punishment while those not caught might perceive a lower certainty. Since more respondents had been deviant and unpunished than deviant and punished, the result would have been to increase the relationship between perceived low certainty and high deviance. This conclusion would have been unwarranted since the perception of punishment could have come after and not before the deviant behaviour. However, since few had experienced any severity of punishment, it was felt safe to measure perceived personal severity of punishment.

Instead of personal certainty, respondents were asked for their perceptions of the certainty and severity of punishment for all Canadians. Admittedly these perceptions may deter less than perceptions of personal punishment, but to overcome the above limitations these questions were substituted. Moreover, if the perceptions of punishment for others is negatively related to deviance, then one cautiously can infer that there may be a similar and perhaps greater deterrent effect for perceived personal certainty and severity of punishment.

The hypotheses for the study were: (1) those responses who perceive higher certainty should commit less deviance; (2) that the negative relationship between severity of punishment and offences should be found only for those respondents who perceive a level of certainty high enough to make severity salient. Thus Teevan raised the point that severity may be unimportant because the certainty is so low as to make it irrelevant. If a higher certainty is perceived, then severity may be important.

Analysis of the data revealed again there is a weak negative relationship between perception of certainty of punishment and self-reported deviance. As stated previously, the deterrence measure used was one of general deterrence for all Canadians and not personal deterrence for the individual. Were that latter variable measured, a stronger relationship might have been found. Concerning severity of punishment the deterrence hypothesis was unsupported since those individuals who perceive a more severe punishment for other Canadians are not less deviant than those who perceive a less severe punishment. However, as predicted, when controlling for certainty, that is, examining only those respondents who perceive a higher certainty, then those respondents who perceive a

higher severity commit less deviance. It should be noted again, as in the Waldo and Chiricos study, that very few respondents perceive a high certainty of punishment. Thus severity is salient for a very small proportion of the population.

Using a different measure of severity, a personal measure which requested the students' predictions on the experiences of prison, the deterrence hypothesis of higher severity, and lower deviance was supported for both high and low certainty. Again, the individuals' perceptions about his own punishment are crucial in deterring or failing to deter him from deviance.

The relationship between the deterrence variables and deviance showed mixed results for the *mala prohibita*/*mala in se* distinction. The *mala prohibita* offence, marijuana use, was not always deterred more by perceived higher certainty and severity of punishment than the *mala in se* offence, shoplifting. A possible explanation is that in both the Teevan and Waldo and Chiricos studies the sociologists are making the distinction. Respondents were not asked how *they perceived the offences*. Some may have perceived shoplifting to be *mala prohibita*—"it hurts no one" and "stores should be ripped off". Some may have defined marijuana use as *mala in se*. Using the respondents' definitions, *mala in se* offences may be less affected by threats of punishment than *mala prohibita* offences.

Finally, Teevan tried to use perceived certainty and severity of punishment as intervening variables between gender, social class and deviance. He questioned that if boys, more than girls, use marijuana and upper class respondents more than lower class, is it perception of punishment which deters girls and lower class respondents from marijuana use? The data reveal that it is not fear of punishment which deters girls and lower class respondents from marijuana use. Controlling both for perceived levels of certainty and severity of punishment, boys and upper class respondents are still over-represented among marijuana users. Other variables are needed to explain these gender and social class variations.

In a second study, Teevan (1974) again examined the relationship between perceived certainty and severity of punishment and marijuana use and shoplifting. In this research, however, secondary school students were studied, a group both more representative than university students of the general population and perhaps more vulnerable to pressures toward deviance. In a second modification of previous research, the *mala in se*/*mala prohibita* hypothesis was reexamined using the *respondents'* definitions of the laws as *mala in se*, "basically a good law because that behaviour is wrong" or *mala prohibita*, "basically a bad law because that behaviour is not really wrong". Finally, respondents' perceptions of how they felt *before* they committed the deviant act were elicited.

The results of this study are in basic agreement with the previous studies with several exceptions. Perceptions of higher levels of certainty of punishment for others appear to deter marijuana use but not shoplifting

among the high school students. The relationship is not strong, however. When the students were asked to remember how they felt before their illegal acts (or how they presently feel if they had not committed any illegal acts) then perceptions of higher certainty of punishment appear to deter both marijuana use and shoplifting. The two potential problems with these latter results are accuracy of recall and temporal order, as previously mentioned. Does the perception that one is unlikely to be caught precede or come after the deviance and similarly does the perception that one is likely to be caught precede or come after the decision *not* to commit the acts in question?

Variations in perceived severity of punishment were not related to levels of deviant behaviour, and this finding cannot be explained by arguing that perceived certainty is so low as to make severity irrelevant. Severity of punishment for all Canadians is unrelated to deviance even among those respondents who perceive a higher certainty of punishment. However, recalled perceptions of perceived severity before the act were negatively related to deviance but again this finding is subject to the above criticisms of temporal order. Overall, certainty of punishment is more important than severity.

Only for shoplifting was there an interaction between perception of the validity of the law against the offence as either *mala prohibita* or *mala in se* and deterrence. In that instance perceptions of the law as *mala prohibita* revealed a deterrent effect of increased certainty of punishment and decreased shoplifting. For severity of punishment and shoplifting and for certainty and severity of punishment for marijuana use there was no interaction. Only the first order relationships of increasing certainty and decreasing marijuana use and of perceiving the law as *mala prohibita* and increased marijuana use appeared.

