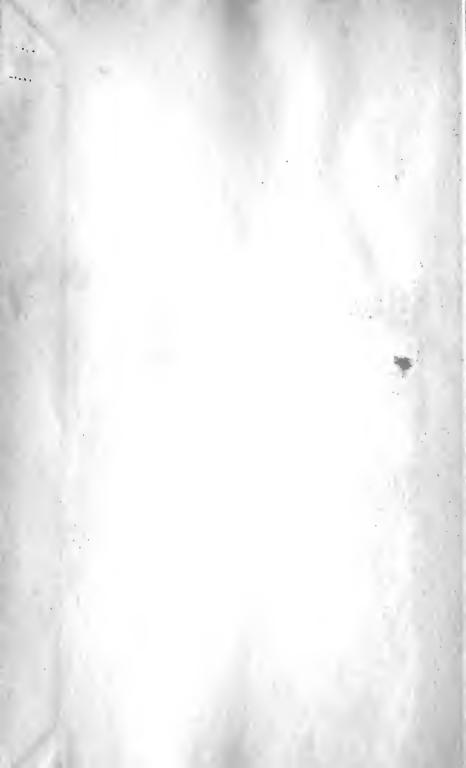




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# PSYCHOLOGICAL TESTS REVISED and CLASSIFIED BIBLIOGRAPHY

David Mitchell Georgie J. Ruger

THE BUREAU of EDUCATIONAL EXPERIMENTS 16 West Eighth Street 5 9 0 9 1 New York City -

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David Mitchell Georgie J. Ruger

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NEW YORK CITY

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## PREFACE



N publishing this Bibliography, the Bureau of Educational Experiments wishes to aid the great army of workers who are interested in the evaluation of intelligence. The titles are classified under various headings

so that one who wishes to work on a special field may readily find the necessary references. The first three sections include discussions of general problems, the development of procedures, and the treatment of results. Section IV- includes reports which present data obtained in the investigation of various problems and in the examination of different groups of subjects. Attention is directed to the latter part of Section II., B, in which tests are listed according to name, and the names of the authors reporting on the tests are given.

This publication reprints the titles given in the Bibliographies previously prepared by the Bureau. It contains, also, numerous additions, principally articles of earlier date. Many of the reports from foreign countries, omitted in the earlier compilations, are now given. Further additions will be made when the references are available. The compilers are anxious to make this Bibliography as helpful as possible, and would welcome criticisms and suggestions.

In a number of cases we have made use of references prepared by other authors. Where this has occurred, we have indicated the fact by enclosing the author's name in brackets. We wish to express our indebtedness to such authors.

### DAVID MITCHELL.

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#### I. Theoretical, Historical and General Discussions

- Anderson, V. V. The Laboratory in the Study and Treatment of Crime. J. of Crim. Law and Criminol., 1914-15, 5, 840-850.
  - The psychopathic laboratory of the Boston Municipal Court. A comparison of mentally defective and psychopathic cases.
- Anderson, V. V. A Proper Classification of Borderline Mental Cases Amongst Offenders. Boston Med. and Surg. J., 1918, 173, 466-469. Also J. of Crim. Law and Criminol., 1916, 6, 689-695.

Discussion of three types of borderline mental cases: the mental defectives, the psychopaths and the mental delinquents. Mental level is mentioned, but information not given concerning its derivation.

 Anonymous. Vocational Guidance Analyzed. Nat. Assoc. of Corporation Schools, Bulletin, 1913, 3, 21-31. Reprint from "The Unpopular Review."

Ridicules the use of psychological tests in vocational guidance.

 Ayres, L. P. Psychological Tests in Vocational Guidance. J. of Educ: Psychol., 1913, 4, 232-237.

Selecting people for positions or positions for people. A review of Münsterberg's work and that of others in testing people for positions. No tests have been developed which are adequate for the second purpose.

5. Binet, A. A propos de la mesure de l'intelligence. Année psychol., 1905, 11, 69-82.

The ability to profit by instruction is a good measure of intelligence.

- Binet, A. Comment les instituteurs jugent-ils l'intelligence d'un ecolier? Bull. Soc. libre Étude de l'Enfant, 1910, 10, 172-182. Results show marked inaccuracy in judgments when based on other than sound experiment, training and experience (Kohs).
- Binet, A. L'Étude experimentelle de l'intelligence. Paris: Schleicher, 1903. Pp. 309.

A study in individual differences, the subjects being the author's two daughters. thirteen and fourteen years of age.

 Binet, A., et Simon, T. Sur la nécessité d'établir un diagnostic scientifique des états inférieurs de l'intelligence. Année psychol., 1905. 11, 163-190.

A discussion of means for the exact measurement of intelligence. Proposes as series of intelligence tests.

- Binet, A., et Simon, T. Methodes nouvelles pour le diagnostic du niveau intellectual des anormaux. Année psychol., 1905, 11, 191-244. The 30 tests of the 1905 series presented. There is also a brief discussion of the pedagogical examination of the feebleminded and a longer discussion of the medical examination.
- Binet, A., et Simon, T. Application des méthodes nouvelles au diagnostic du niveau intellectual chez des enfants normaux et anormaux. d'hospice et d'école primaire. Année psychol., 1905, 11, 245-336. Analysis of age differences found in tests of about 50 pupils. Analysis of the intellectual capacities of the different grades of feeblemindedness. Binet's: method of standardization.
- Binet, A., et Simon, T. Les Enfants anormaux. Guide pour l'admissiondes Enfants anormaux dans les classes de Perfectionnement. Paris: Colin, 1907. Pp. 211. Tr. by W. B. Drummond. (With an appendix)

containing the Binet-Simon Tests of Intelligence by M. Drummond.) New York: Longmans, Green, 1914. Pp. 180.

The psychology of mental defectives, including discussion of results obtained by the application of the 1905 scale. Their pedagogical and medical examination also discussed.

12. Binet, A., et Simon, T. Langage et pensée. Année psychol., 1908, 14, 284-339.

Discusses the evolution of language, language as a sign of intelligence, and the relation between language and thought. Also takes up the difference between the feebleminded adult and a normal child of the same mental age.

13. Binet, A., et Simon, T. L'Intelligence des imbéciles. Année psychol., 1909, 15, 1-147.

Terman says, "Of the criticisms which have been showered upon him, not one in ten would have been possible had the authors of them ever read this article."

 Binet, A. Les Idées modernes sur les enfants. Paris: Flammarion, 1909. Pp. 346.

The author's expressed purpose in writing this book was to summarize the results of 30 years' experimentation in educational matters. It includes a chapter on the measurement of intelligence.

 Bingham, W. V. Mentality Testing of College Students. J. of Appl. Psychol., 1917, 1, 38-45.

The present demand, the problems, and a program for cooperative research.

- Bobertag, O. A. Binet's Arbeiten über die intellektuelle Entwicklung des Schulkindes (1894-1909). Zsch. f. angew. Psychol., 1909, 3, 230-259. Reviews Binet's work.
- Bobertag, O. Neuere Arbeiten über Intelligenzprüfung. Zsch. f. angew. Psychol., 1911, 5, 204-210. Reviews.
- 19. Boshler, I. E. V. Mental Tests. Volta Rev., 1918, 20, 193-195. No original work. The application of mental tests to the deaf.
- 20. Bronner, A. F. Attitude as it Affects Performance of Tests. Psychol. Review, 1916, 23, 303-333. Evaluation of attitude as a factor "can be done only in descriptive, not in guantitative terms."
  - -21. Bronner, A. F. The Psychology of Special Abilities and Disabilities. Boston: Little, Brown & Company, 1917. Pp. 269. The chapter on Differential Diagnosis enumerates and discusses "tests available for the study of various mental processes." The book offers a program for attacking problem cases and illustrates method by selected case-studies.
    - Burt, C. Mental Tests. Child Study, 1915, 8, 8-13. Urges the claim of research and outlines a plan for coöperative study. Incidentally some correlation results with tests given.
    - Carey, N. Factors in the Mental Processes of School Children. I. Visual and Auditory Imagery. II. On the Nature of Specific Mental Factors. III. Factors concerned in School Subjects. Brit. J. of Psychol., 1915, 7, 453-473; 1915, 8, 70-92; 1916, 8, 170-182.

The question of a "general factor" in mental performances is the chief consideration. With the tests the evidence is not clear, but in the school work there is an indication of a general factor which is complicated by the existence of other factors.  Claparède, E. Tests de développement et tests d'aptitudes. Arch. de Psychol., 1914, 14, 101-107. Tr. by C. R. Chapple, Child Study, 1915, 8, 108-112.

The distinction between tests of individual capacity and tests of age level and how it is to be established.

- Cogan, L. G., Conklin, A. M., and Hollingworth, H. L. An Experimental Study of Self-Analysis, Estimates of Associates and Psychological Tests. School and Soc., 1915, 2, 171-179. A study of intercorrelations between the above three factors.
- Cornell, W. S. Health and Medical Inspection of School Children. Philadelphia: F. A. Davis Company, 1912. Pp. 614.
- 27. Dana, C. L. Mental Tests. Med. Rec., 1913, 83, 1-10. A discussion of mental tests under three heads: Laboratory tests, which include the author's own arrangement of a series; Association tests; and the Binet-Simon tests. An appendix gives the 1911 list of Binet tests.
- De Sanctis, S. Les enfants anormaux. 1. Cong. intern. de Pédol., Bruxelles, 1911.

He recommends the Binet scale, but states that in order to treat the child properly we must not only know the degree of mental defect, but we must also determine his particular mental type (Kohs).

- 29. De Sanctis, S. Educazione dei Deficienti. Miano: Villardi, 1915. Pp. 300. Presents conclusions drawn from sixteen years' work with feebleminded in institutions at Rome. Contains much material on the measurement of intelligence, including a discussion of the Binet-Simon scale.
- Doll, E. A. Clinical Studies in Feeble-mindedness. Boston: Badger. 1917.

Diagnostic criteria and illustrative cases. Description of a group of useful tests.

- Dósai-Révész, M. Experimentelle Beiträge zur Psychologie der moralisch verkommenen Kinder. Zsch. f. angew. Psychol., 1911, 5, 272-330. The morally feebleminded compared with the normal and other feebleminded.
- 32. Ellis, F. W., and Bingham, A. T. Report of Mental Examinations. Reprint from 8th Anul. Rept. of N. Y. Prob. and Prot. Assoc., Sept., 1916. Gives statement of purpose and background of mental testing, and cases of individual delinquents.
- Fernald, W. E. The Diagnosis of the Higher Grades of Mental Defect. Amer. J. of Insan., 1914, 70, 741-742. Also J. of Psycho-Asthen., 1913, 18, 73-84.

A physician's warning against too great faith in psychological tests.

- 34. Fernald, W. E. Standardized Fields of Inquiry for Clinical Studies of Borderline Defectives. Mental Hyg., 1917, 1, 211-234. "An elaboration and demonstration" of a former paper—"The Diagnosis of the Higher Grades of Mental Defect." A program for individual case study consisting of ten lines of inquiry. The author states that some evidence of mental defect even in the borderline cases "will be found in most of the ten fields of inquiry."
- 35. Ferrari, G. C. Les Arriérés scolaires. 6 Cong. de psychol., Genéve, 1909, pp. 399-422.

The study of mental types has been found valuable by the clinician.

 Goddard, H. H. The Feeble-Minded Immigrant. Training School Bull., 1912, 9, 109-113.

Showing the accuracy with which trained observers can detect mental defect simply by watching the line of immigrants as they pass.

37. Goddard, H. H. The Improvability of Feeble-Minded Children. J. of Psycho-Asthen., 1913, 17, 121-131.

> 346 subjects ranging in chronological age from 5 to 40 and in mental age from 1 to 12 were given three annual testings by the Binet scale. It is concluded that the feebleminded can be trained in activities belonging to their mental level, but cannot be improved in mental capacity. Educational treatment is indicated in this hypothesis.

- 38. Goddard, H. H. Feeble-Mindedness. Its Causes and Consequences. New York: Macmillan, 1914. Pp. 599. The chief emphasis of the book is on the relation of feeblemindedness to the problems of crime, pauperism, alcoholism. 327 case studies, mental level being determined by the Binet scale. Considers the Binet scale reliable in differentiating
- Goddard, H. H. School Training of Defective Children. School Efficieucy Series. Yonkers-on-Hudson: World Book Company, 1914. Pp. 97.

insanity from feeblemindedness.

In 1912 the author investigated the "ungraded classes" of New York City. This is an enlarged and generalized report of that investigation. Much of its argument is based on the results obtained by the application of the Binet scale tomembers of such classes.

40. Groszmann, M. P. E. Classification of Exceptional Children as a Guide in Determining Segregation. Reprint from Bull. of Amer. Acad. of Med., Oct., 1909.

A distinction is made between the mental and physio-psychological tests.

- Groszmann, M. P. E. The Determination of Exceptional Development in Children. A Rational System of Medical, Physiopsychological and Mental Tests. N. Y. Med. J., 1914, 100, 1071-1075. "Mere backwardness, educational neglect, simplicity and primitiveness of mind have too often been confounded with mental defect."
- 42. Groszmann, M. P. E. The Exceptional Child. New York: Scribner, 1917. Pp. 764.

Part II is devoted to the "problem of clinical research and diagnosis."

- 43. Hall, M. Mental Tests. Educ. Bimonthly, 1914, 9, 66-78. Something of the history and development of such tests, particularly the Binet-Simon.
- 44. Hart, B., and Spearman, C. General Ability, Its Existence and Nature. Brit. J. of Psychol., 1912-13, 5, 51-84. Theoretical consideration. Believe that the "remarkable revival of mental tests is due to the transformance of both their purpose and method to accord with the theory of a General Factor."
- 45. Hart, B., and Spearman, C. Mental Tests of Dementia. J. of Abnorm. Psychol., 1914, 9, 217-264.

The use of tests "for estimating impairment of intellect." A study in correlation connected with the problem of "general and specific factors."

 Healy, W. The Individual Delinquent. Boston: Little, Brown, 1915. Pp. 825.

Chapters 6 and 7 of Book I are largely devoted to the description and discussion of mental tests and include sections on "Tests for Special Abilities and Functions" and "Norms on Our Own Tests."

47. Hollingworth, H. L. Specialized Vocational Tests and Methods. School and Soc., 1915, 1, 918-922.

A description and evaluation of four methods which have been developed in the search for vocational tests: vocational miniature, vocational sampling, vocational analogy, and miscellaneous empirical tests.

 Hollingworth, H. L. Vocational Psychology. Its Problems and Methods. New York: Appleton, 1916. Pp. 308.

A history of vocational psychology and a discussion of the various methods which have been employed in the course of the development of this branch of applied psychology.

 Hollingworth, L. S. The Vocational Aptitudes of Women. Chap. X. pp. 222-244. Hollingworth's Vocational Psychology.

A discussion of sex differences under the following heads: Innate differences, differences in variability, the operation of special causes, differences in affective or instinctive equipment and the effect of tradition. Conclusion: "Up to the present time experimental psychology has disclosed no sex differences in mental traits which would imply a difference of labor on psychological grounds."

- 50. Hollingworth, H. L., and Poffenberger, A. T. Applied Psychology. New York: Appleton, 1917. Pp. 337. Page 196 ff. Description of so-called "teams of tests" for vocational selection: method of derivation and tables.
- Holmes, A. The Conservation of the Child. Philadelphia: Lippincott, 1912. Pp. 345.

Discussion of the function, field, methods, and sociological relations of a psychological clinic. In the chapters dealing with the classification of clinic cases the Binet tests and some pedagogical tests are discussed.

- 52. Holmes, W. H. School Organization and the Individual Child. Worcester, Mass.: Davis Press, 1912. Pp. 211. The modifications of school organization to meet the demands of individual education. The chapter on mental tests lists the De Sanctis and the Binet-Simon tests.
- 53. Huey, E. B. Retardation and the Mental Examination of Retarded Children. J. of Psycho-Asthen., 1910, 15, 31-43. Discusses the upper limit of feeblemindedness and the measurement of retardation above "this dead line."
- Huey, E. B. Backward and Feeble-Minded Children. Clinical Studies in the Psychology of Defectives, with a Syllabus for the Clinical Examination and Testing of Children. Baltimore: Warwick and York, Educ. Psychol. Monog. Pp. 221.

An "intensive clinical study" of 34 borderline cases of the State School and Colony at Lincoln, Illinois. Chapter V describes the tests used. Chapter VI contains the author's syllabus, including record blanks and his modification of Goddard's version of the Binet scale.

- Ioteyko, I. Revue Générale des Travaux récents sur l'Enfance anormale. Rev. psychol., 1909, 2, 238-248.
- Irwin, E. A. Tests and the Method of Testing. Training School Bull., 1916, 13, 120-123.

Principles and precautions. Importance of objective standards.

- 57. Jaederholm, G. A. Undersökningar över Intelligensmatningarnas Teori och Praxis. Förläg. Stockholm: Bonniers, Vols. I. and II., 1914. Research on the theory and practice of the intelligence measurements. An intensive study of psychological testing.
- 58. Johnson, G. E. Contribution to the Psychology and Pedagogy of Feeble-Minded Children. Ped. Sem., 1894, 3, 246-301. Contains an investigation of the memory span and mental association of feebleminded children. Includes also a history of their treatment.
- Kite, E. S. The Development of Intelligence in Children. Vineland: The Training School, 1916. Pp. 336. Translation of Nos. 8, 9, 10, 156 and 158.

- 60. Kite, E. S. The Intelligence of the Feeble-Minded. Vineland: The Training School, 1916. Pp. 328. Translation of Nos. 12, 13 and 157.
- Kitson, H. D. Scientific Study of the College Student. Psychol. Monog., 1917, 23, No. 1. Pp. 81.
   A program looking toward the realization of the "ideal of individualized instruction." Includes a description and discussion of tests for college students.
- Kohs, S. C. A New Departure in the Treatment of Inmates of Penal Institutions. Publications of the Research Department, Chicago House of Correction Bull. No. 1, 1915. Pp. 14.
- 63. Kohs, S. C. Who is Feeble-Minded? J. of Crim. Law and Criminol., 1915-16, 6, 860-871.

A criticism of Walliu's article of the same title.

64. Kohs, S. C. The Borderlines of Mental Deficiency. J. of Psycho-Asthen., 1916, 20, 88-103.

A general discussion of the problem including the use of the Binet scale.

 Kraepelin, O. Der psychologische Versuch in der Psychiatrie. Psychol. Arbeiten, — 1, 1-91.

Wells says that this article would serve quite as well for an epilogue to the first four volumes of the Arbeiten as for a prologue. Very little change in procedure.

66. Kuhlmann, F. The Mental Examination of Reformatory Cases. J. of Crim. Law and Criminol., 1914, 5, 666-674.

No original experimentation. A brief and "dogmatic" discussion of the methods of mental examination for the purpose of determining the grade of intelligence.

 Kulpe, O. Psychologie und Medizin. Zsch. f. Patho-psychol., 1912, 1, 187-267.

Does not believe that there is much comparative value in "mental age." Thinks Binet exaggerated the value of the scale. It is not a true psychological experiment because it lacks the aid of introspection.

- Lapie, P. Avancés et retardés. Année psychol., 1912, 18, 233-270. In each class some bright young children and some dull old children are found. Investigates with tests to determine the reason. Twenty-four subjects.
- Ley, A. Les enfants anormaux. Année psychol., 1912, 18, 503-519. Also L'Enfance Anorm, 1913, 7, 37-52. Reviews.
- McDougall, W. Psychology in the Service of Eugenics. Eugenics Rev., 1913-14, 5, 295-308.

A program of the work which lies before eugenists. Several uses to which mental tests' should be put, e.g., in the investigation of the relation between social status and mentality and in the study of racial psychology and the effect of racial mixtures.

 Mead, C. D. The Relations of General Intelligence to Certain Mental and Physical Traits. New York. Columbia Univ., Teachers College Contrib. to Educ., 1916. Pp. 117.

A comparative study of normal and feebleminded children as regards age of walking and talking, height and weight, strength of grip and dextrality, perception (cancellation test) and memory for related and unrelated words. The feebleminded children were also tested for ability to form abstract notions and for power of association.

 Meumann, E. Der gegenwartige Stand der Methodik der Intelligenzpr
üfungen (mit besonderer Rucksicht auf der Kinderpsychologie). Zsch. f. exper. Paed., 1910, 11, 68-79.

The present status of tests of intelligence with an attempt to interpret the principles involved. Discusses aims to be realized, i.e., for use in psychiatry;

to distinguish between the normal and abnormal; to determine normal types and standards of normal ability.

- 73. Meumann, E. Experimentelle Pädagogik und Schulreform. Zsch. f. Päd. Psychol., 1911, 12, 1-13. The problem of measuring intelligence is very important for experimental pedagogy (Kohs).
- Meumann, E. Vorlesungen. Leipzig: Engelmann, 1913. Zehnte Vorlesung. Pp. 800.
- 75. Mitchell, D. Schools and Classes for Exceptional Children. Cleveland: Survey Committee of the Cleveland Foundation, 1916. Pp. 122. Children considered as socially competent and socially incompetent. Decision te be based on the results of an extended examination which will include many tests. Evaluation of the Binet-Simon series.
- 76. Morgan, B. S. The Backward Child. New York: Putnam, 1914. Pp. 263. The application of tests to determine the mental function in which backward children are weak. Chapter 13 gives a résumé of the tests which have been described in detail in the earlier chapters.
- Münsterberg, H. Finding a Life Work. McClure's Mag., 1910, 398-403. Suggestions concerning the contributions which psychological laboratories and tests have to offer to the development guidance.
- Münsterberg, H. Psychology and Industrial Efficiency. Boston: Houghton, Mifflin, 1913. Pp. 321.

The book is divided into three parts: The Best Possible Man, The Best Possible Work, The Best Possible Effect. The first part analyzes "the results of experiments which have actually been carried out." Those tested were motormen, ship service men and telephone girls. Efficiency in the tests was found to correspond with efficiency in service.

- Myers, C. S. The Pitfalls of "Mental Tests." Brit. Med. J., 1911, 195-197.
- Lough, J. E. Experimental Psychology in Vocational Guidance. Proceedings of the Second National Conference on Vocational Guidance. New York: 1913, 89-96.

"In vocational tests the functioning of the mind will be more significant than mere knowledge." A substitution test was used to measure the subjects' ability to form habits. Results correlated with typewriting ability, "business forms" including stenography, and German grammar.

- Pintner, R. The Value of Mental Testing in the Elimination of the Repeater. School and Soc., 1916, 4, 909-911.
   44 children, who, in the judgment of their teachers, would probably fail in the year's work, were in the middle of the year tested by Yerkes point scale.
   33 were found to be normal or supernormal and, thanks to a special "coaching" class, only four failed.
- Pintner, R., and Paterson, D. G. A Psychological Basis for the Diagnosis of Feeble-mindedness. J. of Crim. Law and Criminol., 1916-17, 7, 32-55.

