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INTELLIGENCE AND DELINQUENCY

Harry Manuel Shulman

This is another contribution to the recent International Congress of Criminology in Paris. The author is Associate Professor of Sociology and Director of the Community Service Division of the City College, New York City. He has served as Research Director for the New York State Crime Commission, and is author of a series of research monographs published by the Commission. He is now conducting field studies in gang treatment under a New York City Youth Board grant.—EDITOR.

The study of the relationship of intelligence and delinquency began with the early 19th century neo-classical criminal justice doctrine that since crime was a rational choice of conduct, mental defectives in common with infants and the insane, were not legally responsible for their actions. While the medical differentiation of mental defectives from the insane was accomplished during the early part of the 19th century, it was not until the late 19th century that scientific standards were established for the measurement of degrees of mental ability and for the determination of mental defect, despite man's observation since time immemorial of the individual variability in mental ability. These were tests for general intelligence, the product of research by a whole school of psychologists, but attributable directly to the researches of Alfred Binet, of France.

The application of these early crude intelligence tests to samplings of institutionalized offenders in prisons, reformatories and juvenile training schools and the finding that a very large proportion of those tested could be diagnosed as mental deficient, led to the single-factor theory of mental deficiency as the greatest cause of delinquent conduct. Thus Harry H. Goddard, one of America's most distinguished adherents of the psychological school of crime causation, was impelled to state, as late as 1919, that "It is no longer to be denied that the greatest single cause of delinquency and crime is low-grade mentality, much of it within the limits of feeble-mindedness." A similar declaration was made by Dr. William Healy, while Dr. Charles Goring, the English investigator into Lombroso's claims, declared more conservatively that defective intelligence was a vital constitutional factor in the aetiology of crime.¹

While there was substantial agreement as to the facts, there was considerable divergence as to the interpretation of the test findings, leading to such theories as: (1) the mental defective is a type of "born criminal," i.e., the "moral idiot"; (2) feeble-mindedness is a hereditary unit-character following Mendel's law, accounting for the preponderance of male defective offenders; (3) the feeble-minded characteristically commit dan-

1. See H. H. GODDARD, *Feeble-mindedness*, 1914.

gerous crimes of assault and sex assault; (4) feeble-minded individuals commit crimes, in the absence of inhibiting social factors, because they lack the capacity to grasp the social values of their culture, including its social and legal definitions of right and wrong; (5) the feeble-minded cannot foresee the consequences of their actions, hence cannot be deterred by the threat of punishment laid down for crimes; (6) feeble-minded are suggestible, and so respond to the criminal leadership of brighter persons; (7) feeble-mindedness in individuals reared in families and neighborhoods where delinquent example is common, leads to delinquency.

Thus the elaborations of proponents of this single-factor theory ranged from the biological to the bio-social. The biological concept of the mental defective as a moral idiot or a Mendelian criminal type preceded in historical sequence the bio-social view of the mentally deficient offender as a product of social interaction. During the early decades of the 20th century there was still a predisposition to think fatalistically of mental deficiency, delinquency and dependency as inevitably associated phenomena. Even Sumner, in his brilliant source-book on the *Folkways*, published in 1906, was willing to associate these three groups as the submerged tenth at the bottom of the social class ladder.

Today, the concept that mental deficiency is necessarily a product of a tainted heredity is no longer accepted as wholly true. Evidence exists that perhaps one-half of all mental deficiency is the effect of non-germinal toxic and mechanical damage during the intra-uterine period and at birth.² Mental deficients are found among all social classes and in every parental occupational and educational level.³ Nor is the concept any longer accepted that mental deficients must necessarily be behavior risks. Together with the awareness that mental deficiency occurs in all levels of the population, it has been discovered that under proper conditions of child rearing and supervision, the mental defective may become a docile and obedient personality, with useful occupational potentialities. A perhaps contrary trend of thought is seen, however, in the growth in many American jurisdictions, of the practice of voluntary sterilization of defective delinquents, and in the spread of legislation authorizing this practice.⁴

Despite a changing outlook upon the relationship between mental defect and delinquency there remain a number of questions regarding which it is essential to have scientific evidence, such as: (1) The propor-

2. NEGLEY H. TEETERS and JOHN OTTO REINEMANN, *The Challenge of Delinquency*, New York, 1950, p. 91.

3. *Ibid.*

4. *Ibid.*, p. 96.

tion of mental defectives among delinquents compared to the general population; (2) significant differences in general mental ability between delinquents and the general population; (3) criminal patterns and tendencies toward recidivism among defectives compared to non-defective offenders; (4) the relationship between level of intelligence and treatability. We will consider these matters in the following sections. First, however, we shall seek a somewhat clearer view of the nature of general intelligence, of mental deficiency, and of the concepts and procedures involved in their measurement.

