

1920

Comparative Intelligence of Prisoners

Edgar A. Doll

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

Edgar A. Doll, Comparative Intelligence of Prisoners, 11 J. Am. Inst. Crim. L. & Criminology 191 (May 1920 to February 1921)

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.

THE COMPARATIVE INTELLIGENCE OF PRISONERS

EDGAR A. DOLL¹

The State Board of Control of Institutions and Agencies of the State of New Jersey has authorized Commissioner Burdette G. Lewis to institute a program of psychiatric and psychological examining in the correctional institutions of New Jersey. The following report is based on the initial results of applying the Army Group Intelligence Test Alpha to nearly one thousand prisoners in the New Jersey State Prison as the first results of the psychological program. Publication is approved by the Commissioner of Institutions and Agencies of New Jersey in order to secure discussion of findings for the benefit of further investigations and institutional administration.

I. ARMY GROUP TEST ALPHA

Psychological examining was initiated at the New Jersey State Prison in February, 1919. A total of 839 prisoners have been examined with the Army Group Intelligence Test Alpha prior to July 1, 1919. This is the group test used for the examination of literate army recruits. The statistical results of these examinations are presented in Table I. In this table the first column indicates the score-intervals. The second column shows the number of men at each score-interval. The third column shows the percentage of men at each score-interval. The fourth column shows the percentage at each score-interval and below, that is, the summation of all cases from the lowest scores to the highest scores. The distribution of scores is represented graphically in Plate 1. On this plate is also shown the graphic distribution of 6,541 white draft recruits of the September draft at Camp Dix, New Jersey. The distribution of letter-grade scores of this draft are identical with the distribution of 1,500,000 recruits in the army as a whole.² The curve is, therefore, representative not only of the State of New Jersey, but also of the army as a whole. The Beta subjects (illiterate recruits) of this draft are represented on this curve as Alpha scores below 15 (the D—or Alpha—illiterate army grade). This makes possible a

¹Psychologist, New Jersey Department of Institutions and Agencies.

²Based on data from *Army Mental Tests*, Washington, D. C., Nov. 22, 1918, p. 5.

direct comparison of the army mentality with the prison mentality, since illiterate prisoners were not given the Beta (illiterate) examination. In comparing the prison curve with the army curve, however, certain cautions must be observed as outlined below.

