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Sheldon Glueck

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INDIVIDUALIZATION AND THE USE OF PREDICTIVE DEVICES

SHELDON GLUECK¹

Introductory

During the past few years a number of penologists have been making studies of the possible rôle of prognostic tables in the improvement of different phases of correctional work with offenders.² These contributions are concerned mostly with the use of predictive devices by parole boards in guiding them to determine the potentialities of prisoners for "success" or "failure" on parole. The writer has also insisted on the possibilities of predictive devices in the sentencing of offenders by judges. By comparing the predictive value of the crime committed with the predictive value of certain sociologic-psychiatric factors, it was demonstrated that the latter are a much surer guide to judges than the former.³ In other words, by using predictive tables which take into account a variety of pertinent factors in the lives of offenders, instead of relying almost exclusively on the nature of the crime committed, judges might carry on their work of sentencing offenders much more intelligently and effectively than most of them are doing it today.

Construction of Predictive Tables

One method thus far used by the writer and his co-worker, Dr. Eleanor T. Glueck, in constructing prognostic tables for use by both judges and parole boards, may be described as follows: We investigated the life histories of some 500 former inmates of the Massachusetts Reformatory, who left that institution between 1911 and 1922 and were traced and identified in 1926 and 1927. We provided for

¹Professor in Harvard Law School.

²See Hart, H., "Predicting Parole Success," *Journal of Criminal Law and Criminology*, Vol. XIV, No. 3, pp. 405 *et seq.*, Bruce, Harno, Burgess, and Landesco, "Workings of the Indeterminate-Sentence Law and the Parole System in Illinois, Chap. XXX, Glueck, S. and E. T., "Predictability in the Administration of Criminal Justice," *Harvard Law Review*, Vol. XLII, No. 3, pp. 297 *et seq.*, and 500 *Criminal Careers*, N. Y., 1930, and Vold, G. B., *Prediction methods and parole*, (Sociological Press, Hanover, N. H., 1931), Tibbits, C., "Success or Failure on Parole Can Be Predicted: A Study of the Records of 3,000 Youths Paroled from the Illinois State Reformatory," *Journal of Criminal Law and Criminology*, Vol. XXII, No. 1, pp. 11 *et seq.*, etc.

³Glueck, S. and E. T., "Predictability," etc., *op cit.*, pp. 327-329.

a five-year post-parole "test period" during which the behavior of the graduates of the reformatory was noted. But this period was only one of four into which the life currents of these young criminals were artificially dammed for our purpose. The other three stages, reconstructed through elaborate social investigation,⁴ were the history of the youths prior to their sentence to the reformatory, their history while in the reformatory, their history while on parole. Some fifty factors concerning the careers of this group, from childhood through the post-parole period, were gone into. By means of correlation tables and the mean square contingency coefficient the degree of relation of each of these factors to the post-parole criminal status of the men was determined. The process may be illustrated by the following two tables:

TABLE I
SERIOUSNESS OF OFFENSE FOR WHICH SENTENCE TO MASSACHUSETTS
REFORMATORY WAS IMPOSED, RELATED TO CRIMINALITY
DURING FIVE-YEAR POST-PAROLE PERIOD

<i>Seriousness of Offense for which Original Sentence was Imposed</i>	<i>Criminal Conduct Record During Post-Parole Period</i>			
	<i>Success %</i>	<i>Partial Failure %</i>	<i>Total Failure %</i>	<i>Total %</i>
Major	21.7	17.5	60.8	100
Minor	25.0	18.7	56.3	100
Total	22.1	17.7	60.2	100

Coefficient of Contingency .05

TABLE II
PRE-REFORMATORY INDUSTRIAL HABITS RELATED TO
POST-PAROLE CRIMINALITY

<i>Pre-Reformatory Industrial Habits</i>	<i>Criminal Conduct Record During Post-Parole Period</i>			
	<i>Success %</i>	<i>Partial Failure %</i>	<i>Total Failure %</i>	<i>Total %</i>
Good Worker	46.7	10.0	43.3	100
Fair Worker	20.3	20.3	59.4	100
Poor Worker	12.1	19.4	68.5	100
Total	21.5	17.7	60.8	100