THE TESTING OF GENERAL INTELLIGENCE

Whereas no adequate concept of the nature of intelligence has yet been constructed, owing to a conflict among psychologists as to the priority of general intelligence or of specific intelligences (such as social, mechanical, musical intelligence, etc.) there is agreement that general intelligence is the capacity to learn from experience. Binet constructed a scale to test the growth in this ability, based on the observation that in childhood and youth growth in learning ability parallels physical growth. In the absence of any objective criteria for the measurement of learning growth, Binet depended upon empirical trial and error, devoting fifteen years to the discovery of a scale of mental tests of increasing difficulty, correlated with the chronological age of his subjects.⁵

Out of this experimentation came the year-level general intelligence scale. Tests were assigned to a year-level when 75 percent of the subjects in an age-group successfully performed the tests. By assigning a given number of sub-tests to each year-level, and a given amount of year-level credit to each sub-test, it became possible to establish a *mental age*, consisting of the basal mental age below which all tests were passed, plus year-level credit for all succeeding tests passed. By comparing the mental age with the chronological age of the child and multiplying this ratio by 100, it became possible to establish an intelligence quotient, or IQ. Thus a child of 12 years, chronological age, with a mental age of nine years, had an IQ of $9/12 \times 100$ or 75, while a child of the same age with a mental age of 15 years, had an IQ of $15/12 \times 100$ or 125.

Successive tests of child population samplings by other psychologists disclosed that tested general intelligence assumed a normal or bell-shaped curve, with half of the IQ's falling within the range of 90 and 110, the remainder being almost equally divided above and below this range. Terman classified intelligence ratings into the following mental

5. BINET, A. et SIMON, TH., *Le développement de l'intelligence chez les enfants*. ANNEE PSYCHOLOGIE, 1903, Vol. 14, pp. 1-94.

ability levels: Above 140, "near" genius or genius; 120-140, very superior; 110-120, superior; 90-110, normal or average; 80-90, dull; 70-80, borderline mental deficiency; below 70, mental deficiency.⁶

PROBLEMS IN THE TESTING OF INTELLIGENCE

Despite the proliferation of individually applied verbal tests for general intelligence, their standardization in nearly every tongue and their application to millions of school children, certain fundamental problems in intelligence testing remain unsolved. Among these are: (a) the nature of the normal learning curve, (b) the constancy of the IQ and (c) the nature of the mental functions which the tests presume to measure.

The form of the learning curve is related both to the constancy of the IQ and to the determination of a mental growth cessation point, to serve as the enumerator of the equation for the determining of the IQ among children above that chronological age. The determination of that point is of very real significance in the diagnosis of mental defect, especially when mental deficiency must be established as a legal entity for purposes of differentiated social treatment. There is evidence that the growth curve in learning ability reaches its maximum somewhere between the fourteenth and sixteenth year, and then declines sharply. Thus examiners have variously taken chronological ages between 14 and 16 to represent adulthood, for intelligence testing purposes. As a result, a given mental age will fluctuate in IQ according to the adult year level chosen. Until there is arbitrary uniformity in defining this mental growth cessation point, the percentages of mental deficiency established for either general populations or delinquent samplings will be non-comparable. It was suggested by many psychologists that 15 years be arbitrarily set to represent adulthood for mental growth purposes, and the majority of child guidance clinics now adhere to this standard.

The labeling of children as to their mental ability by means of the IQ assumes the constancy of the IQ; that is, that the future mental growth of a child is predictable in terms of his rate of mental growth up to the time of testing. The evidence to date is that within a probable error of perhaps 2.5 points in either direction, *under conditions of constant cultural stimulation*, the IQ does not vary with age. But such factors as serious illness, or irregularity in exposure to learning situations, or other factors that affect opportunity for learning, do appear to affect the learning growth rate, and the IQ. Thus, there is evidence that children

6. LEWIS M. TERMAN, *THE MEASUREMENT OF INTELLIGENCE*, Boston, 1916, p. 79.

transferred from inferior to superior cultural environments appreciate in their learning rate, and gain in IQ, and that children returned from superior to inferior cultural environments tend to regress in learning rate and in IQ to the level previously established in the inferior social environment.⁷

The product of learning growth known as "native" general intelligence is thus not alone dependent upon nature, but on nature and nurture. As a result, general intelligence must be viewed as a product of bio-social interaction. This introduces the problem of the significance of cultural differences in the determination of intelligence levels. This factor is of significance for the relation between intelligence and delinquency. Since the accurate measurement of general intelligence is dependent upon constancy of cultural stimulation, factors tending to differentiate the cultural background levels of delinquents and non-delinquents would lead to the under-estimation or over-estimation of the intelligence of one group or the other. Thus a finding as to the relative mental status of delinquents and non-delinquents requires holding constant the factor of cultural stimulation. Since this has not usually been done, a finding that delinquents are inferior in tested general intelligence to non-delinquents does not necessarily prove that intelligence and delinquency are causally related but only that the same antecedent factors that contributed an inferior nurture to the group from which the preponderance of delinquents were drawn, also led to the preponderance of that culture level in juvenile court arraignments.

The desirability of disentangling the functions of nurture and nature in learning potential, so that "native" potential may be measured, has led to the suggestion that culture-free mental tests be devised. Whether culture-free tests, if they could be devised, would successfully elicit the full measurement of intelligence potential is questionable. Motivation has ordinarily strong cultural reference, and especially for delinquents, the necessity of arousing full response to an intellectual situation probably involves the utilization of culturally familiar motivations, since among delinquents there is a disproportion of emotionally disturbed children.^{8 9}

7. FRANK N. FREEMAN, K. J. HOLZINGER and others, *The Influence of Environment on Intelligence*. Year-book of National Society for the Study of Education, 27:103-217 (1928). See also ROBERT S. WOODWORTH, *Heredity and Environment*, Bulletin 47, Social Science Research Council, New York, 1941.

8. Furthermore, the emotional tensions accompanying the usual situations within which delinquents are psychologically tested—prior to court adjudication or upon admission to a juvenile training school—probably lead often to blocking of full participation in the test situation.