TABLE I

DISTRIBUTION OF SCORES IN ALPHA APPLIED AT THE NEW JERSEY STATE PRISON

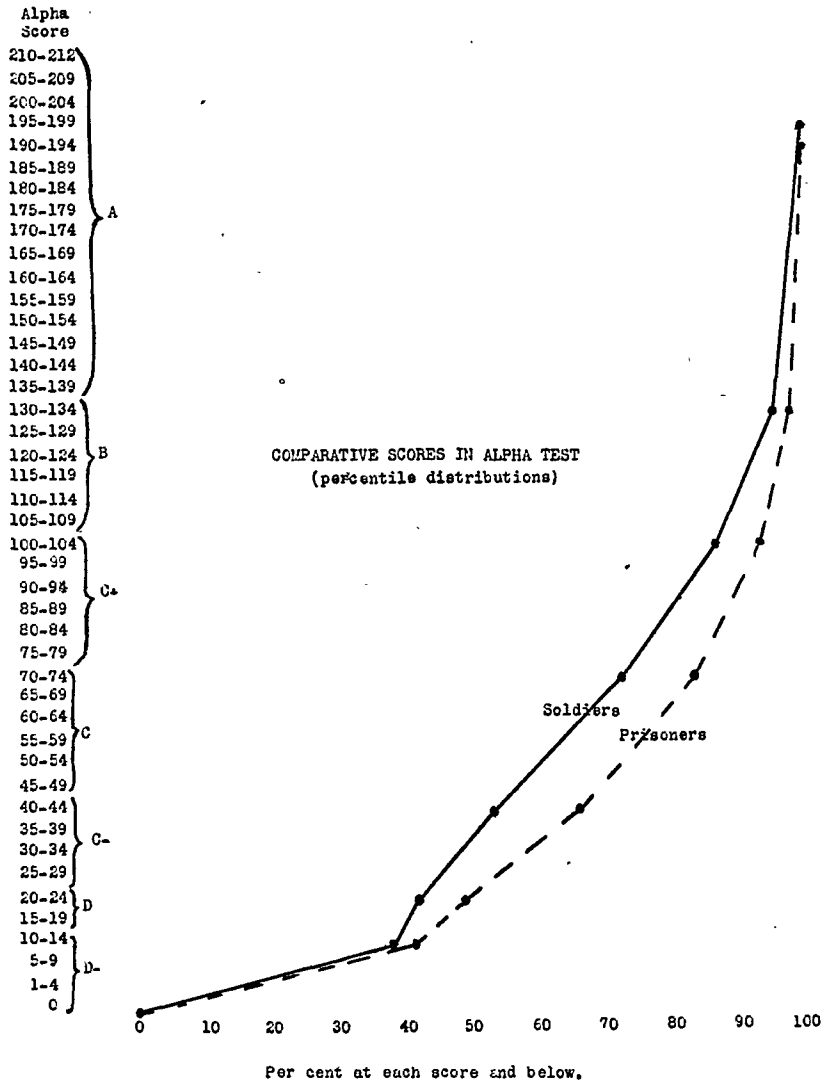
<i>Alpha Score</i>	<i>Number</i>	<i>Per Cent</i>	<i>Sum- mation Per Cent</i>	<i>Alpha Score</i>	<i>Number</i>	<i>Per Cent</i>	<i>Sum- mation Per Cent</i>
0.....	130	15.5	15.5	100-104.....	8	.9	93.0
1- 4.....	91	10.8	26.3	105-109.....	9	1.2	94.2
5- 9.....	76	9.1	35.4	110-114.....	4	.5	94.7
10-14.....	50	5.9	41.3	115-119.....	8	.9	95.6
15- 19.....	32	3.9	45.2	120-124.....	8	.9	96.5
20- 24.....	35	4.1	49.3	125-129.....	7	.9	97.4
25- 29.....	33	4.0	53.3	130-134.....	2	.3	97.7
30- 34.....	34	4.0	57.3	135-139.....	3	.3	98.0
35- 39.....	35	4.2	61.5	140-144.....	4	.5	98.5
40- 44.....	37	4.4	65.9	145-149.....	1	.1	98.6
45- 49.....	27	3.2	69.1	150-154.....	3	.4	99.0
50- 54.....	26	3.2	72.3	155-159.....	2	.1	99.1
55- 59.....	37	4.3	76.6	160-164.....	1	.1	99.2
60- 64.....	21	2.4	79.0	165-169.....
65- 69.....	22	2.7	81.7	170-174.....	3	.4	99.6
70- 74.....	16	1.9	83.6	175-179.....	1	.2	99.8
75- 79.....	16	1.9	85.5	180-184.....	..	.1	99.9
80- 84.....	16	2.0	87.5	185-189.....	1	.1	100.0
85- 89.....	15	1.8	89.3	190-194.....	1	.1	100.0
90- 94.....	13	1.5	90.8				
95- 99.....	11	.13	92.1	Total.....	839		

The following facts are evident from an inspection of the table and curves:

1. Forty-one per cent of the prisoners obtain scores below 15. This indicates a degree of literacy below that of the third school grade and constitutes failure in this examination. Some of these failures are due to unwillingness to take the examination seriously, but individual examination and questioning indicate that the number is very small. This percentage of practical illiteracy is 3.6 per cent greater than in the army recruits with whom the prisoners are compared.