Thus, the prediction that those respondents who perceive offences as *mala in se* should be less vulnerable to threats of punishment because they agree with the law than those who perceive them as *mala prohibita* was supported for shoplifting only. The lack of support for marijuana may arise because so few of the respondents perceive a high certainty of punishment for marijuana use. The belief that one can get away with marijuana use may be so pervasive that the added effects of also challenging the validity of the law may be negligible. If more respondents perceived a higher certainty of detection, then perhaps those who believe the law invalid might be deterred more than those who believe it valid. At present, however, the low level of certainty is of greater importance.

Summary

For all five studies then, there is a weak deterrent effect from perceived increases in certainty of punishment. The consistency of this result for different populations and different offences is important. The weak-

ness of the relationship is also important. A possible explanation, in addition to the argument that people are law abiding because they are socialized to be and not out of fear of punishment, may rest in the limit and/or the range of perceptions of certainty of punishment. First, the maximum perceived certainty of punishment for some offences may be so low as to be below a threshold of salience for many individuals. Second, if the perception of certainty of punishment varied between 25% and 95% then a perception of higher certainty might be associated with lower deviance rates. However, in Teevan's first study, for example, the perceived certainty of being caught for marijuana use varies from 0-25%. Thus the difference between the higher and the lower certainty may be unimportant. The range may be too narrow and/or the maximum may be too low for higher certainty to have an effect in reducing deviant behaviour.

Severity of punishment is not as much as a deterrent to deviance as is certainty. In one study, the combination of higher certainty and increases in severity are related to decreased deviance rates but in another study they are not. Overall, the evidence argues against any strong deterrent effect of increased severity of punishment.

II Methodology

London, Ontario secondary school students, both male and female, were asked by their teachers to fill out anonymous questionnaires on their perceptions of punishment and their personal histories of various forms of deviance. Of 398 questionnaires passed out, 302 were returned for a response rate of 76%. In addition to this "less vulnerable" population, adolescents who frequented the drop-in centres in London's core area were interviewed on the same topics. This second population (N = 74) was assumed to be higher risk populations than the secondary school students. Finally residents at a boys and girls treatment centre were interviewed. These twenty respondents had come to the attention of the authorities and thus perhaps represented the highest risk of deviance. In the data however, we will see how more than 40% of the total sample engaged in shoplifting, thus indicating there was much deviance even in the "less vulnerable" secondary school.

The samples were not randomly chosen. On the other hand, they were not deliberately biased in any way in order to support our hypotheses. A random sample of youth even for London, let alone Canada, would have been most difficult to achieve. Instead, we have a rough cross-section of youth in an urban area, aged 13-20, with an oversampling of those felt to be more at risk to commit deviance.

In both the interview and questionnaires, in order to measure perceptions of certainty of punishment, the respondents were asked: "For all young Canadians who have broken into a store, how many do you think were caught by police? Almost all, about $\frac{3}{4}$, about $\frac{1}{2}$, about $\frac{1}{4}$, about

1/10, almost none." This question was appropriately modified and repeated for shoplifting, breaking into houses, taking something or some part from a car, taking a bicycle, and taking something from a mailbox.

For severity, respondents were then asked for each of the six above offences: "For those caught, what is their usual punishment? Nothing, informal handling, fine, probation or suspended sentence, jail." As a more personal measure of perceived severity, they were asked to predict what would happen if they went to jail: homosexual attacks, branded for life, wasted time, never get a good job again, disgrace to family.

In an attempt to simulate a panel design, respondents who had committed deviant acts were asked how they felt *before* they committed the act in question. "Before I did it, I thought the chances of being caught were: 100%, 75%, 50%, 25%, 10%, 0%", and the penalty would be "very bad, not so bad, nothing to worry about, nothing at all". These perceptions of certainty and severity were obtained as a check on the previously mentioned measures of deterrence to see if deviants commit crimes regardless of fear of punishment. Additionally all respondents were asked to rank fear of punishment first, second, or third, in importance as a reason for refraining from deviance. They were asked to rank that fear along with the two additional reasons of the act being wrong in itself and the act hurting people. Again, we are interested in whether fear of punishment is an important concern to potential deviants or is it a desire to refrain from hurting people which keeps them straight?

Finally, respondents were asked to rate the laws concerning each offence as: "basically a good law because that behaviour is wrong" or "basically a bad law because that behaviour is not really wrong". The respondent's definition of *mala in se/mala prohibita* is used to determine if *mala in se* perceivers are less vulnerable to threats of punishment since they already agree with the law, while *mala prohibita* perceivers are more vulnerable and need the threat since they do not agree with the law.

HYPOTHESES

The hypotheses are the usual deterrence hypotheses:

- (1) those respondents who perceive a higher certainty of punishment should engage in less deviance,
- (2) those respondents who perceive a higher severity of punishment and a high certainty, those to whom severity is salient, should engage in less deviance,
- (3) the effects should be stronger for *mala prohibita* perceivers than for *mala in se* perceivers.

For hypotheses one and two the strength of relationship will be weak. This prediction is in line with previous research as well as taking note of the effects of other variables which may be more important than fear of punishment in deterring crime. Thus socialization to conventional

values may be a more important pull away from crime and poverty, youth, and being a male may be more important pushes toward crime than any deterrent variable can counteract. In the first instance, fear of punishment is unnecessary, in the second ineffective.

III *Results*

Part of the data to test the hypotheses are presented in Table I in which the percentages of respondents in the most frequent categories of deviance under varying conditions of perceived certainty and severity are listed. Since the full tables are omitted, the gamma statistics based on the original tables are also shown.

