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# TOWARDS MORE RATIONAL DECISIONS ON CRIMINALS

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## *Towards more rational decisions on criminals*

### *Introduction*

I regret that I never had the opportunity to meet Dr. Geary. From the obituary that Professor Kennedy wrote about him for *The Irish Times*, it is clear that R.C. Geary, Ireland's late internationally eminent statistician, would have shared my goal: to give court and penal systems a grounding in science and a logical consistency that can make their decisions more rational. I would like to share this interest with you.

Police, prosecutors, judges, prison directors and probation or parole officers of many countries often assert that they don't make the laws, they only enforce them. But this image of an impersonal and discretionless criminal justice system is always a myth. Close observation soon reveals that discretion by officials in dealing with individual offenders is not only pervasive, but is probably inevitable. Laws usually limit the range of action that may properly be taken with criminals, but seldom completely specify what must be done. For example, judges are allowed some discretion in fixing penalties for at least three reasons: first, no two offences are identical even when given the same name, such as robbery, for they differ tremendously in what is taken, in cruelty, premeditation or other features; secondly, no two offenders are alike, for they differ greatly in their prior criminal and non-criminal conduct; thirdly, no government allocates nearly enough resources to impose the maximum lawful punishments on all or even most of the persons found guilty of crimes. Indeed, the maximum penalties were intended only for the worst cases in each category of lawbreaking. A majority of those who could legally be imprisoned are,

instead, given fines, probation or other alternative penalties, and even those confined are held for less than the maximum permitted duration. Therefore, judges, usually, must select for each case one sentence from several lawful possibilities. Later decisions on how to treat those who are sentenced are made by prison, probation, parole or other officials.

How rational are these many case decisions? How well do humans decide the fate of others? A few examples from diverse fields will suggest that many extremely important decisions are routinely made without nearly as much wisdom as is generally assumed. Some psychological principles help to explain why humans are often unaware of their poor judgement and, hence, are undisturbed by it.

### *The Doctors' and Judges' Dilemmas*

About 50 years ago, when it was more customary than it is now to remove a child's tonsils if they were inflamed, the New York City Board of Health had physicians examine the tonsils of 1,000 12-year old school children. They found that 611 already had their tonsils removed and they recommended tonsilectomies for 45 per cent of the remainder. This left 215 children for whom tonsil removal was not prescribed and they were then sent to other physicians who did not know of the previous diagnoses. For 46 per cent of these children, tonsilectomy was now recommended. This left 116 children who twice had been deemed not to need the operation. They were then sent to a third set of physicians, who recommended tonsilectomy for 44 per cent of them. Thus, three independent screenings by presumably precise medical experts each found that about 45 per cent of the children whom they saw needed tonsilectomies, yet the physicians in the last two examinations did not know that they were seeing the approximately 55 per cent whom other physicians had already diagnosed as not needing this operation, (American Child Health Association, 1934).

There is reason to believe that much similarly questionable judgement occurs not only in medicine, but in the criminal justice system and elsewhere. Such conduct by presumed experts probably exists wherever the evidence

on which a decision must be based is diverse and vague; wherever there are more likely to be future complaints or regrets if a preventative action is not taken than if it is; and wherever there are constraints from custom, cost or other factors that discourage taking preventive action for all cases. In short, humans faced with uncertain risks but with feedback only on their wrong decisions tend to become as conservative in their decisions as they are permitted to be. They also develop unofficial quotas for various types of decisions without being aware of it.

At the time of the medical experiment, tonsilectomies were presumed to reduce the risk of throat infections. There was complaint against the physicians only if infection followed failure to operate; if infection occurred despite a tonsilectomy, the operation was simply deemed an insufficient preventative. But because this operation involves some risk pain and expense for the patient, it was deferred for the healthiest of the children seen.

In the criminal justice system, judges and other officials are often blamed—and feel responsible even if not blamed—when a released offender who could legally still be confined commits a serious crime. Of course, no one knows and therefore no one is blamed when a criminal is confined who would not have committed any offence if released. But if judges and parole board members become so cautious as to impose much longer imprisonment than is customary, there are complaints because confinement facilities become overcrowded, while probation and parole supervisors are underworked. Thus, a subculture of traditional sentencing practices develops in each courthouse, although there is still some inconsistent sentencing in each court and there is much discrepancy between the practices in different courts.