An attempt to show how a psychological definition of feeblemindedness may be formulated in terms of degrees of intelligence on a normal curve. "The lowest three per cent. of the community at large, that is, the lowest as determined by definitely standardized mental tests, are to be called feebleminded." The Binet-Simon scale and Yerkes point scale are analyzed from the point of view of this hypothesis.

 Pintner, R., and Toops, H. A. Mental Tests of Unemployed Men. J. of Appl. Psychol., 1917. 1, 325-341; 1918, 2, 15-25.

The efficiency of our employment bureaus could be greatly increased by the use of mental tests.

- 84. Pintner, R. The Mentality of the Dependent Child, together with a Plan for a Mental Survey of an Institution. J. of Educ. Psychol., 1917, 8, 221-238. Advocates a group of well standardized class tests for the first rough grading according to mentality and for carrying on mental surveys on a large scale.
- 85. Porter, F. Difficulties in the Interpretation of Mental Tests—Types and Examples. Psychol. Clin., 1915-16, 9, 140-158, 167-180. An attempt to break away from the statistical standpoint and to emphasize "the peculiarities of the individual child's reactions to the tests."
- Pyle, W. H. Mental and Physical Examination of School Children in Rural Districts. Psychol. Clin., 1912-1913, 6, 260-262. A program for the universal application of tests.
- Pyle, W. H. The Value to be Derived from Giving Mental Tests to All School Children. 4th Intern. Congr. School Hyg., Buffalo, 1913, 5, 637-641.
- Pyle, W. H. A Manual for the Mental and Physical Examination of School Children. Univ. of Missouri Bull., 1916, 17 (No. 24). Pp. 32.
- 89. Rossolimo, G. Die psychologischen Profile. Zur Methodik der quantitativen Untersuchung der psychischen Vorgänge in normalen und pathologischen Fällen. Eine experimentel psychologische Skizze. Klinik für psychische und nervöse Krankheiten, Halle, Band VI., Heft 3 u. 4, Band VII., Heft 1, 1912. Represents by means of a curve the test results for an individual.
- Rossolimo, G. Mental Profiles. A Quantitative Method of Expressing Psychological Processes in Normal and Pathological Cases. J. of Exp. Ped., 1911-12, 1, 211-214. An English statement of the above.
- Roussel, S. Correspondence. Bull. Soc. Libre Étude psychol. de l'Enfant, 1910, 10, 89-92.
   Emphasizes the predominance of sensation, reason and personality or will in various periods. Includes a chart of classification for ages 3 to 13.
- 92. Ruml, B. The Reliability of Mental Tests in the Division of an Academic Group. Psychol. Monog., 1917, 24, No. 105. Pp. 63. "The object of this research is the determination of the value of mental tests in dividing large groups of students into smaller groups of relatively equal mental ability."
- Report of the Committee of the American Psychological Association on the Standardizing of Procedure in Experimental Tests. Psychol. Monog., 1910, 13, No. 53. Pp. 107.
- 94. Sandiford, P. The Mental and Physical Life of School Children. London: Longmans, Green, 1913. Pp. 346. A textbook "for the use of students in Training Colleges for Teachers." The Stanford tentative revision of the Binet-Simon scale listed.
- Saffiotti, F. U. Clinica Medico-psico-pedagogica. L'infanzia Anormale, 1911, 5, 102-116.
   A program for the work of a clinic. Among the tests recommended are the De Sanctis.
- Saffiotti, F. U. L'Examen psychologique des écoliers et les problemes de psychologie pédagogique normale et anormale. Milan: Civelli, 1911.

 Saffiotti, F. U. Rilievi e observazioni sul rendimento scolastico nei diversi metodi di educazione infantile. Colturo Popolare, 1914, 4. Pp. 23.

> Comparison of several pre-school methods as to their effect upon the intelligence of young children, based upon the application of the Treves-Saffiotti tests to a group of children. Declares in favor of the Fröbel method.

 Saffiotti, F. U. La misura dell'Intelligenza nei Fanciulli. Roma: 1916. Pp. 286.

> The first part of the book is historical. The second part contains a critical discussion of the Binet-Simon tests, while the final part is devoted to the Treves-Saffiotti scheme for revising the arrangement and scoring of them.

99. Schneider, H. Selecting Men for Particular Work. National Assoc. of Corporation Schools, Bulletin, 1916, 3, 23-28.

Discussion of four "bases on which to select men for work." Adverse criticism of psychological tests as one of these methods.

 Seashore, C. E. Elemental Tests in Psychology. J. of Educ. Psychol., 1916, 7, 81-86.

"The findings in these experiments constitute a challenge to a large part of current systems of mental tests."

 Seashore, C. E. A Child Welfare Research Station. Iowa City: Univ. of Iowa, 1916. Pp. 18.

Outlines the purpose and problems of such an organization.

 Seashore, C. E. Avocational Guidance in Music. J. of Appl. Psychol., 1917, 1, 342-348.

> Three forms of work developed in the University of Iowa laboratory: development of a series of "Mass" tests to be used as a "rough dragnet in the public schools," development of a series of motor tests, introduction of tests into conservatories of music.

- 103. Sharp, S. Individual Psychology: A Study in Psychological Method. Amer. J. of Psychol., 1899, 10, 329-391. The history of individual psychology and of the tests used in its study. In her own investigations the author used the tests described by Binet and Henri in their "La psychologie individuelle."
- 104. Stern, W. Die differentielle Psychologie in ihren methodischen Grundlagen. Leipzig: Barth, 1911, Kapitel 6. Review of literature and historical.
- 105. Stern, W. Fragestellungen, Methoden und Ergebnisse der Intelligenzpr
  üfung. 1 deut. Kongr. f. Jugendbldg. u. Jugendkde., Dresden, 1911. Pedagogy now demands a better understanding of the psychological nature of each individual child. Discussion of tests of intelligence and related problems (Kohs).
- 106. Stern, W. Zum Vergleich von Vorschülern und Volksschülern. Zsch. f. angew. Psychol., 1913, 8, 120-123. Emphasizes the significance of his results from the point of view of school promotion.
- 107. Stern, W. The Psychological Methods of Testing Intelligence. Tr. by G. M. Whipple. Baltimore: Warwick and York. Educ. Psychol. Monog., 1914, No. 13. Pp. 160.

A survey and discussion of the literature of intelligence testing previous to 1912, based on the following definition: "Intelligence is a general capacity of an individual consciously to adjust his thinking to new problems and conditions of life." He treats his subject under three heads: Single tests, the Binet-Simon scale and the correlation method. The bibliography is limited to 1911 and 1912 articles and supplements that of an earlier work, "Die differentielle Psychologie."

- 108. Sullivan, W. C. La mesure du développement intellectuel chez les jeunes délinquantes. Année psychol., 1912, 18, 341-361. The search for the explanation of the anti-social tendencies of delinquents leads us into the affective and not the intellectual sphere (Kohs).
- Symposium. Seashore, C. E., Angell, J. R., Bingham, W. V., Goddard, H. H., Freeman, F. N., Haines, T. H., Healy, W., Bronner, A. F., Hollingworth, H. L., Kitson, H. D., Kuhlmann, F., Miner, J. B., Pyle, W. H., Terman, L. M., Town, C. H., Wallin, J. E. W., and Whipple, G. M. J. of Educ. Psychol., 1916, 7, 229-240, 278-286, 348-360.
- 110. Terman, L. M. The Significance of Intelligence Tests for Mental Hygiene. 4 Intern. Cong. School Hyg., Buffalo, 1913, 3, 502-508. The function of mental hygiene is "positive as well as negative." Suggestions concerning the contributions of intelligence tests to the solution of educational problems.
- 111. Terman, L. M. Review of Meumann on Tests of Endowment. J. of Psycho-Asthen., 1914-15, 19, 75-94, 123-134, 187-199. Review of those parts of the second volume of Meumann's Experimentelle Pädagogik which deal with the methods and results of tests of endowment and the practical problems connected with such tests.
- 112. Terman, L. M. Research in Mental Deviation Among Children; A Statement of the Aims and Purposes of the Buckel Foundation. Research Lab., Buckel Foundation, Stanford Univ., 1913, 2, 3-15.

A classified summary of the purposes of the Buckel Foundation under the following heads: Backward and feebleminded children; delinquent or potentially delinquent children; nervous, morbid, or psychopathic children; children of superior ability and normal children. Little is said about tests.

- 113. Terman, L. M. The Mental Hygiene of Exceptional Children. Ped. Sem., 1915, 22, 529-537. A by-product of the investigation which resulted in the Stanford Revision of the Binet Scale. The discussion deals "chiefly with the correlation between the I. Q. and grade progress." It is concluded "that the tendency of the school is to promote children by age rather than by ability."
- Terman, L. M. The Intelligence Quotient of Francis Galton in Childhood. Amer. J. of Psychol., 1917, 28, 209-215.

From evidence cited, it is concluded that Francis Galton's I. Q. between 3 and 8 years of age was "not far from 200." That his biographer has called him a normal child is only another example of the error which arises when performance is not judged "in terms of the mental age to which it corresponds."

 Thompson, G. H. A Hierarchy Without a General Factor. Brit. J. of Psychol., 1915, 8, 271-281.

> "Let me, therefore, reiterate that all I have shown is that Professor Spearman's calculations are incapable of discriminating between a General Factor and Overlapping Group Factors."

-116. Thompson, H. B. The Mental Traits of Sex. An Experimental Investigation of the Normal Mind in Men and Women. Chicago: The Univ.

of Chicago Press. Pp. 188.

The pioneer attempt to determine experimentally and systematically "the psychological likenesses and differences of the sexes." A long series of tests was given to 25 women and 25 men. Technique, results, and comparison with other investigations are discussed separately under each of the following heads: Motor ability, skin and muscle senses, taste and smell, hearing, vision, intellectual faculties, and affective processes. Concludes that sex differences are slight.

117. Thompson, F. V. Vocational Guidance in the Public School System. Proceedings of the National Guidance Association, 1915, 17-24. "Our psychological tests are aptly called eliminative tests. They are more nega-

tive than positive; they eliminate, but do not evaluate."

- Thorndike, E. L. The Relation of Accuracy in General Sensory Discrimination to General Intelligence. Amer. J. of Psychol., 1909, 20, 364-369.
- 119. Thorndike, E. L. Relation Between Initial Ability and Improvement in a Substitution Test. School and Soc., 1915, 1, 429-431. Status attained by an individual "from any amount of practice is highly prophetic of the status which he will attain from any given amount of additional practice."
- 120. Thorndike, E. L. The Resemblance of Twins in the Mental Traits. Columbia Univ. Contrib. to Phil. and Psychol., 13, 3.
- 121. Waite, H. The Teacher's Estimation of the General Intelligence of School Children. Biometrika, 1911, 8, 79-83.
- 122. Wallin, J. E. W. Danger Signals in Clinical and Applied Psychology. J. of Educ. Psychol., 1912, 3, 224-226. Urges the thorough training of those who wish to be psycho-clinicists; the use of wide range testing, and the maintenance of the 1908 Binet scale as the standard one.
- 123. Wallin, J. E. W. The Mental Health of the School Child. The Psycho-Educational Clinic in Relation to Child Welfare. Contributions to a New Science of Orthophrenics and Orthosomatics.

To a considerable extent this report consists of reprints of the following:

- A. Medical and Psychological Inspection of School Children.
   The Western J. of Educ., 1909, 433-446.
   Few general statistics on the prevalence of defects and then a plea for a more careful evaluation of the children.
- B. The New Clinical Psychology and the Psycho-Clinicist. J. of Educ. Psychol., 1911, 2, 121-132, 191-210.
  - Plans and needs, not results. Review of work already done along these lines. Bibliography of 26 titles.
- C. Clinical Psychology: What It Is and What It Is Not. Science, 1913, 895-902.

Outlines problems facing a clinical psychologist and classifies cases with which he deals. Differentiates this field from neurology, psychiatry, etc.

- D. The Functions of the Psychological Clinic. Med. Rec., 1913. Diagnosis and recommendations for mentally exceptional cases, research and propaganda.
- E. The Distinctive Contribution of the Psycho-Educational Clinic of the School Hygiene Movement. Fourth Intern. Congr. of School Hyg., Buffalo, 1913.

Children should be psychologically examined "so that they may be more accurately mentally and educationally diagnosed."

F. Human Efficiency. Ped. Sem., 1911, 18, 74-84. Sub-title: A Plan for the Observational, Clinical and Experimental Study of the Personal, Social, Industrial, School and Intellectual Efficiencies of Normal and Abnormal Individuals.

Plans, criticisms, suggestions, hopes, needs, but no results. Tests, particularly the Binet scale, discussed in one portion of the article.

G. Eight Months of Psycho-Clinical Research at the New Jersey State Village for Epileptics, with Some Results from the Binet-Simon Testing. Epilepsia, 1912, 3, 366-380.

- H. The Present Status of the Binet-Simon Graded Tests of Intelligence. Alienist and Neurol., 1912, 33, 162-173. Discusses four methods for testing the accuracy of measuring scales of intellectual capacity.
- I. Current Misconceptions in Regard to the Functions of Binet Testing and of Amateur Psychological Testers. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 678-689.
  - Suggests raising the standard of requirements for the "Psycho-educational diagnostician."
- J. Re-averments Respecting Psycho-Clinical Norms and Scales of Development. Psychol. Clin., 1913-14, 7, 89-96.

An outline of the type of training which should be demanded of the psycho-clinicist, and suggestions concerning the kind of graded scales needed for clinical examinations.

- K. Individual and Group Efficiency. Psychol. Bull., 390-397. Surveys the literature relating to human efficiency and says that the problem is many-sided, requiring for its solution a scientific technique carried on by a new type of scientific investigator.
- L. Aspects of Infant and Child Orthogenics. Psychol. Clin., 1912-13, 6, 153-173.

The case as between Euthenics and Eugenics.

- M. Experimental Oral Orthogenics: An Experimental Investigation of the Effects of Dental Treatment on Mental Efficiency.
  - J. of Phil., Psychol., and Sci. Methods, 1912, 9, 290-298. 27 children examined. Five tests, each "arranged in six sets" of equal difficulty, were used. Two sets were given before treatment began and four during treatment or after its close. The index of improvement for each test was calculated from the differences between the average of sets 1 and 2 and the average of sets 5 and 6. The results seemed to be positive, although there was no control group.
- N. The Relation of Oral Hygiene to Efficient Mentation in Backward Children. The Child, 1913, 27-32. Not casual observation, but experimental evidence of a quantitative nature was desired.
- 124. Wallin, J. E. W. Who is Feeble-Minded? J. of Crim. Law and Criminol., 1915-16, 6, 706-716.

An attempt to show the unscientific nature of much of the psychological diagnosis by means of tests.

125. Wallin, J. E. W. Experimental Studies of Mental Defectives. A Critique of the Binet-Simon Tests and a Contribution to the Psychology of Epilepsy. Baltimore: Warwick and York, Educ. Psychol. Monog., 1912, 7. Pp. 155.

1908 version applied to 333 epileptics. Includes a reprint from "Psychological Clinic" of a practical guide for the administration of that version.

- 126. Wallin, J. E. W. Problems of Subnormality. Yonkers-on-Hudson, N. Y., World Book Co., 1917. Pp. 485. Chapter two, devoted to the "problem of diagnosis," is of particular interest to the student of psychological tests.
- 127. Walsh, E. A. Ungraded Class Work in New York City—Methods and Results. J. of Psycho-Asthen., 1914, 19, 59-66. Psychological tests should be used to "ascertain the strength as well as the weakness of the individual."

 Webb, E. Character and Intelligence. Brit. J. of Psychol., Monog. Suppl., 1915, 1, No. 3. Pp. 99.

This is an attempt to demonstrate the existence, in addition to general intelligence, of a second general factor on the side of character. Data used were estimates of many qualities by various judges and results obtained from tests.

129. Wells, F. L. Technical Aspects of Experimental Psychopathology. Amer. J. of Insan., 1907-08, 64, 477. A survey of the field and a review of the work done in it. Bibliography.

130. Wells, Frederick Lyman. The Relation of Practice to Individual Differences. Amer. J. of Psychol., 1912, 23, 75-88. The extent to which differences in particular functions are inherent in individuals or are the product of environment and education.

- 131. Wells, F. L. The Principle of Mental Tests. Science, 1913, 38, 221-224.
- 132. Wells, F. L. Systematic Observation of the Personality. Psychol. Rev., 1914, 21, 295-333.
- 133. Whipple, G. M. Manual of Mental and Physical Tests. Baltimore: Warwick and York. 2nd Edition, Vol. I., Simpler Processes, 1914, pp. XVI. + 365. Vol. II., Complex Processes, 1915. Pp. 336. Summarizes the investigations in all the various fields.
- 134. Whipple, G. M. The Use of Mental Tests in Vocational Guidance. Personal and Employment Problems in Industrial Management. Amer. Acad. of Pol. and Soc. Sci., 1916, 65, No. 154, 193-204.
- 135. Woolley, H. T. The Psychological Laboratory as an Adjunct to a Vocational Bureau. Proceedings of the Second National Conference on Vocational Guidance, 1913, 84-88. Discussion of "the question as to what part a psychological laboratory might play in an ideal school vocation bureau."
- Woolley, H. T. The Vocation Bureau of the Public Schools, Cincinnati, Ohio. Boston: National Vocational Guidance Association, Bulletin, 1917, 3, 2-3.

Description of eight minor forms of activity which the bureau has undertaken. All involve the use of tests.

- 137. Yerkes, R. M. Mental Examination of Police and Court Cases. J. of Crim. Law and Criminol., 1916, 7, 366-372. "Mental examination alone is wholly inadequate for the solution of such complicated human problems as court cases almost invariably present." Suggestions concerning the procedure to be followed in psychological examinations.
- 138. Yerkes, R. M. How May We Discover the Children Who Need Special Care? Mental Hyg., 1917, 1, 252-259. Advocates group examination, followed by intensive individual examination when necessary.
- 139. Ziehen, T. Die Erkennung des Schwachsinns im Kindesalter. Berlin: Karger, 1909. Pp. 32.
- 140. Ziehen, T. Die Prinzipien und Methoden der Intelligenzprüfung. Berlin, 1911. Pp. 94.

Classification and description of the questions and tests used in his clinic.

#### II. Methodology, Apparatus and Technique

### A. Intelligence Scales. 1. Binet-Simon, Yerkes, Terman, etc.

- 141. Anonymous. A Standard Scale of Intelligence. School Hyg., 1910, 1, 102-108.
- Anonymous. Modo de aplicar la escala métrica de Binet. Rev. de educ., 1911, 1, 43-54.

Procedure in the use of the tests.

- 143. Ayres, L. P. The Binet-Simon Measuring Scale for Intelligence: Some Criticisms and Suggestions. Psychol. Clin., 1911-12, 5, 187-196. Criticises the scale because the tests do not touch the individual's ability to cope with the problems of life.
- 144. Barončini, L. Riposta alle Osservazioni di Alfredo Binet. Riv. di psicol., 1910, 6, 185-188.
- 145. Bateman, W. G. The Naming of Colors by Children. The Binet Test. Ped. Sem., 1915, 22, 469-486.

591 children from the first three grades of a public school tested. Since 95.7 per cent. of the children pass the Binet color naming test, the author would put that test in the 6th or 5th year group of tests. Boys show much less discrimination with colors than girls. "American children appear to have more ability in this respect than French, Italian or German children."

- 146. Bell, C. F. Another Experience with the Binet Test. Training School Bull., 1913, 10, 77-78.
  "A striking illustration of the accuracy of the Binet tests as a measure of retardation in selecting for a special class." 38 children tested.
- 147. Bell, J. C., Berry, C. S., Cornell, W. S., Doll, E. A., Wallin, J. E. W., Whipple, G. M. Informal Conference on the Binet-Simon Scale: Some Suggestions and Recommendations. J. of Educ. Psychol., 1914, 5, 95-100.

19 questions asked and answered in an attempt to standardize procedure.

148. Berry, C. S. A Comparison of the Binet Tests of 1908 and 1911. J. of Educ. Psychol., 1912, 3, 444-451. The comparative merits of the two scales illustrated by results obtained by test-

ing 45 school children and 50 defectives, inmates of a house for the feebleminded.

- 149. Berry, C. S. Some Limitations of the Binet-Simon Tests of Intelligence. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 649-654. Criticisms of the scale should take into account Binet's conception of its purpose. The scale, both as to its individual tests and its technique, needs further standardization.
- 150. Berry, C. S. Eighty-two Children Retested by the Binet Tests of Intelligence. Psychol. Bull., 1913, 10, 77-78. The two testings were a year apart; 42 subjects were public school children, the rest were defectives. High correlation between two results.
- Binet, A., et Simon, T. Methodes nouvelles pour le diagnostic du niveau intellectuel des anormaux. Année psychol., 1905, 11, 191-244. See No. 9.
- 152. Binet, A., et Simon, T. Application des méthodes nouvelles au diagnostic du niveau intellectuel chez des enfants normaux et anormaux d'hospice et d'école primaire. Année psychol., 1905, 11, 245-336. See No. 10.

153. Binet, A., et Simon, T. Mitteilung über die neuen Methoden der Diagnose des Kretinismus. Schwachsinns und mangelhafter Eutwicklung. Eos. 1905. 1. 247-251.

Types and degree of defect diagnosed by the use of the scale.

154. Binet, A., et Simon, T. Méthodes nouvelles pour diagnostiquer l'idiotie, l'imbecilité et la débilité mentale. 5. cong. intern. di psicol., Roma, 1905, pp. 507-510.

A short summary of their method in diagnosing degrees of defect.

- 155. Binet, A., et Simon, T. Les enfants anormaux. Guide pour l'admission des Enfants anormaux dans les classes de Perfectionnement. Paris: Colin, 1907. Pp. 211. Tr. by W. B. Drummond. (With an appendix containing the Binet-Simon Tests of Intelligence by M. Drummond.) New York: Longmans, Green, 1914. Pp. 180. See No. 11.
- 156. Binet, A., et Simon, T. De développement de l'intelligence chez les enfants. Année psychol., 1908, 14, 1-90. Gives the 1908 scale.
- 157. Binet, A., et Simon, T. Nouvelle théorie psychologique et clinique de la démence. Année psychol., 1909, 15, 168-272. Results from a small number of paralytics and dements.
- 158. Binet, A. Nouvelles recherches sur la mesure du niveau intellectuel chez les enfants d'école. Année psychol., 1911, 17, 145-201. The 1911 revision.
- 159. Binet, A., et Simon, T. La mesure du développement de l'intelligence chez les jeunes enfants. Bull. Soc. libre Étude Psychol. de L'Enfant, 1911, 11, 187-256.

Binet's final revision of his test series.

160. Bloch, E., und Lippa, H. Die Intelligenzprüfungsmethode von Binet-Simon (1908) an schwachsinnigen Kindern. Zsch. f. angew. Psychol., 1913, 7, 397-409. Forty-one boys and thirty girls, eight to fifteen years. Tables and results.