According to the deterrence hypotheses, those individuals who perceive a higher level of certainty and severity of punishment should engage in the least amount of deviance. Examining certainty of punishment, this logic appears to be partially correct but the strength of relationship is often quite weak and the patterns are inconsistent both within and across offences. Specifically, for shoplifting, of those respondents who think that all or $\frac{3}{4}$ of the Canadians who shoplift are caught, only 10% shoplift. Once that perception of certainty drops to $\frac{1}{2}$ or less caught, the percentage engaging in shoplifting more than doubles. Thus higher certainty is associated with lower shoplifting or lower certainty is associated with higher shoplifting. Either interpretation is consistent with a deterrence hypothesis.

For breaking into a house or store, both rare offences compared to shoplifting, again the perceptions of higher certainty are associated with lower incidences of crimes. The differences in absolute percentage points are small but this is necessarily the case since the overall percentage who commit these offences is small. Relatively, however, there are three to four times the proportion of deviants in the lower than in the higher perceived certainty categories. For example, none of the 56 and the 3% of the 115 respondents who think that all or $\frac{3}{4}$ of Canadians who break into stores are caught, have ever broken into a store, whereas 14% and 12% of those respondents who perceive that $\frac{1}{4}$ or $1/10$ and less respectively get caught, have committed that crime. In all three instances, the differences are statistically significant, although the very low frequencies in certain cells add to this significance.

For the other three offences there is less support for the deterrence hypothesis. Although, more of those respondents who perceive lower certainty of punishment take bicycles the greatest amount of theft occurred for the highest certainty category. Those who should have been more afraid of punishment committed the crime most. Moreover, it was not their being caught which led them to this viewpoint, that is, getting caught did not cause this perception. Of the eight bike stealers in this category, seven were not caught. For taking items from mailboxes or cars, the pat-

tern of the relationship with perceived certainty is such that one must reject the deterrence hypothesis. For theft from cars no matter what perceived level of certainty, approximately the same percentage of the respondents take items from cars. For theft from a mailbox, the pattern is erratic such that the least deviance is in the second not the highest level of certainty and the greatest amount is in the third and not the lowest level of certainty.

OVERALL, PERCEIVED LEVEL OF CERTAINTY OF PUNISHMENT IS ONLY WEAKLY RELATED TO CERTAIN TYPES OF DEVIANCE. THE FIRST DETERRENCE HYPOTHESIS THUS IS ONLY PARTIALLY SUPPORTED.

Turning to severity of punishment, first we examine to see if severity alone can deter deviance, and second if under conditions of high certainty, thus making severity more salient, severity will be an important deterrent. For taking a bike and taking an item from a car, the severity of punishment hypothesis generally is supported, if weakly. Those respondents who think that Canadians who commit those offences go to jail commit the fewest offences and the percentage who commit the offences increases as one moves down in severity to fine, to informal handling and nothing. For breaking into a store, or breaking into a house, however, perceived severity shows almost no relationship to deviance rates. Those who perceive that those Canadians caught go to jail are just as likely to risk that punishment and commit the offence as those who perceive that the Canadians caught receive informal handling or no punishment at all. Finally, for taking an item from a mailbox and shoplifting, the pattern of relationship is inconsistent. Deviance increases as perceived severity decreases but then decreases in the lowest severity category, contrary to expectation. According to deterrence hypotheses, these last respondents should be the most deviant since they perceive the least severe punishment.

However, the hypothesis of this study argued that severity would deter those respondents who perceive a higher certainty, those for whom severity could be the most salient. Still in Table 1, the third section presents the data to test this notion. First, it should be noted that for the acts of breaking into a house or store and taking items from a mailbox, this analysis could not be run. The higher certainty perceivers all perceived that those caught would go to jail. There being no variation in perceived severity, the comparisons among levels of severity could not be made. For the three offences that could be analyzed, the results were not in the predicted directions. For shoplifting and taking an item from a car, the lowest severity is related to the *lowest* and not the highest amount of deviance and for taking a bike, there is almost no variation in incidences from high to low severity. Thus the effects of varying levels of severity on

crime while holding constant high certainty are not stronger and moreover may be even weaker than the already weak relationship between perceived severity of punishment alone and deviance.

Another measure of severity was used to determine a second time if severity of punishment would be important. Respondents were asked to predict what could happen to them in prison. Five negative items were listed: homosexual attacks, branded for life, wasted time, never get a good job again, disgrace to family, and respondents were asked to check how many they expected. An index of 0-5 was then constructed, 5 being high severity and 0 being low severity of imprisonment.

This measure of perceived severity of punishment is more strongly related to crimes than is the previous measure but again the relationships are inconsistent both across and within offences. Fear of higher prison hardship deters shoplifting weakly ($\gamma = .10$), 31% in the lowest severity condition shoplift, while only 18% in the highest do so. For breaking into a store and theft from a mailbox, a similar relationship is evident, 0% in highest to 10% in lowest severity and 5% in highest to 13% in lowest severity respectively. Theft of a bike, theft from a car, and breaking into a house, are inconsistent in their relationships with perceived severity of punishment. Those respondents who perceive higher levels of severity do not always engage in less deviance than those who perceive lower levels of severity. Even so, the strengths of the relationships are statistically significant with the exception of breaking into a house.

OVERALL, PERCEIVED LEVEL OF SEVERITY OF PUNISHMENT IS MORE WEAKLY RELATED TO AMOUNTS OF DEVIANCE THAN CERTAINTY OF PUNISHMENT. CONTROLLING FOR PERCEIVED CERTAINTY DOES NOT GREATLY STRENGTHEN THE RELATIONSHIP. HOWEVER, FEAR OF PRISON IS MORE STRONGLY NEGATIVELY RELATED TO DEVIANCE. THE SECOND DETERRENCE HYPOTHESIS IS WEAKLY SUPPORTED.