9. The desirability of a having a common instrument for the testing of all children, regardless of culture origin, has led some criminologists to suggest the establishment of an

A final comment on the role of culture in the testing of general intelligence must stress the desirability of the homogeneity of culture backgrounds among delinquents compared with non-delinquents for mental status. Since delinquents are drawn disproportionately from urban areas, from among industrial groupings that include disproportionate numbers of children of ill-educated, bi-lingual and low-socio-economic status parentage, they should be compared in general intelligence, not to the whole child population, nor even to the total urban child population, but to samplings drawn from the same races, ethnic origins, socio-economic levels, and residence areas. These fundamental needs must be kept in mind in evaluating the available evidence on the intelligence of delinquents.

THE GENERAL INTELLIGENCE OF JUVENILE DELINQUENTS

We have said that the earliest studies of the general intelligence of juvenile delinquents emphasized their retarded mentality as a class. Studies of more than 200 American samples of institutionalized delinquent children, on a literal translation of the original Binet-Simon scale, in connection with the knowledge that practically no institutionalized feeble-minded rated above twelve years in mental age, led to the conclusion that at least one-half of juvenile delinquents were mental defectives.^{10, 11}

Recent examinations, however, have tended to a reduction in the proportion of alleged mental defect among juvenile delinquents, in part as a result of newer tests having a higher mental age "ceiling," that permitted the testing of superior individuals, in part the greater skill of examiners and the use of more effective techniques for achieving motivation, and in part the extension of tests to broader samplings of

International Commission under the United Nations to establish standards of international psychological examination. C. Nony, of the *Institute de Psychologie*, Sorbonne, Paris, abstractor for the psychological section of the Second International Congress of Criminology, Paris, 1950, has made this suggestion in correspondence with the writer. The problem of culture effect on motivation, in the absence of culture-free tests based on fundamental human drives, would be a problem such a commission would have to solve.

10. H. H. GODDARD, *HUMAN EFFICIENCY AND LEVELS OF INTELLIGENCE*, Princeton, 1920, pp. 73-74.

11. Mental retardation has been referred to by two terms, *feeble-mindedness* and *mental deficiency*, each having a somewhat different meaning. Mental deficiency refers only to mental test level. Feeble-mindedness refers to an inadequacy in personal social adjustment—to get along in school, make an independent living, manage one's own affairs, etc.—without special assistance or supervision. An individual may be mentally deficient as defined by test, yet capable of self-support and adequate social adjustment in a congenial social environment, and hence, not feeble-minded. The writer recalls a juvenile training school graduate who by test was mentally deficient, yet who out of his experience in the institution powerhouse, invented a fuse with a handle that minimized the danger of shock, and established a paying manufacturing enterprise around his invention. (See MAUD A. MERRILL, *PROBLEMS OF CHILD DELINQUENCY*, Boston, 1947, pp. 160-161.)

juvenile delinquents to include non-committed as well as committed cases.

A study in 1928-29, of all the mental tests reported on criminals and delinquents, comprising some 350 reports on approximately 150,000 offenders, showed a decrease from an average of 50 percent of delinquents diagnosed as feeble-minded in the period 1910-1914 to an average percentage of 20 percent in the period 1925-1928. The wide variation in test results was regarded as reflecting differences in test methods and scoring rather than differences in mental abilities of offenders.¹²

THE INTELLIGENCE OF JUVENILE DELINQUENTS AND TOTAL JUVENILE POPULATION

Attention has been directed during the two past decades to a comparison of the intelligence levels of juvenile delinquents as compared to the general juvenile population. Samples of juvenile delinquents, drawn for the most part from court-arraigned cases, have been found to be lower in tested general intelligence than the child population series upon which the major intelligence tests were standardized. Terman, in standardizing the revised Binet, found that approximately 50 percent of his one thousand unselected American school children fell between an IQ of 93 and 108 and that the remainder fell above and below in equal proportion. Only .33 percent had IQ's below 65 and only 2.6 percent had IQ's below 75. In comparison, Healy and Bronner, in their 1926 court sample, reported 13.5 percent of their cases as mentally deficient, Burt reported 8 percent of a London, England, court sample as mentally deficient, and Merrill reported 23 percent of 1,731 Los Angeles court delinquents as mentally deficient with IQ's below 70. Merrill, however, pointed out that her sample contained an unknown proportion of Mexican-born and Mexican ethnic stock children of presumed bi-lingual backgrounds. In a second California court sample of 500 cases from a territory having a more homogeneous ethnic stock, she reported 11.6 percent as mentally deficient.¹³

Relatively similar findings have been reported for other delinquency samplings, some more selective and others less selective than total court intake. Kvaraceus reported 10.4 percent of all public school problem children referred for guidance care as mentally deficient, with IQ's

12. EDWIN H. SUTHERLAND, *MENTAL DEFICIENCY AND CRIME*, Ch. XV in KIMBALL YOUNG (Editor), *SOCIAL ATTITUDES*, 1931, pp. 357-375.