No one has tried with judges or other criminal justice officials an experiment identical in design to the New York study on tonsilectomies. Yet in conferences, judges or parole board members have frequently been asked to study independently of each other a set of case reports on criminals and then to recommend penalties for each case. The officials almost always show much disagreement, especially if they come from different communities.

Because new crime by an offender results in officials being blamed for having taken less preventive action than they could, but not blamed if they tried everything permitted and it did not suffice, criminal justice officials tend to take all, presumably, preventive action that custom and resources permit. Thus, if efforts are made to decrease the rate of incarceration by expanding the offices and staff that supervise and counsel offenders in the community, judges tend to use these new resources for petty offenders whom they would have previously warned and dismissed, rather than to reduce the number who are incarcerated (Klein 1979). Judges also tend to keep detention facilities full and to fill new structures more rapidly than is anticipated (Pawlak, 1977, pp. 152-165). Further, it is a common observation that when prison systems include both high and low security buildings, administrators keep the most secure structures more continuously full than the less secure confinement facilities. This conservatism in punishment would be highly rational if the officials were making optimum decisions on the best use of their resources for preventive actions. Unfortunately, they share with other humans some serious deficiencies as decision makers.

#### *Humans as Predictors and Deciders*

It has repeatedly been demonstrated that everyone makes many errors in predicting whether or not individual criminals will commit further crimes. Recidivism is the technical term for new crimes committed by released criminals. On the average, for any large number of offenders, recidivism rates are best predicted by indices of the frequency of each individual's past criminal behaviour, such as the number of prior arrests, convictions or incarcerations and how young at first arrest or confinement. Also highly predictive of recidivism are poor school and work records and alcohol or drug addiction. These are predictive because most of the crime that frightens the public and burdens the police today is committed by teenagers and young adults who are doing poorly in school or are both out of school and out of work. Also, much recidivism is associated with excessive use of

alcohol or drugs. The earlier these illegal or addictive behaviors begin and the more frequently they occur, the more likely they are to persist. Conversely, the earlier and the more often youths have gratifying experiences in conventional studies, work and recreation, the less likely they are to break the laws.

For over half a century it has repeatedly been shown that actuarial prediction tables based primarily on these statistical correlates of recidivism can more accurately estimate the probability of a released offender committing new crimes than can the individual case study prognoses of psychiatrists, sociologists, social workers, parole board members, prison wardens or other presumed experts (Mannheim and Wilkins, 1955.; Hogarth 1960). The failure of most of these professionals to recognise their limitations and, thus, their failure to seek statistical guidance for their case judgements, results largely from defects common in all human decision making.

People reach conclusions too hastily, as a rule, grasping at the first suggestion of a basis for decision. They then do not investigate further and become overconfident about the wisdom of their judgements. Research shows that most people develop some anxiety when making an important and difficult decision, but that once they decide, they are greatly relieved. This reduction of anxiety fosters the habit of impulsive decision making. Also, once people make a choice, they tend to raise their ratings of what they selected and to downgrade the alternatives. This finding was explained by the psychologist Leon Festinger as part of a human tendency to reduce cognitive dissonance; it is uncomfortable to think that one's choice was wrong, so people modify their perceptions of the alternatives to justify their decisions (Festinger, 1964). Therefore, judges probably feel more comfortable after they have sentenced someone, than when they are trying to decide what the sentence should be.<sup>1</sup>

Some interesting aspects of this overconfidence of humans in their judgements was demonstrated by a study in which students at a British university were asked a series of so-called

<sup>1</sup>For a comprehensive and lucid review of decision research by psychologists and others, see Hogarth (1980).

"almanac questions," such as: "Which is longer, the Panama or the Suez Canal?", "What is the capital of Iraq?" After each of their answers, the students were to estimate as a percentage the probability that they were correct. Their overconfidence was shown by the fact that their average estimate of the probability that they were correct was always higher than the percentage of their answers that were actually correct. This overconfidence was much greater in students majoring in the arts and humanities than in those who were science majors. Also, British students, who are exposed to much scientific thought, were less overconfident about the correctness of their answers than were students from the Malaysian area, where science is less developed and astrologers are widely relied upon for advice in important decisions (Wright, et al., 1978).

