

Summer 1938

Scale of Seriousness of Crimes

John Henderson Gorsuch

Follow this and additional works at: <https://scholarlycommons.law.northwestern.edu/jclc>

 Part of the [Criminal Law Commons](#), [Criminology Commons](#), and the [Criminology and Criminal Justice Commons](#)

Recommended Citation

John Henderson Gorsuch, *Scale of Seriousness of Crimes*, 29 *Am. Inst. Crim. L. & Criminology* 245 (1938-1939)

This Article is brought to you for free and open access by Northwestern University School of Law Scholarly Commons. It has been accepted for inclusion in *Journal of Criminal Law and Criminology* by an authorized editor of Northwestern University School of Law Scholarly Commons.

A SCALE OF SERIOUSNESS OF CRIMES¹

JOHN HENDERSON GORSUCH²

Introduction

From time to time in the statistical treatment of criminal data it becomes necessary to evaluate the previous criminal records of delinquents, and to distinguish degrees of criminality in habitual offenders. The adequacy of the indices most commonly used is sometimes questioned since they offer no particular discrimination between major and minor crimes. Early in the present century Goring³ attempted to supplement the most common index, i.e., number of previous convictions, by making two additional indices based on a combination of the number of previous convictions and the time elapsing between the first and last convictions.

In 1922 Clark⁴ developed a scale for grading 15 juvenile offenses. This scale was based on the judgments of 50 university faculty members and students and 50 other persons engaged in social and educational work. The scale was later revised by Mursell⁵ who also added a formula for calculating a recidivistic index.

About 1926 John E. Slawson⁶ developed another index to evaluate the past criminal records of delinquents he was studying. His method involved the construction of a seriousness scale for previous records based on the total time incarcerated. Sentences involving fines were evaluated by considering a one dollar fine as the equivalent of one day incarcerated.

More recently, the Gluecks⁷ have devised a dichotomous clas-

¹ Abstracted from M.A. thesis, *A Scale for Evaluating Crimes of Recidivists*, 1937, submitted to the Graduate School, University of Pittsburgh, under the advisorship of Dr. G. I. Giardini, Lecturer in Psychology, University of Pittsburgh, and Senior Psychologist, Western State Penitentiary of Pennsylvania.

² Formerly Junior Assistant in the Department of Psychology, Western State Penitentiary; now Assistant Psychologist, Pennsylvania Industrial School, Huntingdon, Pa.

³ Goring, Charles. *The English Convict*, London, His Majesty's Printing Office (1913).

⁴ Clark, W. W., *The Whittier Scale for Grading Juvenile Offenses*, California Bureau of Juvenile Research, Whittier State School, Whittier, California, Bulletin 11. (Out of print.)

⁵ Mursell, George R., "A Revision of the Whittier Scale for Grading Juvenile Offenses," *Journal of Juvenile Research*, vol. 16, No. 3, pp. 246-251 (1932).

⁶ Slawson, John E., *The Delinquent Boy*. Boston, H. J. Badger, The Gorham Press (1926).

⁷ Glueck, Sheldon and Eleanor, *500 Criminal Careers*. New York, A. A. Knopf (1930).

sification of crimes with respect to seriousness based primarily on the severity of the legal sentences; but, in some cases, supplemented by personal judgments of the authors.

The purpose of this study is to explore the possibilities of scaling previous criminal records of recidivists by means of a scale of seriousness based on the judgments of a group of professional persons and derived by the use of the paired comparison technique.⁸

It is further desired to apply this scale to a number of recidivistic cases to determine the feasibility of its use, and the discrimination it offers in comparison with other indices.

Method and Results

A questionnaire arranged in accordance with the paired comparison technique was sent out to 158 persons in the professions indicated in Table I. Sixteen categories of crimes were used, following, in general, the categories employed by the Federal Bureau of the Census.⁹ Two changes were made. Embezzlement and fraud were taken from the subcaptions under larceny and placed in independent categories. Secondly, the general category of sex offenses was eliminated and rape and sodomy were made independent categories. The 16 items were then paired, once each with every other, and the resulting 120 pairs were incorporated in a questionnaire. Position of the items with respect to each other, and the position of the respective pairs were controlled by making the questionnaire in two forms, A and B, the order of the pairs in form A being the reverse of form B. Equal number of each form were sent out. With each questionnaire an explanatory letter and a supplementary sheet defining the crimes under each category were included.