13. WILLIAM HEALY and AUGUSTA BRONNER, *DELINQUENTS AND CRIMINALS*, 1926. CYRIL BURT, *THE YOUNG DELINQUENT*, D. Appleton & Co., 1925. MAUD MERRILL, *ibid.*

below 70. Sheldon and Eleanor Glueck reported 13.1 percent of a sample referred by the Boston juvenile court to the Judge Baker foundation clinic for diagnostic study as mentally deficient. The New Jersey Juvenile Commission found 13 percent of New Jersey children committed to juvenile training schools to have IQ's under 70.¹⁴

*Zeleny, after equating the procedures of different examiners, concluded that the ratio of delinquents and general child population in respect to mental deficiency was about 1.2 to 1.*¹⁵

Somewhat similar findings were reported for differences in *average intelligence* among delinquents and non-delinquents. Kvaraceus found an average intelligence quotient of 103 among unselected Passaic, New Jersey school children compared to an average IQ of 89 among 761 problem children referred by schools to a central guidance service. Eleanor Glueck, comparing 1,000 clinic-referred juvenile delinquents with 3,638 school children, found that only 41.6 percent of the delinquents had average intelligence or better (IQ's over 90) compared to 79 percent of the school children.¹⁶

INTELLIGENCE OF GROUPS OF DELINQUENTS GIVEN SELECTIVE TREATMENT

Whereas contemporary interest in the relation of general intelligence and delinquency has continued unabated, instead of seeking a causal explanation of delinquency in intellectual inferiority, the tendency has been to explain the established test differences between delinquents and non-delinquents as a product of social selection.¹⁷ That is, inferior mentality is coming to be viewed as one of a series of attributes that characterize children whom society has selected out for formal adjudication as delinquents through the differential operation of the machinery of juvenile justice.

There is evidence that not only are juvenile delinquents non-representative of the whole child population for social status, but that the selectivity of the delinquent group increases proportionately with the degree of authority applied to their handling. Thus they are found to

14. WILLIAM C. KVARACEUS, *JUVENILE DELINQUENCY AND THE SCHOOL*, Yonkers, 1945, pp. 122-123. NEW JERSEY JUVENILE COMMISSION, *JUSTICE AND THE CHILD IN NEW JERSEY*, 1939, p. 82. SHELDON AND ELEANOR GLUECK, *ONE THOUSAND JUVENILE DELINQUENTS*, Cambridge, 1934, p. 102.

15. L. D. ZELENY, *Feeble-mindedness and Criminal Conduct*, *AMERICAN JOURNAL OF SOCIOLOGY*, 38:564-578, January, 1933.

16. KVARACEUS, *ibid.* GLUECK, *ibid.*

17. A recently annotated bibliography of 972 articles dealing with juvenile delinquency included 243 or approximately one-quarter that referred to some aspect of the relationship between intelligence and delinquency. See P. S. DE Q. CABOT, *JUVENILE DELINQUENCY: A CRITICAL ANNOTATED BIBLIOGRAPHY*, New York, 1946.

be drawn in disproportionate numbers from (a) lower socio-economic groups, (b) Negroes, (c) foreign-born parentage, (d) groups disproportionately high in indices of mental disorder, dependency and adult crime.¹⁸ Those dealt with unofficially, either through the courts or through the public and private child guidance facilities of schools and community appear to represent a group from higher socio-economic status than those officially arraigned or committed to juvenile training schools.

There is further evidence that the selective social characteristics of the officially arraigned delinquency group is accompanied by differential tested intelligence; and that as more selective screening takes place among the arraigned group, in terms of the severity of the subsequent controls applied, the greater the tested intelligence differential. Thus Kvaraceus, in New Jersey, reported an unselected sampling of Passaic school children as having an average IQ of 103, and all public school children referred to a special service division of the Board of Education for child guidance care as having an average IQ of 89. Merrill, in California, reported an unselected sampling of 2,904 children in the general child population as having an average IQ of 101.8 and a court sampling from the same area of 500 consecutive arraignments as having an average IQ of 92.5.¹⁹

As one progresses from court arraignment to training school commitments, the average IQ drops. Merrill cites evidence that with the 1916 Stanford Revision of the Binet scale, the average IQ of court samples reported in the literature is around 85, and for institutional commitments, around 82.²⁰

18. CLIFFORD SHAW, in *DELINQUENCY AREAS*, and in succeeding publications, found that a significantly higher proportion of court-arraigned delinquents were drawn from central residence areas characterized by low rentals, dependency and tenancy, than from outlying residence areas characterized by home ownership and higher rentals. This finding has been corroborated by other investigators, including Elmer, Schmidt, and Burt. For the higher proportion of official delinquency arraignments among Negro children, see reports on juvenile statistics of the Federal Children's Bureau, Federal Security Agency, especially for 1939; U. S. Department of Labor, Children's Bureau, 1939, p. 12. For Negro juvenile delinquency in selected urban areas see J. B. MALLER, *Juvenile Delinquency in New York City*, *Journal of Psychology*, 3, 1-25, November, 1936, and NEW JERSEY JUVENILE COMMISSION, *Justice and The Child in New Jersey*, 1939, p. 80. For the disproportion of juvenile delinquency among children of foreign-born parentage see THORSTEN SELLIN, *Culture Conflict and Crime*, Social Science Research Council, Bulletin 41, 1938, pp. 78-107. For the concurrence of official juvenile delinquency and adult crime see such case study researches as SHELDON AND ELEANOR GLUECK, *ONE THOUSAND JUVENILE DELINQUENTS*, Cambridge, 1934, p. 79 (in which 86.7 percent of the known total of families contained members, other than the juvenile delinquent himself, who were delinquent or criminal), and such area studies as those by HALPERN, STANISLAUS AND BOTEIN, *SLUMS AND CRIME*, New York, 1931, in which the areas of greatest juvenile delinquency and of adult crime were shown to be similar.

