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Crime and Punishment: An Economic Approach

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EDITOR'S INTRODUCTION

In this Nobel prize-winning work, Gary Becker argues that criminals are rational and respond to incentives, just like non-criminals do. In particular the supply of criminal activity decreases as the probability and severity of punishment increases. Society can increase the probability of punishment (p) by hiring more police and spending more on prosecutors; and society can increase the severity of punishment (f) by imprisoning criminals for more years. Either method is costly. As a consequence, society must take into account these costs of prevention as well as the direct harm from the crime itself in determining the optimal amounts of p and f. From the opposite perspective, society chooses the optimal amount of crime. In this regard, the analysis is quite similar to the analysis of torts and accidents. Society reduces the amount of crime until the marginal benefit of reduced crime equals the marginal cost of reducing the crime. Because imprisonment, unlike a fine, involves a social cost instead of being a mere transfer, Becker shows that the elasticity of criminal response must be taken into account when the punishment is imprisonment. Variables that affect the elasticity, such as intent, must then be considered.

This paper demonstrates the power of economics in analyzing "non-economic" behavior. It not only provides substance to such statements as "the punishment should fit the crime," but also provides insight into why criminals might be deterred more by a doubling of the probability of punishment rather than a doubling of the punishment, itself.

I. Introduction

Since the turn of the century, legislation in Western countries has expanded rapidly to reverse the brief dominance of laissez faire during the nineteenth century. The state no longer merely protects against violations of person and property through murder, rape, or burglary but also restricts "discrimination" against certain minorities, collusive business arrangements, "jaywalking," travel, the materials used in construction, and thousands of other activities. The activities restricted not only are numerous but also range widely, affecting persons in very different pursuits and of diverse social backgrounds, education levels, ages,

races, etc. Moreover, the likelihood that an offender will be discovered and convicted and the nature and extent of punishments differ greatly from person to person and activity to activity. Yet, in spite of such diversity, some common properties are shared by practically all legislation, and these properties form the subject matter of this essay.

In the first place, obedience to law is not taken for granted, and public and private resources are generally spent in order both to prevent offenses and to apprehend offenders. In the second place, conviction is not generally considered sufficient punishment in itself; additional and sometimes severe punishments are meted out to those convicted. What determines the amount and type of resources and punishments used to enforce a piece of legislation? In particular, why does enforcement differ so greatly among different kinds of legislation?

The main purpose of this essay is to answer normative versions of these questions, namely, how many resources and how much punishment *should* be used to enforce different kinds of legislation? Put equivalently, although more strangely, how many offenses *should* be permitted and how many offenders should go unpunished? . . .

The optimal amount of enforcement is shown to depend on, among other things, the cost of catching and convicting offenders, the nature of punishments – for example, whether they are fines or prison terms – and the responses of offenders to changes in enforcement. The discussion, therefore, inevitably enters into issues in penology and theories of criminal behavior. A second, although because of lack of space subsidiary, aim of this essay is to see what insights into these questions are provided by our "economic" approach. It is suggested, for example, that a useful theory of criminal behavior can dispense with special theories of anomie, psychological inadequacies, or inheritance of special traits and simply extend the economist's usual analysis of choice.

II. Basic Analysis

A. The cost of crime

Although the word "crime" is used in the title to minimize terminological innovations, the analysis is intended to be sufficiently general to cover all violations, not just felonies – like murder, robbery, and assault, which receive so much newspaper coverage – but also tax evasion, the so-called white-collar crimes, and traffic and other violations. Looked at this broadly, "crime" is an economically important activity or "industry," notwithstanding the almost total neglect by economists. . . . [The costs of crime include] [p]ublic expenditures . . . on police, criminal courts and counsel, and "corrections"; . . . private outlays on burglar alarms, guards, counsel, and . . . other forms of protection; . . . a myriad of private precautions against crime, ranging from suburban living to taxis. . . .; the value of crimes against property, including fraud, vandalism, and theft; [and] the loss of earnings due to homicide, assault, or other crimes. . . .