Coefficient of Contingency .42

⁴I cannot sufficiently stress the indispensability of *verification* of the data found in official sources and purporting to give correct information regarding offenders. To construct predictive tables on unverified data is to indulge in an academic mathematical exercise. It is high time that researchers in crim-

The difference in results of these correlations in the two illustrative tables indicates the value of the method employed for determining which of numerous factors have the greatest relationship to the conduct of prisoners. The seriousness of the crime for which the men were sentenced to the reformatory was in the first table shown to have little if anything to do with their post-parole conduct; the pre-reformatory industrial habits of the men, on the other hand, were obviously related to their post-parole conduct to an appreciable degree.

By such a method, the relationship to post-parole criminal conduct of each of over fifty factors as to which reliable information could be obtained was established. It soon became evident that certain factors had little or no association with the men's behavior during the post-parole period (however important they might have been in the *genesis* of the delinquent careers), while others varied in importance from those having a slight to those having a very great significance. This was only the first step in the construction of predictive tables.

Before describing the subsequent steps, a word is in order to justify what may appear to be a too elaborate procedure—the evaluation, one by one, of more than fifty factors that happened to be involved in this research. Economy and good sense dictate that instead of enthusiastically constructing predictability tables on *all* factors available in the case records of courts and parole boards, those items shown to bear little if any relation to the point at issue should be eliminated. The methods of Burgess and others are far simpler. In the construction of their prognostic tables, they utilized all factors, regardless of their degree of pertinence to prediction. But why should we continue to gather all sorts of sociological data for the construction of predictive tables, if our method shows that many of such items are irrelevant or only slightly relevant? Does not such a procedure remind one of the Abbot's well known command at the sacking of Bezier: "Kill them all; God will know His Own!"⁵

It has been established by Vold that the use of *all* available factors in the construction of predictive tables yields almost as good

inalistics dedicated themselves to the careful ascertainment and verification of the raw materials upon which their mathematico-statistical researches are based.

⁵It may happen that verified data respecting the several items shown to be most significantly related to success or failure are unobtainable in some given piece of research. Some such method as that suggested by Burgess then becomes necessary; since, though information as to the *most significant items* be missing in many cases, the presence of information on other items still renders possible a high degree of prediction. This is illustrated in a forthcoming publication dealing with 1,000 former juvenile delinquents.

predictive results and takes much less work than the use of only the small number of factors shown to be most intimately related to the future conduct of offenders.⁶ It should be pointed out, however, that as predictive tables are not made every day the greater amount of work involved in the method herein described should not be given too much weight.

Continuing the description of the method of constructing the prognostic tables, the second step was as follows: The six pre-reformatory factors found by the correlation process to bear the highest relationship to the post-parole conduct of the men were utilized in constructing the first prognostic table—that for use by judges dealing with first offenders. The method was as follows: First, the actual percentages of the “total failures” (*i. e.*, those who committed serious offenses during the post-parole period) were set down for each of the sub-classes of the six most significant factors. For example, as regards the factor “Industrial habits preceding sentence to reformatory,” the sub-classes and their respective percentages of failure were as follows:

<i>Sub-class</i>	<i>Percentage of Failures</i>
Good Worker	43%
Fair Worker	59%
Poor Worker	68%

This means that only 43% of those offenders who were good workers in their pre-reformatory life, reverted to criminality during the five-year period following their completion of parole; of the fair workers 59% were post-parole failures; and of the poor workers 68% recidivated during the post-parole period. Each of the following items, which had previously been found to be most intimately related to post-parole conduct of the men, was treated as was the above factor: Seriousness and frequency of pre-reformatory crime, Arrest for crimes preceding the offense for which sentence to reformatory was imposed, Penal experience preceding reformatory incarceration, Economic responsibility preceding sentence to reformatory, Mental abnormality on entrance to reformatory.