The returns are shown in Table I. Eighty judges out of 158 returned the questionnaire. Letters were received from 13 who did not return a questionnaire, offering instead various criticisms as to why the questionnaire could not be answered. Many felt unable or unwilling to make any comparison of the crimes in the abstract, feeling that the individual aspects should be available to make an evaluation. This point of view overlooks the fact that in judging a criminal record we seldom have more than was offered

⁸ Thurstone, L. L., "The Method of Paired Comparisons." *Journal of Abnormal and Social Psychology*, vol. 21, No. 4, pp. 384-400 (1927).

⁹ U. S. Bureau of the Census, *A Standard Classification of Offenses for Criminal Statistics*, Washington, U. S. Government Printing Office, 1933.

in the questionnaire. The differentiating circumstantial material, either extenuating or aggravating, is usually lacking. Yet a judgment must be made.

TABLE I
DISTRIBUTION OF JUDGES BY PROFESSIONS

<i>Profession</i>	<i>Questionnaires Distributed</i>		<i>Questionnaires Returned</i>	
	<i>Number</i>	<i>Per Cent</i>	<i>Number</i>	<i>Per Cent</i>
Psychologists	19	12.0	14	17.5
Social Workers	10	6.3	7	8.8
Clergymen	11	7.0	6	7.5
Criminologists	9	5.7	5	6.2
Penal Administrators	17	10.8	8	10.0
Parole Officers	7	4.4	5	6.2
Juvenile Court Officers	13	8.2	3	5.0
Police	3	1.9	3	3.8
School Teachers	13	8.2	7	8.8
Judiciary	18	12.0	3	3.8
Attorneys	12	7.8	3	3.8
Sociologists	13	8.9	5	6.2
Psychiatrists	2	1.3	1	1.2
Students and Unclassified	9	5.7	9	11.2
TOTALS	158	100.0	80	100.0

The results of the questionnaires returned were tabulated in a percentage chart as shown in Table II. This chart shows the percentage of the judges who chose the crime at the top of the column as more serious than the crime of the corresponding row. For example, the top entry in the first column is 47.5. This means that 47.5 per cent of the judges believed assault to be more serious than burglary. A similar chart was then made with the percentages translated into standard deviations, expressed in sigma units. This latter chart and Thurstone's paired comparison technique were used to obtain the scale values. Assuming the zero scale value to fall at -2.896 sigma, the values shown in Table III were obtained.

Inspection of the Seriousness Scale shows that Homicide stands out alone with a seriousness value of 5.24, which is considerably above the seriousness of other crimes. The differences between

the others, successively considered, are not reliable. But it is important to consider the probable errors, which must be regarded as the measures of agreement among the judges as to the seriousness of any one crime. In this connection it is interesting to note the relatively stable position of burglary, robbery and larceny, as indicated by their relatively small probable errors. Sodomy shows considerable fluctuation. This contrast is not surprising, since the seriousness of predatory crimes such as burglary, robbery and larceny, is not in controversy, either in law or professional circles, whereas the seriousness of sodomy is.

TABLE III
SERIOUSNESS INDEX VALUES AND THEIR PROBABLE ERRORS

<i>Crime</i>	<i>Index</i>	<i>Probable Error</i>
Homicide	5.24	.849
Rape	3.63	.461
Burglary	3.46	.326
Robbery	3.45	.359
Embezzlement and Fraud	3.31	.631
Assault	3.28	.524
Forgery and Counterfeiting	3.25	.629
Narcotic Law Violation	3.16	.776
Sodomy	3.15	1.259
Larceny	2.95	.312
Non-support	2.54	.679
Carrying Deadly Weapons	2.42	.701
Motor Vehicle Code Violation	1.98	.929
Liquor Law Violation	1.54	.716
Gambling	1.42	.869
Drunken and Disorderly Conduct	1.38	.774

The lower group of crimes in the scale, with exception of motor vehicle code violations, are those which we usually consider as personal vices, while the middle and upper groups include crimes which directly affect others. The dividing line may be drawn between Larceny and Non-support on the scale. Carrying concealed weapons may be regarded as a personal vice since it usually exists as such for some time before it results in injury to others. In many cases it never reaches this point. The unexpectedly high value

of non-support may be explained by the heavy weighting given to it by some judges because of the suffering, maladjustment and neglect frequently following in its wake. The motor vehicle code violations retain a fairly high position in the scale probably because it includes driving while intoxicated, and drunken drivers are regarded as potential murderers. The relatively high probable errors in the lower group of crimes indicate that there is room for debate as to their relative seriousness.

A total of 1304 cases, representing the consecutive original commitments to the Western Penitentiary of Pennsylvania over a 34 months' period beginning January 1, 1927, were available for this study. Of this group, 674 cases were recidivists by the criterion used. This considered as recidivists only those cases which had actually been incarcerated 15 days or more prior to their last offense. This lenient criterion was used since accurate data on the minor offenses are seldom available.