It was also hypothesized that perceived certainty and severity of punishment would be a more effective deterrent for those respondents who disagree with the validity of the law than for those who agree with it. The latter individuals may obey the law more because they agree with it while the former might need the fear of punishment to make them obey a law with which they disagree.

In effect we are raising the broader issue can fear of punishment deter some selected groups of citizens? Respondents were divided into two groups: those who defined the laws against the various offences as good laws, and those who defined the laws as bad "because the behaviour is not wrong". These last were combined with those who could not decide between good and bad and labelled *mala prohibita* in Table 1 (section 5-8),

while the former are labelled *mala in se*.

Examination of certainty under these two conditions reveals that in general, *mala prohibita* perceivers engage in much more deviance or put oppositely *mala in se* perceivers engage in much less deviance than their counterparts. For the *mala prohibita* perceivers, the deterrence hypothesis does seem to be better supported than for the *mala in se* perceivers. For shoplifting, defined *mala prohibita*, the percentage who shoplift goes from 18% to 48% as perceived certainty decreases (with one drop to 10%) while the *mala in se* perceivers go from 8% to 28% and then down to 23% and not up as certainty further decreases. For all items except theft from a mailbox and breaking into a store the deterrence hypothesis is better supported among *mala prohibita* than among *mala in se* perceivers, as measured by gamma statistics. However, for breaking into a store, *mala in se* is statistically significant and not *mala prohibita*. For taking an item from a car, under neither condition is certainty strongly related to theft. Thus compared to our original findings, controlling for a definition of the law as *mala in se* or *mala prohibita*, there is somewhat more support for increasing certainty being related to decreasing deviance, but the improvements in support are inconsistent.

Turning to perceived severity of punishment, the original lack of relationship between perceived severity and deviance are replicated. The strongest and most consistent relationships are for the *mala in se* and not *mala prohibita* perceivers for the breaking into a house and taking an item from a mailbox offences. In fact among *mala prohibita* the opposite results of the deterrence hypothesis are found for breaking into a house, taking a bike and taking an item from a mailbox. As perceived severity increases deviance increases. Thus severity is relatively unimportant in deterring deviance even among a select subpopulation of individuals who do not agree with the validity of the law.

CONTROLLING FOR AGREEMENT OR DISAGREEMENT WITH THE LAW, PERCEIVED INCREASES IN CERTAINTY OF PUNISHMENT ARE STILL ONLY WEAKLY RELATED TO DEVIANCE WHILE PERCEIVED INCREASES IN SEVERITY OF PUNISHMENT ARE UNIMPORTANT IN DETERRING DEVIANCE.

SUBCULTURE DETERRENCE

The general conclusion to be reached from the analysis of the preceding data is that fear of punishment, either its certainty or severity, is at best only weakly related and at worst possibly totally unrelated to deviance. Some critics might argue that this conclusion is unwarranted since we examined too many high school students, a group of people who are unlikely to commit crimes. They might argue that deterrence is important only among more vulnerable groups of adolescents. Girls are unlikely to

break into stores under any condition, nor are most boys. But boys who are drop outs, or are in trouble in school may be more likely to commit these crimes and thus one should look for deterrent effects in these subcultural groups and not among the general population of adolescents. Since there is proportionately more deviance in the drop-in and residence centres than in the high school population, we will label these groups more vulnerable to deviance. Alternatively, one could argue that deterrent effects would be found *more* in high school populations since the drop-in centre youth would be deviant *regardless of fear of punishment*. In effect, the first position argues that since only certain groups of individuals are likely to commit certain crimes, then it is only among these individuals that we should look for deterrent effects of punishment. The second argues that some individuals will be criminals no matter how we threaten them and thus deterrence is important mainly for more conventional groups.

In order to test these opposing notions, the original sample was broken down into high school females, high school males, drop-in centre males and drop-in centre females. For the following analysis, however, females are not examined except for shoplifting: the high school females because they commit so few crimes, thus no variation on the dependent variables, and the drop-in females because of the small sample size. Thus we can compare high school males to the "more vulnerable" drop-in or resident centre males. Is deterrence more important in deviant or non-deviant milieux?

Table 2 presents the data on these questions. First, for shoplifting, it appears that the strongest relationship between deterrence and deviance is in the drop-in centre group. This finding however may be an anomaly since for the other five crimes it is not repeated. For three of the five, the relationship is stronger for the high school youth, specifically, breaking into houses, breaking into a store, and theft from a mailbox. In the remaining two offences, a higher certainty is related to higher and not lower amounts of crime for the drop-in youth. Thus there is slightly more support for the second position, that deterrent effects of punishment are more important to relatively conventional youth than to subculturally deviant youth. For these latter, fear of punishment is less effective. This conclusion is very tentative since the gammas for the high school youth are sensitive to the zero frequency cells.

Overall, neither high school youth nor drop-in centre youth are strongly deterred by perceptions of severity of punishment. However, for the first measure of severity, concerning severity for all Canadians, the relationship is stronger and more in the predicted direction, for the high school youth than for the drop-in youth. This finding supports the previous conclusion about certainty. For the second measure, the deterrence hypothesis is more supported for the drop-in youth. Their personal expectations of hardship in prison deters them, whereas perceptions of

severity for others does not. Perhaps they are more familiar with the deprivations of prison and thus are more afraid of its consequences.

PERCEPTIONS OF CERTAINTY OR SEVERITY OF PUNISHMENT ARE SLIGHTLY MORE EFFECTIVE IN CONVENTIONAL GROUPS PERHAPS LESS VULNERABLE TO DEVIANCE THAN IN GROUPS OF MORE VULNERABLE DROP-IN CENTRE YOUTH.