For the prognostic table to be utilized by parole boards in considering applications for parole, the conduct records of the prisoners while in the reformatory, were added to the foregoing. Other items regarding the reformatory life of the offenders might also have been used, but the association tables and coefficients indicated that they bore but a slight relationship to the post-parole behavior of the pris-

⁶Vold, *op cit.*, pp. 97 *et seq.*

oners. The factor "Frequency of offenses in the reformatory," on the other hand, was found to be appreciably related to the post-parole criminality of the men. For the prognostic device to be used by parole boards in determining whether to continue a man on parole after a certain period has elapsed or return him to the institution, the factor of "criminal conduct during parole" was found to be the only really significant one. Finally, for the predictive instrument to be used by judges in dealing with recidivists—those who, having already passed through the existing reformatory and parole regimes, again commit crimes—the following five highest post-parole factors were added to the foregoing: Industrial habits following expiration of parole, Attitude toward family following parole, Economic responsibility following parole, Type of home following parole, Use of leisure following parole.

The third step in constructing the predictive tables was to determine, by addition, the highest score, on the one hand, and the lowest, on the other, that it was possible for an offender to have on the basis of the foregoing percentages. All the lowest percentages of failure attributable to the various sub-classes of the above-mentioned significant factors were added to yield the lowest possible failure score; all the highest percentages when totaled gave the maximum possible failure score. Score-classes between these two limits were then established, and each of the offenders involved was classified therein according to his individual score and his criminal record. The following table, which is based on the first six factors, will indicate how this was done.

TABLE III

POST-PAROLE CRIMINALITY RATES (PERCENTAGES OF SUCCESSES, PARTIAL FAILURES, AND TOTAL FAILURES), BASED ON SCORES ON SIX MOST IMPORTANT PRE-REFORMATORY FACTORS

Score in Significant Factors	Status as to Post-Parole Criminality			
	Success %	Partial Failure %	Total Failure %	Total %
244-295	75.0	20.0	5.0	100
296-345	34.6	11.5	53.9	100
346-395	26.2	19.1	54.7	100
396 and over	5.7	13.7	80.6	100
TOTAL	20.0	15.6	64.4	100

Coefficient of Contingency .45

It is clear that there is a high relationship between the status as regards the significant sociologic-psychiatric factors and the status

in respect to post-parole criminality. The former may therefore be used as at least a partial index of the latter. Thus, from the above table a judge, considering whether or not to sentence an offender to the reformatory, could with considerable accuracy determine the advisability of such disposition of the case before him, provided he had reliable information as to the offender's status on the six pertinent factors upon which the table is based. A prisoner who scores as low as 244 to 295 on these six pre-reformatory factors (which means that he was in the favorable sub-classes of those factors) has seven and a half in ten chances (75:100) of being a success in post-parole conduct, while one with as high a score as 396 or over (*i. e.*, who is classifiable in the unfavorable sub-classes) has but half a chance in ten (5.7:100) of succeeding. The division of failures into partial and total need not concern us for the present purpose; it is merely a further refinement. One could, of course, make no such distinction, confining the predictive results to the mere arrest or non-arrest for crime, regardless of its seriousness.