Further evidence of overconfidence in decisions is readily available from listening to persistent gamblers at roulette, lotteries, slot machines or other games of chance in which personal judgement cannot possibly affect the outcome. Because the operators of these games regularly take ten per cent or some other percentage of the money wagered, the more anyone gambles the more certain it is by the laws of probability that he or she will be a net loser. Yet chronic gamblers bet as frequently and as rapidly as they can and talk with pride of their good judgement when they win or when they nearly win, forgetting that they lose more than they win. They have what has been called the "illusion of control," which may also explain overconfidence in many other decisions.

Another illusion in making case-study predictions about human behaviour is that the more types of information one has about persons, the better one can predict their behaviour. In an experiment on predicting the future grade averages of newly-admitted university students, psychologists were given four pieces of information, such as the student's I.Q., secondary school grade average, consistency of secondary school grades and entrance examination score. The psychologists were then asked to make predictions with 18 additional types of information, such as personality test scores and letters of recommendation. They predicted more



accurately with less information, because people tend to attach undue importance to many intriguing personal characteristics and do not then give enough weight to the facts that objectively, are most closely related to the conduct to be predicted (Bartlett and Green, 1966). Years ago I showed that outcome on parole could be predicted by one key aspect of the prior criminal record, such as age at first arrest, than by the case study prognoses of sociologists or psychiatrists (Glaser, 1955).

### *Sentencing and Parole Guidelines*

From the 1920s into the 1960s, various criminologists in different countries proposed that sentencing and parole decisions be guided by actuarial prediction tables which classify criminals into recidivism risk categories on the basis of statistical studies of past experience (Simon, 1971). Judges and parole board members opposed this advice with a variety of arguments. They claimed that they routinely take into consideration the prediction factors, such as prior criminal record, which the actuarial tables weight heavily. They stressed their sensitivity to the uniqueness of each case. They especially objected to the fact that a clerk can apply the tables to determine a criminal's fate instead of this decision being made by a highly educated and prestigious judge or parole board member.

During the late 1960s and early 1970s, however, criminologists Don Gottfredson and Leslie Wilkins developed a way of presenting statistical advice on sentencing and parole that proved acceptable to judges and parole board members in the United States (Gottfredson, 1973; Wilkins, 1969). The officials were first given statistics on the factors that best predicted their past decisions, as well as the variations in consistency and predictability of those decisions. They were also given actuarial tables showing the factors that best predict post-release recidivism. These tables show that the prior criminality of offenders is correlated to both the penalties that they receive and to their subsequent recidivism rates, but especially to the recidivism rates; the penalties are more influenced by the offence for which the

accused is currently convicted. From these two types of tabulation, Gottfredson and Wilkins, in consultation with parole board members and judges, developed a series of decision guidelines that are now used by a majority of the state and federal parole boards in the United States and by some courts (Bohnstedt and Geiser, 1979).

Each of their guidelines is a single sheet of paper with a grid of several vertical and horizontal lines, so that the paper is covered with squares. Each horizontal row of squares represents a group of crimes that are similar in severity, so that small-scale theft or fraud would be in a low severity row together, while murder and kidnapping would be in the highest severity row together. Each vertical column of squares represents the estimated risk of recidivism of the offender, from low to high. Thus, any convicted offender can be classified as fitting that one square which represents his combination of offence severity and recidivism risk. In each square there is printed a recommended range of penalties for all criminals with that particular combination of crime severity and risk.

For example, with such a guideline a first offender convicted of murder would be in the highest crime severity row, but might be in the lowest recidivism risk column. The recommended range of penalties might be as low as 8 to 10 years. If he had three previous felony convictions, a history of narcotic addiction and his first arrest was at age 12, he would be in the highest recidivism risk category and the recommended range of penalties when he is convicted of murder could be 20 years to life imprisonment. However, if this high-risk offender were charged only with a small theft, the recommended range of penalties could be 1 to 4 years. But if this theft were committed by a first offender with a good work record and no alcohol or drug addiction history, the recommended sentence would probably be a fine and probation.