OTHER EVIDENCE

There are several more analyses which can be used to examine the deterrence hypotheses. First, the deviant respondents were asked to recall their perceptions of the certainty or severity of punishment *before* they committed any deviant acts. If we can show that they were predominantly in the low certainty, low severity categories, then this could be considered evidence for the deterrence position. Thus we could argue, that if they perceived punishment as more certain and more severe, they would not have engaged in the deviance.

Table 3 presents data on that question. For certainty, most of the deviants are gathered in the low certainty conditions. Thus low certainty may have encouraged their deviance or at least high certainty did not discourage it. Still, many deviants, even though they thought there was a high chance that they would be caught, engaged in criminal acts. Almost $\frac{1}{4}$ of the boys who broke into stores or houses thought that their chances of being caught were at least 75%. Thus perceptions of low certainty may have encouraged *some* individuals to become deviant, but other respondents became deviant even though they expected fairly certain punishment. Fear of punishment was insufficient to deter these people.

For perceived severity of punishment, again the data reveal it to be less important than certainty. In fact for breaking into a house and breaking into a store the majority of deviants expected very severe punishment yet they still committed these crimes. For all six crimes, close to or more than half thought their punishment would be more severe than "nothing to worry about". They expected the punishment to be of some consequence yet they still committed the crimes. Again fear of punishment is insufficient to deter many people. One could argue that severity is unrelated since certainty is low, but the previous data revealed that fact not to be operating. Thus we must again conclude that severity of punishment is largely unrelated to levels of crime.

There is no comparison with non-deviants to see how they feel about being caught and punished for two reasons. First, they would be giving *present* perceptions of punishment since they have never committed the acts while the deviants would have to recall *past* perceptions. The time differences could be a source of error. Second, deviants and non-deviants were found not to differ significantly in their perceptions of certainty and

severity of punishment. For both reasons only the deviants were examined.

Respondents also were asked to rank other reasons why they never engaged in theft or if they did why they didn't do so more often. Their choices of answers were because: (1) "it hurts people"; (2) "it is wrong"; and (3) "I'm afraid I will get caught". We are interested in where *non-deviants* ranked the fear of getting caught. Examination of these results will tell us if punishment has a negative pull or if a desire not to hurt others has a positive pull to decrease deviance.

Table 4 presents the data to test these ideas. Examining the never deviants for each crime we see that the majority of them rank fear of punishment as the *least important* reason why they don't engage in crime. On the other hand, comparing deviants to non-deviants we see that the deviants rate fear of punishment as a more important deterrent (for them to *more crime*) than do non-deviants. Thus one could argue that fear of punishment does not deter most people but it keeps the incidents of additional crime lower among individuals already deviant. Thus deterrence is important for such already deviant individuals and perhaps increasing certainty, since severity appears less important, would decrease crime.

This finding does not necessarily contradict the previous section which argued that deterrence may be more important in a more conventional rather than a less conventional milieu. The deviants are found in both the high school and the drop-in centre; they are not confined to one milieu. Thus we are making a different point. Regardless of setting, deterrence may be more important to criminals than to conventional individuals. Moreover since the relationships in Table 4 are generally stronger and more consistent, than those in Table 2 in which milieu is controlled, one can argue that deterrence is more important among deviants than among non-deviants who may avoid crime because it is wrong and not out of fear of punishment.

DEVIANTS ARE AFRAID OF GETTING CAUGHT AND
THUS WE CAN HYPOTHESIZE THAT INCREASED CERTAINTY
WOULD DETER THEM.

INTERVIEWS

The interviews with the girls in the treatment home and a male group discussion session in the drop-in centre were taped. In addition, verbal comments made by drop-in centre youth were written down in order to obtain additional data on the topic of deterrence. Two major points kept cropping up in these discussions. We shall merely list them.

First, peer pressure is often mentioned as a reason for committing these crimes. One girl admitted to shoplifting "just because everybody was doing it . . . a bunch of us would go downtown, about seven of us, then we would all split up, go round and get a whole bunch of stuff and then we

would throw it all in a big pile and share the wealth sort of thing." This girl never shoplifts alone, only in groups. Thus deterrence, if it is to be effective, must break down peer group pressures. The threat of punishment to individuals will be ineffective unless the leaders of the peer group also perceive it as dangerous to engage in theft. If the leaders are unmoved by threats of punishment, then they may convince their followers to risk the punishment.

Second, certainty of punishment is more important than severity. This finding supports the previous results and manifests itself in several ways. First, the respondents rarely mention severity as a deterrent to crime. Only certainty is mentioned with the notion that a lower certainty encourages crime and a higher certainty discourages it. For example, a girl whose friends shoplift: "My friends don't think their chances of getting caught are very big." A boy discusses break and entry into houses (he calls it "B and E") and argues that boys are not afraid "cause nobody's around, so nobody's going to get caught at it. Same with car thefts, car thefts you do during the night, nobody gets caught at it cause the cops aren't around, that's just the easiest stuff." Others saw their friends caught, and thus a higher certainty, and were deterred.

Second, aspects of punishment other than jail are deterrents to some of the respondents. Several respondents mentioned fear of parents' reactions as a deterrent to shoplifting. One girl admits that although her friends do shoplift, their major fear in getting caught involves parental disapproval "as well as they were living on their own I don't think they would mind so much (getting caught) but having to tell their parents or having someone tell their parents (worries them)." Another girl adds: "Your parents bitch at you for the rest of your life sort of thing, they'll keep on, just not trust you anymore, you know, ground you for a summer..." Similarly one boy responded that the hassle of court appearances scared him and another boy that a record scared him. Again it was not jail but the consequences of getting caught which deterred them. A more severe jail term could have been irrelevant to them.