19. WILLIAM C. KVARACEUS, *JUVENILE DELINQUENCY AND THE SCHOOL*, New York, 1945, p. 123. MAUD A. MERRILL, *PROBLEMS OF CHILD DELINQUENCY*, Boston, 1947, p. 167.

20. MAUD MERRILL, *ibid.*, p. 164.

There are two possible interpretations of these findings: (a) that greater maladjustment accompanies lower intelligence, resulting in the application of more extreme social controls; (b) that the greater maladjustment and the lower tested intelligence among official cases are both dependent upon inferior antecedent cultural backgrounds of delinquents as compared to general population samples.

The first interpretation leads to the conclusion that since a disproportionate number of severely maladjusted institutionalized delinquents tend to be dullards there is a correlation between mental backwardness and the social conditions within which delinquency is encouraged. From this conclusion it is an easy step to the view that mental dullness and social breakdown, as measured by such terminal indices as dependency, delinquency and crime, are closely related phenomena.

The cultural interpretation rejects the adequacy of the initial findings, arguing that the very tests used for the measurement of general intelligence are discriminatory against the delinquent group. They are not culture-free tests, but tests depending largely upon skill in language expression, vocabulary, breadth of reading, exposure to conceptualized discussion, etc., involving a high level of training in the use of written and spoken English, and presuming an exposure to comparable linguistic cultural material in the family, among both delinquents and nondelinquents. But since we already know that a disproportionately large number of delinquents are of low socio-economic status, whose parents suffer from the handicaps of limited schooling, partial or total illiteracy, and bi-lingual or foreign language speech, it may be inferred that their social backgrounds are not comparable to those of the general child population. Hence the general intelligence test results are not explicable by any fancied relation between intelligence and delinquency, but by a real relationship between court arraignment and low socio-economic and culture status.

Research evidence bearing upon both types of interpretation is at hand from studies of the differential intelligence levels of public school children in high and low delinquency areas. Shulman has shown, for New York City, that the tested intelligence of children in high delinquency areas tends to be lower than that of school children in low delinquency areas. In a recalculation of data from a series of group intelligence tests conducted among public school pupils by the Board of Education, he found that in five public schools in high delinquency areas, the median IQ's ranged from 88.5 to 98.5, with an average median of 91.5, while in seven public schools in low delinquency areas, the medians ranged from 95 to 115.5, with an average median of 103.5. Thus

between the low delinquency areas and the high delinquency areas there was an IQ difference averaging 12 points favoring the low delinquency areas. Similar findings, based upon extensive restudy of the same source data were reported by Maller.^{21 22}

More pertinent to a cultural interpretation were the findings of Allison Davis, who devised a test for the measurement of untaught responses to problems in daily life outside of school. In an experimental study of school children from varying socio-economic backgrounds, on standard intelligence tests, and on the test for daily life problems, he found that whereas on ten standard tests there was an average difference of nearly 8 points in IQ between the high and the low socio-economic groups, favoring the former, these differences vanished when the tests for daily life problems were applied.²³ He concluded that the standard tests did not truly measure the problem-solving potentialities of children from low socio-economic backgrounds.

DELINQUENTS AND MATCHED CONTROL SAMPLES

Whereas apparently significant tested intelligence differences, usually without calculation of statistical significance, have been found between arraigned delinquents and the general child population, the controversy as to the role of native and cultural factors in the results has led some authorities to suggest that comparisons of delinquents and non-delinquents in samplings in which socio-economic status is held constant might be helpful in resolving this problem.

In this connection, Lichtenstein and Brown are reported to have found among 658 grade school children from a high delinquency area, 10 percent with IQ's below 70. Use of this figure as a control percentage for the general population in a high delinquency area would not be unfavorable to the theory that delinquents are of the same tested mental potential as non-delinquents when equated for socio-economic background. Some of Merrill's findings lend additional weight to this theory. Among 300 delinquents of both sexes compared to 300 non-delinquent controls from the same communities and public schools, she found an average IQ for the controls only slightly and not significantly higher (89.3-86.7) but on the other hand she found among the delinquents almost as twice as many IQ's below 70 as among the controls.²⁴

21. HARRY MANUEL SHULMAN, *A Study of Problem Boys and Their Brothers*, New York State Crime Commission, Albany, 1929, pp. 18-22.

22. JULIUS MALLER, *Juvenile Delinquency in New York City*, *Journal of Psychology*, 1937, 3, 1-25.

23. From *New York Times*, March 23, 1950.

24. For Lichtenstein and Brown, see MILTON METFESSEL AND CONSTANCE LOVELL, *Recent*

However, the findings of other investigators controvert this point of view. Burt's delinquents and controls from the same districts and public schools in London showed differences favoring the controls, with 1.2 percent in the defective group (IQ's 50-70) compared to 7.6 percent in the delinquents, a ratio of better than six to one; and IQ's above 115 among only 2.5 percent of the delinquents and 8.5 percent of the controls, a reverse ratio of better than three to one.²⁵ Charles, comparing Kuhlman-Anderson IQ's for 528 reform school boys with a public school group of the same socio-economic status found that among delinquents, 29.5 percent of white boys and 47.3 percent of Negro boys, had IQ's under 70, compared to 1.16 percent and 3.48 percent, respectively, for the public school groups.²⁶