It should be especially noted that these guidelines do not specify a punishment that the judge or parole board *must* impose. They only recommend that the penalty be within a specific range. If officials who study the unique features of the crime and criminal should decide in a particular case to

impose a lawful punishment that is outside the recommended range, either more lenient or harsher, they are free to do so, but when they make such an exception they are asked to record their reasons for treating this case differently.

The original objective of these guidelines was primarily to increase the consistency of sentencing or parole decisions. The first Gottfredson and Wilkins guideline, which was for the United States Board of Parole, grouped all of the several hundred different federal crimes into seven categories of severity according to the average duration of confinement imposed in past years on those who were convicted of each crime. Thus, the least severe crime group included theft of money or goods worth less than \$2,000, while the most severe category included aircraft hijacking. The four columns of this guideline classified federal prisoners as *very good*, *good*, *fair* or *poor* risks for parole according to their *salient factor score*, which has proved to be the most accurate known way of predicting their parole violation rates. These scores range from 0 to 11, with eight of the score points based on prior criminal record and one favourable point assigned if the current offence was not auto theft, cheque forgery or cheque theft, one if the subject had no history of dependence on heroin or other opiates and one if he had verified employment or full-time school attendance for at least six months of his last two years in the community (Hoffman and Adelberg, 1980; Hoffman and Beck, 1979).

This guideline's recommended range of penalties for each combination of offence severity and risk category was originally the range of punishments that the Board in preceding years had given to most prisoners with that combination of crime severity and recidivism risk. Every six months the Board meets to study a tabulation of the penalties it has given in the past half year to prisoners in each of the guideline's categories. It also reviews a list of the reasons recorded for its deviations from guideline recommendations. The Board can then decide to revise the guideline, for example, changing the severity classification of some crimes or the range of penalties recommended for some combination of crime severity and recidivism risk.

Such sentencing and parole decision guidelines contribute

to rationality by making explicit the reasons for imposing different penalties, by making the punishments more consistent for each specific type of crime and criminal and by facilitating revision of punishment policies on the basis of new research or a new consensus on the penalties that are appropriate for particular types of offences and offenders.

### *Correctional Administration Decision Guidelines*

If criminals are sentenced to a prison system that has diverse institutions, officials must decide where to confine each of them. If offenders are released on probation, or if they are imprisoned but later paroled, supervision officials must decide how often to check on each releasee's conduct in the community. These case decisions, like those of judges and parole board members, are often based on inaccurate predictions of a criminal's behaviour and, therefore, they produce much less than optimum use of available resources for protecting the community.

In California, a 1978 revision of the criminal code resulted in longer prison terms. It increased the number of inmates in the state's already full prison system by over 20 per cent in less than two years. Fortunately, not long before the new penalty code went into effect, Norman Holt and associates in the state's research staff completed a statistical analysis of the classification of inmates for different levels of security in confinement. As in most large prison systems, caseworkers had interviewed and tested each newly-received prisoner to prepare an initial classification report that included a recommended tightness of custody. But the researchers found from a follow up of past reports that the inmate's custody classification had almost no value as a predictor of the prisoner's subsequent number of disciplinary reports or escape attempts (Holland and Holt, 1980). From a multiple correlation analysis to identify the factors that best predict such inmate non-conformity to the rules, Holt developed a "point system" of classification that gave unfavourable points for prior misconduct and length of sentence yet to serve, but also awarded favourable points for recent periods of good conduct (Holt *et al.*, 1981).

California was able to absorb its rapid increase in prisoners only by quickly expanding its minimum security housing, for these are the most rapidly procured prison buildings. Yet because of the point system for classifying inmates by custodial risk, it had its lowest escape rate in twenty years. The federal and several state prison systems have now adopted actuarial guideline methods of classifying prisoners, but the insistence of many of their administrators and caseworkers on relying mostly on their personal judgement in each case, with the guidelines only advisory, has made the results not as dramatic as the 1979-82 experience in California.