Comparison of Seriousness Index With Other Indices

The index value for a given case was calculated by substituting the seriousness index value for each particular crime found in the previous criminal record and summing these values. The total was considered the seriousness index for that particular case. An example: A case has two previous convictions, one for burglary and one for larceny. The index values for these crimes are 3.46 and 2.95 respectively. The seriousness index for this case would then be 2.95 plus 3.46 or 6.41. It is, of course, possible to work out a mean seriousness index for each case by dividing the total of the values by the number of crimes. In the illustration just given the mean value index would be 3.20.

In order to compare the seriousness index with other indices it was deemed advisable to hold the age of the group constant, since only cases of equal ages could have previous criminal records that could be regarded comparable. Out of the group of 674 recidivists 114 were found with ages between 25 and 27 inclusive. This three year range was necessary in order to make the group large enough for statistical treatment. The various indices were then applied to the 114 cases and correlation coefficients calculated with the results set forth below.

1. *Number of Previous Convictions.* This index is probably the one most commonly used in predicting future criminality. The

number of previous convictions, without reference to the nature of these convictions, is the basis of prediction. In the present study, this index was found to correlate .934 with a probable error of .0081, with the seriousness index.¹⁰

2. *Total Time Incarcerated.* In view of the general belief in the deteriorative effects of imprisonment, *per se*, the total time that a man has spent in penal and correctional institutions is regarded as important in predicting the possibilities for future readjustment. When this index was applied to our constant age group of 114 men, this index gave a correlation of .620 with a probable error of .0099 with the seriousness index.

3. *Per Cent of Time Incarcerated.* This index is of course derived from the one just described. It is computed in the following manner: The total time incarcerated since the first conviction is divided by the total time elapsing between the first and last convictions, and the quotient multiplied by 100. An example: A man is 27 years of age at the time of present offense. He was first incarcerated at the age of 17, and has been incarcerated a total of five years since that time. The index would then be $5/10$ times 100 or 50. This index, when applied to the constant age group, correlated .010 with a probable error of .0645 with the seriousness index.

4. *Convictions per Year of Freedom.* This index was first used by Goring¹¹ and is calculated in the following manner. The number of previous convictions is divided by the difference between the total time elapsed and the total time incarcerated between the first and last convictions. An example: A man was 22 years of age when first arrested, and 25 years of age when last arrested. Between these ages he had been incarcerated twice and had served a total of one year. The index would then be $2/(3-1)$ or 1.00. In applying this index to the constant age group, it was found to be very unreliable where the time elapsed between the first and last conviction is relatively small. It was found to correlate .314 with a probable error of .0075, with the seriousness index.

The correlations of the seriousness index with the other indices discussed above, are summarized in Table IV.

The high correlation between the seriousness index and the number of previous convictions is so high as to suggest that the two indices might be used interchangeably. But this is not entirely the

¹⁰ In this and succeeding correlations, Hull's method for ungrouped data was used. See Hull, Clark L., *Aptitude Testing*, Yonkers-on-Hudson, World Book Co. (1928).

¹¹ Goring, C., *The English Convict*, London, His Majesty's Printing Office (1913).

case. Computation of the two indices for individual cases shows an increasing disparity between them as the number of previous convictions increases. The relatively lower correlations, or lack of correlation, between the seriousness index and the other indices may indicate that these measure quite different aspects of the recidivistic problem, and that they should probably be used in combination with the seriousness index.

TABLE IV
CORRELATION COEFFICIENTS OF SERIOUSNESS INDEX WITH
OTHER INDICES

<i>Indices</i>	<i>Correlation</i>	<i>Probable Errors</i>
Seriousness Index with:		
1. No. of Previous convictions	.934	.0081
2. Total time incarcerated	.620	.0099
3. Per cent time incarcerated	.010	.0645
4. Convictions per year of freedom	.314	.0075

Conclusion

The seriousness scale devised in this study seems to afford additional discrimination over the other indices discussed. In comparison with the number of previous conviction index, the seriousness index affords an additional criterion of recidivism only when the previous record has been extensive. The low correlations between the seriousness index and some of the other indices are indicative of the need of further study to determine what relationship does exist between the different indices, and whether the true recidivistic index should not be a composite of a number of indices, of which the seriousness index might be one.

The results of the present study further show that a much larger group of cases, probably about 5,000, would be necessary to enable adequate selection and control, particularly at the extremes of the distributions.