A difficulty in equating culture backgrounds in terms of socio-economic status or area of residence is that within the same area of residence, as pointed out elsewhere by the writer, or within the same income group, there are significant familial variations in culture level.²⁷ A stricter measure of cultural homogeneity is afforded when delinquents and non-delinquents within the same families are compared for general intelligence. Healy and Bronner, in 105 court-arraigned delinquency cases, compared to a like number of non-delinquent siblings matched closely for age and usually for sex, found differences slightly favoring the non-delinquents. Their data sought to exclude mental defectives and were therefore valid only for IQ's above 70. Their findings (figures for delinquents given first) were: IQ above 110, 13-17 percent; 90-110, 52-57 percent; 72-90, 30.8-22.6 percent. These differences were not calculated for significance. Shulman, in a smaller matched sample of siblings, found that for 28 pairs, delinquents averaged IQ 75 and non-delinquents IQ 86.²⁹ Thus, both studies favored the theory that delinquents tend toward lower tested intelligence than non-delinquents, when equated for culture level. It is suggested that in the interest of a resolution of this question of the relation of intelligence and delinquency, further studies concern themselves with the intelligence of delinquent and non-delinquent siblings, with emphasis upon the analysis of those

Literature on Individual Correlates of Crime, Psychological Bulletin, 1942, 34, 153-160. MERRILL, *ibid.*, pp. 169-170.

25. CYRIL BURT, *ibid.*, p.

26. M. F. METFESSEL AND CONSTANCE D. LOVÉLL, *opus cit.*

27. HARRY MANUEL SHULMAN, *SLUMS OF NEW YORK*, New York, 1938, p. 107.

29. WILLIAM HEALY AND AUGUSTA BRONNER, *NEW LIGHT ON DELINQUENCY AND ITS TREATMENT*, New Haven, 1936, p. 75. HARRY MANUEL SHULMAN, *A STUDY OF PROBLEM BOYS AND THEIR BROTHERS*, New York State Crime Commission, Albany, 1929, p. 61.

physical and emotional factors that might affect learning, mental growth and motivation to maximum test output.

GENERAL INTELLIGENCE AND TYPE OF OFFENSE

Since the publication of Goring's study on the English convict, there has been an interest in the relation of intelligence and type of offense. Forgery and fraud have been associated with higher levels of intelligence and crimes of violence with lower levels. Findings of this type, based on adult samplings, are as pointed out by Merrill, of limited significance for juvenile delinquency, since legal offenses are not always descriptive of juvenile behavior. Thus, in 500 cases of children's offenses, she found only eight cases of forgery. It could also be pointed out that many other forms of offense have their origin in the economic and cultural roles of adult life and their presence in adult criminal statistics affords no basis for use of similar categories in dealing with children.

Merrill has traced certain relationships between type of juvenile offense and intelligence level. She found intelligence positively correlated with forgery, lack of parental control and malicious mischief; and negatively correlated with sex offenses, truancy and vagrancy. Stealing, comprising a majority of the cases in her sampling, was found to have no significant relation to intelligence. It is possible, however, that a refinement of the categories of theft, to reveal differential theft patterns, would have been productive of more significant results.³⁰

Luton Ackerson, in a sampling comprising nearly 5,000 cases, found that for children ages five to 12.9 years, the offenses of stealing, fire-setting, forgery or check-raising, incorrigibility, truancy and escape from an institution, increased with IQ increase. However, since his entire sample had a low median IQ, the results are not too significant. Certain of his findings were very interesting. He found a greater tendency to gang membership among IQ's from 40 to 99 than among problem children with IQ's over 99. He found, among girls ages 13-17.9 years, a higher proportion of sex delinquency, including unmarried motherhood, among low IQ's. It should be pointed out that since none of his correlations exceeded .30 they are not statistically significant, even though suggestive of further avenues of exploration.³¹ Ackerson's findings on the sex offender may be taken together with those of Tendler, that on a test for impulsiveness (the Porteus Maze) unmarried female sex offenders who did not become pregnant, achieved scores superior to

30. MAUD MERRILL, *ibid.*, p. 171.

31. LUTON ACKERSON, *CHILDREN'S BEHAVIOR PROBLEMS*, Chicago, 1931.

those who became unwed mothers. Thus the young unwed mother is described by these findings as tending toward lower general intelligence and greater impulsiveness than either the sex delinquent girl who avoids pregnancy or the non-delinquent girl.³²

Qualitative distinctions have been made between the offenses of individuals of different intelligence levels. Abrahamsen, speaking without specific reference to children, has remarked that the offense chosen is typical of the individual who commits it; thus an individual with a low IQ will usually commit a simple theft such as breaking in through a window and taking some insignificant object, or stealing a car, leaving it and running away.³³

John Levy made the observation that bright children tend toward personality problems and dull children toward conduct disorders. Among more than 700 children with IQ's above 80 referred to a child guidance clinic, personality problems increased with IQ from 25 to 53 percent, and conduct problems decreased from 32 to 12 percent. He sought to equate out the socio-economic factor by comparing 50 bright children (IQ's over 110) from the lowest socio-economic group with 70 dull children (IQ's 80-90) from the highest socio-economic group and found that socio-economic differences did not modify the trend of his findings.³⁴