B. The model

It is useful in determining how to combat crime in an optimal fashion to develop a model to incorporate the behavioral relations behind the costs. . . . These can be divided into five

categories: the relations between (1) the number of crimes, called "offenses" in this essay, and the cost of offenses, (2) the number of offenses and the punishments meted out, (3) the number of offenses, arrests, and convictions and the public expenditures on police and courts, (4) the number of convictions and the costs of imprisonments or other kinds of punishments, and (5) the number of offenses and the private expenditures on protection and apprehension. The first four are discussed in turn. . . .

1. Damages

Usually a belief that other members of society are harmed is the motivation behind outlawing or otherwise restricting an activity. The amount of harm would tend to increase with the activity level. . . . The concept of harm and the function relating its amount to the activity level are familiar to economists from their many discussions of activities causing external diseconomies. From this perspective, criminal activities are an important subset of the class of activities that cause diseconomies, with the level of criminal activities measured by the number of offenses.

The social value of the gain to offenders presumably also tends to increase with the number of offenses. . . . The net cost or damage to society is simply the difference between the harm and gain. . . .

[It] seems plausible [that] offenders usually eventually receive diminishing marginal gains and cause increasing marginal harm from additional offenses . . . [This means that the *net* damage is eventually positive.]

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2. The cost of apprehension and conviction

The more that is spent on policemen, court personnel, and specialized equipment, the easier it is to discover offenses and convict offenders. . . .

3. The supply of offenses

Theories about the determinants of the number of offenses differ greatly, from emphasis on skull types and biological inheritance to family upbringing and disenchantment with society. Practically all the diverse theories agree, however, that when other variables are held constant, an increase in a person's probability of conviction or punishment if convicted would generally decrease, perhaps substantially, perhaps negligibly, the number of offenses he commits. In addition, a common generalization by persons with judicial experience is that a change in the probability has a greater effect on the number of offenses than a change in the punishment, although, as far as I can tell, none of the prominent theories shed any light on this relation.

The approach taken here follows the economists' usual analysis of choice and assumes that a person commits an offense if the expected utility to him exceeds the utility he could get by using his time and other resources at other activities. Some persons become "criminals," therefore, not because their basic motivation differs from that of other persons, but

because their benefits and costs differ. I cannot pause to discuss the many general implications of this approach, except to remark that criminal behavior becomes part of a much more general theory and does not require ad hoc concepts of differential association, anomie, and the like, nor does it assume perfect knowledge, lightning-fast calculation, or any of the other caricatures of economic theory.

This approach implies that there is a function relating the number of offenses by any person to his probability of conviction, to his punishment if convicted, and to other variables, such as the income available to him in legal and other illegal activities, the frequency of nuisance arrests, and his willingness to commit an illegal act. . . .

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. . . An increase in either *[the probability of punishment]* or *[an increase in the severity of punishment]* would reduce the utility expected from an offense and thus would tend to reduce the number of offenses because either the probability of "paying" the higher "price" or the "price" itself would increase. . . . The effect of changes in some components of [utility] could also be anticipated. For example, a rise in the income available in legal activities or an increase in law-abidingness due, say, to "education" would reduce the incentive to enter illegal activities and thus would reduce the number of offenses. Or a shift in the form of the punishment, say, from a fine to imprisonment, would tend to reduce the number of offenses, at least temporarily, because they cannot be committed while in prison.

This approach also has an interesting interpretation of the presumed greater response to a change in the probability than in the punishment. An increase in *[the probability of conviction]* "compensated" by an equal percentage reduction in *[the severity of punishment]* would not change the expected income from an offense but could change the expected utility, because the amount of risk would change. It is easily shown that an increase in *[the probability of conviction]* would reduce the expected utility, and thus the number of offenses, more than an equal percentage increase in *[the severity of punishment]* if [the person] has preference for risk; the increase in *[the severity of the punishment]* would have the greater effect if he has aversion to risk; and they would have the same effect if he is risk neutral. The widespread generalization that offenders are more deterred by the probability of conviction than by the punishment when convicted turns out to imply in the expected-utility approach that offenders are risk preferrers, at least in the relevant region of punishments.