The state of Wisconsin in 1979 adopted a now widely copied system of classifying probationers and parolees (Baird *et al.*, 1979). To help assure acceptance of this system, case supervisors were involved with the researchers in developing it. In the Wisconsin procedure, at release and every six months thereafter an "Assessment of Client Risk" form is prepared for each offender. It assigns risk points based on statistical correlates of probation or parole violation. When the offender is released under supervision he gets favourable points for the time that he was employed or in school during the last 12 months of freedom, but gets unfavourable points for his number of address changes during this period, for drug or alcohol abuse and for several aspects of prior criminal record. The risk forms completed every six months thereafter are based mainly on the subject's behaviour during the preceding half year. In Wisconsin, Los Angeles and elsewhere, these risk scores were highly predictive of the individual's success or failure on probation or parole. In practice, officials add 15 points to the risk score of every offender convicted of an assaultive crime during the preceding five years. These 15 points do not make the score predict more accurately, but they assure the supervisor's conformity to the public's demand that anyone with a record of violence be closely watched.

In addition, as a concession to the concerns of the Wisconsin supervisors, a "Needs Assessment" form is completed for each probationer and parolee at release and every six months thereafter. This form assigns points based

on the supervisor's judgement on eleven possible types of assistance that the individual may need, such as getting a job, health care, companionship or treatment for drug or alcohol addiction. The form produces a total needs score that proved not nearly as predictive of probation or parole violation rates as the risk score.

These two forms were first introduced experimentally in one part of Wisconsin, with a comparison part of the state using old procedures in which the overall risks and needs of a probationer or parolee were rated from case studies as "High," "Medium" or "Low." In the experimental area, "High," "Medium" and "Low" were defined as having specific ranges of scores on the two forms. In both areas of the state, the minimum frequency of an officer's contact with each client was determined by the risk and need classification. Research showed that in the area where points on these forms were used for classifying clients, violation rates were significantly lower for probationers and parolees classified as in the maximum need or risk categories than in the area where case study judgements determined these classifications. The rates were similar in both areas for those called "Medium" or "Low" in risk and need. Thus, the forms helped in crime control for the cases that it rated as most serious.

### *Some Other Trends*

From the standpoint of a social scientist, the guidelines described are but first steps towards the rational protection of the public from recidivism by convicted offenders. More optimum guidelines would reflect research now available and still better research that is feasible, on what types of penalties and assistance are most cost-beneficial in reducing recidivism rates for different types of criminals. Also desirable would be knowledge, now lacking, on the minimum penalties, if any, needed to deter non-offenders from committing crimes.

Opinion polls show that most people want their government to imprison more lawbreakers and for longer terms than is now customary, but few are willing to pay the additional

taxes that such punishments would require. It is now much more expensive to lock up a criminal for a year than it would be to enrol him in a university for that period, but judges do not have college or gaol as their sentencing alternatives. Yet pressure for governmental economy is forcing officials to seek those punishments for which the monetary value of public benefits is greatest in relation to costs. One can argue from available research data that such a level of economic rationality can be approached by seeking an optimum mixture of six often complementary but sometimes opposed principles in sentencing and correctional practice:

1. *The Economy Principle* calls for minimum use of imprisonment and maximum use of fines. Imprisonment generally costs over ten times the cost of probation, but fines can pay the cost of collecting them plus all court costs if the fines are progressive in proportion to income, and if they are collected on an instalment plan when necessary (Shaw, 1980; Bishop, forthcoming).

2. *The Incapacitation Principle* dictates long imprisonment only for those offenders who are likely to be the most predatory recidivists. These are the small proportion whose recidivism if released would probably cost the public more than the cost of their further confinement. The costs of concern here are, primarily, the physical and emotional suffering that crime imposes on victims. These can be assessed monetarily, even if somewhat imperfectly, and then added to costs from property losses, arrest and prosecution. Such high-cost recidivists can be identified actuarially from their records of early and persistent prior crime, drug use, and idleness (Chaiken and Chaiken, 1982; Greenwood and Abrahamse, 1982). Of course, no prisoner should be confined for longer than the lawful maximum penalty for the crimes of which he or she has been convicted. Ideally, the length of confinement appropriate might be reduced by drastic improvements in the prisons and, perhaps, by supplying opiates medically to confirmed addicts if they remain law-abiding in the community (Trebach, 1982).