Satisfied with the scale as a means of grading intelligence (Kohs).

- 161. Bloch, E., und Lippa, H. Ueber Wiederholung der Binet-Simonschen Intelligenzprüfungen an schwachsinnigen Kindern nach einem Jahre. Zsch. f. angew. Psychol., 1915, 9, 512-513. On repeated testing of the feebleminded.
- 162 Bloch, E. Ueber Wiederholung der Binet-Simonschen Intelligenzprüfung an denselben schwachsinnigen Kindern nach Ablauf eines Jahres. Zsch. für. d. ges. Neur. u. Psychiat., 1915, 28, 445-455. See No. 174.
- 163. Bluemel, C. S. Binet Tests on Two Hundred Juvenile Delinquents. Training School Bull., 1915, 12, 187-193.

The Goddard revision of the Binet scale used in the Juvenile Court of Denver. The majority of the subjects were over twelve. The author advocates a nonmathematical, gualitative evaluation of the 15-year-old and adult tests. The results are given in tabular form, and separately for first offenders, probationers and Industrial School students.

Bobertag, O. A. Binet's Arbeiten über die intellektuelle Entwicklung 164. des Schulkindes (1894-1909). Zsch. f. angew. Psychol., 1909, 3, 230-259.

Reviews Binet's work.

- 165. Bobertag, O. Ueber Intelligenzprüfungen (nach der Methode von Binet und Simon). I. Methodik und Ergebnisse der einzelnen Tests. Zsch. f. angew. Psychol., 1911, 5, 105-203. II. Gesamtergebnisse der Methode. Zsch. f. angew. Psychol., 1912, 6, 495-538. A detailed discussion of each test of the 1908 version of the Binet scale based on its application to more than 400 Breslau children.
- 166. Bobertag, O. Quelques reflexions méthodologiques à propos de l'échelle métrique de l'intelligence de Binet et Simon. Année psychol., 1912, 18, 271-287.

He emphasizes some of the fundamental principles to be kept in mind both in giving the tests and in evaluating the results (Kohs).

167. Bobertage, O. Kurze Anleitung zur Ausführung der Intelligenzprüfung nach Binet und Simon. Instit. der Gessellsch. f. exper. Psychol., 1913, Nr. 8.

The scale in German (Kohs).

168. Bobertag, O. Some Theses Regarding the Scientific Use of the Binet Scale for Measuring Intelligence. Fourth Intern. Cong. School Hyg., Buffalo, 1913, 5, 642-644.

Rules for the adaptation and standardization of tests for use within the Binet scale.

- 169. Boulenger, M. I testi di Binet e Simon applicati a fanciulli anormali inglesi e belgi. Riv. di psicol., 1915, 11, 227-234.
- 170. Boyd, W. Definitions in Early Childhood. Child Study, 1914, 7, 66-70. Report of an investigation carried on with the author's little girl. Binet's test was used, supplemented by many others devised by the author. Insists "on a different interpretation" of the results of the definition test than that usually given.
- Bridges, J. W., and Coler, L. E. The Relation of Intelligence to Social Status. Psychol. Rev., 1917, 24, 1-31.

Investigation carried out in two schools situated in localities radically different as regards economic and social conditions. 391 children tested with the Yerkes point scale and the results compared with those obtained by Bridges from Cambridge children. The effect of social condition on the results for each test is studied; the correlation between intelligence and the occupations of the subjects' fathers is investigated. "Correlation of intelligence and social status is probably higher for boys than for girls."

172. Brigham, C. C. An Experimental Critique of the Binet-Simon Scale. J. of Educ. Psychol., 1914, 5, 439-448.

> 309 children in the first six grades of the Princeton Model School were tested by the Goddard 1911 revision. The scale was found to be 96 per cent. efficient when applied to children from 7-11 years of age.

173. Brigham, C. C. Two Studies in Mental Tests: I. Variable Factors in the Binet Tests. II. The Diagnostic Value of Some Mental Tests. Psychol. Monog., 1917. 24, No. 1. Pp. 254.

The discussion of the Binet scale is based on a study of the individual tests and disregards the total score or "mental age."

174. Brown, D. L. F. Testing Epileptics. Training School Bull., 1917, 14, 12-16.

80 epileptics retested by the Binet scale after a lapse of from 2 to 3 years. Discussion of the scale as an index of deterioration.

175. Burt, C. The Measurement of Intelligence by the Binet Tests. Eugenics Rev., 1914-15, 6, 36-50, 140-152.

The correlational and the age grade methods for investigating inborn intelligence compared. The author decides against "the principle of measuring intelligence in terms of age" and for a method which shall be based on correlation.

- 176. Burt, C. La misura dell' intelligenza. The Treves-Saffiotti Revision of the Binet-Simon Scale. Eugenics Rev., 1916-17, 8, 365-373. Review of six articles appearing in the years 1911 to 1916.
- 177. Chotzen, F. Die Bedeutung der Intelligensprüfungsmethode von Binet und Simon für die Hilfsschule. Hilfsschulle, 1912, 5, 153-162. A summary of the results obtained by Bobertag in his use of the Binet tests. The scale valuable because f itso ability to give a rapid diagnosis (Kohs).
- 178. Chotzen, F. Die Intelligenzprüfungsmethode von Binet-Simon bei schwachsinnigen Kindern. (Unter Mitwirkung von Dr. M. Nicolauer.) Zsch. f. angew. Psychol., 1912, 6, 411-494.

Bobertag's technique used. Discussion and evaluation of the individual tests for the diagnosis of feeblemindedness, including an analysis of them as applied to groups of subjects of the same chronological age but different mental ages, and as applied to those of the same mental age but different chronological age. Sex differences.

- 179. Cords, R. Die Farbenbenennung als Intelligenzpr
  üfung bei Kindern. Zsch. f. p
  äd. Psychol., 1910, 11, 311-314. Confirms the accuracy of the Binet color test (Kohs).
- Cornell, Arnold E. Gauging the Minds of the Blind. Tech. World Mag., Apr., 1915, p. 214.

Irwin's revision of the Binet scale for blind children.

- 181. Cornell, W. S. Health and Medical Inspection of School Children. Philadelphia: Davis, 1912. Pp. 614. The questions of the Goddard revision of Binet tests and directions for using themare included.
- 182. Coxe, W. W. Grading Intelligence by Years and by Points. J. of Crim. Law and Criminol., 1916-17, 7, 341-365. A history and adversely critical discussion of the Binet scale. Includes tables in which the positions given to each test by the different revisors are shown. Believes in the superiority of the point scale method.
- Cruchet, R. L. Les Tests de Binet dans le tout jeune âge. J. de méd. de Bordeaux, 1912, 42, 17-32.

The scale is unsatisfactory for young children.

- Cunningham, K. S. Binet and Porteus Tests Compared. Examination of One Hundred School Children. J. of Educ. Psychol., 1916, 7, 552-556.
- 185. Dana, C. L. Mental Tests. Med. Rec., 1913, 83, 1-10. See No. 27.
- Decroly, O., et Degand, J. Le Mesure de l'intelligence chez les enfants.
   2 contribution critique. La méthode de De Sanctis. Arch. intern. d'hyg. scaloire, 1904, 4, 230-303.

Twenty-nine cases. Binet and De Sanctis closely compared (Kohs).

 Decroly, O., et Degand, J. Les tests de Binet et Simon pour la mesurede l'intelligence: contribution critique. Arch. de Psychol., 1906, 6,. 27-130.

Account of individual responses.

 Decroly, O. Intelligenzmessungen bei normalen und abnormalen Kindern. 2. Kong. exper. Psychol., Würzburg, 1906, pp. 187-193. Leipzig: Barth, 1907.

A very close correspondence is noticed between the mental age, as found by the Binet scale, and other mental and physical manifestations (Kohs).

 Decroly, O., et Boulenger. Les tests mentaux chez l'enfant. 2 Congrde Neurol., Bruxelles, 1907.  Decroly, O. Classifications des enfants irréguliers et en particulier des irréguliers scolaires. 6. Congr. Intern. de psychol., Genéve, 1909, pp. 359-393.

The Binet scale is most simple and practical (Kohs).

191. Decroly, O., et Degand, J. Le mesure de l'intelligence chez des enfants normaux d'après les tests de MM. Binet et Simon. Arch. de Psychol., 1909, 9, 81-108.

45 private school children ranging in age from two to twelve years.

- 192. Decroly, O. L'examen des délinquants juvéniles. 3. Congr. intern. de Neurol. et Psychiat., Bruxelles, 1913.
- 193. De Sanctis, S., e Jeronutti, A. Applicazione della "Scala metrica intelligenza" di Binet e Simon e dei "Reattivi" di Sante de Sanctis. 6 Congr. intern. de psychol., Genéva, 1909: 775-778.
- 194. De Sanctis, S. Les enfants anormaux. 1 Congr. intern. de Pédol., Bruxelles, 1911. See No. 28.
- 195. De Sanctis, S. Mental Development and the Measurement of the Level of Intelligence. J. of Educ. Psychol., 1911, 2, 498-507. A discussion of the principles upon which the Binet scale is based. The De Sanctis tests are intended to measure not the level of intelligence, but the "degree of mental defect." Three tests and their method of determining degree
- 196. De Sanctis, S. Educazione dei Deficienti. Milano: Villardi, 1915. Pp. 300. See No. 29.

of mental deficiency briefly described.

197. Descoeudres, A. Les tests de Binet et Simon et leur valeur scolaire. Arch. de Psychol., 1911, 11, 331-350.
24 children, one bright girl and one bright boy, and one dull girl and one dull boy

from each of the six primary grades of the Geneva schools were tested with all the questions of the 1908 scale. 57 per cent. of all the correct answers were made by the bright children; 43 per cent. by the dull ones. The tests varied in their ability to distinguish the bright subjects from the dull. The usual criticisms of the early and later year tests.

- 198. Descoeudres, A. Les tests de Binet-Simon comme mesure du développement des enfants anormaux. Arch. de Psychol., 1915, 15, 225-254. A critique and a report upon the application.
- 199. Doll, E. A. Suggestions on the Extension of the Binet-Simon Measuring Scale. 4. Intern. Congr. School Hyg., Buffalo, 1913, 5, 663-669. Outline of the principles on which the creation and standardization of tests for the adolescent and adult end of the scale should be based.
- 200. Doll, E. A. Note on the "Intelligence Quotient." Training School Bull., 1916, 13, 36-41.

"Its meaning, its value and its short-comings." The tests on the eleven illustrative case studies cover a period from 2 to 5 years.

201. Doll, E. A. Mental Tests and Methods of Testing. Training School Bull., 1917, 14, 3-6.

"Generalizations" concerning the Binet-Simon scale.

.202. Doll, E. A. A Brief Binet-Simon Scale. Psychol. Clin., 1917-18, 11, 197-211, 254-261.

A scale "made up of individual tests which have been experimentally selected as offering unusual difficulty for mental defectives."

203. Dougherty, M. L. Report on the Binet-Simon Tests Given to Four Hundred and Eighty-three Children in the Public Schools of Kansas City, Kansas. J. of Educ. Psychol., 1913. 4, 328-352.

- Down, R. L. Nomenclature and Classification. Nat. Conf. Preventn. of Destitutn., London, 1911. London: King, 1911, pp. 555-566. Six of Binet's tests employed (Kohs).
- 205. Downey, J. E. The Standard Adult Intelligence Tests. J. of Delinq., 1917, 2, 144-155. Stanford tests for sixteen and eighteen years given to some one hundred normal adults.
- 206. Dumville, B. A Trial of Binet's Tests on Five-Year-Olds. J. of Exp. Ped., 1913, 2, 113-118.

A criticism of the scale on the basis of its application to 89 subjects. A rearrangement of the tests suggested.

- 207. Ellis, F. W. Mental Age and Psychological Age in Interpreting the Binet and Simon Age Scale. Ungraded, 1915, 1, 1-6. Recommends that mental age be "regarded from the point of view of physical growth periods," rather than in terms of months and years. A specimen interpretation of a Binet-Simon test included.
- Eynon, W. G. The Mental Measurement of Four Hundred Juvenile Delinquents by the Binet-Simon System. N. Y. Med. J., 1913, 98, 175-178.

Includes some of the usual criticisms of the scale; a description and classification as to nationality of the subjects; presentation of the results in tabular form, and some suggestions for social betterment based on these results.

- 209. Fernald, M. R. Practical Applications of Psychology to the Problems of a Clearing House. J. of Crim. Law and Criminol., 1917, 7, 722-731. Used combination Binet method so that each of the 100 subjects could be scored by the Binet scale in its original form and by several of its revisions. Compares critically nine standards recommended by different authorities for the diagnosis of feeblemindedness.
- Forsberg, Hjalmar. Alfred Binet—en banbrytare inom psykologi och pedagogik. Svenskt. Arkiv. för Pedagogik, Band I., 1913, Häfte I.
- 211. Fernald, G. M. The Use of the Binet Scale with Delinquent Children. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 670-677. The Binet tests have not been standardized for the court type of child and the only way to do so is "by checking them up with the child's future success or failure in a reasonably good environment." The scale should include more motor and game tests.
- 212. Fernald, G. M. Report of the Psychological Work at the California School for Girls. J. of Delinq., 1916, 1, 22-32. One hundred cases tested by each of four revisions, Binet 1911, Huey, Stanford 1914 and 1916. The uniformity of results, for practical diagnosis, is shown by tabular and graphic comparisons.
- 213. Ferrari, G. C. Come si misura lo sviluppo dell' intelligenza nei bambini normali. Riv. di psicol., 1908, 4, 465-471. The Binet-Simon 1908 scale in Italian (Kohs).
- 214. Garrison, S. C. Yerkes' Point Scale for Measuring Mental Ability as Applied to Normal Adults. School and Soc., 1917, 5, 747-750.
  88 college students tested. Tests found to be too easy and not such as would pick out the best students.
- Goddard, H. H. Four Hundred Feeble-minded Children Classified by the Binet Method. Ped. Sem., 1910, 17, 387-397. Also J. of Psycho-Asthen., 1910, 15, 17-30.

The Binet mental-age classification was checked up with the estimates of the heads of departments and of the teachers and with the comments of every normal person employed on the grounds. The form-board test was also used as a check.

The terminology of classification is discussed and the term moron suggested for the high-grade defective.

 Goddard, H. H. A Revision of the Binet Scale. Training School Bull., 1911, 8, 56-62.

The Goddard 1911 revision. A list of the tests is given, with new ones indicated and explained.

- 217. Goddard, H. H. Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence. Ped. Sem., 1911, 18, 232-259. The results arrange themselves on a normal curve of distribution which, according to the author, "amounts to practically a mathematical demonstration of the accuracy of the tests." Discusses Binel's 1911 revision, the proper placing of the individual tests in the scale, and the bearing of the results on the problem of school promotion.
- 218. Goddard, H. H. Échelle métrique de l'intelligence. Résultats obtenus en Amérique, à Vineland. Année psychol., 1912; 18, 288-326. Similar report to that on the "Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence."
- Goddard, H. H. The Reliability of the Binet-Simon Measuring Scale of Intelligence. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 693-699.

"In conclusion I can only sum it all up by expressing my conviction born of experience, which certainly is not too limited, that while I do not deny that the scale could be improved, yet for practical purposes of giving us a remarkably accurate idea of the children's mental development at any age from three to twelve it hardly needs improvement, but may be safely used as it is and the results confidently relied on."

- 220. Goddard, H. H. Standard Method for Giving the Binet Test. Training School Bull., 1913, 10, 23-30. The result of semi-weekly conferences held at Vineland for the purpose of standardizing procedure.
- 221. Goddard, H. H. The Binet Tests and the Inexperienced Teacher. Training School Bull., 1913, 10, 9-11. Showing that novices of ordinary good sense may get valuable information from the use of the Binet scale. Illustrated by one case study.
- 222. Goddard, H. H. The Binet Measuring Scale of Intelligence. What It is and How It Is to be Used. Training School Bull., 1914, 11, 86-91. Elaboration of the discussion "The Binet Tests and the Inexperienced Teachre."
- 223. Goddard, H. H. Mental Tests and the Immigrant. J. of Delinq., 1917, 2, 243-277.

In this investigation "tentative diagnosis of mental level" was established by the Binet scale. Other tests were used to "modify this diagnosis to the extent of their number and validity."

224. Haberman, J. V. Intelligence Examination and Evaluation, and a New Intelligence Examination Sheet. J. of Amer. Med. Assoc., 1915. 65, 399-404.

A preliminary report dealing with a new outline of tests, based on Ziehen's test series, but modified and increased as a result of the work in the author's clinic. Adverse criticism of the Binet scale. Laments the lack of medical students specializing in mental abnormalities.

225. Haines, T. H. Mental Examination of Delinquent Boys and Girls. Ill. Med. J., 1915, 28, 283-290.

574 hoys and 306 girls examined in their respective industrial schools. Both year scale and point scale used and their diagnostic value compared. Declares im favor of the point scale as "a more psychological procedure."

 Haines, T. H. Relative Values of Point-Scale and Year-Scale Measurements of One Thousand Minor Delinquents. J. of Exp. Psychol., 1916, 1, 51-82.

Finds the point scale a much more delicate measuring instrument.

- 227. Haines, T. H. A Point-Scale for the Mental Measurement of the Blind. J. of Educ. Psychol., 1916, 7, 143-149. See "Mental Measurement of the Blind."
- 228. Haines, T. H. Mental Measurement of the Blind. Psychol. Monog., 1916, No. 89. Pp. 86. A full description of the tests with instructions for their use. Fifty-two blind subjects whose results are compared with those from seeing children.
- 229. Hall, M. Mental tests. Educ. Bi-montly, 1914, 9, 66-78. See No. 43.
- 230. Hardwick, R. S. Program and Directions for the Mental Examination of Asocial, Psychopathic and Doubtful Subjects. Boston Med. and Surg. J., 1915, 172, 817-821, 861-865, 906-910, 935-939. The writer's special problem was the organizing of tests to supplement the Yerkes point scale. In the last part (935-939) the author attempts to classify the tests of the point scale, of the Binet and Knox scales, the Healy tests and a group of miscellaneous tests "with respect to the mental functions involved."
- Hardwick, R. S. The Weighting of Point Scale Tests. J. of Educ. Psychol., 1917, 8, 416-424.

Seeks numerical scores which will be more nearly accurate. Discussion based "on a study of the correlations between the scores made in the several tests as now given and the total scores resulting."

- Heller, T. Grundriss der Heilpädogogik. Leipzig: Engelmann, 1912, pp. 374-377.
- 233. Heymans, G., und Brugmans, H. J. T. W. Intelligenzprüfungen mit Studierenden. Zsch. f. angew. Psychol., 1913, 7, 317-331. The use of some of the Binet tests among others (Kohs).
- 234. Hickman, H. B. Delinquent and Criminal Boys Tested by the Binet Scale. Training School Bull., 1915, 11, 159-164. The Goddard revision of the Binet scale was applied to 229 boys of the Indiana Boys' School. The value of mental tests and of the Binet tests in particular is emphasized. General technique for administering the tests is described and the results are shown in tabular form.
- 235. Hicks, V. C. The Value of the Binet-Simon Mental Age Tests for First Grade Entrants. J. of Educ. Psychol., 1915, 6, 157-166. Investigates the relation between the results of these tests and progress during the first year of school. The subjects were the entire membership of a kindergarten, 34 in all. The details of the comparison are presented in tabular form.
- 236. Hinckley, A. C. The Binet Tests Applied to Individuals over Twelve Years of Age. J. of Educ. Psychol., 1915, 6, 43-58. A criticism of the Binet scale based on its application to 200 subjects over twelve

years of age in the order of their admittance to the New York Clearing House for Mental Defectives.

 Healy, W. Some Types of Mental Defectives. J. of Psycho-Asthen.. 1913-14, 18, 111-116.

Seven special types difficult of diagnosis and the significance of the Binet scale as applied to them.

 Hogarth, A. H. Note on a Standard Scale of Intelligence. School Hyg., 1910, 1, 276-279.

The Binet scale, although useful, is not yet satisfactory.

239. Huey, E. B. A Point Scale of Tests for Intelligence. Baltimore: Warwick and York. Pp. 4.

Ilucy is credited with originating the idea of a point scale.

240. Huey, E. B. The Binet Scale for Measuring Intelligence and Retardation. J. of Educ. Psychol., 1910, 1, 435-444.

"I have not seen any published results of trials with this scale in America. The present article is written to call the attention of psychologists and educators to the fact that we have here an immediately available means of measuring retardation which can be of immediate and extensive use in the schools and institutions of America." Translation of the 1908 scale with supplementary notes.

- Huey, E. B. Binet's Scale for Measuring Intelligence. Volta Rev., 1911, 13, 26-30.
  A reprint (J. of Educ. Psychol., 1910, 1, 435-444), introduced by the suggestion that the scale may readily be adapted for use with the deaf.
- 242. Huey, E. B. Backward and Feeble-Minded Children. Baltimore: Warwick and York, Educ. Psychol. Monog., 1912. Pp. 221. See No. 54.
- 243. Huey, E. B. A Syllabus for the Clinical Examination of Children With the Revised Binet-Simon Scale for the Measurement of Intelligence. Baltimore: Warwick and York, 1912. Pp. 45. See Chap. VI of "Backward and Feebleminded Children."
- 244. Jeronutti, A. Applicazione della "Scala metrica dell' intelligenza" di Binet e Simon, e dei "reattivi" di Sante De Sanctis, per l'accertamento del grado dell' intelligenza di fanciulli anormale deficienti Esperienze, comparasionie critiche. Riv. Padagog., 1909, 3, 263-281. Tested 144 children, boys and girls between the ages of three and fourteen. A large number of the tests appear too easy for the Rome children. Also tested 24 feebleminded children (Kohs).
- 244A. Jeronutti, A. 1. Congr. intern. de Pédol., Bruxelles, 1911.
- 245. Johnson, K. L. The Measurement of Intelligence. Binet-Simon Tests. J. of Exper. Pedag., 1911-12, 1, 148-151. Comparison of the Binet 1905 and 1908 lists.
- 246. Jennings, H. M., and Hallock, A. L. Binet-Simon Tests at the George Junior Republic. J. of Educ. Psychol., 1913, 4, 471-475. Twenty boys and six girls-selected cases-examined by Goddard's 1911 revision. Five morons and six doubtful. I. Q. of dubious value. Difficulties in the use of the tests.
- 247. Johnson, K. L. M. Binet's Method for the Measurement of Intelligence. Some Results. J. of Exper. Pedag., 1911-12, 1, 24-31. Also School World, 1910, 12, 391-392. 218 girls, ranging in age from 6 to 16, tested. Criticisms. "It may be that the spirit of the tests is foreign to our children, and that the English rendering requires to be less of a translation."
- 248. Keller, Chr. Atter Binet's Forstandsprover. Nyt. Tydeskr. f. Abnormvaes., 1911, 13, 289-298. (See also 1909, 11, 1-7; 1910, 12, 42-44, 89-100, 132-144, 316.