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A well-known result states that, in equilibrium, the real incomes of persons in risky activities are, at the margin, relatively high or low as persons are generally risk avoiders or preferrers. If offenders were risk preferrers, this implies that the real income of offenders would be lower, at the margin, than the incomes they could receive in less risky legal activities, and conversely if they were risk avoiders. Whether "crime pays" is then an implication of the attitudes offenders have toward risk and is not directly related to the efficiency of the police or the amount spent on combating crime. . . .

4. Punishments

Mankind has invented a variety of ingenious punishments to inflict on convicted offenders: death, torture, branding, fines, imprisonment, banishment, restrictions on movement and

occupation, and loss of citizenship are just the more common ones. In the United States, less serious offenses are punished primarily by fines, supplemented occasionally by probation, petty restrictions like temporary suspension of one's driver's license, and imprisonment. The more serious offenses are punished by a combination of probation, imprisonment, parole, fines, and various restrictions on choice of occupation. . . .

The cost of different punishments to an offender can be made comparable by converting them into their monetary equivalent or worth, which, of course, is directly measured only for fines. For example, the cost of an imprisonment is the discounted sum of the earnings foregone and the value placed on the restrictions in consumption and freedom. Since the earnings foregone and the value placed on prison restrictions vary from person to person, the cost even of a prison sentence of given duration is not a unique quantity but is generally greater, for example, to offenders who could earn more outside of prison. The cost to each offender would be greater the longer the prison sentence, since both foregone earnings and foregone consumption are positively related to the length of sentences.

Punishments affect not only offenders but also other members of society. Aside from collection costs, fines paid by offenders are received as revenue by others. Most punishments, however, hurt other members as well as offenders: for example, imprisonment requires expenditures on guards, supervisory personnel, buildings, food, etc. . . .

The total social cost of punishments is the cost to offenders plus the cost or minus the gain to others. Fines produce a gain to the latter that equals the cost to offenders, aside from collection costs, and so the social cost of fines is about zero, as befits a transfer payment. The social cost of probation, imprisonment, and other punishments, however, generally exceeds that to offenders, because others are also hurt. . . . .

III. Optimality Conditions

The relevant parameters and behavioral functions have been introduced, and the stage is set for a discussion of social policy. If the aim simply were deterrence, the probability of conviction, p, could be raised close to 1, and punishments, f, could be made to exceed the gain: in this way the number of offenses, O, could be reduced almost at will. However, an increase in p increases the social cost of offenses through its effect on the cost of combating offenses, C, ... as does an increase in f [the social cost of punishment when prison is used instead of a fine]. At relatively modest values of p and f, these effects might outweigh the social gain from increased deterrence. Similarly, if the aim simply were to make "the punishment fit the crime," p could be set close to 1, and f could be equated to the harm imposed on the rest of society. Again, however, such a policy ignores the social cost of increases in p and f.

What is needed is a criterion that goes beyond catchy phrases and gives due weight to the damages from offenses, the costs of apprehending and convicting offenders, and the social cost of punishments. The social-welfare function of modern welfare economics is such a criterion, and one might assume that society has a function that measures the social loss from offenses. . . . The aim would be to select values of f, and [p] that minimize the social loss. . . .

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IV. Shifts in the Behavioral Relations

This section analyzes the effects of shifts in the basic behavioral relations – the damage, cost, and supply-of-offenses functions – on the optimal values of p and f. . . . [Here o]nly intuitive proofs are given. The results are used to explain, among other things, why more damaging offenses are punished more severely and more impulsive offenders less severely.