3. *The Non-criminalisation Principle* urges isolation from other offenders for those lawbreakers who have a strong stake in conventional behaviour despite their crimes. Such

a stake in conformity is suggested by good school or work records, close ties with law-abiding persons and little involvement with other delinquents or criminals. These are the so-called "neurotic" or "conflicted" offenders for whom fines, community service, and probation are both cheaper and more effective penalties than much confinement (Palmer, 1974; Palmer, 1978).

4. *The Crime-spree Interruption Principle* prescribes removal from the situation of their lawbreaking for any offenders who have had close involvement with delinquent or criminal associates for a long time or have had an extended period of much success at crime. This removal may usually be for weeks or months rather than years and it may be as effective in many cases if it is to a distant work camp or farm where the offenders can be constructively occupied and motivated not to escape, rather than to a costly correctional institution (Murray and Cox, 1979; Palmer *op cit.*,).

5. *The Differential Association Principle* minimises the intensity of a prisoner's involvement with other prisoners and maximises his or her bonds with law-abiding persons. One way of achieving such recidivism-reducing conditions is simply to have only a few inmates reside in any prison living unit, for there is significantly less recidivism with 25 instead of 50 young offenders in a dormitory, (Clements, 1980; Jesness, 1965; McCain *et al.* 1980) and there probably is still less with the Dutch pattern of 8 to 20 inmates per living unit, with each inmate having a separate room. Another contribution to differential association is to maximize collaborative activities of inmates with staff (Coates *et al.*, 1978) and even to adopt the frequent Dutch practice of having inmates and staff collectively decide on much of the unit's management, including the discipline of those who misbehave. A third technique is to maximize contacts of inmates with law-abiding persons in the free community. This policy has been shown to reduce recidivism rates when it involves facilitating visits to the prisoners, giving inmates brief furloughs from the prison and letting them serve the last portion of their sentences in a halfway house from which they can depart daily for work or for other approved activity in the community (Le Clair 1978 and 1981).



6.. *The Retraining Principle* would maximise the extent to which prisoners obtain an appreciable amount of realistic training and experience in legitimate occupations that appeal to them, and for which jobs are most likely to be available for them in the free community. In California it has been shown that giving 1000 or more hours of training in auto repair, welding or machinist work to prisoners more than pays for the cost by its increasing the prisoner's post-release tax payments, apart from the benefits of reducing recidivism rates (McKee Jr. 1978).

These six principles, each supported by objective data and unified by an economic perspective, suggest the diverse considerations that judges and prison administrators must take *into account in each of their major case decisions* if they are to serve the public interest in an optimum manner. The principles presented here by no means exhaust the concerns of sentencing and correctional policy, but they deal with issues of major importance for most cases. An ideal set of decision guidelines, to recommend a particular penalty, placement and program for each offender, would take all of these principles into account more than do those now available.

### *Conclusion*

To summarise, case assessments in courts, prisons and probation or parole agencies have repeatedly been shown by research to be much less sound than is usually assumed and less accurate than actuarial tables in predicting the misconduct of convicted criminals. However, because of an *overconfidence in the wisdom of past judgements* that pervades many types of human decision making and for other reasons, officials have resisted the claims of researchers that sentencing and correctional decisions would be more effective if they took into account available statistics on actuarial risks. Recently some types of decision guidelines have been widely adopted nevertheless, largely because their advice reflects not only the prediction of an offender's conduct, but such other interests of the decision makers as expressing public outrage at serious crimes and identifying the needs of pro-

bationers and parolees for individual assistance. More optimum guidelines would reflect principles of sentencing and correctional policy that can be inferred from research results now available, such as the six presented here and others that might be developed by further studies. The objective is to identify the types of penalties and assistance that are most cost-effective in reducing recidivism rates for different types of criminals, assuming that these measures are compatible with deterring the general public from crime.

In the criminal justice field, as in other concerns of public policy, rationality requires a willingness to permit and support research on government actions. One must describe, count and explain what officials do and measure the consequences of their acts. Our increasingly computerised world keeps better records and recovers information from them more easily than was possible in the past. If we recognise and use the full potential of these new resources for testing ideas, we can have more effective policies.

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