2. The average score is 25 points. This average score is 15 points below the average of recruits in the army, but, as will subsequently be shown, is much influenced by disproportionate numbers of

PLATE I



negroes and foreigners in the prison who tend to obtain very low scores in any mental examination.

3. A small percentage of prisoners (7 per cent) obtain scores equivalent to those of typical army officers (above 105 points), as compared with 13 per cent of recruits.

4. Comparing the prison scores as a whole with the army scores as a whole, disregarding the excessive number of negroes and low-

grade foreigners, we observe that the lowest 50 per cent of prisoners equal the lowest 40 per cent of draft recruits, while the highest 10 per cent of prisoners do not exceed the highest 25 per cent of draft recruits; that is to say, the prison population as a whole is somewhat inferior in intelligence to the army population as a whole, if we disregard the heavy proportion of negroes and low-grade foreigners in the prison. This army curve includes no negroes, while the prison curve includes about 25 per cent negroes, who tend to score below whites in this examination.

II. SELECTIVE INFLUENCES

As intimated above, the distribution of scores in the prison is not strictly comparable with the distribution in the army for the following reasons:

1. About 25 per cent of these prisoners are low-grade foreigners and about 25 per cent are negroes. It was demonstrated in the army that negroes and certain classes of foreigners, notably southern Italians and provincial Russians, are of distinctly inferior mentality when compared with the native white population in this country. For example, while the average mental age of native white recruits proved to be about 13 years, the average mental age of northern negroes and southern Italians proved to be only about 10 years.³

2. The proportion of foreigners and negroes in the prison as compared with the adult male population in this State is shown in Table II. The first column in this table indicates nationality and color. The second column indicates the number of prisoners for each nationality and color, as obtained from the New Jersey State Prison Annual Report of 1917. The third column indicates the percentage of nationality and color with respect to the total prison population. The fourth column indicates the percentage of nationality and color for the adult male population of the State as a whole as obtained from the 1910 United States Census. The fifth column indicates the ratio of nationality and color in the prison as compared with nationality and color in the State as a whole. For example, the first line of this table reads as follows: Sixty-nine prisoners were born in Austria-Hungary and constitute 6.5 per cent of the total prison population as compared with 3.4 per cent, which is the proportion of Austria-Hungarians in the State as a whole; therefore, there are 1.9 times as many

³The arguments and data by means of which this conclusion is obtained are presented in an article entitled "*The Average Mental Age of Adults*," by Edgar A. Doll, in the *Journal of Applied Psychology*, Dec., 1919.

Austria-Hungarians in the prison in proportion to the prison population as there are Austria-Hungarians in the total population of the State.

TABLE II

RELATIVE PROPORTIONS OF COLORED AND FOREIGN-BORN ADULT MALES IN STATE PRISON AND IN STATE AT LARGE

<i>Nationality</i>	<i>Number in Prison⁴</i>	<i>Per Cent in Prison</i>	<i>Per Cent in State⁵</i>	<i>Ratio</i>
Austria-Hungarian	69	6.5	3.4	1.9
German	33	3.1	7.5	.4
Russian-Poland	40	3.8	5.6	.7
Italian	207	19.5	7.0	2.8
Other foreign-born	57	5.4
Native whites	406	38.2	46.3	.8
Negroes	251	23.6	3.7	6.4

An inspection of the fifth column of Table II indicates the actual proportion of foreign-born and negroes in the prison as compared with the expected number. For example, there are proportionately about twice as many Austria-Hungarians in the New Jersey State Prison as in the State of New Jersey as a whole, there are about three times as many Italians, and about six times as many negroes. These facts are of the utmost significance for the understanding of the composition of this prison population.

In general, then, it may be said that when allowance is made for selective influences on the basis of nationality and color, the mental constitution of the prison as a whole corresponds very closely to the average intelligence of adult males of the State as a whole.