In this connection, the findings of Davis and Havighurst are significant, that middle-class families tend to rear their children more rigidly than do lower-class families and that differences in socio-economic status are more important in rearing than those of race. Thus the rearing practices of middle-class Negro mothers tended to approximate the tightness of control by middle-class white mothers as opposed to the relative permissiveness of the lower socio-economic group of mothers in both races.³⁵

It is possible that the common factor operating in both the Levy and Davis-Havighurst findings was differential general intelligence, with higher parental intelligence tending to be correlated with strictness of rearing and lower parental intelligence with permissiveness in rearing. If this were so, the anxieties resulting from the frustrations of strict rearing might have explained the greater number of personality problems in bright children, and the contact with delinquency attitudes and experiences that would result from laxness in rearing in lower socio-

32. ALEXANDER TENDLER, unpublished.

33. DAVID ABRAHAMSEN, *CRIME AND THE HUMAN MIND*, New York, 1944, p. 22.

34. JOHN LEVY, *A Quantitative Study of the Relationship Between Intelligence and Economic Status as a Factor in the Etiology of Children's Behavior Problems*. AMERICAN JOURNAL OF ORTHOPSYCHIATRY, 1. Pp. 152-162, Jan. 1931.

35. ALLISON DAVIS AND ROBERT J. HAVIGHURST, *Social Class and Color Differences in Child-Rearing*, *American Sociological Review*, December, 1946.

economic areas might have explained the greater number of cases of conduct disorder among dull children.

The writer has pursued this line of reasoning further, pointing out that the differences in types of adult crime characteristic of lower and middle classes—the former tending to assault and theft, and the latter to fraud—may be in part a function of differences in childhood rearing. The lower-class child, reared permissively, but frustrated in his status aspiration in a democratic society, and subjected to temperamental and culture clashes in his family environment, may react to his frustrations by conduct disorder, while the middle class child, reared strictly, but with less frustration of his status aspirations, may react to frustrations in opportunity for self-expression and to temperamental and culture clashes in his family environment by anxiety and personality problems. Thus the lower class child may behave as though the social order has many loopholes and few restrictions, and the middle-class child as though society has few loopholes and many restrictions. Such behavior would be consistent with differential criminal behavior in adult life, with the poor tending toward crimes involving outbursts of hostility and aggression—thefts and assaults—and the middle-class tending toward crimes involving tension maintenance and the application of an extensive range of conventional protective practices—namely, fraud.³⁶

INTELLIGENCE AND RECIDIVISM

The relationship of intelligence and recidivism, *i.e.*, repetition of offenses, has been given some attention. In the United States, roughly one-quarter of all children arraigned as juvenile delinquents had previous arraignments. This proportion is much higher among Negro children. The proportion for girls is roughly one-half the rate for boys of the same race.

Criminologists have reported that among adults, low IQ's contribute an excessive proportion of offenders who tend to become recidivist about as frequently as other offenders and to be as successful on parole. The findings for children are inconclusive. Mann and Mann found among 428 child recidivists lower IQ's (average IQ 78) than among 1,731 unselected delinquents (average IQ 84) arraigned in the Los Angeles juvenile court.³⁷ The Gluecks found recidivists to deviate in the same

36. HARRY MANUEL SHULMAN, *The Family and Juvenile Delinquency*, ANNALS AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, Vol. 261, January, 1949, p. 30.

37. CECIL W. MANN AND HELENE POWNER MANN, *Age and Intelligence of a Group of Juvenile Delinquents*, *Journal of Abnormal and Social Psychology*, 1939, 34, 351-360.

direction.³⁸ But Merrill found no significant difference between recidivists and single arraignments, while Lane and Witty found no difference.³⁹

The problem of recidivism has been approached by some investigators in terms of the normal curve for intelligence. Haggerty, among others, has reported that while deviants from the normal curve, *i.e.*, both superior and dull children, tend to higher incidences of behavior disorder than children of average intelligence, the bright group tend to "unlearn" much of their maladjusted behavior between the ages of 9 and 13 years, whereas the dull either continue or increase in the extent of their maladjustment with age increase. In this connection, the finding by Tendler is pertinent, that in a psychiatric child guidance clinic, among matched groups of children, the bright group responded to case work treatment more effectively than the dull group.⁴⁰

Ackerson has studied the effect of intelligence on frequency of offense at different age groups. He found the same results as Haggerty, that bright children tended to a reduction in the frequency of their offenses, compared to dull children. He reported that among pre-adolescents under the age of 13, there was an increase with IQ (to IQ 110-120) of frequency in 154 types of problem incident, but among adolescents ages 13-18 years, the increase in frequency of problem incidents was only among the low IQ's, 70-80, particularly with respect to conduct disorder.⁴¹ Thus the findings of Haggerty, Tendler and Ackerson, while each having a somewhat different orientation, all indicate that bright children tend toward a reduction in their behavior problems with age increase, with or without treatment, while dull children tend toward an increase in behavior problems with age.

SOCIAL INTELLIGENCE AND DELINQUENCY

The material up to this point deals with the relation of *general* intelligence and delinquency. General intelligence has been thought by many psychologists to be a poor indicator of social adjustment. The tendency has been to limit the prognostic use of tests of general intelligence to the prediction of educability through formal classroom instruction in the content of academic education, and to seek the prediction of social

38. ELEANOR GLUECK, *Mental Retardation and Juvenile Delinquency*, *Mental Hygiene*, 1935, 19, 549-572. MERRILL, *ibid.*, p.