An increase in the marginal damages from a given number of offenses . . . increases the marginal cost of changing offenses by a change in either p or f. . . . The optimal number of offenses would necessarily decrease, because the optimal values of both p and f would increase. . . . [T]he optimal values of p and f move in the same, rather than in opposite, directions.

An interesting application of these conclusions is to different kinds of offenses. Although there are few objective measures of the damages done by most offenses, it does not take much imagination to conclude that offenses like murder or rape generally do more damage than petty larceny or auto theft. If the other components of the loss in income were the same, the optimal probability of apprehension and conviction and the punishment when convicted would be greater for the more serious offenses.

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Sometimes it is possible to separate persons committing the same offense into groups that have different responses to punishments. For example, unpremeditated murderers or robbers are supposed to act impulsively and, therefore, to be relatively unresponsive to the size of punishments; likewise, the insane or the young are probably less affected than other offenders by future consequences and, therefore, probably less deterred by increases in the probability of conviction or in the punishment when convicted. The trend during the twentieth century toward relatively smaller prison terms and greater use of probation and therapy for such groups and, more generally, the trend away from the doctrine of "a given punishment for a given crime" is apparently at least broadly consistent with the implications of the optimality analysis.

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V. Fines

A. Welfare theorems and transferable pricing

The usual optimality conditions in welfare economics depend only on the levels and not on the slopes of marginal cost and average revenue functions, as in the well-known condition that marginal costs equal prices. The social loss from offenses was explicitly introduced as an application of the approach used in welfare economics, and yet slopes as incorporated into elasticities of supply do significantly affect the optimality conditions. Why this difference? The primary explanation would appear to be that it is almost always implicitly assumed that prices paid by consumers are fully transferred to firms and governments, so that there is no social loss from payment.

If there were no social loss from punishments, as with fines, the elasticity of supply would drop out of the optimality condition . . . If [there were a social loss from punishments], as

with imprisonment, some of the payment "by" offenders would not be received by the rest of society, and a net social loss would result. The elasticity of the supply of offenses then becomes an important determinant of the optimality conditions, because it determines the change in social costs caused by a change in punishments.

Although transferable monetary pricing is the most common kind today, the other is not unimportant, especially in underdeveloped and Communist countries. Examples in addition to imprisonment and many other punishments are the draft, payments in kind, and queues and other waiting-time forms of rationing that result from legal restrictions on pricing . . . and from random variations in demand and supply conditions. It is interesting, and deserves further exploration, that the optimality conditions are so significantly affected by a change in the assumptions about the transferability of pricing.

B. Optimality conditions

If [the social cost of punishment were zero], say, because punishment was by fine, and if the cost of apprehending and convicting offenders were also zero, the [optimality condition would be to set the number of offenses such that the marginal net harm were 0].

Economists generally conclude that activities causing "external" harm, such as factories that pollute the air or lumber operations that strip the land, should be taxed or otherwise restricted in level until the marginal external harm equaled the marginal private gain, that is, until marginal net damages equaled zero. . . . [I]f the costs of apprehending, convicting, and punishing offenders were nil and if each offense caused more external harm than private gain, the social loss from offenses would be minimized by setting punishments high enough to eliminate all offenses. Minimizing the social loss would become identical with the criterion of minimizing crime by setting penalties sufficiently high.

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If the cost of apprehension and conviction were not zero, the optimality condition would have to incorporate marginal costs as well as marginal damages and . . . offenders [would] have to compensate for the cost of catching them as well as for the harm they directly do, which is a natural generalization of the usual externality analysis.

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C. The case for fines

Just as the probability of conviction and the severity of punishment are subject to control by society, so too is the form of punishment: legislation usually specifies whether an offense is punishable by fines, probation, institutionalization, or some combination. Is it merely an accident, or have optimality considerations determined that today, in most countries, fines are the predominant form of punishment, with institutionalization reserved for the more serious offenses? This section presents several arguments which imply that social welfare is increased if fines are used *whenever feasible.*

In the first place, probation and institutionalization use up social resources, and fines do not, since the latter are basically just transfer payments, while the former use resources in the form of guards, supervisory personnel, probation officers, and the offenders' own time . . .