Review of Binet's 1911 revision and Goddard's additions (Kohs).

249. Keller, E. Need for Correlation of Binet-Simon Tests with Other Tests of Doing. Psychol. Clin., 1915-16, 9, 18-22.

The Binet-Simon scale is criticised for laying too great stress on language development as a measure of mental development. The scale is said to fail in three kinds of cases: "In the lower range, in the upper range, and in certain neuropathic cases."

- 250. Kelley, T. L. Further Logical Aspects of the Binet Scale. Psychol. Rev., 1916, 23, 407-411. Favorable criticism of the article by Otis and further suggestions along the same line.
- 251. Kite, E. S. The Development of Intelligence in Children. Vineland: The Training School, 1916. Pp. 336. See No. 59.
- 252 Kite, E. S. The Intelligence of the Feeble-Minded. Vineland: The Training School, 1916. Pp. 328. See No. 60.
- Kohs, S. C. The Binet Test and the Training of Teachers. 253. Child Study, 1914, 7, 30-33. Also Training School Bull., 1913, 10, 113-117. Can students be taught during a six weeks' summer school course to use the Binet tests with accuracy? An account of an attempt to do so and its encouraging results.
- 254. Kohs, S. C. The Borderlines of Mental Deficiency. J. of Psycho-Asthen., 1916, 20, 88-103. See No. 64.
- 255. Kohs, S. C. Practicability of the Binet Scale and Question of the Borderline Case. Training School Bull., 1916, 12, 211-224. Frequency distribution of 335 cases examined by the Binet scale. Case studies and a discussion of supplementary tests. Gives the lower and upper limiting ages of borderlinity for cases investigated. Finds Binet entirely satisfactory for purposes of mental diagnosis.
- 256. Kohs, S. C. The Stanford (1915) and the Vineland (1911) Revision of the Binet Scale. Psychol. Rev., 1917, 24, 174-179. A comparison-no experimental work reported. "The Stanford revision is to be welcomed in its effort toward a scale free from those objections which are still being quixotically hurled against it."
- 257. Kramer, F. Die Intelligenzprüfung bei kriminellen und psychopathischen Kindern. 1. deut. Kongr. f. Jugendbdg. u. Jugendkde., Dresden, 1911. Also Leipzig: Teubner, Arbeiten des Bundes für Schulreform, 1911. Pp. 28.

Results and suggestions (Kohs).

258.Hjorth, B. M. Binet's Intelligensprove i Amerika. Nyt Tidsskr. f. Abnormvaes., 1913, 15, 121-125.

A short review of some of Binet's, Kuhlmann's and Goddard's work.

- 259. Kramer, F. Die Intelligenzprüfung bei kriminellen und psychopathischen Kindern. Vortrag, 1911. Used the Bobertag revision of the Binet-Simon scale. Found the method satisfactory for his purpose. Discussion of the problem of the morally defective.
- Kuhlmann, F. The Binet and Simon Tests of Intelligence in Grading 260. Feeble-Minded Children. J. of Psycho-Asthen., 1912, 16, 173-193. See J. of Psycho-Asthen., Monog. Suppl., 1912, 1, No. 1.
- Kuhlmann, F. The Results of Grading Thirteen Hundred Feeble-Minded 261. Children with the Binet-Simon Tests. J. of Educ. Psychol., 1913, 4. 261-268.

See the author's monograph. "A Revision of the Binet-Simon System for Measuring the Intelligence of Children."

Kuhlmann, F. A Revision of the Binet-Simon System for Measuring 262 the Intelligence of Children. J. of Psycho-Asthen., Monog. Suppl., 1912. No. 1. Pp. 41.

Nature of the present revision, general directions for giving the tests, discussion of the degree of accuracy of the individual tests and of the mental ages found. Specific directions for giving and scoring each test. The scale is extended downward, tests being added for 3, 6, 12 and 24 months.

263. Kuhlmann, F. The Degree of Mental Deficiency in Children as Expressed by the Relation of Age to Mental Age. J. of Psycho-Asthen., 1913, 17, 132-143. Also Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 629-636.

Discussion of a scale which the author has constructed by computation on the basis of the Intelligence Quotient in order to show "the course of mental ages for each rate of mental development, or degrees of deficiency, from birth to the age of 15." Data from 1,006 feebleminded children were used to test the reliability of this scale.

264. Kuhlmann, F. Some Results of Examining a Thousand Public School Children with a Revision of the Binet-Simon Tests of Intelligence by Untrained Examiners. J. of Psycho-Asthen., 1914, 18, 150-179, 233-269.

Tests were given by 20 teachers who had had a preliminary training of from 15 to 20 hours. Qualifications of a good examiner and the training required to attain them briefly summarized. Further comparison of his own revision with the original scale. Lengthy discussion of the method of determining the accuracy of the mental ages obtained.

- 265. Kuhlmann, F. A Further Extension and Revision of the Binet-Simon Scale. J. of Crim. Law and Criminol., 1917-18, 8, 890-901. "A brief statement of the general principles that were followed in producing the present scale of tests, with a few indications of the main results, and the list of tests incorporated in the scale as it now stands." Much modified from the 1912 list; the number of tests being increased and some tests changed in location.
- 266. Kulpe, O. Psychologie und Medizin. Zsch. f. Patho-psychol., 1912, 1, 187-261. See No. 67.
- 267. Lacy, W. I. A Study of 880 Children in Bloomington, Ind., Tested by the Binet Scale. School and Soc., 1917, 6, 206-209. The Binet-Goddard scale was used. The author compares his results with those Terman found with his 1,000 unsettled pupils.
- 268. Loades, H. R., and Rich, S. G. Binet Tests on South African Natives— Zulus. Ped. Sem., 1917, 24, 373-383. The 1911 revision was translated into Zulu, alternate tests being used only occasionally when the original tests dealt with material unfamiliar to the natives.
- Lawrence, I. A Study of the Binet Definition Tests. Psychol. Clin., 1911-12, 5, 207-216.

784 children given a written examination in Binet's 1908 definition tests. Three tables show the relation of the results to chronological age, grade, and teachers' estimates of scholarship. Examples of definitions given. Results uphold Binet's opinion that definition tests are tests of maturity, not of accuracy (la rectitude).

 Lewis, E. O. The Binet and Point Scale Methods of Testing Intelligence. J. of Exp. Psychol., 1917-18, 4, 192-202.

A comparison of the point scale and Binet scale based on their application to fifty pupils in schools for mentally defective children of high grade. Both based upon some theoretical principles, the majority of which are hypothetical.

271. Lipmann, O. The Examination of Intelligence in Children. School World, 1910, 12, 366-369.

Includes a "diagram showing the general agreement in the results of observations with school children" by Bobertag, Binet and Simon, McDougall and Galton.

272. MacDonald, J. B. The Binet Tests in a Hospital for the Insane. Training School Bull., 1910, 7, 250-251.

> "One of the most striking proofs of the value of the Binet tests in insanity is the similarity of findings in the true feehleminded cases and those seniles where involution changes have brought about a state of second childhood."

- 273. Martin, A. L. Experiments with Binet-Simon Tests upon African Colored Children, Chiefly Kaffirs. Training School Bull., 1915, 12, 122-123. A brief report of Dr. Loades' attempt to adapt the Binet tests to the Zulu language and condition.
- 274. Maxfield, F. N. Some Mathematical Aspects of the Binet-Simon Tests. J. of Educ. Psychol., 1918, 9, 1-12.

Suggestions for a method of statistical treatment which shall make it possible to compare the results of the different revisions and to predict the results of further revisions.

275. Melville, N. J. Standard Method of Testing Juvenile Mentality by the Binet-Simon Scale. Philadelphia: J. B. Lippincott Company. 1917. Pp. 140.

Guide for the use of the Binet 1911 revision. Part I deals with general procedure Part I1 contains detailed directions for applying the individual tests.

 Meumann, E. Anleitung zu praktischen Arbeiten in der Jugendkunde und experimentellen Pädogogik. Zsch. f. päd. Psychol., 1912, 13, 623-638.

A short history of the scale and a review of the criticisms (Kohs).

 277. Meumann, E. Die soziale Bedeutung der Intelligenzprüfungen. Zsch. f. päd. Psychol., 1913, 14, 433-440.

Social condition affects the results.

- 278. Mitchell, D. Schools and Classes for Exceptional Children. Cleveland: Survey Committee of the Cleveland Foundation, 1916. Pp. 122. See No. 75.
- 279. Moore, R. C. The Application of the Binet-Simon Scale to Normal English Children. J. of Exp. Ped., 1917, 4, 113-128.
  491 children ranging in age from 4 to 13 tested. A study of the individual tests of the 1911 revision and a graphic presentation of results. Certain tests are found to be unsuited for the age in which they are placed and a rearrangement of the serial order of the tests is suggested.
- 280. Moore, M. L'influence de l'état social sur degré de l'intelligence des enfants. Bull. Soc. libre Educ. psychol. d'enfant, 1911, 12, 8-15. School children from a poor part of Paris compared with those from a school in a wealthy district. A difference of about three-fourths of a year (Binet-Simon) found.
- Newmayer, S. W. Medical and Sanitary Inspection of Schools. New York: Lea and Febiger, 1913, pp. 262-295. The Vineland technique.
- Ordahl, G. A Study of Fifty-three Male Convicts. J. of Delinq., 1916, 1, 1-21.

Discusses the significance of the Binet tests in such a study.

283. Otis, A. S. Some Logical Aspects of the Binet Scale. Psychol. Rev., 1916, 23, 129-152, 165-179.

Theoretical discussion concerning the selection, standardization and spacing of tests in "an absolute scale of intelligence."

- 284. Otis, A. S. A Criticism of the Yerkes-Bridges Point Scale with Alternative Suggestions. J. of Educ. Psychol., 1917, 8, 129-150. "In the opinion of the writer, the method used in scoring with the point scale fails entirely to accomplish the purpose sought."
- 285. Pintner, R., and Paterson, D. G. Experience and the Binet-Simon Tests. Psychol. Clin., 1914-15, 8, 197-200.

Study based on the examination of 988 Binet blanks from a large institution for the feebleminded. Recommends the elimination from the scale of two tests: naming the days of the week and naming the months of the year.

286. Pintner, R., and Paterson, D. G. The Binet Scale and the Deaf Child. J. of Educ. Psychol., 1915, 6, 201-210.

Twenty-two deaf children tested with the Goddard revision. The difficulties encountered in the administration of the tests are described and the inadequacies of the scale pointed out.

- 287. Pintner, R., and Paterson, D. G. The Factor of Experience in Intelligence Testing. Psychol. Clin., 1915-16, 9, 44-50. An attempt to show that real tests of intelligence are not affected by the factor of experience. The Binet tests and two of the Knox tests analyzed on the basis of this hypothesis.
- Pintner, R., and Paterson, D. G. A Psychological Basis for the Diagnosis of Feeble-mindedness. J. of Crim. Law and Criminol., 1916-17, 7, 32-55. See No. 82.
- 289. Pintner, R., and Reamer, J. C. Children Tested by the Point Scale and the Performance Scale. Psychol. Clin., 1917, 11, 142-151. 178 children were tested by both scales. The two scales were found to supplement each other.
- 290. Pintner, R., and Toops, H. A. A Chart for Rapid Computation of Point Scale Scores. J. of Delinq., 1917, 2, 209-210. The chart explained and its use illustrated.
- 291. Pintner, R., and Reamer, J. Mental Ability and Future Success of Delinquent Girls. J. of Delinq., 1918, 3, 74-79. The coefficients of mental ability as determined by Yerkes-Bridges point scale were found for 26 girls. "The result of our study is negative, in the sense that so far as this group of girls is concerned, the mental tests were not prognostic of their success after leaving the Big Sisters' Home."
- 292. **Porteus, S. D.** The Measurement of Intelligence: Six Hundred and Fifty-three Children Examined by the Binet and Porteus Tests. J. of Educ. Psychol., 1918, 9, 1-31.

Emphasis on the value of the Porteus tests. Have been tried with normal, feebleminded, delinquent and deaf and dumb subjects. They reveal facts regarding the dispositions of subjects which the Binet tests do not touch.

- 293. Priestly, J. The Binet and Simon Tests and the Investigation of Mental Defects in Children. The Child, 1917, 8, 132-136. "In short, where the Binet and Simon tests are not superfluous they are ineffectual."
- Rogers, A. L., and McIntyre, J. L. The Measurement of Intelligence in Children by the Binet-Simon Scale. Brit. J. of Psychol., 1914-15, 7, 265-299.

Based on the application of all the tests of the 1908 and 1911 scales to 217 Scottish children ranging in age from 4 to 14. Results compared with those of French, German and American investigators. Analysis of the individual tests. Concludes that with certain changes in the arrangement of the tests and with the introduction of certain supplementary tests, the scale can be usefully applied to Scottish children.

- 295. Rogers, M. A Case Study from the Indiana University Clinic. Psychol. Clin., 1912-13, 6, 144-151. A case study, including Binet record question by question.
- 296. Rossy, C. S., and Sawyer, M. H. Comparison of Mental Gradings by the Yerkes-Bridges Point Scale and the Binet-Simon Scale. Ped. Sem., 1916, 23, 452-467.

Exact agreement between the two scales in only 4 per cent, of the cases.

297. Rowe, E. C. Five Hundred Forty-seven White and Two Hundred Sixty-eight Indian Children Tested by the Binet-Simon Tests. Ped. Sem., 1914, 21, 454-468.

Includes a critical discussion of the Binet tests and a comparative study of the 1909 and 1911 versions as well as the study in race differences. "The Indians are everywhere inferior to the whites."

- 298. Saffiotti, F. U. Résumé des résultats d'un controle a l'échelle métrique de l'intelligence de Binet et Simon suivant la méthode Tréves-Saffiotti. I. Congr. intern. de Pédol., Bruxelles, 1911. Six hundred and sixty-six subjects. Criticisms and suggestions.
- 299. Saffiotti, F. U. L'Examen psychologique des écoliers et les problemes de psychologie pédagogique normale et anormale. Milan: Civelli, 1911.
- 300. Saffiotti, F. U. L'échelle métrique de l'Intelligence modifiée selon la méthode Tréves-Saffiotti. Année psychol., 1912, 18, 327-340. Suggests the need of a new method for evaluating and classifying results (Kohs).
- 301. Saffiotti, F. U. Die Erziehung der Abnormen in Italien. Eos. 1913,
  9, 33-44.
  The plans of work in Italy, including the use of the scale. The results of nearly one thousand testings confirm him in the belief that the scale does not measure intelligence.
- 302. Saffiotti, F. U. "Note Psicologiche" su due gemelle. Riv. d. Antrop., 1913. 18.

Tests applied to a pair of twins in an attempt to determine whether the Binet scale measures inborn intelligence.

- 303. Saffiotti, F. U. Sul "Quoziente d'Intelligenza" nella misura dell' eta mentale in Rapporto all' eta fisica. Riv. d. Antrop., 1913, 18, pp. 34. Criticises the use of the intelligence quotient because it is based on mental age.
- 304. Saffiotti, F. U. La misura dell' Intelligenza nei Fanciulli. Roma: 1916. Pp. 286. \* See No. 98.
- 305. Schmitt, C. The Binet-Simon Tests of Mental Ability. Discussion and Criticism. Ped. Sem., 1912, 19, 186-200. The author had used the tests with about 200 children. No numerical results given. She considers the Binet tests inadequate "for a full diagnosis of any clinical case." Attempts to distinguish the fundamental tests from the superficial.
- 306. Schereschewsky, J. W. School Hygiene, Washington, D. C.: U. S. Pub. Health Serv. Pub. Health Repts., 1913, 28, 2031-2035. Report of a symposium: Fourth International Congress on School Hygiene, Buffalo, New York.
- 307. Schreuder, P. H. Yets over Verstandsmetingen. Pädogog. Tydsskr., 1911. 3.

Finds that the results obtained from the application of the tests on large numbers of children conform with the binomial curve of Quetelet and the curve of Gausse (Kohs).

- 308. Schreuder, A. J. Some Dutch Experiences with the Binet Scale. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 690-692. Many of the Binet tests "are suitable for international application and this proves again the superiority of the work of Binet."
- 309. Schubert, A. Versuch einer Anwendung der Methode von Binet auf die Erforschung der russischen defektiven Kindern. (Original in Russian: 1. Russ. Congr. Exper. Pedag., 1910.) Also Archiv. f. d. gesamt. Psychol., 1913. 26, ——. Transl. H. Reybekiel.

Tested 229 children, aged 3 to 19. Found a large number of tests too hard (Kohs).

- 310. Schwegler, R. A. The Binet-Simon Scale of Intelligence. Topeka, Kansas: State Printing Office, 1914. Pp. 56. General directions and guide for the use of the scale.
- Seifert, H. A. Binet und seine Intelligenzpr
  üfungen. Kathol. Schulztg. f. Norddeutschld., 29.
- 312. Shrubsall, F. C. The Examination of Mentally Defective Children. School Hyg., 1911, 2, 564-576, 609-619. Brief outline of Binet and De Sanctis tests.
- 313. Skinner, C. E. Point Scale of Ninety-three Dependent Children. Psychol. Cliu., 1916-17, 10, 168-174. Subjects were inmates of a county home for orphans. In diagnosing feeblemindedness three methods are compared: Goddard's 3 and 2 bases, Pintner and Paterson's 3 per cent. hypothesis, and an I. Ω, below 0.75. The scores and these comparisons are presented in four tables.
- 314. Squire, C. R. Some Requirements of Graded Mental Tests. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 645-648. Recommends a scale consisting of a small number of tests, each test being arranged in steps graduated for degree of difficulty. Two, at least, of Binet's tests are so arranged and the majority of them are well adapted to such treatment.
- 315. Stern, W. Ueber die psychologischen Methoden der Intelligenzprüfung und deren Anwendung an Schulkindern. 5. Kongr. f. exper. Psychol., Berlin, 1912, pp. 1-109. Also Leipzig: Barth, 1912, pp. 1-109. An examination of the individual tests. They are not all valuable, but the scale as a whole is useful.
- 316. Stern, W. Der Intelligenz Quotient als Mass der kindlichen Intelligenz insbesondere der unternormalen. Zsch. f. angew. Psychol., 1916, 11, 1-18.

Discusses the use of the Intelligence Quotient; that is, the mental age divided by the chronological age, in the diagnosis of feeblemindedness.

317. Strong, A. C. The Three Hundred Fifty White and Colored Children Measured by the Binet-Simon Measuring Scale of Intelligence: A Comparative Study. Ped. Sem., 1913, 20, 485-515.

The purpose of this investigation was threefold: To study the results obtained from the white children and to compare them with those Goddard obtained from his "Two Thousand Normal Children." To make a comparative study of white and colored children. To study the scale itself with respect to its reliability as a whole and as to its serial arrangement. A bibliography of 67 titles.

- 318. Sunne, D. A Comparative Study of White and Negro Children. J. of Appl. Psychol., 1917, 1, 71-83. The Binet scale and the Yerkes point scale and other tests used. The white and negro children tested were similar in social and economic status.
- 319. Taylor, N. G. R. Further Data towards the Study of the Binet-Simon Scale. J. of Exp. Ped., 1915-16, 3, 256-266. Investigation carried out in a primary school in a working class quarter of Sheffield. Includes some analysis of individual tests, criticism of marking of tests, and correlation between teachers' ranking and scale results.
- 320. Terman, L. M. A Survey of Mentally Defective Children in the Schools of San Luis Obispo, California. Psycol. Clin., 1912-3, 6, 131-139. Twenty-four children were given the "improved Binet scale." The value of the scale "as a means of getting a definite idea of the intellectual status of a child" is demonstrated.

321. Terman, L. M. Suggestions for Revising, Extending and Supplementing the Binet Intelligence Tests. Fourth Intern. Congr. School Hyg., Buffalo, 1913, 5, 700-706.

Briefly considered under the following topics: Selection of children for standardizing the tests; the question of age grupingo; the per cent. of correct responses necessary for placing a test; needed shift of tests; criteria for the elimination and substitution of tests; desirable number of tests for each age group; suggestions for extending and supplementing the scale.

322. Terman, L. M., and Childs, H. G. A Tentative Revision and Extension of the Binet-Simon Measuring Scale of Intelligence. J. of Educ. Psychol., 1913, 3, 61-74, 133,143, 198-208, 277-289. Also Psychol. Clin., 1911-12, 5, 199-206.

> A preliminary investigation whose results "for various reasons" were not made use of in the final Stanford revision. 396 children examined. The lists of tests of this tentative revision given and four supplementary tests described in detail. Conclusions and suggestions.

323. Terman, L. M. Psychological Principles Underlying the Binet-Simon Scale and Some Practical Considerations for its Correct Use. J. of Psycho-Asthen., 1913-14, 18, 93-104.

- 324. Terman, L. M., Lyman, G., Ordahl, G., Ordahl, L., Galbreath, N., and Talbert, W. The Stanford Revision of the Binet-Simon Scale and Some Results from its application to One Thousand Non-selected Children. J. of Educ. Psychol., 1915, 6, 551-565. A brief summary and analysis of the investigation which resulted in the Stanford revision of the Binet-Simon scale.
- 325. Terman, L. M., and Knollin, H. E. Some Problems Relating to the Detection of Borderline Cases of Mental Deficiency. J. of Psycho-Asthen., 1915, 20, 3-15.

Another summary of the investigation which resulted in the Stanford revision of the Binet scale with special emphasis on the superiority of that revision over other forms of the scale in the detection of borderline cases of both lower and upper ranges.

- 326. Terman, L. M. The Binet Scale and the Diagnosis of Feeble-Mindedness. J. of Crim. Law and Criminol., 1916-17, 7, 530-543. Replies to five of the usual criticisms of Binet tests and testers. Suggests a criterion of "intellectual feebleness" on the basis of the Stanford revision.
- 327. Terman, L. M. The Measurement of Intelligence. Boston: Houghton, Mifflin, 1916. Pp. 362.

A discussion of the general principles of intelligence testing and a guide for the use of the Stanford revision. Specific directions are given for administering and scoring each question. A classified and selected bibliography of 89 titles on the Binet scale.

328. Terman, L. M., Lyman, G., Ordahl, G., Ordahl, L. E., Galbreath, N., and Talbert, W. The Stanford Revision and Extension of the Binet-Simon Scale for Measuring Intelligence. Baltimore: Warwick and York, Educ. Psychol. Monog., 1917, No. 18. Pp. 179.

Deals with "source material" and is a "companion" volume to the "Measurement of Intelligence." Analyzes the results of the individual tests for sex differences. Chapter V deals with the "relation of intelligence to social status." It is concluded that "children of superior social classes" do better in the tests "because of superior original endowment."

Special characteristics and reliability of the Binet-Simon scale: its limitations and sources of error.

329. Terman, L. M. Errors in Scoring Binet Tests. Psychol. Clin., 1918, 12, 23-39.

The errors made by five students in scoring 843 Binet tests tabulated and analyzed. Special training should be given for scoring certain tests.