39. R. A. LANE AND P. A. WITTY, *The Mental Ability of Delinquent Boys*, *JOURNAL JUVENILE RESEARCH*, 1935, 19, pp. 1-12.

40. ALEXANDER TENDLER, *Role of Intelligence and Emotion in Maladjusted Children*, *Proceedings and Papers, Ninth International Congress of Psychology*, Princeton, N. J., Psychol. Review Co., p. 425.

41. LUTON ACKERSON, *ibid.*, p. ...

adjustment through other tests. Thus Miss Chassell, in an extensive survey of the literature on the relation of intelligence and morality, found correlations between plus 0.10 and plus 0.39, none high enough for statistical significance. Such findings do not wholly thrust aside a relation between intelligence and morality, since the findings demonstrate a positive relationship, but the correlation is too low to be predictive.

The term *social intelligence* refers to the capacity for social adjustment and maturity in social relationships as differentiated from the ability to learn from experience. That is to say, an intelligent person may through his general intelligence learn to profit from experience, but not necessarily in the direction of benefit to society. The adequate study of social intelligence has been retarded by a lack of research in this area, resulting in a lack of well-standardized tests for social intelligence. In part, this has been due to a lack of reference points for the measurement of social development. Child psychology has been relatively successful in tracing the social development of the pre-school age group, but beyond this age our knowledge of the individual process in social development is extremely sketchy and based very largely upon doctrinaire speculative theories.

Chief among the very few social intelligence scales is the Vineland Social Maturity scale, a year-level scale standardized for the estimation of level of social performance through the observation of social behavior in the areas of personal hygiene, household duties, purchasing, employment, social relations and civic life. In the belief that this scale might disclose delinquents to be socially immature, in the light of their ego-centricity, it has been used by some investigators. The scanty evidence is conflicting, and not helpful. For example, Springer, testing 80 white and 50 Negro delinquents, found that social maturity level tended to be correlated with IQ, so that bright delinquents tended to be socially mature as measured by the scale. The social maturity of first offenders and recidivists was related to their mental levels. Thus, from this study, it would appear that any tendency toward social immaturity among juvenile delinquents would be a function of their tendency to vary from the normal for general intelligence. This area will have to be studied much more before adequate generalizations can be made.⁴²

It may prove to be necessary to treat statistics of delinquents in more qualitatively descriptive categories than merely *first offenders* and

42. N. N. SPRINGER, *The Social Competence of Adolescent Delinquents; A Comparative Study of White and Negro First Offenders and Recidivists*, *The Journal of Social Psychology*, 14, 337-348, 1941.

recidivists, for purposes of social intelligence research. The primary behavior disorder, the personality disorder, the assaultive group, and the matured predatory group, may have varying levels of social intelligence corresponding to the varying degrees of social participation involved in different types of delinquent activity. There is a possibility that training school admissions are heavily loaded with predatory offenders whose anti-social experience has included considerable group association and delinquent gang membership. Such delinquents may have had considerably greater experience in group participation than others, and may test higher on tests for social intelligence than isolate offenders.

MECHANICAL INTELLIGENCE AND DELINQUENCY

In addition to general and social intelligence, psychologists have distinguished a number of others in the hierarchy of capacities, of which for our purposes perhaps the most important is mechanical intelligence. This series of qualities, which includes the capacities for form preception, effective hand-eye co-ordination, and an understanding of mechanical relations, is of prime importance in a technical society. A number of tests, some involving actual manipulation of mechanical objects, and others requiring only paper and pencil responses, have been standardized, including the Stenquist Mechanical Assembly Test, the McQuarrie, the Minnesota, the O'Rourke, etc. In addition, numerous tests exist for the measurement of specific motor performances. These tests have demonstrated that general intelligence and mechanical ability are largely independent capacities, the correlation between them rarely rising above plus .40.

Early tests on delinquents gave rise to the hope that here was a quality in which the problem individual might find compensating superiority to the well-adjusted child, and thus a basis for constructive education and training. Several experimenters found delinquents slightly superior to non-delinquents in mechanical ability, and others found no significant differences between the two groups. Slawson found the performance of delinquent boys at the House of Refuge and the Hawthorne school practically on a par with that of New York City school children, on a paper-and-pencil group form of the Stenquist. The writer, on a small sample of 22 pairs of delinquents and their non-delinquent brothers, found the delinquents as a group superior to their brothers, as well as to unselected school children, on a mechanical assembly form of the Stenquist,

although they were inferior to their brothers on the average, for general intelligence and school achievement.^{43 44}

Belief in the relative adequacy of delinquents in mechanical ability, as compared to general intelligence and academic school achievement led to a movement during the '20's for the use of trade and vocational education as a delinquency rehabilitation program. School problem youths together with other academic failures were shunted into trade and vocational schools. This program has been generally abandoned, with recognition among educators that competence in trade and vocational careers calls for good intelligence, stable temperamental and personality characteristics, and adequacy in mathematical and language skills, in addition to good mechanical ability. The frequent mental dullness, emotional instabilities, and reading and writing disabilities of a large proportion of delinquents make them poor risks for industrial training. Today, delinquents are recommended for trade and vocational education only on the basis of individual diagnostic study and counseling.

43. JOHN SLAWSON, *THE DELINQUENT BOY*, Boston, 1926.

44. HARRY MANUEL SHULMAN, *PROBLEM BOYS AND THEIR BROTHERS*, Albany, 1929, pp. 64-66.