OVERALL, THE INFORMAL EVIDENCE SUGGEST THAT CERTAINTY OF PUNISHMENTS IS A MORE IMPORTANT DETERRENT THAN SEVERITY AND THAT THE ACT OF GETTING CAUGHT, WITHOUT ANY PUNISHMENT ADDED, MAY BE A SUFFICIENT DETERRENT.

IV: Discussion and Conclusions

Over all crimes, across groups, and using several measures of deterrence, it is evident that certainty is more important than severity of punishment. Thus, from a deterrence perspective, in order to decrease crime one should increase the certainty of punishment. (We will omit the issue of changing social conditions conducive to crime.) Merely making the

punishment more severe may not accomplish the goal of reduced crime. Moreover, certainty of punishment may be especially important to adolescents already deviant. They engage in less crime than they could because of fear of punishment. Non-deviants may avoid crime more because it is wrong to do.

These are the general conclusions of our study. However, they should not be interpreted for more than they represent. We have demonstrated that there is only a weak relationship between perceptions of certainty of punishment and deviance and a weaker relationship between severity and deviance. Individuals who perceive a higher certainty and severity do not engage in significantly less deviance than those who perceive a lower certainty. This comparison however is static or cross-sectional. We have not examined how a perceived *change* in certainty or severity for individuals could effect their deviance rates. Nor have we ruled out the possibility that some third variable may cause both deviance and perceptions of punishment. For example, perhaps coming from a broken home and being in the lower social class causes an individual first to believe that he will not get caught, because he sees similar others not getting caught, and also to engage in deviant acts. Middle class youth from unbroken homes may perceive, perhaps from the news media, that criminals are caught—a high certainty, and also learn that one should not engage in crime. Fear of punishment is irrelevant to them. Thus any relationship between perceptions of punishment is “caused” by the relationship to a common prior “cause” (see Figure 1). There may be no causal relationship between deterrence and crime.

The first caution, that our study is static rather than dynamic, holds hope for the deterrence hypotheses. They may receive greater support in such a study. The second caution that a third variable may be operative could lead to a lack of support for the deterrence hypotheses. It must be added however, that in a previous test of spuriousness, Teevan (1973), found it to be unsupported. Controlling for prior variables did not alter the relationships between perceptions of punishment and deviance.

OVERALL, WE SHOULD ASK THAT THE DETERRENCE HYPOTHESES BE CAUTIOUSLY RETAINED FOR CERTAINTY OF PUNISHMENT AND CAUTIOUSLY REJECTED FOR SEVERITY OF PUNISHMENT UNTIL OTHER EVIDENCE IS AVAILABLE. INCREASING CERTAINTY MAY DECREASE CRIME WHILE INCREASING SEVERITY MAY NOT.

Selected References

- BENTHAM, Jeremy, 1843, "Principles of penal law," in John Bowring (ed.), *The Works of Jeremy Bentham*, Edinburgh: W. Tait.
- CHAMBLISS, William J., 1966, "The deterrent influence of punishment." *Crime and Delinquency* 12 (January):70-75.
- CHIRICOS, Theodore and Gordon Waldo, 1970, "Punishment and crime: an examination of some empirical evidence." *Social Problems* 18 (Fall):200-217.
- CLASTER, Daniel, 1967, "Comparison of risk perception between delinquents and non-delinquents." *Journal of Criminal Law, Criminology and Police Science* 58 (March):80-86.
- FATTAH, E. A., 1972, *A Study of the Deterrent Effect of Capital Punishment with Special Reference to the Canadian Situation*, Ottawa: Information Canada.
- GIBBS, Jack P., 1968, "Crime, punishment, and deterrence." *Southwestern Social Science Quarterly* 49 (March):515-530.
- HENSHEL, Richard and Sandra Carey, 1971, "Deviance, deterrence, and knowledge of sanctions." Paper presented at the Annual Meeting of the Eastern Sociological Society, Boston, Massachusetts.
- JENSEN, Gary, 1969, "Crime doesn't pay: correlates of a shared misunderstanding." *Social Problems* 17 (Fall):184-501.
- LOGAN, Charles H., 1972, "General deterrent effects of imprisonment." *Social Forces* 51 (September):64-73.
- TEEVAN, James J., Jr., 1972, "Deterrent effects of punishment: the Canadian case." *Canadian Journal of Criminology and Corrections* 14 (January):68-82.
- TEEVAN, James J., Jr. and Paul C. Whitehead, 1972, "Deterrent effects of punishment: toward subjective measures." Paper presented at Eastern Sociological Meetings, Boston, Massachusetts.
- TEEVAN, James J., Jr., 1973, "Deterrent effects of punishment: subjective measures continued." Paper presented at the Annual Meeting of the Society for the Study of Social Problems, New York.
- TEEVAN, James J., Jr., 1974, "Subjective perception of deterrence continued." Unpublished manuscript, University of Western Ontario.
- TITTLE, Charles R., 1969, "Crime rates and legal sanctions." *Social Problems* 16 (Spring): 409-422.