330. Thorndike, E. L. The Significance of the Binet Mental Ages. Psychol. Clin., 1914-15, 8, 185-189.

"I shall show that the very measurements whence Goddard derived this assumption of the exact correspondence of the Binet mental ages V to XIII, to the average ability of chronological ages 5 to 12, show in reality something entirely different, and that so also do the results of others who have used these tests."

331. Thorndike, E. L. The Significance of the Binet-Simon Tests. Psychol. Clin., 1916-17, 10, 121-123.

Data obtained from the Stenquist-Thorndike-Trabue study entitled "The Intellectual Status of Children Who Are Public Charges."

The coefficients which result when the Binet tests, the completion test, and the reading test are intercorrelated, are compared with the coefficients which result when those three are each correlated with the construction test. The former are 0.88, 0.81, 0.86, and the latter 0.63, 0.65, 0.58. The Binet test is not an adequate measure of general ability, but "measures chiefly the ability to deal with ideas expressed in words."

332. Town, C. H. The Binet-Simon Scale and the Psychologist. Psychol. Clin., 1911-12, 5, 239-244.

The dangers inherent in a wholesale and unscientific use of the scale. Regrets that the English version of the tests is almost without commentary, and quotes largely from Binet to show that he foresaw the dangers. Also replies to Ayres' criticism.

- 333. Town, C. H. Translation of No. 159. Lincoln, Ill.: Courier, 1913. Pp. 83.
- 334. Treves, Z., e Saffiotti, F. U. La Escala metrica de la Inteligencia de Binet y Simon. Boletin d. l. Instruccion Publica, Buenos Aires, 1910. Spanish translation of "La scala metrica, etc."
- 335. Treves, Z., and Saffiotti, F. U. La "Scala Metrica dell' Intelligenza di Binet e Simon" Milano, 1911. Pp. 67. Based on the application of the scale to 666 Milan school children. Criticises the arrangement of the tests of the scale and its method of grading intelligence in terms of "mental age."
- 336. Treves, Z., e Saffiotti, F. U. Prove mentali per la graduazione dell' intelligenza nella popolazione scolastica elementare. Paravia, Milan, 1913.
- 337. Vaney, V. Le diagnostic des arriérés scolaires. L'Enfance Anorm., 1913, 20, 509-514. In the past five years the scale has proved a most valuable aid in diagnosing backwardness and feeblemindedness.
- 338. Vaney, V. Comment se groupent les éléves d'une classe. Bull. Soc. libre Étude psychol. de l'Enfant, 1913, 13, 59-66. A positive correlation is found between the development of intelligence as revealed by the Binet tests and school work.
- Villiger, R. Die Erkennung des Schwachsinns beim Kinde. Leipzig: Engelmann, 1913. Pp. 90.

A full explanation of the scale and the directions for its application.

 Wallin, J. E. W. A Practical Guide for the Administration of the Binet-Simon Scale for Measuring Intelligence. Psychol. Clinic, 1911-12, 5, 217-238.

Specific and general directions for the administration of the 1908 tests, supplemented by the "tests for idiocy" from the 1908 series.

- 341. Wallin, J. E. W. Experimental Studies of Mental Defectives. Baltimore: Warwick and York, Educ, Psychol. Monog., 1912, No. 7. Pp. 155. See No. 125.
- 342. Wallin, J. E. W. The Present Status of the Binet-Simon Graded Tests of Intelligence. Alienist and Neurol., 1912, 33, 162-173. See No. 123. H.
- 343. Wallin, J. E. W. Current Misconceptions in Regard to the Functions of Binet Testing and of Amateur Psychological Testers. Fourth Intern. Cong. School Hyg., Buffalo, 1913, 5, 678-689. See No. 123. I.
- 344. Wallin, J. E. W. The Binet-Simon Tests in Relation to the Factors of Experience and Maturity. Psychol. Clin., 1914-15, 8, 266-271. See "Experimental Studies of Mental Defectives."
- 345. Wallin, J. E. W. Criminal Irresponsibility. J. of Deling., 1916, 1, 250-253.

An attempt to show that the Binet mental age XII is too high a level at which to draw the line of irresponsibility.

346. Wallin, J. E. W. The Individual Tests in the Binet-Simon Scale. Psychol. Clin., 1917, 11, 79-85.

The present article confines itself to the weight-discrimination test.

- 347. Wallin, J. E. W. The Phenomenon of Scattering in the Binet-Simon Scale. Psychol. Clin., 1917, 11, 179-195. An attempt to determine whether feebleminded children "scatter" more than normal children.
- 348. Wallin, J. E. W. Wide Range versus Narrow Range Binet-Simon Testing. J. of Delinq., 1917, 2, 315-330. An investigation to ascertain whether the same necessity for wide range testing,

which the author had found in his examination of the epileptic and insane, obtained also among school children.

349. Wallin, J. E. W. An Analysis of Binet-Simon Records. School and Soc., 1918, 7, 387-390.

> "We shall limit ourselves to pointing out a few general results and conclusions based on analyses which are sent out in detail in various publications."

350. Wallin, J. E. W. A Further Comparison of Scattering and of the Mental Rating by the 1908 and 1911 Binet-Simon Scales. J. of Deling., 1918, 3, 12-27.

> "An analysis of the phenomenon of scattering when the subjects were grouped according to B-S age." Binet 1908 and 1911 scales compared in this and other respects.

351. Weidensall, J. Psychological Tests as Applied to the Criminal Woman. Psychol. Rev., 1914, 21, 370-375.

> The preliminary study out of which grew the author's later and larger investigation. It originated in an attempt to secure a body of tests which would prove a guide to the criminal woman's reformability. The Binet 1908 series was given to 200 women as they came from the courts to Bedford Hills. The author is convinced, for reasons stated, that general intelligence tests, such as the Binet, are much less useful for her purposes than motor co-ordination tests.

Weigl, F. Intelligenzprüfung von Hilfsschülern nach der Testmethode. 352. Beitr. z. Kinderfrschg, und Heilerzg., 1913, Heft 111. Also Zsch. f. Kinder frschg., 1913, 18, 374-380, 455-462, 509-530.

An examination of different test systems, including Binet's and a tabular comparison of the latter with Ziehen's. Tested 55 boys and 38 girls, ages 7 to 13. Finds scale very valuable for immediate diagnosis (Kohs).

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353. Weintrob, J., and Weintrob, R. The Influence of Environment on Mental Ability as Shown by the Binet-Simon Tests. J. of Educ. Psychol., 1912, 3, 577-583.

> Seventy children from each of three grades of social condition, good, medium and poor, were tested with the Goddard revision of the Binet scale. "Judging from the results environment does not seem greatly to affect mental capacity, if at all."

354. Wender, Louis. The Applicability of Binet-Simon Intelligence Tests in Psychoses of the Senium. N. Y. Med. J., Vol. CI., No. 10, Mar. 6, 1915.

The tests used to diagnose mental enfeeblement in the aged.

355. Whipple, Dr., and Mrs G. M. The Vocabulary of a Three-Year-Old Boy. Ped. Sem., 1909, 16, 1-22.

Compares this child's color terms with Binet's requirements.

- 356. Widen, L. E. A Comparison of the Binet-Simon Method and Two Discrimination Methods for Measuring Mental Age. Thesis, Graduate College, Iowa City, 1911.
- 357. Wijsman, J. W. H., und Schreuder, P. H. Die psychologische Methode Binet und Simons zur Bestimmung des Grades des Intellekts, angewandt bei zurückgebliebenen Schulkindern. Zuid en Noord, 1912, 3, 186 ff.; 323 ff.
- 358. Williams, J. H. A Study of 150 Delinquent Boys. Research Lab., Buckel Foundation, Stanford Univ., 1915, 1, 3-15.

This investigation furnished part of the data on which the upper extension of the Stanford revision of the Binet scale is based. Case studies, conclusions and suggestions.

359. Winch, W. H. Binet's Mental Tests: What They Are and What We Can Do With Them. Child Study, 1913, 6, 113-117; 1914, 7, 1-5, 19-20, 39-45, 55-6, 87-90, 98-104, 116-122, 188-144; 1915, 8, 1-8, 21-27, 50-56, 86-92.

A description of the Binet 3-year-old tests given in three London schools. The children tested were from three to seven years of age.

360. Yerkes, R. M., and Bridges, J. W. The Point Scale: A New Method for Measuring Mental Capacity. Boston Med. and Surg. J., 1914, 171, 857-866.

Preliminary report, later presented in "A Point Scale for Measuring Mental Ability."

 Yerkes, R. M., Bridges, J. W., and Hardwick, R. S. A Point Scale for Measuring Mental Ability. Baltimore: Warwick and York, 1915. Pp. 218.

> A scale consisting of a single series of tests in which partial or full credit is given according to the degree of merit of the subject's response. In the selection of the 20 tests of which it is composed preference was given to the Binet tests and to those of the latter which are capable of serial arrangement. The norms are based on the examination of 805 individuals. Emphasis is laid on the necessity of norms for sex, and linguistic and social status, as well as for age. In the minds of the authors this scale is only provisional, and a list of principles upon which "a universal scale" should be based is given.

362. Yerkes, R. M., and Anderson, H. M. The Importance of Social Status as Indicated by the Results of the Point Scale Method of Measuring Mental Capacity. J. of Educ. Psychol., 1915, 6, 137-150.

The author's purpose is to demonstrate that there are other norms as important as those of age. The necessity for norms of social and economic status is emphasized. Fifty-four pupils from each of two schools whose pupils differ radically in these respects were examined. A striking difference in results obtained. 363. Yerkes, R. M., and Wood, L. Methods of Expressing Results of Measurements of Intelligence: Coefficient of Intelligence. J. of Educ. Psychol., 1916, 7, 593-606.

> Supplementary to "A Point Scale for Measuring Mental Ability." Six modes of "expressing intellectual status are listed," and one of them, "coefficient of intelligence," is discussed at length. Coefficients are presented for 2414 subjects. The study also includes the presentation of "revised point scale norms for the ages 4 to 18" in the form of a curve.

364. Yerkes, R. M. The Binet versus the Point Scale Method of Measuring Intelligence. J. of Appl. Psychol., 1917, 1, 111-122.

The two scales are compared as to their method of selection and standardization of their constituent tests and as to their method of measurement of the subjects' responses. Suggestions are made for the development of a scale which should retain the serviceable principles of these scales and improve upon them.

365. Yerkes, R. M., and Burtt, H. E. The Relation of Point Scale Measurements of Intelligence to Educational Performance in College Students. School and Soc., 1917, 5, 535-540.

By the use of lantern slides and special record blanks the scale was adapted to the demands of group testing. Correlation with educational performance and sex differences studied.

366. Zimmerman, J. The Binet-Simon Scale and Yerkes Point Scale. A Comparative Study based on the Examination of 100 Cases. J. of Educ. Psychol., 1917, 8, 551-558.

> "The point scale demonstrates its superiority for at least tour years beyond the point where the reliability of the Binet scale ceases."

367. Zylber, D., et Lublimer, E. Institut pour enfants arriérés à Varsovie.
1. Congr. intern. de pédol., Bruxelles, 1911.

A private institution founded in 1908 (Warsaw, Russia) finds the scale very valuable for purposes of classification.

## 2. De Sanctis, Knox, Porteus, etc.

- 368. Anonymous. The De Sanctis Tests. Training School Bull., 1913, 10, 34-36.
  - The tests listed and briefly described; also a brief discussion of their diagnostic value.
- Cunningham, K. S. Binet and Porteus Tests Compared. Examination of One Hundred School Children. J. of Educ. Psychol., 1916, 7, 552-556.

A comparative study. The two tests correlated 0.71. The advantages of the Porteus tests.

- 370. Decroly, O., et Degand, J. Le mesure de l'intelligence chez les enfants.
  2. contribution critique. La méthode de De Sanctis. Arch. intern. d'hyg. scaloire., 1904, 4, 230-303. See No. 186.
- 371. De Sanctis, S. (a) Types et degrés d'insuffisance mentale. Année psychol., 1906, 12, 70-83. (b) Typen und Grade Mangelhafter geistiger Entwicklung. Eos, 1906, 2, 97-115. (c) Tipi e gradi d'insufficienze mentale. Annali di Neorologia, 1906.

Not believing in Binet's 1905 scale, he devises a series of six tests with which to determine the grade of intelligence.

- 372. De Sanctis, S. Mental Development and the Measurement of the Level of Intelligence. J. of Educ. Psychol., 1911, 2, 498-507. See No. 195.
- 373. De Sanctis, S. Lo sviluppo psichico e la misura del livello intellectuale. Infanz, anormale, 1912, 6, 33-41.

- 374. De Sanctis, S. Reattivi per la misura dell' insufficienza mentale. Contrib. psicol., 1912, 1.
- 375. De Sanctis, S. Educazione dei Deficienti. Milano: Villardi, 1915.
   Pp. 300. See No. 29.
- 376. Knox, H. A. A Scale, Based on the Work at Ellis Island, for Estimating Mental Defect. J. of Amer. Med. Assoc., 1914, 62, 741-747.
- 377. Knox, H. A. Measuring Human Intelligence. A Progressive Series of Standardized Tests Used by the Public Health Service to Protect our Racial Stock. Scientific American, 1915, 112, 52-53, 57-58.
  A much illustrated account of the testing done at Ellis Island. The scale is given.
- 378. Knox, Howard A. Alien Mental Defectives. Chicago: C. H. Stoelting Co.

Describes Knox scale and other tests used to test immigrants at Ellis Island.

- 379. Martin, L. A Contribution to the Standardization of the De Sanctis Tests. Training School Bull., 1916, 13, 93-100. 207 normal and 150 feebleminded subjects tested. It is concluded that the tests not only fulfill their author's claim by indicating grades of defect, but that "they mark grades of development of normal mind."
- 380. Pintner, R., and Paterson, D. G. The Factor of Experience in Intelligence Testing. Psychol. Clin., 1915-16, 9, 44-50.
- 381. Pintner, R., and Paterson, D. G. A Scale of Performance Tests. New York: Appleton, 1917. Pp. 218. The scale consists of 15 tests, none of which require verbal responses. The verbal directions used are very brief and when necessary can be dispensed with Tests standardized and norms established.
- 382. Pintner, R., and Reamer, J. C. Children Tested by the Point Scale and the Performance Scale. Psychol. Clin., 1917, 11, 142-151. 178 children were tested by both scales. The two scales were found to supplement each other.
- 383. Porteus, S. D. Mental Tests for Feeble-Minded. A New Series. J. of Psycho-Asthen., 1915, 19, 200-213.
- 384. Porteus, S. D. Motor Intellectual Tests for Mental Defectives. J. of Exp. Ped., 1915-16, 3, 127-135. The tests, directions for giving them, graphs, and comparison with the Binet scale.
- 385. Porteus, S. D. Mental Tests with Delinquents and Australian and Aboriginal Children. Psychol. Rev., 1917, 24, 32-42. The Porteus series graded for mental ages from 3 to 13 was used. A comparative study. A few deaf children were also tested. The author's ideal is to study abnormalities of intelligence and "disposition," and to determine the importance of these "in their bearing upon conduct."
- 386. Porteus, S. D. The Measurement of Intelligence: Six Hundred and Fifty-three Children Examined by the Binet and Porteus Tests. J. of Educ. Psychol., 1918, 9, 13-31.

Emphasis on the value of the Porteus tests. Have been tried with normal, feebleminded, delinquent and deaf and dumb subjects. They reveal facts regarding the dispositions of subjects which the Binet tests do not touch.

- 387. Saffiotti, F. U. Clinica medico-psico-pedagogico. L'infanzia Anormale, 1911, 5, 102-116. See No. 95.
- 388. Shrubsall, F. C. The Examination of Mentally Defective Children. School Hyg., 1911, 2, 564-576, 609-619.

Brief outline of Binet and De Sanctis tests.

389. Squire, C. E. Graded Mental Tests. J. of Educ. Psychol., 1912, 3, 363-380, 430-443, 403-506.

A scale of serially graded mental tests. Age norms, based on results from 65 unretarded children, are presented for years 6 to 13, inclusive. Twenty tests described and results for each given in a table.

#### B. Individual Tests and Groups of Tests

390. Abelson, A. R. The Measurement of Mental Ability of "Backward" Children. Brit. J. of Psychol., 1911, 4, 268-314.

> This investigation was carried out under carefully controlled conditions in eight of the London County Council Schools for the mentally defective. The 33 girls and hoys examined lacked pronounced mental or physical defect, and ranged in age from 8 to 15 years. Intercorrelation of the tests and of the correlation of each test with the amalgamation of all the tests and with the teachers' estimates of "practical intelligence" and of "scholastic ability" are studied. The author believes that two fundamental principles on which the application of tests should be based have been established by his research: first, the increased diagnostic value which is obtained by pooling several independent tests, and, second, the importance of taking care that each test be "consistent with itself." He explains how he obtained a reliability coefficient for his own tests. For the examination of border line cases, such as his own subjects, he advocates the use of the same tests, "simply making allowance for age." instead of a scale graduated for age such as the Binet.

- 391. Aitkens, H. A., and Thorndike, E. L. Correlation among Perceptive and Associative Processes. Psychol. Rev., 1902, 9, 374-382. 160 eighth grade and 60 fifth grade children tested. The tests used were two cancellation tests, easy and hard opposites, the forward-alphabet tests and an addition test.
- 392. Anderson, H. W., and Hilliard, G. H. The Standardization of Certain Mental Tests for Ten-Year-Old Children. J. of Educ. Psychol., 1916, 7, 400-413.

Seven tests given to 51 boys and 64 girls. Correlations with school progress and sex differences studied.

393. Andrews, M. An Investigation into the Rate of Mental Association. J. of Educ. Psychol., 1917, 8, 97-102.

Uncontrolled concrete association series used. As a measure of intelligence, types of response found to be more important than mere speed of reaction.

394. Ash, I. E. The Correlates and Conditions of Mental Inertia. Ped. Sem., 1912, 19, 425-437.

An attempt to measure objectively "independence and originality in observation and interpretation," and their relation to promptness, rank and general attitude in school. 850 eighth grade pupils tested with five pairs of questions—one of each pair requiring simply "book learning," the other original work. "Persistence in type," that is, the tendency of independence in one situation to obtain in others also, is more pronounced in boys than in girls.

- 395. Bagley, W. C. On the Correlation of Mental and Motor Ability in School Children. Amer. J. of Psychol., 1901, 12, 193-205. Reports a negative correlation between motor skill and intelligence. The mental tests are not described.
- 396. Baldwin, B. T. The Learning of Delinquent Adolescent Girls as Shown by a Substitution Test. J. of Educ. Psychol., 1913, 4, 317-332. The substitution test suggested by Gray was used. Performances of negro and

white girls compared.

397. Beanblossom, M. L. Mental Examination of Two Thousand Delinquent Boys and Young Men. Jeffersonville, Ind.: Indiana Reformatory Print, 1916. Pp. 23.

Suggestions concerning psychological tests for mental diagnosis, especially for adults and those nearing adult age.

- 398. Bechterew, W. von, und Wladyczko, S. Beiträge zur Methodik der objektiven Untersuchung von Geisteskranken. Zsch. f. Psychother. n. Med. Psychol., 1911, 3, 87-109.
  Each test consists of a number of graded parts.
- 399. Bell, J. C. A Detailed Study of Whipple's Range of Information Test. J. of Educ. Psychol., 1917, 8, 475-482.

The object of the study was to ascertain how each group of students, consisting of the four college classes, responded to each word of the test.

400. Bickersteth, M. E. The Application of Mental Tests to Children of Various Ages. Brit. J. of Psychol., 1917, 9, 23-73. 2,500 subjects; 12 tests. Study of following correlations included: Mental age with physical age; motor tests with mental tests; intellectual ability with ability to profit he hereing. Compared terms and sensitive bildren. Complete that "ity approximate terms and sensitive approximate terms and sensitive approximate terms."

to profit by learning. Compares town and country children. Concludes that "the same test applied at different ages" has greater diagnostic value than a series of "externally graded tests."

 Binet, A., et Henri, V. La psychologie individuelle. Année psychol., 1895, 2, 411-465.

A long and detailed list of tests for the study of individual differences.

- 402. Binet, A. Attention et adaptation. Année psychol., 1899, 6, 248-404. Attempted to differentiate intelligent from unintelligent differences.
- 403. Binet, A. La suggestibilité. Paris: Schleicher, 1900. Pp. 396. A study of suggestibility in school children. The author was probably the first totest "capacity to report."
- 404. Binet, A. A proposito delle "Ricerche di Psicologia individuale nei dementi" di Baroncine e Sarteschi. Riv. di psicol., 1910, 6, 184-185. A criticism of both the work of these Italian experimenters and the interrogation method of Ferrari (Kohs).
- 405. Binet, A. Psychologie individuelle. La description d'un objet. Année psychol., 1896, 3, 296-332. A picture description test was given to 175 children from 8 to 14 years of age and an object description test to 18 adults.
- 406. Bingham, W. V. Some Norms of Dartmouth Freshmen. J. of Educ. Psychol., 1916, 7, 129-142.

200 measured individually and their performances in eight tests are shown by means of percentile curves of distribution.

407. Bolton, T. L. The Growth of Memory in School Children. Amer. J.. of Psychol., 1891, 4, 362-380.

A study of age and sex differences in the memory span for digits.

- 408. Bond, N. J., and Dearborn, W. F. A Comparison of the Auditory Memory and Tactual Sensibility of the Blind with Those of Persons Whohave Normal Hearing. J. of Educ. Psychol., 1917, 8, 21-26.
- 409. Bonser, F. G. The Reasoning Ability of Children of the Fourth, Fifth and Sixth Grades. Teachers College, Columbia Univ., Contrib. to-Educ., 1910, No. 37. Pp. 113. "The results here derived point to the conclusion that the correlations among"

"The results here derived point to the conclusion that the correlations among the abilities here tested are a matter of native capacity rather than the result of training."

- 410. Bonser, F. G. The Selective Significance of Reasoning Ability Tests. J. of Educ. Psychol., 1916, 7, 187-200.
  - A follow-up experiment. A number of years after the completion of the author's investigations cited just above, an attempt was made to ascertain the educational and industrial status of the 757 children whose ability in tests of reasoning was therein studied.
- 411. Bonser, F. G., Burch, L. H., and Turner, M. R. Vocabulary Tests as Measures of School Efficiency. School and Soc., 1915, 2, 713-719. The Kirkpatrick and a new list of words were used. Children of several schools compared. The writers believe that the superiority of one school in these tests was due to its curriculum and method of work which were "shot through and through with social motives, values and ideals."
- 412. Bourdon, B. Influence de l'âge sur la mémoire immédiate. Revue Phil., 1894. 38. 148-167.

100 students ranging in age from 8 to 20 years were tested. Number, letter and word series used. Relationship between immediate memory and teachers' estimates of intelligence studied.