Moreover, the determination of the optimal number of offenses and severity of punish-

ments is somewhat simplified by the use of fines. A wise use of fines requires knowledge of marginal gains and harm and of marginal apprehension and conviction costs; admittedly, such knowledge is not easily acquired. A wise use of imprisonment and other punishments must know this too, however, and, in addition, must know about the elasticities of response of offenses to changes in punishments. As the bitter controversies over the abolition of capital punishment suggest, it has been difficult to learn about these elasticities.

I suggested earlier that premeditation, sanity, and age can enter into the determination of punishments as proxies for the elasticities of response. These characteristics may not have to be considered in levying fines, because the optimal fines. . . do not depend on elasticities. Perhaps this partly explains why economists discussing externalities almost never mention motivation or intent, while sociologists and lawyers discussing criminal behavior invariably do. The former assume that punishment is by a monetary tax or fine, while the latter assume that non-monetary punishments are used.

Fines provide compensation to victims, and optimal fines at the margin fully compensate victims and restore the status quo ante, so that they are no worse off than if offenses were not committed. Not only do other punishments fail to compensate, but they also require "victims" to spend additional resources in carrying out the punishment. It is not surprising, therefore, that the anger and fear felt toward ex-convicts who in fact have *not* "paid their debt to society" have resulted in additional punishments, including legal restrictions on their political and economic opportunities and informal restrictions on their social acceptance. . . .

One argument made against fines is that they are immoral because, in effect, they permit offenses to be bought for a price in the same way that bread or other goods are bought for a price. A fine *can* be considered the price of an offense, but so too can any other form of punishment; for example, the "price" of stealing a car might be six months in jail. The only difference is in the units of measurement: fines are prices measured in monetary units, imprisonments are prices measured in time units, etc. If anything, monetary units are to be preferred here as they are generally preferred in pricing and accounting.

Optimal fines . . . depend only on the marginal harm and cost and not at all on the economic positions of offenders. This has been criticized as unfair, and fines proportional to the incomes of offenders have been suggested. If the goal is to minimize the social loss in income from offenses, and not to take vengeance or to inflict harm on offenders, then fines should depend on the total harm done by offenders, and not directly on their income, race, sex, etc. In the same way, the monetary value of optimal prison sentences and other punishments depends on the harm, costs, and elasticities of response, but not directly on an offender's income. Indeed, if the monetary value of the punishment by, say, imprisonment were independent of income, the length of the sentence would be *inversely* related to income, because the value placed on a given sentence is positively related to income.

We might detour briefly to point out some interesting implications for the probability of conviction of the fact that the monetary value of a given fine is obviously the same for all offenders, while the monetary equivalent or "value" of a given prison sentence or probation period is generally positively related to an offender's income. . . . [A]ctual probabilities of conviction are not fixed to all offenders but usually vary with their age, sex, race, and, in particular, income. Offenders with higher earnings have an incentive to spend more on planning their offenses, on good lawyers, on legal appeals, and even on bribery to reduce the probability of apprehension and conviction for offenses punishable by, say, a given prison term, because the cost to them of conviction is relatively large compared to the cost of these

expenditures. Similarly, however, poorer offenders have an incentive to use more of their time in planning their offenses, in court appearances, and the like to reduce the probability of conviction for offenses punishable by a given fine, because the cost to them of conviction is relatively large compared to the value of their time. The implication is that the probability of conviction would be systematically related to the earnings of offenders: negatively for offenses punishable by imprisonment and positively for those punishable by fines. Although a negative relation for felonies and other offenses punishable by imprisonment has been frequently observed and deplored . . . , I do not know of any studies of the relation for fines or of any recognition that the observed negative relation may be more a consequence of the nature of the punishment than of the influence of wealth.