III. SIGNIFICANCE OF ALPHA TEST SCORES

The scores obtained in the Alpha Test may be transmuted into mental age equivalents on the basis of the relation of Alpha score to Binet mental age as determined in the army. Table III shows these equivalents, and indicates the number and percentage of prisoners at each equivalent mental age. In this table column one shows the Alpha score, column two the equivalent mental age, column three the number of prisoners at each mental age, column four the percentage of prisoners at each mental age, and column five the percentage of prisoners at each mental age and below.

⁴As indicated in Annual Report for 1917.

⁵Calculated from United States 1910 Census.

TABLE III

DISTRIBUTION OF MENTAL AGES OF 839 PRISONERS, NEW JERSEY STATE PRISON,
AS INDICATED BY ARMY GROUP TEST ALPHA

<i>Alpha Score</i>	<i>Mental Age Equivalent⁶</i>	<i>Number Prisoners</i>	<i>Per Cent</i>	<i>Per Cent at Each Mental Age and Under</i>
Under 10	*	297	35	35
10- 19	10	82	10	45
20- 34	11	102	12	57
35- 44	12	72	9	66
45- 59	13	90	11	77
60- 74	14	59	7	84
75- 89	15	47	6	89
90-114	16	45	5	95
115-134	17	25	3	98
135-159	18	13	1	99
160-212	19	7	1	100

Alpha scores may also be transmuted into prison percentile scores based on the distribution of scores in the prison as a whole. In obtaining these percentile scores, the scores of all prisoners are arranged in ascending order of value and then grouped in intervals of 5 per cent from 0 to 100; that is, the lowest score in the prison would be 0 per cent while the highest score would be 100 per cent. The middlemost or average score would, of course, be 50 per cent. By means of this comparison the mentality of any prisoner may be compared on the scale of 100 with the mentality of all men in the prison, where 50 per cent means average. Table IV shows these equivalents. Column one of this table indicates the Alpha score and column two the equivalent percentile. It is not feasible to give the equivalent score percentiles for the adult male population outside the prison because of the complications already mentioned due to illiteracy, nationality and color. It is advisable, however, in reporting individual cases to indicate the standing of any prisoner with special relation to degree of literacy, nationality or color, based on standards for adult males outside the prison.

The fallacy of distribution has been committed so frequently in the application of local psychological results to criminology as a whole, that instead of concluding this article with a summary of the main

*Means mental age uncertain because of illiteracy in Alpha test. This usually signifies mental age under 10 years.

⁶*Examiner's Guide for Psychological Examining in the Army*, Washington, 1918, page 91. The mental age equivalents used in this article are interpolations from the "Table of Equivalent Scores," Appendix A, and are thought to be more accurate than those given in the "Basis for the Assignment of Letter Grades."

TABLE IV
ALPHA SCORE EQUIVALENTS IN TERMS OF PRISON PERCENTAGES

<i>Alpha Score</i>	<i>Prison Percentage</i>	<i>Alpha Score</i>	<i>Prison Percentage</i> ⁷
0	0	40- 44	65
1- 4	25	45- 54	70
5- 9	35	55- 59	75
10- 14	40	60- 69	80
15- 19	45	70- 84	85
20- 24	50	85- 99	90
25- 29	55	100-124	95
30- 39	60	125-212	100

facts, we wish to urge that no such summary is possible on the basis of these results. It is not known what selective influences have governed the sending of men to prison in the State of New Jersey. It is not known how representative the prison situation in New Jersey is of the prison situations in other states. In fact, there is good reason to believe that the prison problem is radically different in different states. It is believed, however, that the data here represented throw considerable light on the prison problem in New Jersey, and that perhaps there is some contribution in the application of group methods of investigation as here presented.

⁷It should be noted that this distribution is seriously affected by illiteracy and by disproportionate numbers of negroes and foreign-born prisoners. The prison negro population is 25 per cent of the total prison population, which is six times the ratio for adult negro males in the state as a whole. Similarly, the Italians constitute 20 per cent of the total prison population, which is three times their ratio in the adult population of the state.