- 413. Bowler, A. C. The Trabue Completion Test as Applied to Delinquent Girls. J. of Exp. Psychol., 1916, 1, 533-539. By the application of Trabue's original list of 256 girls a "practical graded series short enough to be completed in fifteen or twenty minutes" was obtained.
- 414. Bowler, A. C. A Picture Arrangement Test. Psychol. Clin., 1917, 11, 37-54.

Among the advantages of the test are the following: Its power to hold the attention, its independence of "school learning," its eliminaiton of the need of language on the part of the subject and of the personal equation on the part of the examiner.

- 415. Boyd, W. Definitions in Early Childhood. Child Study, 1914, 7, 66-70. Report of an investigation carried on with the author's little girl. Binet's test, supplemented by many others devised by the author, was used. Insists "on a different interpretation" of the results of the definition test than that usually given.
- 416. Bradford, E. J. G. A Psychological Analysis of School Grading. J. of Exp. Ped., 1913-14, 2, 431-440.

Two groups used, one demanding analysis of visual forms, the second being tests of association and memory. Correlations of the tests with each other, of the groups with each other and of the groups and individual tests with school grades studied.

- 417. Brigham, C. C. Two Studies in Mental Tests: I. Variable Factors in the Binet Tests. II. The Diagnostic Value of Some Mental Tests. Psychol. Monog., 1917, 24, No. 1. Pp. 254. See No. 173.
- 418. Bronner, A. F. "Construction Test A" of the Healy-Fernald Series. Psychol. Clin., 1916-17, 10, 40-44. Summary of the results in the Psychopathic Institute of the Juvenile Court of Chicago, and a criticism of the Bruckner-King investigation.
- 419. Bronner, A. F. The Psychology of Special Abilities and Disabilities. Boston: Little-Brown, 1917. Pp. 269. The chapter on Differential Diagnosis enumerates and discusses "tests available for the study of various mental processes." The book offers a program for attacking problem cases and illustrates methods by selected case-studies.
- 420. Bruckner, L., and King, I. A Study of the Fernald Form-Board. Psychol. Clin., 1915-16, 9, 249-257.

The test given to 90 8-year-old children and 59 10-year-old children and studied with respect to time taken, method and form of solution used, correlation with school progress and with Courtis tests. It is said to have diagnostic value only when used as one of a series of tests.

421. Burt, C. Experimental Tests of General Intelligence. Brit. J. of Psychol., 1909, 3, 94-177.

> An attempt to determine whether the higher mental functions would not show closer connection with "General Intelligence" than was shown by simpler mental functions, such as sensory discrimination and motor reaction, with which previous investigations have been so largely engrossed. Half of the article is given to a detailed discussion of the apparatus, technique, and results of each of the twelve tests employed. Six of these are tests of the simpler mental functions and six of the higher. The correlations of the former with estimated intelligence were in all cases below 0.50, and of the latter, above 0.50. Of the 43 subjects, thirteen came from homes of "men of eminence in the intellectual world"; thirty from the homes of fairly well-to-do tradesmen. With but two exceptions, touch and weight discrimination, tests which yield the lowest correlations with intelligence, the former were found superior.

- 422. Burt, C. Experimental Tests of Higher Mental Processes and their Relation to General Intelligence. J. of Exp. Ped., 1911, 1, 93-112. Using the Alphabet Finding test as the criterion, an attempt is made to elaborate tests which yield higher correlations with intelligence. Twelve tests, including the criterion test, are described. Of these, five are found which are superior to it in reliability and correlation with intelligence and which are tests of "the power of thinking; that is, the power to understand or reason." Under the tilte "Secondary Problems," the effect on the test results of sex, social status, training of the experimenter, etc., is studied.
- 423. Burt, C., and Moore, R. C. The Mental Differences between the Sexes. J. of Exp. Ped., 1911, 1, 273-284, 355-388.

The aim of these investigations is "to isolate, by means of experiment, the inborn mental differences between the sexes from those acquired." They review the work, not only of those authors who approach the problem from their own standpoint of psychological experimentation, but also of those who approach it from the biological, sociological or historical standpoint. Experiments on children from 12.5 to 13.5 years of age give them the major portion of their results, but their more important tests were repeated on children of other ages and upon adults and upon children and adults of different social status and nationality. They find "a high correlation between the size of sex-differences and the simplicity of the capacities compared." Their main conclusion is that "innate sex differences of mental constitution are astonishingly small."

424. Burtt, H. E. Professor Münsterberg's Vocational Tests. J. of Appl. Psychol., 1917, 1, 201-213.

Work begun by Professor Münsterberg completed and supplemented.

- 425. Calfee, M. College Freshmen and Four General Intelligence Tests. J. of Educ. Psychol., 1913, 4, 223-231. The tests used were card-dealing, card alphabet sorting and mirror tracing. Correlations and sex differences studied.
- 426. Calkins, M. W. Community of Ideas of Men and Women. Psychol. Rev., 1896, 3, 426-430. A criticism of Dr. Jastrow's investigation. It is based on a repetition of his experiment without the change in method used in Never's investigation.

427. Carey, N. Factors in the Mental Processes of School Children. I. Visual and Auditory Imagery. II. On the Nature of Specific Mental Factors. III. Factors Concerned in School Subjects. Brit. J. of Psychol., 1915, 7, 453-473; 1915, 8, 70-92; 1916, 8, 170-182. See No. 23.

> The question of a "general factor" in mental performances is the chief consideration. With the tests the evidence is not clear, but in the school work there is an indication of a general factor which is complicated by the existence of other factors.

 Carley, L. A. Mental Tests and Practical Judgment. J. of Crim. Law and Criminol., 1915, 6, 249-259.

Compares delinquent individuals with normal, and white delinquents with colored. Compares results of tests with judgments of the heads of departments in the reformatory.

429. Carpenter, D. F. Mental Age Tests. J. of Educ. Psychol., 1913, 4, 538-544.

A study of age differences by the use of the Squire tests.

- 430. Cattell, J. M., and Farrand, L. Physical and Mental Measurements of the Students of Columbia University. Psychol. Rev., 1896, 3, 618-648. "Our chief object in the present paper is the description and discussion of methods rather than the communication of results, but we give the averages secured from 100 students." The psychological tests included reaction time, perception of time and space, and memory.
- 431. Cattell, J. Experiments on the Association of Ideas. Mind. 1887, 12, 68-74.

Controlled association series classified and studied. Two subjects.

432. Cattell, J. M., and Bryant, S. Mental Association Investigated by Experiment. Mind, 1889, 14, 230-244. Tabulated lists of frequency derived from association tests are first found in this

investigation.

- 433. Cattell, J. M. Mental Tests and Measurements. Mind, 1890, 15, 373-380. Tests described but no results of their use given.
- 434. Chambers, W. G. Memory Types of Colorado Pupils. J. of Phil., Psychol. and Sci. Methods, 1906, 3, 231-234. Grade pupils and normal juniors tested. A study of sex and age differences in auditory and visual memory-span for digits.
- 435. Chambers, W. G. Individual Differences in Grammar Grade Children. J. of Educ. Psychol., 1910, 1, 61-75. Physical, psychological and pedagogical tests used.
- 436. Chapman, J. C. Individual Differences in Ability and Improvement and their Correlations. New York: Columbia Univ., Teachers College Contrib. to Educ., 1914, No. 63. Pp. 45. By giving 22 subjects ten trials in each of five tests a measure of initial efficiency and improvability was obtained.
- 437. Chase, H. W. Work with the Backward and Subnormal in the Children's Institute. Ped. Sem., 1910, 17, 189-203. A brief discussion of the kind of psychological tests to be used. The actual work done illustrated by three case studies.
- 438. Chassel, L. M. Tests for Originality. J. of Educ. Psychol., 1916, 7, 317-328.

Twelve selected tests were applied to 100 university students and to one inventor of international reputation.

- 439. Claparède, E. Développement (âge) et Aptitude. Extrait du Bulletin de la Société pédagogique. Genevoise, Mars, 1916. Tests to measure individual aptitude.
- 440. Cohn, J., und Dieffenbacher, J. Untersuchungen über Geschlecht-Alters und Begabungs-Unterschiede bei Schülern. Beiheften zur Zsch. f. angew. Psychol., 1911, Heft 2. Pp. 213.

- 441. Collins, E. R. The Correlation of Secondary School Grades with Certain Standard Mental Tests as Evidence of General Intelligence. Bull. of the State Normal School, Moorhead, Minn., 1914, 10, No. 4. The standard tests were those of sense discrimination, attention, perception, memory, association and motor control. An extensive study.
- 442. Conway, C. E. Performance Norms for Thirteen Tests. The Capitol, Albany, N. Y., Eugenics and Social Welfare Bull., No. 8, 1917. Pp. 142.

The second contribution of the Bureau of Analysis and Investigation to the standardization of mental tests. 757 children were tested. 314 of these were normal public school children, all of whom were at age for their grades. The rest were from four orphan asylums and unselected.

443. Cornell, C. B. A Graduated Scale for Determining Mental Age. J. of Educ. Psychol., 1917, 8, 539-549. Scale consists of nine tests for which norms have been established for the ages

6 to 14 on the basis of 45 children for each age studied.

- 444. Coxe, W. W. The Woolley Tests Applied to a Pre-vocational Class of Boys. School Rev., 1916, 24, 521-532. The class was composed of retarded boys from the public schools of Chicago, 14 to 17 years of age, none of whom had completed the eighth grade.
- 445. Dana, C. L. Mental Tests. Med. Rec., 1913, 83, 1-10. See No. 27.
- 446. Dearborn, W. F., Anderson, J. E., and Christiansen, A. O. Form Board and Construction Tests of Mental Ability. J. of Educ. Psychol., 1916, 7, 445-458.

Describes eight tests which the authors hope to use as part of a scale.

- 447. Dearborn, W. F., and Brewer, J. M. Methods and Results of a Class Experiment in Learning. J. of Educ. Psychol., 1918, 9, 63-82. Substitution test based on the code test of the Healy-Fernald series. General principles illustrated by the experiment.
- 448. Decroly, O., and Degand, J. Tests Bearing on the Early Ideas of Number and Quality. Tr. and abridged by T. G. Tibbey. Child Study, 1913, 6, 125-127.

17 tests for use with children from 2 to 5 described.

449. Decorly, O. Épreuve nouvelle pour l'examen mental et son application aux enfants anormaux. Extrait du Bull. de la Soc. d'Anthropologie de Bruxelles, 1913, 32. Pp. 25.

Test of "practical logic" which can be carried out with little or no use of language. A picture arrangement test.

- 450. Descoeudres, A. Exploration de quelques tests d'intelligence chez des enfants anormaux et arriérés. Arch. de Psychol., 1911, 11, 351-375. 14 backward and abnormal children ranging in age from 6 to 14 years were placed under observation and their rank in intelligence estimated. They were then given 15 tests, 6 of them Binet tests, and each child given a rank in each test and a summation rank in all the tests taken together. All the correlations with estimated intelligence high.
- 451. Dockerill, W. H. A., and Fennings, A. J. A New Test of Reasoning. J. of Exp. Ped., 1914, 2, 356-361.

The test consists in giving an illustration and the meaning of each of ten proverbs.

452. Doll, E. A. The A-test with the Feeble-Minded. Training School Bull., 1913, 10, 49-57.

An attempt to analyze the A-test "as a mental test and as a means of study in the psychology of defectives." 250 children examined with a total of 479 examinations. 453. Doll, E. A. The DeMoor Size Weight Illusion. Training School Bull., 1913, 9, 145-149.

An attempt to evaluate this illusion as a diagnostic test. The subjects were 345 feebleminded children.

454. Doll, E. A. The Maze Test with the Feeble-Minded. Training School Bull., 1914, 11, 63-65.

A motor-coordintaion test. 233 mentally defective children ranging in age from 1 to 11 years tested.

455. Doll, E. A. The Painted Cube Construction Test. J. of Educ. Psychol., 1917, 8, 176-178.

When first employed, this test was given verbally, without apparatus. This article gives suggestions for its use as a "manual-intellectual construction test" with concrete material.

456. Doll, E. A. Form Board Speeds as Diagnostic Age Tests. J. of Psycho-Asthen., 1916, 20, 53-62.

> "The purpose of the present study was to see if form board speeds could be used as diagnostic age tests, according to the per cent. passing at given ages for given speeds." Based on the records of almost 800 feebleminded individuals. "Diagnostic norms may be established on the basis of approximately 75 per cent. passing at given standard speeds."

- 457. Dunham, F. L. The Arrow Board. An Adult "Form-Board" Test. Ped. Sem., 1916, 23, 283-289.
  99 high school boys and 85 high school girls ranging in age from 15 to 18 years. Test described and results given in tables.
- 458. Eastman, F. C., and Rosanoff, A. J. Association in Feeble-Minded and Delinquent Children. Amer. J. of Insan., 1912, 69, 125-141. The same standardized method employed as in "A Study of Association in Insanity."
- Ebbinghaus, H. Ueber eine neue Methode zur Pr
  üfung geistiger F
  ähigkeiten und ihre Anwendung bei Schulkindern. Zsch. f. Psychol., 1897, 13, 401-459.

The author was the inventor of the completion test method. He calls it a "real test of intelligence."

460. Ellis, F. W., and Bingham, A. T. Report of Mental Examinations. Reprint from 7th Annl. Rept. of N. Y. Prob. and Prot. Assoc., Sept., 1915.

Describes Neurological Institute Mental Tests and gives representative cases.

- 461. Engelsperger, A., und Ziegler, O. Beiträge zur Kenntnis der physischen und psychischen Natur des Sechsjährigen in die Schule eintretenden Kinder. Exp. Päd., 1905, 1, 173-235; 2, 29-95. Investigated 200 children in Münich.
- 462. English, H. B. An Experimental Study of Mental Capacity of School Children, Correlated with Social Status. Psychol. Monog., 1917, 23, 266-331.

14 tests were applied to 37 children of English professional and upper middle class and to 31 of the lower middle class and the better class of trades people. In all save tests of rapid movement, the children of the "better class" were strikingly superior.

463. Ferguson, G. O. The Psychology of the Negro. An Experimental Study. Arch. of Psychol., 1916, No. 36. Pp. 138.

Extensive comparative tests of negro and white children. Twenty-five pages given to review of work already done.

- 464. Fernald, G. G. An Achievement Capacity Test. A Preliminary Report. J. of Educ. Psychol., 1912, 3, 331-336. A test of "persistence or spunk."
- 465. Ferrari, G. C. Dei Mezzi practici per l'esame digli alienati nei Manisomi e nelle Cliniche Atti del X<sup>0</sup> Congresso della "Societé Freniatrica Italiano," Napoli, 1899.

Proposed a series of 46 questions for workers in the field of individual psychology.

- 466. Francia, G., e Ferrari, G. C. L'esame psicologico sommario dei deficienti. Riv. de psicol., 1912, 8, 269-288 Replies to Giroud's criticism and analyzes her report in Bull. Soc. libre Etude Psychol. de l'Enfant 1911, Vol. II.
- 467. Franz, S. I. Handbook of Mental Examination Methods. New York: Nervous and Mental Disease Monog. Series, 1912. Pp. 165. Describes tests and outlines the procedure for them.
- 468. Galton, F. Supplementary Notes on "Prehension" in Idiots. Mind, 1887, 12, 79-82. Tested the memory span for digits of feebleminded children.
- 469. Garbini, A. Evoluzione del Senso Cromatico nella Infanzia. Arch. per l'antrop. e la etnol., Vol. 24, 71-98, 193-220.
   600 Italian school children tested for their ability to name colors.
- 470. Gassmann, E., und Schmidt, E. Das Nachsprechen von Sätzen in seiner Beziehung zur Begabung. Experimentelle Untersuchungen über den sprächlichen Auffassungsumfang des Schulkindes. (Wiss. Beitr. z. Päd. u. Psychol., Heft. 3.) Leipzig: Quelle u. Meyer 1913. Pp. 101. An intensive study of one test, the memory for sentences.
- 471. Gates, A. I. Correlations and Sex Differences in Memory and Substitution. Univ. of Calif. Publ. in Psychol., 1916, 1, 245-250. 197 students in elementary psychology were tested.
- 472. Gates, A. I. The Mnemonic Span for Visual and Auditory Digits. J. of Exp. Psychol., 1916, 1, 393-403. One purpose of the work was to find the exact memory span of a number of individuals. About 165 college students underwent the tests.
- 473. Gates, A. I. Experiments on the Relative Efficiency of Men and Women in Memory and Reasoning. Psychol. Rev., 1917. 24, 139-146. See No. 473.
- 474. Gates, A. I. Variations in Efficiency During the Day, Together with Practice Effects, Sex Differences and Correlations. Univ. of Calif. Publ. in Psychol., 1916, 2, 1-156.
- 475. Gates, A. I. The Abilities of an Expert Marksman Tested in the Psychological Laboratory. J. of Appl. Psychol., 1918, 2, 1-14. Tests used to determine "in what respects his (an expert marksman) superiority over the marksman of average or inferior ability was to be found." Ten laboratory students were tested as controls.
- 476. Giese, F. Die Dreiwortmethode bei Intelligenzprüfungen. Zsch. f. päd. Psychol., 1913, 14, 524-534, 550-555. Improvements, corrections and conclusions. Sex differences studied.
- 477. Gilbert, J. A. Researches on the Mental and Physical Development of School Children. Yale Psychol. Studies, 1894, 2, 40-100. A pioneer work in the measurement by tests of the mental processes of school children. Relation of tests to general ability as estimated by teachers studied.

478. Giroud, A. Étude d'un procédé nouveau pour la mesure du niveau intellectuel. Bull. Soc. libre Étude psychol. de l'Enfant., 1911, 11, 156-169.

The use of 46 questions proposed by Francia and Ferrari, with children 7 to 12 years of age. A critical discussion and results for each age.

 479. Giroud, A. La suggestibilité chez des enfants d'école de sept à douze ans. Année psychol., 1912, 18, 362-388.

Found a gradual decrease in "yields" with age.

480. Goett, T. Assoziationsversuche an kindern. Zsch. f. Kinderheilkunde, 1911, 1, 241-345.

Mentally abnormal children compared with normal by use of free association tests. Lists of 100 stimulus words used.

481. Goddard, H. H. The Form Board as a Measure of Intellectual Development in Children. Training School Bull., 1912, 9, 49-52.

The Goddaard modification of the Norsworthy form-board. A table and a graph present results obtained with 271 normals and 420 defectives.

482. Goddard, H. H. The Adaptation Board as a Measure of Intelligence. Training School Bull., 1915, 11, 182-188.

"A very satisfactory and remarkable diagnostic test for eight years." Description of the test, technique for administering it, and tables of norms.

483. Goddard, H. H. Mental Tests and the Immigrant. J. of Delinq., 1917, 2, 243-277.

> In this investigation "tentative diagnosis of mental level" was established by the Binet scale. Other tests were used to "modify this diagnosis to the extent of their number and validity."

484. Gordon, K. A Study of an Imagery Test. J. of Phil., Psychol. and Sci. Methods, 1915, 12, 574-579. Fernald's spelling backward test tried out on 25 adults and, 25 children. The intro-

spections of the subjects studied. Distributions of time of performance are nomal for children and skewed for adults.

 Gordon, K. Some Tests on the Memorizing of Musical Themes. J. of Exp. Psychol., 1917, 2, 93-99.

Compared with memory for nonsense syllables.

486. Goudge, M. A Simplified Method of Conducting McDougall's Spot Pattern Test. J. of Educ. Psychol., 1915, 6, 73-84.

A laboratory experiment with seven adult subjects. The use of simpler method justified.

487. Gould, R. L. Manual Accuracy in Prevocational School Boys. J. of Educ. Psychol., 1917, 8, 439-441.

Three tests were given at the beginning and end of a school year in an attempt to determine whether shop practice produces any change in general manual accuracy.

488. Gray, C. T. A New Form of Substitution Test. J. of Educ. Psychol., 1913, 4, 293-297.

> The article calls "attention to a form of the substitution test which may be used for testing a higher type of learning than that involved in most forms already adopted." The test was suggested by a wig-wag signalling code.

489. Gregor, A. Untersuchungen über die Entwicklung einfacher logischer Leistungen. Zsch. f. angew. Psychol., 1915, 10, 339-451.

Children and adults tested as to their ability to define various concrete and abstract terms.

490. Gwyn, M. K. The Healy Puzzle Picture and Defective Aliens. Med. Rec., 1914, 85, 197-199.

22 feebleminded aliens tested and the results given in tabulated form.

491. Haberman, J. V. Intelligence Examination and Evaluation and a New Intelligence Examination Sheet. J. of Amer. Med. Assoc., 1915, 65, 399-404.

> A preliminary report dealing with a new outline of tests, based on Ziehen's test series, but modified and increased as a result of work in the author's clinic. Adverse criticism of the Binet scale. Laments the lack of medical students specializing in mental abnormalities.

492. Haberman, J. V. The Intelligence Examination and Evaluation. A Study of the Child's Mind. Psychol. Rev., 1916, 23, 352-379, 484-500.

 $\Lambda$  detailed explanation of the author's "method of examination and evaluation by means of the tests and test sheet."

493. Haines, T. H. Diagnostic Value of Some Performance Tests. Psychol. Rev., 1915, 22, 299-305.

> Twelve tests were used, including some of the Healy-Fernald tests, two verbal memory tests, a learning, an opposites, a completion, and a motor coordination test and a moral discrimination test. The subjects were 63 girls of the Ohio Girls' Industrial School, who had been given Binet and Point scale ratings.

- 494. Hall, G. E. Report on the Standardization of Eleven Mental Tests. Chiefly from the Healy-Fernald Series Standardized by the N. Y. Bureau of Analysis and Investigation. 48. Annl. Rept. State Bd. of Char., 1914.
- 495. Hall, G. E. Reports on 52 Border-line Cases in the Rome State Custodial Asylum. N. Y. State Bd. of Char., Eugenics and Social Welfare Bulletins 4 and 6, 1915.
- 496. Hardwick, R. S. Program and Directions for the Mental Examination of Asocial, Psychopathic, and Doubtful Subjects. Boston Med. and Surg. J., 1915, 172, 817-821, 861-865, 906-910, 935-939. The writer's special problem was the organizing of tests to supplement the Yerkes point scale. In the last part (935-939) the author attempts to classify the tests of

point scale. In the last part (935-939) the author attempts to classify the tests of the Point Scale, of the Binet and Knox scales, the Healy tests and a group of miscellaneous tests "with respect to the mental functions involved."

497. Healy, W., and Fernald, G. M. Tests for Practical Mental Classification. Psychol. Monog., 1911, 13, No. 2. Pp. 53. The 20 tests here described were developed during two years' work in the Juve-

nile Psychopathic Institute of Chicago. 498. Healy, W. A Picture Completion Test. Psychol. Rev., 1914, 21, 189-203

A description of the test with a discussion of norms for seven groups of individuals.

- 499. Heilbronner, K. Zur klinisch-psychologischen Untersuchungstechnik. Monatssch. f. Psychiat. u. Neurol., 1905, 17, 115-132. Used a picture test which (according to Stern) examines ability to complete in the sphere of vision.
- Henderson, E. N. A Study of Memory for Connected Trains of Thought. Psychol. Monog., 1903, 5. Pp. 87.