Another argument made against fines is that certain crimes, like murder or rape, are so heinous that no amount of money could compensate for the harm inflicted. This argument has obvious merit and is a special case of the more general principle that fines cannot be relied on exclusively whenever the harm exceeds the resources of offenders. For then victims could not be fully compensated by offenders, and fines would have to be supplemented with prison terms or other punishments in order to discourage offenses optimally. This explains why imprisonments, probation, and parole are major punishments for the more serious felonies; considerable harm is inflicted, and felonious offenders lack sufficient resources to compensate. Since fines are preferable, it also suggests the need for a flexible system of installment fines to enable offenders to pay fines more readily and thus avoid other punishments.

This analysis implies that if some offenders could pay the fine for a given offense and others could not, the former should be punished solely by fine and the latter partly by other methods. In essence, therefore, these methods become a vehicle for punishing "debtors" to society. Before the cry is raised that the system is unfair, especially to poor offenders, consider the following.

Those punished would be debtors in "transactions" that were never agreed to by their "creditors," not in voluntary transactions, such as loans, for which suitable precautions could be taken in advance by creditors. Moreover, punishment in any economic system based on voluntary market transactions inevitably must distinguish between such "debtors" and others. If a rich man purchases a car and a poor man steals one, the former is congratulated, while the latter is often sent to prison when apprehended. Yet the rich man's purchase is equivalent to a "theft" subsequently compensated by a "fine" equal to the price of the car, while the poor man, in effect, goes to prison because he cannot pay this "fine."

Whether a punishment like imprisonment in lieu of a full fine for offenders lacking sufficient resources is "fair" depends, of course, on the length of the prison term compared to the fine. For example, a prison term of one week in lieu of a $10,000 fine would, if anything, be "unfair" to wealthy offenders paying the fine. Since imprisonment is a more costly punishment to society than fines, the loss from offenses would be reduced by a policy of leniency toward persons who are imprisoned because they cannot pay fines. Consequently, optimal prison terms for "debtors" would not be "unfair" to them in the sense that the monetary equivalent to them of the prison terms would be less than the value of optimal fines, which in turn would equal the harm caused or the "debt."

It appears, however, that "debtors" are often imprisoned at rates of exchange with fines that place a low value on time in prison. Although I have not seen systematic evidence on the different punishments actually offered convicted offenders, and the choices they made,

many statutes in the United States do permit fines and imprisonment that place a low value on time in prison. For example, in New York State, Class A Misdemeanors can be punished by a prison term as long as one year or a fine no larger than $1,000 and Class B Misdemeanors, by a term as long as three months or a fine no larger than $500 *(Laws of New York,* 1965, chap. 1030, Arts. 70 and 80). According to my analysis, these statutes permit excessive prison sentences relative to the fines, which may explain why imprisonment in lieu of fines is considered unfair to poor offenders, who often must "choose" the prison alternative.

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VIII. Summary and Concluding Remarks

This essay uses economic analysis to develop optimal public and private policies to combat illegal behavior. The public's decision variables are its expenditures on police, courts, etc., which help determine the probability *(p)* that an offense is discovered and the offender apprehended and convicted, the size of the punishment for those convicted *(f),* and the form of the punishment: imprisonment, probation, fine, etc. Optimal values of these variables can be chosen. . . .

"Optimal" decisions are interpreted to mean decisions that minimize the social loss in income from offenses. This loss is the sum of damages, costs of apprehension and conviction, and costs of carrying out the punishments imposed, and can be minimized simultaneously with respect to p, f, and the form of f unless one or more of these variables is constrained by "outside" considerations. The optimality conditions derived from the minimization have numerous interesting implications that can be illustrated by a few examples.

If carrying out the punishment were costly, as it is with probation, imprisonment, or parole, the elasticity of response of offenses with respect to a change in p would generally, in equilibrium, have to exceed its response to a change in f. This implies, if entry into illegal activities can be explained by the same model of choice that economists use to explain entry into legal activities, that offenders are (at the margin) "risk preferrers." Consequently, illegal activities "would not pay" (at the margin) in the sense that the real income received would be less than what could be received in less risky legal activities. The conclusion that "crime would not pay" is an optimality condition and not an implication about the efficiency of the police or courts; indeed, it holds for any level of efficiency, as long as optimal values of p and f appropriate to each level are chosen.