By way of further illustration, the following table is the kind that might be used by a parole board:

TABLE IV

POST-PAROLE CRIMINALITY RATES BASED ON TOTAL FAILURE SCORES IN SIX HIGHEST PRE-REFORMATORY FACTORS AND HIGHEST REFORMATORY FACTOR

Score in Significant Factors	Status as to Post-Parole Criminality			
	Success %	Partial Failure %	Total Failure %	Total %
274-325	71.5	21.4	7.1	100
326-425	40.6	18.8	40.6	100
426-475	11.6	15.2	73.2	100
476 and over.....	4.7	12.5	82.8	100
Total	20.9	15.8	63.3	100

Coefficient of Contingency .44

From the foregoing table it will be seen that a prisoner coming up before the parole board for consideration, whose record on the seven factors involved gives him a score of between 274 and 325, has seven out of ten chances (71.5:100) of being a success in post-parole conduct and but half a chance in ten (7.1:100) of turning out to be a total failure. On the other hand, a prisoner whose record on the six highest pre-reformatory factors and one highest reformatory factor gives him a failure score totalling 476 or over, has only half a chance in ten (4.7:100) of being a success in post-parole conduct

and eight out of ten chances (82.8:100) of becoming a complete failure.

Prediction and Individualization

The possible value of predictive devices to judges in sentencing offenders cannot be overemphasized. The books are full of talk about "individualization" of punishment. At present individualization consists largely of a compound of hunches and "expert experience" of judges. Prognostic tables, being based on an *analysis of results*, would compel judges to individualize in terms of *objectified experience*. Suppose, for illustration, that a judge had before him separate prognostic tables based on fines, on imprisonment in a penitentiary, on imprisonment in a reformatory, on probation or, even more discriminatingly, on results obtained by different probation officers. And suppose that the judge, on consultation of the prognostic tables found that Prisoner X, according to past experiences with other prisoners who in certain pertinent particulars resembled X, had, say nine out of ten chances of continuing in crime if sent to prison, seven out of ten if sent to a reformatory, five out of ten if placed on probation, and only two out of ten if placed on probation under the supervision of Officer Y. Clearly, the judge would have very pertinent data upon which to discriminate between several alternatives, in disposing of the case. The illustration given is of course extreme. Experience with crime surveys convinces me more and more that the "outcomes" obtained by *any* of the devices thus far invented by society for the treatment of criminality are nothing to send up paeans of praise about. But there is some difference in effectiveness between, say, probation under proper auspices and imprisonment under proper or improper auspices. By *objectifying and organizing his experience*, the judge can greatly improve his exercise of discretion in imposing sentence.

In addition to testing existing alternative instruments of correctional treatment, predictive tables have another, closely-related possibility. Suppose it were found that four-fifths of prisoners with a certain syndrome of individual and social characteristics fail under *all* existing methods of treatment. Suppose an experiment were then set up whereby a new type of treatment were utilized, or more intensive application was made of existent types (such as probation or parole); and it were found that only half of the prisoners with the designated characteristics failed under the experiment. That would be a social demonstration of great value.

When constructing the predictive tables we planned to apply them to subsequent cases passing through courts and parole boards;

but other activities have thus far prevented this. I understand that Prof. Vold has made such a test, so far as parole is concerned, and has found a high degree of predictive value in his tables. This remains to be done at the *sentencing* stages of the procedure.

Curiously enough, many psychiatrists and social workers have strenuously objected to the utilization of predictive devices on the ground that such instruments "destroy individualization." This objection arises from a superficial conception of the place and use of prognostic devices. The question resolves itself into this: Is it better for clinical criminologists, judges and parole board members to rely exclusively on that vague something called "expert knowledge," or to objectify, organize and reflect upon their experience so that they can bring it intelligently to bear when considering how to handle the individual case? It is a naive sort of self-importance that makes a judge or criminologist believe he can detect the minutest details of difference that distinguish one offender from another and on top of that determine the precise method of treatment suited to the individual case and to that case alone! Only a god could do that. What the intelligent criminalist can do is to determine, first, in what manner and to what degree the individual offender under consideration resembles hundreds of others who have come and gone before him; secondly, what the results have been in treating an offender of such characteristics by one type or another of correctional instrument; thirdly, which remaining, more subtle characteristics, not taken into account by the statistical tables, seem to distinguish the individual under consideration from the hundreds of others whom he resembles in other respects; finally what form of treatment is dictated in the instant case, taking into account (a) his resemblances to others in various pertinent characteristics, (b) his differences from them in characteristics possibly significant, (c) the results obtained in the past by using one or another form of correctional treatment with cases having a number of important resemblances to the one under consideration; (d) the modification that is necessary in the treatment suggested by consultation of predictive devices, because of the possibly significant distinguishing characteristics of the case under consideration.