An extensive study of several logical memory tests.

501. Hentschel, M. Die Gedächtnisspanne. Zsch. f. päd. Psychol., 1912, 13, 562-579.

31 special class children and 24 normal children studied. Series of consonants used.

502. Heymans, G., und Brugmans, H. J. T. W. Intelligenzprüfungen mit Studierenden. Zsch. f. angew. Psychol., 1913, 7, 317-331. See No. 233. 503. Hollingworth, H. L. Influence of Caffein on Mental and Motor Efficiency. Arch. of Psychol., 1912, No. 22. Pp. 166.

The tests employed were: The color naming opposites, calculation, size-weight, cancellation, choice-reaction, steadiness, tapping, and three holes tests.

504. Hollingworth, H. L. Specialized Vocational Tests and Methods. School and Soc., 1915, 1, 918-922. See No. 47.

# 505. Hollingworth, H. L. Articulation and Association. J. of Educ. Psychol., 1915, 6, 99-105.

The correlation method used to investigate the effect of speed of articulation on association reaction times. 11 men and 8 women, ranging in age from 18 to 33, given 100 trials each in color naming test and the opposites test. Afterwards they were given typewritten lists of the responses to those tests and their times for reading these aloud taken. "The women are clearly quicker, both in association time and in reading and articulation time."

- 506. Hollingworth, H. L., and Poffenberger, A. T. Applied Psychology. New York: Appleton, 1917. Pp. 337. See No. 50.
- 507. Huey, E. B. Backward and Feeble-Minded Children. Baltimore: Warwick and York, Educ. Psychol., Monog., 1912. Pp. 221. See No. 54.
- 508. Humpstone, H. J. Some Aspects of the Memory Span Test. A Study in Associability. Philadelphia: The Psychol. Clinic Press, 1917. Pp. 31.

"The purpose of this experiment was to see how the memory span could be employed for diagnostic purposes." About 3,300 subjects—grammar school pupils, trades school boys and college students—were tested for their memory span for digits.

509. Ide, G. G. The Witmer Formboard and Cylinders as Tests for Children Two to Six Years of Age. Psychol. Clin., 1918, 12, 65-88. Conclusions with regard to (1) "the age level of these tests," (2) "their clinical

value," (3) "the earliest passing age," (4) "analytic determination of the causes of failure" and (5) "the value of their employment as tests of educability." Case studies.

510. Jacobs, J. Experiments in Prehension. Mind, 1887, 12, 75-79.

Age differences in "span of prehension" for digits, nonsense syllables and letters.

511. James, B. B. Correlations of Mental Tests and Scholarship. School and Soc., 1918, 7, 238-239.

> Five tests given at the beginning of the school year. The author concludes that a teacher may get a knowledge of his pupils "which will make the rest of the semester's work easier for him and more satisfactory to all concerned."

## 512. Jastrow, J. A Statistical Study of Memory and Association. Educ. Rev., 1891, 2, 442-452.

About 70 university students and 100 freshmen and junior high school students were tested for free association, one reaction word being required for each of ten stimulus words; after 48 hours they were tested for their memory of the reaction words first unaided and then aided by the presence of the stimulus words. Sex differences are studied, the results obtained from the school students corrohorating those obtained with university students.

- 513. Jastrow, J. A Study in Mental Statistics. New Rev., 1891, 5, 559-568. A study of sex differences by means of the free association test.
- 514. Jastrow, J. Community of Ideas of Men and Women. Psychol. Rev., 1896, 3, 68-71.

An answer to Nevers' criticism (Psychol. Rev. 1895, 2, 363-367).

515. Jastrow, J. A Sorting Apparatus for the Study of Reaction-Times. Psychol. Rev., 1898, 5, 279-285.

Description of the author's card-sorting apparatus.

- 516. Jeffrey, G. R. Some Obesrvations on the Use of the 'Reckoning Test' in School Children. J. of Exper. Ped., 1911, 1, 392-396. Professor Maloney's modification of Kraepelin's Test. 9 boys and 9 girls, 11 years of age, each sex being divided into three groups, bright, average, and dull, tested for fifteen minutes on five consecutive days. Sex differences and improvability studied.
- 517. Johnson, G. E. Contribution to the Psychology and Pedagogy of Feeble-Minded Children. Ped. Sem., 1894, 3, 246-301. See No. 58.
- 518. Johnson, R. H., and Gregg, J. M. Three New Psychometric Tests. Ped. Sem., 1912, 19, 201-203.

An attempt to find tests for the adolescent level,

- 519. Jones, E. S. The Woolley Test Series Applied to the Detection of Ability in Telegraphy. J. of Educ. Psychol., 1917, 8, 27-34. A study in correlation carried out at the Cincinnati Vocational Bureau. "The type of ability demanded in telegraphy seems to be fairly highly correlated with ability as measured by certain of the psychology tests." Six of them pooled together cor-
- related 0.81 with ability in telegraphy as judged by an expert. 520. Jones, E. E. Individual Differences in School Children. Psychol. Clin.,

1912, 6, 241-251.

A study of range of variability in several psychological and pedagogical tests.

- 521. Karpas, M. J. Remarks on Neurology and Psychiatry in Berlin, with Special Reference to Ziehen's Intelligence Test. Utica, N. Y.: State Hosp. Bull., 1910. 3, 393-402.
- Karpas, M. J. Psychic Constitutional Inferiority. N. Y. Med. J., Mar. 22, 1913.

Includes Ziehen's Tests.

523. Katzenellenbogen, E. W. A Critical Essay on Mental Tests in their Relation to Epilepsy. Epilepsia, 1912, 4, 130-173. Finds that "the Form Board test, Healy's puzzle test and the Bechterew tests are most successful in the elimination of the element of training." Compares the

problems presented by imbecility on the one hand and epilepsy on the other. Insists upon a thorough training in both psychology and medicine for psychopathologists.

- 524. Kelly, R. L. Psycho-Physical Tests of Normal and Abnormal Children—A Comparative Study. Psychol. Rev., 1903. 10, 345-372.
- 525. Kelley, T. L. The Association Experiment: Individual Differences and Correlations. Psychol. Rev., 1913, 20, 479-504. Twelve college students tested with a list decidedly more difficult than that of Kent-Rosanofi.
- 526. Kelley, T. L. A Constructive Ability Test. J. of Educ. Psychol., 1917, 17, 1-16.

This test "attempts to measure the ability to initiate as well as to execute a task."

- 527. Kemble, W. F. Choosing Employees by Mental and Physical Tests. New York: The Engineering Mag. Co., 1917. Pp. 333.
- 528. Kent, G. H., and Rosanoff, A. J. A Study of Association in Insanity. Amer. J. of Iusan., 1910-11, 67, 37-96, 317-390.

The first part of this study is given to the discussion of results obtained by the application of the tests, for the purpose of establishing standards, to over 1,000 normal subjects. This includes 48 pages of frequency tables. The pathological material is discussed in the second part: the test was applied to 247 insane patients. Many individual test records, with classified reactions, are given. No sharp distinction was found between mental health and mental disease.

529. Kent, G. H. A Graded Series of Geometrical Puzzles. J. of Exper. Psychol., 1916, 1, 40-50.

A series of 24 puzzles, each consisting of rectangular or triangular pieces of wood and each, when correctly arranged, forming a square, tried out on 25 subjects. An attempt to find non-verbal tests which would avoid certain difficulties of the Binet scale.

530. Kent, G. H. A Graded Series of Colored Picture Puzzles. J. of Exper. Psychol., 1916, 1, 242-246.

> A series of puzzles made by cutting colored Perry or Brown pictures into horizontal strips. Description of the puzzles and the records for 29 subjects given in tabular form.

 Kephart, A. P. Clinical Studies of Failures with the Witmer Formboard. Psychol. Clin., 1918, 11, 229-253.

An investigation to determine "what difficulties the formboard presents, what causes failure, and what failure means in relation to diagnosis."

- 532. King, I., and Gold, H. A Tentative Standardization of Certain "Opposites Tests." J. of Educ. Psychol., 1916, 7, 459-482. A complete tabulation is given of all the reactions to the 158 words.
- 533. King, I. The Relationship of Abilities in Certain Mental Tests to Ability as Estimated by Teachers. School and Soc., 1917, 5, 204-209.
- 534. King, L., and M'Crory, J. Freshmen Tests at the State University of Iowa, I. of Educ, Psychol., 1918, 9, 32-46.

Seven tests applied to 276 women and 268 men. Each test is discussed and its correlation coefficients in this investigation compared with those found in former investigations. "These tests pick out those of poor mental ability much more accurately than those of good mental ability." "Sex differences in mental functionings are negligible as far as these mental tests are concerned."

535. Kirkpatrick, E. A. Individual Tests of School Children. Psychol. Rev., 1900. 7, 274-280.

As a result of his attempt to interpret the individual test records obtained in this investigation, the author is led to emphasize the need for a normal standard for each age.

- 536. Kirkpatrick, E. A. A Vocabulary Test. Pop. Sci. Mo., 1907, 70, 157-164.
- 537. Kitson, H. D. Psychological Tests for Lip-Reading Ability. Volta Rev., 1915, 17, 471-476.
- 538. Kitson, H. D. Psychological Tests and Vocational Guidance. School Rev., 1916, 24, 207-214.

Promising and unpromising uses of tests for vocational guidance.

 539. Kitson, H. D. Psychological Measurements of College Students. School and Soc., 1917, 6, 307-311.
 A program for the study of the individual college student, including a system et

A program for the study of the individual conege student, including a system of psychological tests conducted by the author.

- 540. Kitson, H. D. Scientific Study of the College Student. Psychol. Monog., 1917, 23, No. 1. Pp. 81. See No. 61. A program looking toward the realization of the "ideal of individualized instruction." Includes a description and discussion of tests for college students.
- 541. Kohnky, E. Preliminary Studies of the Effect of Dental Treatment upon the Physical and Mental Efficiency of School Children. J. of Educ. Psychol., 1913, 4, 571-578.

Two-fifth grade classes of the same school were selected for this comparison. The tests used were tapping, cancellation, rote memory and substitution. The experimental class showed its superiority over the control class in all the physical tests and in all but one of the psychological tests.

- 542. Knox, H. A. A Test for Adult Imbeciles and Six-Year-Old Normals. N. Y. Med. J., 1913, 98, 1017-1018. Two form-board tests.
- 543. Knox, H. A. Two New Tests for the Detection of Defectives. N. Y. Med. J., 1913, 98, 522-524. Visual comparison tests and the author's modification of the Healy construction test A.
- 544. Knox, H. A. A Comparative Study of the Imaginative Powers in Mental Defectives. Med. Rec., 1914, 85, 748-751. <sup>25</sup> average and <sup>25</sup> mentally deficient Italians tested by the ink blot test.
- 545. Lahy, J. M. Les conditions psychophysiologiques de l'aptitude an travail dactylographique. J. de Physiology, 1913. Correlation of certain tests with practical ability.
- 546. Ley, A., et Menzerath, P. L'étude expérimentale de association des idées dans les maladies mentales. Gand: Van der Haeghen, 1911. Pp. 200.
- 547. Lindley, M. A Picture Test. Training School Bull., 1918, 14, 156-161. A completion test ("the flower game") tried out for its value as an intelligence test with 70 feebleminded children.
- 548. Link, H. C. An Experiment in Employment Psychology. Psychol. Rev., 1918, 25, 116-127.

An experiment conducted by the Winchester Repeating Arms Company. The correlation of eight tests with the output in two types of work.

549. Lipsky, A. School Guidance of Menal Tests. School and Soc., 1916, 3, 320-324.

Correlations between certain mental tests and success in foreign language work studied. The tests used were a specially devised memory test, some of the Woodworth and Wells "Association Tests" and a cancellation test.

550. Lobsien, M. Intelligenzprüfungen auf Grund von Gruppenbeobachtungen. Langensalza: Beltz, 1914. Pp. 59.

40 pupils about ten years of age tested by the group method. The method of testing compared with the individual. Correlations between teachers' estimates and test results studied.

551. Lodge, R. C., and Jackson, J. L. Reproduction of Prose Passages. Psychol. Clin., 1916, 10, 128-145.

A study of immediate memory. Includes a study of age and sex differences and a comparison of qualitative and quantitative methods of scoring.

552. Lough, J. E. Experimental Psychology in Vocational Guidance. Proceedings of the Second National Conference on Vocational Guidance. New York: 1913, 89-96.

"In vocational tests the functioning of the mind will be more significant than mere knowledge." A substitution test was used to measure the subjects' ability to form habits. Results correlated with those in typewriting, stenography, etc.

553. Luckey, B. M. Correlation between Form Board Improvement and Ability to Improve Industrially. Training School Bull., 1918, 14, 140-142.

"Very strong evidence of the value of the Form Board as a diagnostic test of the industrial ability in feebleminded children."

554. Maloney, W. J. On the Reckoning Test and its Uses in Psychiatry. Rev. of Neur. and Psychiat., 1911, 9, 366-377.

A discussion and description of Kracpelin's reckoning test. Reviews the work already done with it and makes suggestions for its application in the study of mental diseases.

555. Manchester, G. S. Experiments on the Unreflective Ideas of Men and Women. Psychol. Rev., 1905, 12, 50-66.

A study of sex differences by means of the association test-continuous method.

- 556. Martin, M. A. The Transfer Effects of Practice in Cancellation Tests. Arch. of Psychol., 1915, 4 (No. 32). Pp. 68.
- 557. Marvin, W. T. A Comparison of Some Mental Measurements with the Standing of Students in Two College Courses. Training School Bull., 1911, 8, 66-69. An investigation to determine how closely grades in logic and psychology would ormet with grades the start of texture of the second s

agree with results from two sets of tests: 1, opposites for common-place words expressing abstract relations; 2, memory for letters, words and sentences.

- 558. Mateer, F. Some Criteria for the Evaluation of Mental Tests and Test Series. Mental Hygiene, 1917, 1, 241-251.
- 559. Mayer, A., and Orth, J. Zur qualitativen Untersuchung der Association. Zsch., f. Psychol., 1901, 26, 1-28.
- 560. McCall, W. A. Correlation of Some Psychological and Educational Measurements. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 79. Pp. 87. Study based on the results of testing 88 children from two 6B classes in a New York City public school. An extended experiment in group testing.

## 561. McComas, H. C. Some Tests for Efficiency of Telephone Operators. J. of Phil., Psychol., and Sci. Methods. (Referred to by Hollingworth in Vocational Psychology.) Used a test of the "vocational miniature" type, i. e., a miniature switchboard.

Used a test of the "vocational miniature" type, i.e., a miniature switchboard, and put the subjects through actual calls and responses.

- 562. Mead, C. D. The Relations of General Intelligence to Certain Mental and Physical Traits. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916. Pp. 117. See No. 71. A comparative study of normal and feebleminded children as regards age of walking and talking, height and weight, strength of grip and dextrality, perception (cancellation test) and memory for related and unrelated words. The feebleminded children were also tested for ability to form abstract notions and for power of association.
- 563. Meumann, E. Intelligenzprüfungen an kindern der Volksschule. Die Experimentelle Pädagogik, 1905, 1, 35-101.

Tested 800 Zurich school children for their memory for concrete and abstract. Emphasizes the degree of understanding the abstract as a measure of intelligence.

564. Meumann, E. Ueber eine neue Methode der Intelligenzprüfung und über den Wert der Kombinationsmethoden. Zsch. f. päd. Psychol., 1912, 13, 145-163.

> The test of constructing a sentence, certain words being given. Meumann finds it a good test of intelligence and instructive also when studied in its qualitative aspect.

565. Miles, W. R., and Butterworth, J. E. A Tentative Standardization of a Completion Test. J. of Educ. Psychol., 1916, 7, 329-336. "The aim of the study was to determine as far as possible the relative difficulty

of the various elisions of one of the widely used completion tests."

- 566. Monroe, W. S. Perception of Children. Ped. Sem., 1904, 11, 498-507. A study of age and sex differences in perception by means of a description test. Over 2,000 children tested. Review of other work done and bibliography.
- 567. Moore, H. T. A Method of Testing the Strength of Instincts. Amer. J. of Psychol., 1916, 27, 227-233. A form of association test used.

- 568. Moore, R. C. Tests of Reasoning and their Relation to General Mental Ability. Rep. Brit. Assoc. Adv. Sci., 1913, 83, 684-685. (Abstract.) Reports high correlation of opposites, analogies, syllogism and argument tests with intelligence. 1,6 171
- .11 569. Mulhall, E. F. Tests of the Memories of School Children. J. of Educ. Psychol., 1917. 8, 294-302.

Following problems investigated: Improvement with age and grade and sex difference in achievement and variability.

570. Mullan, E. H. Mental Status of Rural School Children. Report of the Preliminary Sanitary Survey made in New Castle Co., Delaware, with a Description of the Tests Employed. Public Health Reports, 1916, 31, 3174-87. 101111

- 571. Mullan, E. H. Mentality of the Arriving lmmigrant. United States Public Health Service. Public Health Bull., No. 90, 1917. Pp. 132. . . 293 normal immigrants tested for the purpose of trying out methods and tests.
- 572. Murphy, G. An Experimental Study of Literary vs. Scientific Types. Amer. J. of Psychol., 1917, 28, 238-262.

The word association test was used. There were 40 subjects-27 senior students and 13 faculty members. 3. ( 0. 14

573.<sup>11</sup> Nevers, C. C. Dr. Jastrow on Community of Ideas of Men and Women. Psychol. Rev., 1895, 2, 363-367.

> A criticism, based on a modified method of Dr. Jastrow's experiment (New Rev., 1891. 5, 559). According to the author, her results are obtained from too few cases "to allow any positive deduction, but their uncompromising contradiction of Dr. Jastrow's results gives a needed warning concerning the dangers of a comparative study of the mental processes of men and women."

574. Norsworthy, N. The Psychology of Mentally Deficient Children. Arch. of Psychol., 1906, No. 1. Pp. 111. Mentally defective children compared with normal children by the use of twelve

mental and four physical tests.

- 575. Ordahl, L. E., and Ordahl, G. Qualitative Differences between Levels of Intelligence in Feeble-Minded Children. J. of Psycho-Asthen. Monog. Suppl., 1915, 1 (No. 2), 1-50. Fifteen tests used. Feebleminded children found to lack energy and capacity for voluntary effort and to be weak in degree, duration and span of attention.
- 576. Osborn, A. S. Form Blindness or the Psychology of Sight in Relation to Legal Procedure. Reprint from Vol. 19, No. 12, Case and Comment, Rochester, N. Y.

Tests of identification of handwriting and typewriting.

577. Otis, M. Study of Association in Defectives. J. of Educ. Psychol., 1915. 6, 271-288.

> A comparison with normal subjects. Five types of response studied and graphically presented.

578. Parsons, C. J. Children's Interpretations of Ink-Blots. (A Study in Some Characteristics of Children's Imagination.) Brit. J. of Psychol., 1917. 9, 74-92.

> 52 boys and 45 girls between seven and seven and a half years of age tested with the first ten of Whipple's standardized ink blots. Sex differences.

A sifting method tried; used three short tests with longer re-examination when necessary. 12316 12

579. Paschal, F. C. A Report on the Standardization of the Witmer Cylinder Test. Psychol. Clin., 1918, 12, 54-59.

Results from over 2,200 subjects, children and adults of both sexes. "The especial value of the Witmer Cylinder Test lies in the degree to which the mental steps are represented by the physical steps."

- 580. **Paschal, F. C.** The Witmer Cylinder Test. Hershey, Pa.: The Hershey Press, 1918. Pp. 54. See reference above.
- 581. Pear, T. H., and Wyatt, S. The Testimony of Normal and Mentally Defective Children. Brit. J. of Psychol., 1913-14, 6, 387-419. An interesting and very carefully worked-out "event" test used.
- 582. Peterson, A. M., and Doll, E. A. Sensory Discrimination in Normal and

Feeble-Minded Children. An Experimental Study of Discrimination of Lifted Weights in Relation to Mental Age. Training School Bull., 1914, 11, 110-118, 135-144.

Results are obtained in the examination of 203 inmates of the Training School at Vineland, N. J., and of 262 normal children of the same chronological ages as the "mental ages" of the defectives. "An implication which the results have for present-day pedagogy" is indicated.

583. Peterson, H. A. Correlation of Certain Mental Traits in Normal School Students. Psychol. Rev., 1908, 15, 323-338.

An investigation in the field "of the so-called higher processes, in particular some which play a leading part in acquiring knowledge."

584. Peterson, H. A. The Generalizing Ability of Children. J. of Educ. Psychol., 1914, 5, 561-570.

Describes new tests for generalizing ability. Age difference studied.

- 585. Peterson, J. The Effect of Attitude on Immediate and Delayed Reproductions: A Class Experiment. J. of Educ. Psychol., 1916, 7, 523-532. An attempt to determine quantitatively the effect of the attitude "intent to learn."
- 586. Pintner, R. The Standardization of Knox's Cube Test. Psychol. Rev., 1915, 22, 377-401.

867 normal children and a few normal adults and 463 feebleminded individuals, all of whom had been graded by the Binet scale, tested. Curves showing the comparative difficulty of the different lines of the test and percentages of correct performances for different combinations of the lines. Test standardized for ages 5 to 16, inclusive, on the basis of the kind and the number of lines passed.

587. Pintner, R., and Paterson, D. G. A Class Test with Deaf Children. J. of Educ. Psychol., 1915, 6, 591-600.

The Digit Symbol test applied as a class test to 325 pupils in a school for the deaf. Pyle's norms used as a basis of comparison. See "Learning Tests with Deaf Children."

588. Pintner, R., and Paterson, D. G. The Formboard Ability of Young Deaf and Hearing Children. Psychol. Clin., 1915, 9, 234-237.

Based on the records of 18 seven-year-old deaf children and 14 six-year-old hearing children, tested on entering school and retested a year later. The results indicate that the average deaf child "is apt to be about a year backward in form-board ability." The rankings of the two years correlated highly.

589. Pintner, R., and Anderson, M. M. The Müller-Lyer Illusion with Children and Adults. J. of Exp. Psychol., 1916, 1, 200-210. An investigation to determine whether this illusion can be used as "a test for suggestion which will correlate with general intelligence as measured by increase in

chronological age." Result negative.

590. Pintner, R., and Paterson, D. G. The Ability of Deaf and Hearing Children to Follow Printed Directions. Ped. Sem., 1916, 23, 477-497. Woodworth and Wells easy directions tests used. 591. Pintner, R., and Paterson, D. G. A Discussion of the Index of Formboard Ability. Psychol. Clin., 1916-17, 10, 192-198.

The authors conclude that the average of the first three trials is the best index.

592. Pintner, R., and Paterson, D. G. A Measurement of the Language Ability of Deaf Children. Psychol. Rev., 1916, 23, 413-436.