TABLE 1: Percentage of Respondents Who Are Deviant under Varying Conditions of Perceived Certainty and Severity of Punishment

Variable	Condition	Shop-lift times 3+	N	Take bike ever	N	Take item from car ever	N	Break into home ever	N	Break into store ever	N	Take item from mail- box ever	N
1) Certainty all Canadians	all, ¼	10%	48	25%	32	17%	36	3%	104	0%	56	5%	37
	½	23%	92	10%	53	11%	72	8%	93	3%	115	5%	48
	¾	27%	136	12%	61	11%	84	8%	102	5%	102	0%	48
	1:10	28%	76	18%	85	14%	91	12%	51	14%	71	10%	63
	almost none	27%	37	20%	154	15%	105	11%	37	12%	43	8%	236
2) Severity all Canadians	jail	15%	20	15%	122	8%	64	6%	156	6%	156	3%	72
	probation; suspended sentence	23%	169	17%	103	17%	153	8%	182	7%	195	8%	63
	fine	28%	78	17%	103	13%	119	6%	47	6%	34	7%	117
	informal handling	25%	118	18%	118	20%	45	6%	47	6%	34	10%	91
	nothing			21%	38							5%	37
3) Severity all Canadians Control certainty Higher certainty respondents only	jail	21%	62	15%	39	14%	35						
	probation; suspended sentence					16%	43						
	fine	25%	36	14%	22								
	informal handling					7%	27						
	nothing	10%	30	16%	24								

These cross tabulations could not be completed since the higher certainty respondents all perceived higher severity, that is, there was no variation in the severity variable and comparisons could not be made.

* $p < .05$

TABLE 1: Percentage of Respondents Who Are Deviant under Varying Conditions of Perceived Certainty and Severity of Punishment

Variable	Condition	Shop-lift 3+	Take bike	Take item from car	Break into home	Break into store	Take item from mail- box
		N	N	N	N	N	N
4) Severity of prison							
	Highest	22	22	22	22	22	22
	Next highest	95	14%	8%	5%	5%	5%
	Next highest	124	13%	13%	5%	5%	5%
	Lowest	72	19%	17%	10%	10%	6%
	all, 1/2	72	25%	22%	10%	10%	13%
5) <i>Mala</i> <i>prohibita</i> , or neutral Certainty all Canadians							
	all, 1/2	11	22%	12%	0%	0%	0%
	1/2	20	10%	11%	9%	17%	8%
	1/2	31	23%	18	8%	17%	12
	1 10	21	27%	16	29%	17%	12
	almost none		33%	26			11%
6) <i>Mala in</i> <i>se</i> , certainty all Canadians							
	all, 1/2	37	12%	85	3%	4%	2%
	1/2	69	28%	12%	7%	3%	86
	1/2	95	7%	59	8%	15%	55
	1 10	53	13%	71	9%	11%	48
	almost none	30	13%	72			7%

TABLE 1. Percentage of Respondents Who Are Deviant under Varying Conditions of Perceived Certainty and Severity of Punishment

Variable	Condition	Shop- lift 3+ times	Take bike every N Gamma	Take item from car ever N Gamma	Break into home ever N Gamma	Break into store ever N Gamma	Take item from multi- box N Gamma
7) <i>Mala prohibita</i> , or neutral Severity all Canadians	jail	23% 43	33% 27	8% 12	14% 21	8% 24	11% 18
	probation suspended sentence	31% 16	27% 18	48% 25			
	fine informal handling	34% 29	25% 61	16% 30	11% 28	11% 35	14% 22
	nothing			29% 14			7% 45
8) <i>Mala in se</i> Severity all Canadians	jail	22% 141	9% 86	8% 49	5% 126	6% 124	3% 64
	probation suspended sentence	28% 60	13% 136	11% 119			5% 44
	fine informal handling	23% 81	13% 84	12% 89	9% 176	6% 179	6% 88
	nothing			16% 25			9% 75

TABLE 2: Percentage of Respondents Who Are Deviant under Varying Conditions of Perceived Certainty and Severity of Punishment—Controlling Milieu

	H.S. Females				H.S. Males				Drop-In Males & Females				H.S. Males				Take Bike				Drop-In Males				Take Item from Car							
	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma	%3+	N	Gamma		
Certainty all																																
Canadians																																
all, 1/2	0%	12		5%	21		29%	14					33%	21		38%	16							14%	35		44%	18				
1/2	14%	43		24%	29		39%	21	.22				20%	20	.00	23%	13	.09						7%	30	.00	75%	12	-.18			
1/4	16%	62	.02	27%	45		43%	35					21%	39		38%	13						17%	42		33%	15					
1-10	16%	31		24%	55		54%	24																								
almost none													27%	64		27%	22						11%	44		37%	19					
Severity all																																
Canadians																																
jail	14%	44		27%	51		40%	55					15%	53		37%	27						9%	22		47%	38					
probation																																
suspended																																
sentence																																
fine	19%	36	-.13	26%	27	.11	53%	15	.05				31%	39	.25	24%	17	-.20					14%	57	.20	38%	16	.05				
informal																																
handling	13%	63		17%	70		42%	24					29%	56		26%	19					15%	13		50%	10						
nothing																																
Perceived																																
severity																																
Highest	11%	46		14%	43		29%	28					21%	43		32%	19					12%	43		37%	19						
Next																																
highest	20%	49		18%	45		48%	29					20%	45		21%	19					11%	44		42%	19						
Next																																
highest	9%	23	.02	31%	29	.12	48%	21	.19				25%	28	.11	43%	14	.14				14%	29	.09	57%	14	.2					
Lowest	17%	23		30%	33		50%	16					27%	33		38%	13					15%	33		54%	13						

TABLE 2: Percentage of Respondents Who Are Deviant under Varying Conditions of Perceived Certainty and Severity of Punishment—Controlling Milieu Cont.