If costs were the same, the optimal values of both p and f would be greater, the greater the damage caused by an offense. Therefore, offenses like murder and rape should be solved more frequently and punished more severely than milder offenses like auto theft and petty larceny. Evidence on actual probabilities and punishments in the United States is strongly consistent with this implication of the optimality analysis.

Fines have several advantages over other punishments: for example, they conserve resources, compensate society as well as punish offenders, and simplify the determination of optimal p's and fs. Not surprisingly, fines are the most common punishment and have grown in importance over time. Offenders who cannot pay fines have to be punished in other ways, but the optimality analysis implies that the monetary value to them of these punishments should generally be less than the fines.

Vengeance, deterrence, safety, rehabilitation, and compensation are perhaps the most impor-

tant of the many desiderata proposed throughout history. Next to these, minimizing the social loss in income may seem narrow, bland, and even quaint. Unquestionably, the income criterion can be usefully generalized in several directions, and a few have already been suggested in the essay. Yet one should not lose sight of the fact that it is more general and powerful than it may seem and actually includes more dramatic desiderata as special cases. For example, if punishment were by an optimal fine, minimizing the loss in income would be equivalent to compensating "victims" fully . . . ; or it would be equivalent to deterring all offenses causing great damage if the cost of apprehending, convicting, and punishing these offenders were relatively small. Since the same could also be demonstrated for vengeance or rehabilitation, the moral should be clear: minimizing the loss in income is actually very general and thus is more *useful* than these catchy and dramatic but inflexible desiderata.

This essay concentrates almost entirely on determining optimal policies to combat illegal behavior and pays little attention to actual policies. The small amount of evidence on actual policies that I have examined certainly suggests a positive correspondence with optimal policies. For example, it is found for seven major felonies in the United States that more damaging ones are penalized more severely, that the elasticity of response of offenses to changes in p exceeds the response to f, and that both are usually less than unity, all as predicted by the optimality analysis. There are, however, some discrepancies too: for example, the actual tradeoff between imprisonment and fines in different statutes is frequently less, rather than the predicted more, favorable to those imprisoned. Although many more studies of actual policies are needed, they are seriously hampered on the empirical side by grave limitations in the quantity and quality of data on offenses, convictions, costs, etc., and on the analytical side by the absence of a reliable theory of political decision making.

Reasonable men will often differ on the amount of damages or benefits caused by different activities. To some, any wage rates set by competitive labor markets are permissible, while to others, rates below a certain minimum are violations of basic rights; to some, gambling, prostitution, and even abortion should be freely available to anyone willing to pay the market price, while to others, gambling is sinful and abortion is murder. These differences are basic to the development and implementation of public policy but have been excluded from my inquiry. I assume consensus on damages and benefits and simply try to work out rules for an optimal implementation of this consensus.

The main contribution of this essay, as I see it, is to demonstrate that optimal policies to combat illegal behavior are part of an optimal allocation of resources. Since economics has been developed to handle resource allocation, an "economic" framework becomes applicable to, and helps enrich, the analysis of illegal behavior. At the same time, certain unique aspects of the latter enrich economic analysis: some punishments, such as imprisonments, are necessarily non-monetary and are a cost to society as well as to offenders; the degree of uncertainty is a decision variable that enters both the revenue and cost functions; etc.

Lest the reader be repelled by the apparent novelty of an "economic" framework for illegal behavior, let him recall that two important contributors to criminology during the eighteenth and nineteenth centuries, Beccaria and Bentham, explicitly applied an economic calculus. Unfortunately, such an approach has lost favor during the last hundred years, and my efforts can be viewed as a resurrection, modernization, and thereby I hope improvement on these much earlier pioneering studies.