But will not the court and parole board then become mere rubber stamps, or slot machines? No, because it is not proposed that judges or members of administrative boards dispose of cases by the mere mechanical and routine following of the treatment suggested by the prognostic tables. Individual differences will still have to be con-

sidered. But a much more intelligent individualization will result if the process of distinguishing one offender and one form of treatment from another is grounded in objectified and organized experience with hundreds or thousands of similar, yet in some respects different, cases. By sound individualization of this sort, the predictive tables can continuously be improved as experience becomes further and further refined through the addition of creative thinking in each individual case to the mass result of many cases that is reflected in the tables.

Natural History of Criminogenic Factors

It is not altogether irrelevant to refer, in closing, to a point of the first importance that has thus far been almost completely overlooked by criminologists and that has some bearing on the problem of individualization and the use of predictive devices. In taking into consideration the probable influence of various factors in the lives of criminals on their criminal conduct, it must not be forgotten that the different forces and situations involved have their own natural history. Some of them are long-lived, others short-lived. Some are linked with various biological changes and fluctuate with them, others lead a seemingly independent life. In determining the degree of relationship between various *pre-reformatory* factors in the careers of reformatory graduates and outcomes, it was found that many of them have but a very remote association, if any, to the conduct of offenders many years later. For instance, such factors as whether the young men were native or foreign-born, whether, in the childhood of the offenders, their parents were economically dependent, in marginal circumstances or "comfortable," whether the offenders were Protestant, Catholic or Hebrew, whether they had attended church regularly or irregularly, whether they had left the parental roof when they were under fourteen years of age or fourteen or over, whether they had begun to work at under fifteen or at fifteen or over, whether they were skilled, semi-skilled or unskilled workers during their first years of work, whether in the pre-reformatory stage they had used their leisure harmfully, "negatively" or constructively, whether the offense for which they were first sentenced was a burglary, larceny, robbery or sexually-motivated affair, whether they committed the crime alone or with others, whether they were of normal intelligence or classifiable as dull, borderline, or moron, etc., etc., *had but a very slight or no relationship to their continuance or non-continuance of criminality in the post-parole period.* Now such a finding is not tantamount to saying that the listed factors had but little if anything to do with the *origin* of

the delinquency in these cases. It may well have been that such factors, to cite but a few, as the economic condition of parents, the mobility of families, whether the youths had normal or abnormal intelligence, etc., played an important rôle in *criminogenesis*; they nevertheless had little if any influence, so far as we could ascertain by the association method, in determining whether or not graduates of the reformatory and the parole system would *continue* their criminal activities after the expiration of parole.

It is conceivable that some of the criminogenic factors are of such a nature as to spend their energy, as it were, by the time offenders progress from childhood to youth or adulthood; others are of such kind that their influence may well continue up to and considerably beyond the time when our men completed their sentences. Others may have continued to exert some influence down to today, still others may reasonably be expected to perpetuate their effect throughout the lives of the offenders, and a few may rationally be presumed to continue to work their mischief even in the offspring of the first, second or later generations of the prisoners.

This idea presents such a challenge, that we are definitely planning to re-study these 500 young men (and 1,000 juvenile delinquents who passed through the Boston Juvenile Court and the Judge Baker Foundation and 500 graduates of the Massachusetts women's reformatory) every five years for the next fifteen to twenty-five years, to determine the influence of the passing of time with its maturation and deterioration processes on the various types of factors involved. The "revisiting" of the 500 graduates of the Massachusetts Reformatory will be made next year, when five years will have elapsed since the completion of the five-year post-parole period originally studied.