	H.S. Males			Drop-In Males			H.S. Males			Drop-In Males			H.S. Males			Drop-In Males		
	%ever	N	Gamma	%ever	N	Gamma	%ever	N	Gamma	%ever	N	Gamma	%ever	N	Gamma	%ever	N	Gamma
Certainty all																		
Canadians all . $\frac{1}{4}$	0%	47		23%	13		0%	22		17%	23		0%	14		15%	13	
							2%	45										
$\frac{1}{2}$	15%	34		8%	12		2%	42										
			.50*			.14			.58*			.45*						.17
$\frac{3}{4}$	9%	32		14%	21		11%	27		21%	19		0%	10		0%	10	
													15%	20		15%	41	
1-10	15%	34		26%	19		8%	12		43%	23		12%	102				
almost																		
Severity all																		
Canadians	5%	64		28%	25		2%	60		36%	25		0%	30		4%	26	
jail																		
probation	12%	64		15%	33								17%	30		0%	11	
suspended sentence																		
fine			.36			-.37			.57			-.32				25%	12	.58*
informal handling																		
nothing	11%	18		a			6%	86		23%	40		14%	44		21%	14	
Perceived severity	5%	43		25%	20		2%	43		21%	19		9%	43		11%	19	
Highest																		
Next	9%	45		5%	19		4%	45		21%	19		9%	44		11%	19	
Highest																		
Next	14%	29	.14	21%	14	.10	7%	29	.13	36%	14	.26	14%	28	.05	7%	14	.09
highest							3%	33		38%	13		9%	33		17%	12	
Lowest	6%	32		31%	13													

a = $N \leq 10$ * = $P \leq .05$

TABLE 3: Deviant Respondents' Perceptions of Certainty and Severity of Punishment before Committing Crimes

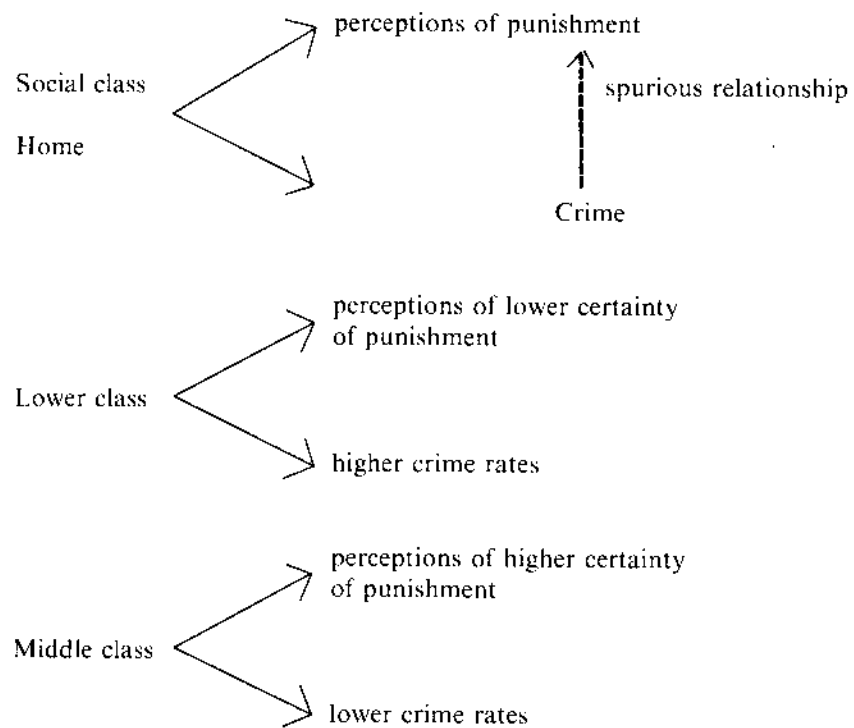
Crime	Perception of Certainty of Punishment					N
	75-100%	50%	25%	10%	0%	
Shoplifting	7%	22%	18%	31%	22%	95
Take bike	8%		18%	28%	46%	61
Take item from car	20%		16%	20%	44%	55
Break into house	22%		37%		41%	27
Break into store	25%		29%		46%	24
Take an item from mailbox	4%		15%	37%	44%	27

Crime	Perception of Severity of Punishment				N
	Very Bad	Not so Bad	Nothing to Worry About	Nothing	
Shoplifting	14%	57%	25%	4%	95
Take bike	16%	30%	28%	26%	61
Take item from car	26%	31%	26%	17%	54
Break into house	59%	37%	4%	0%	27
Break into store	67%	29%	4%	0%	24
Take item from mailbox	4%	42%	19%	35%	26

TABLE 4: Respondents' Reasons Why They Do Not Commit Crimes

Incidence of Crime	Importance of fear of punishment			N	Gamma
	First	Second	Last		
Shoplifting:					
Never	17%	24%	59%	191	.39*
Once or twice	34%	27%	39%	70	
3+ times	47%	18%	34%	87	
Take bike:					
Never	23%	24%	53%	285	.41*
Ever	50%	19%	31%	62	
Take item from car:					
Never	25%	22%	52%	294	-.39*
Ever	43%	28%	28%	53	
Break into house:					
Never	27%	23%	50%	325	-.25*
Ever	42%	19%	38%	23	
Break into store:					
Never	27%	23%	50%	325	.41*
Ever	48%	26%	26%	23	
Take item from mailbox:					
Never	25%	23%	52%	323	.66*
Ever	59%	32%	9%	22	

Figure 1: Model of Possibly Spurious Relationships between Perceptions of Punishment and Crime.



Today, punishment and deterrence are closely linked in our minds;
in fact deterrence has become the major justification for
inflicting punishment.

The notion that punishment deters has been so ingrained in our common
sense that for a long time it was not even seen worthy of study.

What can be more obvious than the assumption that man seeks
pleasure and avoids pain?

And that, therefore, the infliction of pain would keep him from doing things
which have painful consequences.

An examination of the present reality, however, does not seem
to uphold this notion.