570 deaf children tested with Scale A of the Trabue Language scale. Language ability is studied in relation to the method of instruction used, whether oral or manual, and the congenital deaf are compared with the adventitious deaf. "After thirteen years of instruction the language ability of the average deaf child does not reach that of a fifth-grade pupil in our hearing schools."

593. Pintner, R., and Paterson, D. G. Learning Tests with Deaf Children. Psychol. Monog., 1916, 20, No. 88. Pp. 57.

Two substitution tests, the digit-symbol and the symbol-digit, were applied to 1,000 deaf children. The authors conclude that the deaf child is about three years behind the hearing child in learning ability.

594. Pintner, R. A Mental Survey of the School Population of a Village. School and Soc., 1917, 5, 597-600. An attempt to use group tests "for a rough mental survey of a school system."

154 children tested. Tests employed: Rote memory, digit-symbol, symbol-digit, word building and easy opposites.

- 595. Pintner, R. The Mentality of the Dependent Child, together with a Plan for a Mental Survey of an Institution. J. of Educ. Psychol., 1917, 8, 221-228. See No. 84.
- 596. Pintner, R., and Anderson, M. M. The Picture Completion Test. Baltimore: Warwick & York, Educ. Psychol. Monog., 1917, No. 20. Pp. 101. Test applied to over 1,500 children, method of scoring standardized, norms for each age from 6 to 14 established, sex differences, connections with social environment and school standing ascertained.
- 597. Pintner, R., and Paterson, D. G. A Scale of Performance Tests. New York: Appleton, 1917. Pp. 218. The scale consists of 15 tests, none of which require verbal responses. The verbal directions used are very brief and when necessary can be dispensed with. Tests standardized and norms established.
- 598. Pintner, R., and Paterson, D. G. A Comparison of Deaf and Hearing Children in Visual Memory for Digits. J. of Exp. Psychol., 1917, 2, 76-88.

"Deaf children as a group have an abnormally poor memory."

599. Pintner, R., and Toops, H. A. A Mental Survey of the Population of a Workhouse. J. of Delinq., 1917, 2, 278-287. A demonstration of the "practical advantage of the group test method for mental "In "It".

survey purposes." The group tests used were the digit-symbol, opposites, cancellation, easy directions and hard directions.

600. Pintner, R. The Mental Indices of Siblings. Psychol. Rev., 1918, 25, 252-255.

Six tests: memory for concrete words, digit-symbol, symbol-digit, easy opposites and cancellation.

601. **Pyle, W. H.** A Psychological Study of Bright and Dull Pupils. J. of Educ. Psychol., 1915, **6**, 151-156.

Subjects selected according to school markings for the year. It is concluded that significant mental differences between bright and dull pupils "can be ascertained, by means of simple group tests."

602. Pyle, W. H. Standards of Mental Efficiency. J. of Educ. Psychol., 1913, 4, 61-70.

A consideration of the most desirable tests for determining ability.

- 603. Pyle, W. H. The Examination of School Children. A Manual of Directions and Norms. New York: Macmillan, 1913. Pp. 70. Group tests for the examination of all the children of a school system. Physical tests also included.
- 604. **Pyle, W. H.** The Mind of the Negro Child. School and Soc., 1915, 1, 357-360.

408 negro children tested and their norms compared with those of white children. The effect of social position varies with the test. In both races the girls are superior, but there is a tendency for this difference to decrease with increasing age.

605. **Reaney, M. J.** The Correlation between General Intelligence and Play Ability as Shown in Organized Group Games. Brit. J. of Psychol., 1914, 7, 226-252.

Finds a definite correlation. Includes suggestions concerning the organized game as a part of the school curriculum.

- 606. Report of the Committee of the American Psychological Association on the Standardizing of Procedure in Experimental Tests. Psychol. Monog., 1910, 13, No. 53. Pp. 107.
- 607. Ries, G. Beiträge zur Methodik der Intelligenzprüfung. Zsch. f. Psychol., 1910, 56, 321-343. Two tests studied. The second one, the author's B-method, or cause-effect con-

trolled association test, yielded high correlation with estimated intelligence.

- 608. Robinovitch, J. Alienés et anormaux. Paris: Alcan, 1910.
- 609. Roemer, F. Assoziationsversuche an geistig zurückgebliebenen Kindern. Fortschritte der Psychol., 1914, 3, 43-101. Comparison of 120 mentally retarded with 441 normal children in a free association test. An attempt to use the favorite or most frequent responses as a possible means for the diagnosis of feeblemindedness. Oral, individual method used
- 610. Rogers, H. W. Psychological Tests for Stenographers and Typewriters.
   J. of Appl. Psychol., 1917, 1, 268-274.
   "The present study represents an attempt to actually test out in practice the

method of 'empirical vocational tests.'"

- 610A. Rosanoff, I. R., and Rosanoff, A. J. A Study of Association in Children. Psychol. Rev., 1913, 20, 43-89. Correlation with age, mental capacity and school grade studied. Typical test records for ages from 4 to 15 given.
- 611. Rosanoff, A. J. Preliminary Report of a Higher Scale of Mental Measurement. State Hospital Bull., 1914-15, 7, 318-327. A free association test to measure the "environment influence" of education.
- 612. Rosanoff, A. J. Evaluation of Reactions in an Association Test Designed for the Purpose of Higher Mental Measurements. State Hospital Bull., 1915, 8, 215-217.

Supplementary to the report cited just above. Report on the reactions to three words of the 100-word list in an attempt to work out an "objective evaluation" of the reactions. Concludes that a "special selection of subjects according to education" is necessary in order to get such a standard.

613. Rowland, E. Report on Experiments at the State Reformatory for Women at Bedford, New York. Psychol. Rev., 1913, 20, 245-249.

Thirty-five girls tested. The tests were nine in number and included reaction time, memory, attention and direct and indirect suggestibility. Results compared with the superintendent's classification of the girls and results obtained with the same tests when given to college students.

- 614. Rowland, E., and Lowden, G. Report of Psychological Tests at Reed College. J. of Exp. Psychol., 1916, 1, 211-217. All the students were tested individually for three years. The list of tests as finally revised was found to have made a selection of the better students.
- 615. Rusk, R. R. Experiments on Mental Association in Children. Brit. 1. of Psychol., 1909-10, 3, 349-385. Eleven test series, representing as many types of free and controlled association, were used.
- 616. Schmitt, C. Standardization of Tests for Defective Children. Psychol. Monog., 1915, 19, No. 83. Pp. 81.

The purpose of this investigation was "to provide data for the standardization of the Healy-Fernald tests."

617. Scott, C. A. General Intelligence or "School Brightness." J. of Educ. Psychol., 1913, 4, 509-524.

> A study of the intercorrelation between the average of six tests, teachers' judgments after six months' acquaintance, and the judgments of the students themselves. "It would seem that by means of such tests the teacher is placed in the position of distinct advantage in getting more quickly to understand the nature and capacity of his pupils."

- 618. Scott, W. D. Selection of Employees by Means of Quantitative Determinations. Annals of the Amer. Acad. of Polit. and Soc. Sci., Philadelphia, 1916, Publ. No. 999, 182-193.
- 619. Scott, W. D. A Fourth Method of Checking Results in Vocational Selections. J. of Appl. Psychol., 1917, 1, 61-66. A check for estimating the value of vocational tests.
- 620. Scott, W. D. The Scientific Selection of Salesmen. Advertising and Selling, 1915-16, 25, 94-96.
  "A series of tests made by big corporations representing the most important development in sales management in the past dozen years."
- 621. Seashore, C. E. The Measurement of a Singer. Science, 1912, 35, 201-212. (See also "Psychology in Daily Life.") A program of tests, grouped under the titles, sensory, motor, associational, and affective, for the measurement of musical ability.
- 622. Seashore, C. E. The Measurement of Musical Talent. The Musical Quar., 1915 (Jan.) Pp. 20. Discussion, description and some results from the discrimination of pitch test. Sample diagnostic charts.
- 623. Seashore, C. E. Vocational Guidance in Music. Univ. of Iowa Monog., First Series, 1916, No. 2. Pp. 11.
- 624. Seashore, C. E., and Mount, G. H. Correlation Factors in Musical Talent and Training. Psychol. Monog., 1918, 25, No. 108, 47-92. Based on results obtained from tests of musical ability.
- 625. Sharp, S. Individual Psychology: A Study in Psychological Method. Amer. J. f Psychol, 1899, 10, 329-391. See No. 103.
- 626. Shaw, J. C. A Test of Memory in School Children. Ped. Sem., 1896, 4, 61-78.

A logical memory test used. Detailed tabulation of results according to grades.

627. Simpson, B. R. Correlations of Mental Ability. New York: Columbia Univ., Teachers College Contrib. to Educ., 1912, No. 53. Pp. 122. Gave fifteen tests to two groups of adults, the first consisting of 17 professors and advanced students, the second of 20 men who had never held any position

demanding a high grade of intelligence. 60

- 628. Spearman, C. "General Intelligence" Objectively Determined and Measured. Amer. J. of Psychol., 1904, 15, 201-292.
  - Tests of sensory discrimination used. A study in correlation.
- 629. Stecher, L. I. The Effect of Humidity on Nervousness and on General Efficiency. Arch. of Psychol., 1916, No. 38. Pp. 94.

Twenty-nine subjects were tested for accuracy of movement, speed of tapping, speed and accuracy in aiming, typewriting, mirror tracing, hand and arm steadiness, addition, and mental multiplication. Detailed description of the tests, together with a presentation of results in tables and curves and a chapter on correlations. So far as the primary aim of the investigation is concerned, the results are negative.

630. Stelzner, H. Die Psychopathischen Konstitutionen und ihre sociologische Bedeutung. 1911.

Compiled a series of 13 tests.

631. Stenquist, J. L., Thorndike, E. L., and Trabue, M. R. The Intellectual Status of Children Who are Public Charges. Arch. of Psychol., 1915, No. 33. Pp. 52.

To 183 boys and 82 girls. 9 to 16 years of age, were applied four tests—the Stenquist test of mechanical ability, the Trabue completion test, the Goddard revision of the Binet scale, and a reading test. In the last three tests the dependent children were found to be "much below ordinary children of corresponding ages." The same is true of the construction test, but to a less degree. In the supplementary chapter entitled "Heredity versus Environment as the Cause of the Low Intellectual Status of Dependent Children." the authors report measurements of 18 pairs of siblings.

- 632. Stevenson, J. A. Correlation Between Different Forms of Sensory Discrimination. J. of Appl. Psychol., 1918, 2, 26-42. Four tests employed-discrimination of pressure and length of lines, auditory and brightness discrimination.
- 633. Strong, E. K., Jr. An Interesting Sex Difference. Ped. Sem., 1915, 22, 521-528.

A test for perception of details in advertisements was given to 20 men and 20 women. The women saw 50 per cent, more details than did the men.

634. Strong, E. K., Jr. A Comparison between Experimental Data and Clinical Results in Manic-Depressive Insanity. Amer. J. of Psychol., 1913, 24, 66-98.

Besides analysis of results, the report contains criticisms of the tests used.

- 635. Strong, E. K., Jr. Effects of Hookworm Disease on the Mental and Physical Development of Children. New York: The Rockefeller Foundation. Intern. Health Commission. 1916. Pp. 121. 115 children measured physically and mentally. Those who had suffered from the disease were retarded, the retardation being greater the longer a child had
- suffered from the disease.
  636. Strong, E. K., and Gilchrist, E. P. A Method of Recording Errors in Form Board Tests. Psychol. Rev., 1917, 24, 239-241.
- 637. Sunne, D. The Relation of Class Standing to College Tests. J. of Educ. Psychol., 1917, 8, 193-211.

The object of the testing was to compare the achievement of Newcomb College girls with results obtained elsewhere and to correlate the tests with their class grades.

#### 638. Sylvester, R. H. The Form Board Test. Psychol. Monog., 1915, 15, No. 65. Pp. 56.

The purpose of this investigation "was to analyze certain features of the formboard test psychologically, to determine upon the best method of applying it, and to work out a standard interpretation of its results." 605 retarded and defective children and 500 selected normal children tested.

- 639. Tanner, A. The Community of Ideas of Men and Women. Psychol. Rev., 1896, 3, 548-550. A criticism, without original experimental results, of both the Wellesley and Wisconsin results.
- 640. Terman, L. M. Genius and Stupidity. A Study of Some of the Intellectual Processes of Seven "Bright" and Seven "Stupid" Boys. Ped. Sem., 1906, 13, 307-373.

An intensive study. Tests of motor ability and memory, interpretation of fables, and pedagogical tests of mathematical and language ability were used. The bright childre: were found to be superior to the stupid in all mental tests and inferior in all the motor tests.

641. Thompson, G. H., and Smith, F. W. The Recognition Vocabulary of Children. Brit. J. of Psychol., 1915, 8, 48 51.

Reports tests of 467 children, ranging in age from 9 to 14.

642. Thorndike, E. L. Relation between Initial Ability and Improvement in a Substitution Test. School and Soc., 1915, 1, 429-431.

Status attained by an individual "from any amount of practice is highly prophetic of the status which he will attain from any given amount of additional practice."

643. Thorndike, E. L., McCall, W. A., and Chapman, J. C. Ventilation in Relation to Mental Work. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 78. Pp. 83.

> The tests employed were the Woodworth-Wells color-naming test and two of their cancellation tests, Hollingworth's list of hard opposites, a Thorndike addition test and a mental multiplication test. The results, as far as the effect of ventilation is concerned, are consistently negative.

644. Thorndike, E. L., McCall, W. A., and Ruger, G. J. The Effect of Outside Air and Recirculated Air upon the Intellectual Achievement and Improvement of School Pupils. School and Soc., 1916, 3, 679-684.
88 New York City children of 6B grade were, by the application of six tests, divided into two groups of approximately equal ability. One of these groups was

then assigned to a room in which ventilation was by means of outside air and the other to a room in which recirculated air was used. Each group was ther subjected to an extensive experiment in group testing, occupying one-half hour every school day for about three months.

645. Thorndike, E. L., and Ruger, G. J. The Effects of Outside Air and Recirculated Air upon the Intellectual Achievement and Improvement of School Pupils: A Second Experiment. School and Soc., 1916, 4, 260-264.

Subjects not the same as in the first experiment.

646. Town, C. H. A Study of Speech Development in Two Hundred and Eighty-five Idiots and Imbeciles. J. of Psycho-Asthenics, 1912, 17, 7-15.

A list of 320 selected words used. Since the low grade defectives were unable to speak, the ability to understand spoken words was considered as evidence of a vocabulary.

- 647. Town, C. H. An Experimental Study of the Suggestibility of Twelveand Fifteen-Year-Old Boys. Psychol. Clin., 1916, 10, 1-12. An attempt to discover something definite about the relation of suggestibility to age. Five tests, devised by Binet, used.
- 648. Trabue, M. R. Completion-Test Language Scales. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 77. Pp. 118. A development of the Ebbinghaus completion tests. A series of standardized scales in which the steps are approximately equal. The statistical methods employed in deriving the scales and in measuring the intervals between the steps are presented.

- 649. **Travis, A.** Reproduction of Short Prose Passages: A Study of Two Binet Tests. Psychol. Clin., 1915, 9, 189-209. An experiment in group testing on 69 men and 59 women.
- 650. Vickers, W., and Wyatt, S. Grading by Mental Tests. J. of Exp. Ped., 1913, 2, 187-197.

Three tests studied, analogies, opposites, and sentence completion.

- 651. Wallin, J. E. W. Psycho-Motor Norms for Practical Diagnosis. Psychol. Monog., 1916, 22, No. 94. Pp. 102. "A study of the Seguin Form-Board, Based on the Records of 4072 Normal and Abnormal Boys and Girls, with Yearly and Half-Yearly Norms."
- 652. Wallin, J. E. W. Age Norms of Psycho-Motor Capacity. J. of Educ. Psychol., 1916, 7, 17-24.

See "Psycho-motor Norms for Practical Diagnosis"

- 653. Wallin, J. E. W. The Peg Formboards. Psychol. Clin., 1918, 12, 40-53. A very simple graded series of four form boards tried out on 101 children ranging in age from 9 months to 8 years and 2 months. The author is convinced of its "practical utility in the examination of young normal and of young or old low grade subjects."
- 654. Warburg, F. Das Farbenbenennungsvermögen als Intelligenzprüfung bei Kindern. Münch. med. Wock., 1909, 56, 2511-2513. Tested over a thousand children, and found agreement between the results of his color-naming test and the grading of the pupils by teachers.
- 655. **Warburg, F.** The Naming of Colors as a Test of Intelligence Among Children. Intern. Arch. f. Schulhyg., 1910. **6**, 183-184. His findings are positive (Kohs).
- 656. Webb, E. Character and Intelligence. Brit. J. of Psychol., Monog. Suppl., 1915, 1, No. 3. Pp. 99. See No. 128.
- 657. Weidensall, J. The Mentality of the Criminal Woman. A Comparative Study of the Criminal Woman, the Working Girl, and the Efficient Working Woman in a Series of Mental and Physical Tests. Baltimore: Warwick and York, Educ. Psychol. Monog., 1916, No. 14. Pp. 332.

The Woolley tests, supplemented by tests of writing, reading, following directions, some of the Healy-Fernald tests and mirror tracing, were applied to 88 inmates of the Bedford Hills Reformatory and to 188 efficient college maids. The results from the studies of the Bureau of Vocational Guidance at Cincinnati were available for comparison are presented along with the results from the two groups of the present investigation in tables and charts.

- 658. Weigl, F. Intelligenzprüfung von Hilfsschülern nach der Testmethode. Beitr. z. Kinderfrschg. und Heilerzg., 1913, Heft. 111. Also Zsch. f. Kinderfrschg., 1913, 18, 374-380, 455-462, 509-530. See No. 352.
- 659. Wells, F. L. Normal Performance in the Tapping Test. Amer. J. of Psychol., 1908, 19, 437-483.
   "This is an attempt to further standardize a psychological measure of a relatively

high degree of simplicity, precision and responsiveness."

 Wells, F. L. Alternate Methods for Mental Examiners. J. of Appl. Psychol., 1917, 1, 134-143.

Description of tables of alternate material demanded by many types of investigation "as a precaution against the vitiation of results through the subject's foreknowledge."

661. Whipple, G. M. Reaction Time as a Test of Mental Ability. Amer. J. of Psychol., 1904, 15, 489-498.

An attempt to show "that reaction-time tests, of whatever type, cannot be successfully used in tests of school children and fail to indicate mental ability."

- 662. Whipple, G. M. Vocabulary and Word-Building Tests. Psychol. Rev., 1908, 15, 94-105.
- 663. Whipple, G. M. A Range of Information Test. Psychol. Rev., 1909, 16, 347-351. Test consists of 100 selected words each definitely representative of some specific field of knowledge or activity.
- 664. White, W. A. Scheme for a Standard Minimum Examination of Mental Cases for Use in Hospitals for the Insane. Amer. J. of Insan., 1910-11, 67, 17-24.
- 665. Whitley, M. T. An Empirical Study of Certain Tests for Individual Differences. Arch. of Psychol., 1911, No. 19. Pp. 146. About 45 simple tests investigated and criteria upon which the selection of tests should be based discussed. In the historical review lists of tests used by former investigators are given.
- 666. Widen, L. E. A Comparison of the Binet-Simon Method and Two Discrimination Methods for Measuring Mental Age. Thesis, Graduate College, Iowa City, 1911.
- 667. Winch, W. H. Some New Reasoning Tests Suitable for the Mental Examination of School Children. Brit. J. of Psychol., 1914, 7, 190-225. Tests which demand insight into various forms of logical relation.
- 668. Winch, W. H. Mental Fatigue in Day School Children as Measured by Immediate Memory. J. of Educ. Psychol., 1912, 3, 18-28, 75-82. Found high reliability coefficients in tests of visual and auditory memory for letters. Tested a group of 13-year-old boys and another group averaging 11 years of age.
- 669. Winch, W. H. Children's Perceptions. An Experimental Study of Observation and Report in School Children. Baltimore: Warwick and York, Educ. Psycol. Monog., 1914, No. 12. Pp. 245. "What children do and do not observe at different stages of their mental development" investigated by means of Stern's "aussage" test.
- 670. Winteler, J. Experimentelle Beiträge zu einer Begabungslehre. Exp. Päd., 1906, 2, 1-48, 147-247.

Eight 10-year-old boys tested by free and controlled association tests.

- 671. Wissler, C. The Correlation of Mental and Physical Tests. Psychol. Monog., 1901, 3, No. 16. Pp. 62. "Laboratory mental tests show little intercorrelation in the case of college students." All the coefficients of correlation found in this investigation are brought together in a concluding summary. Sex differences in each test considered.
- 672. Woodrow, H., and Lowell, F. Children's Association Frequency Tables. Psychol. Monog., 1916, 22, No. 6. Pp. 110. One thousand school children from 9 to 12 years of age tested.
- 673. Woodrow, H. Practice and Transference in Normal and Feeble-Minded Children. J. of Educ. Psychol., 1917, 8, 85-96, 151-165.
- 674. Woodworth, R. S., and Wells, F. L. Association Tests. Psychol. Monog., 1911, 13, No. 57. Pp. 85. A part of the "Report of the Committee of the American Psychological Association

on the Standardizing of Procedure in Experimental Tests," a supplement to a former report by that committee. Twenty tests studied, each being applied to a small number of subjects.

675. Woolley, H. T. The Issuing of Working Permits and its Bearing on Other School Problems. School and Soc., 1915, 1, 726-733.

Further discussion of the investigation of which the Woolley-Fischer monograph reports a part. The tests are discussed in connection with the comparison of the school and working groups. The positive correlation between the tests and school grade is mentioned in connection with the wage-earning capacity of the children.

676. Woolley, H. T. A New Scale of Mental and Physical Measurements for Adolescents, and Some of its Uses. J. of Educ. Psychol., 1915, 6, 521-550.

The tests, technique for their administration and evaluation described in the Woolley-Fischer monograph. Each test is stated in terms of 10 percentiles for girls and boys separately. A child then gets his rank in each test according to the group within which his records fall. The results given in percentiles and averages of percentile ranks are shown in tables and graphs.

677. Woolley, H. T., and Fischer, C. R. Mental and Physical Measurements of Working Children. Psychol. Monog., 1914, 18, No. 77, Pp. 247.

The larger investigation, of which this monograph reports a part, originated in a desire to study the child labor problem. This report is concerned with the results obtained by testing 753 fourteen-year-old children when they came for their work certificates and by retesting 679 of them one year later. The technique for administering the 15 tests (9 physical and 6 mental), and for evaluating and summarizing the results is described in detail. The results of each test are given in both tabular and graphical form, showing the child's age, sex, grade, and school (public or parochial). Each test is found to correlate positively with school grade. The sexes are compared in connection with each test. Only one of the mental tests gives a large sex difference—in the opening of the puzzle box the hoys are greatly superior.

678. Wyatt, S. The Inter-Relation of Memory. J. of Exper. Ped., 1913-14, 2, 292-298.

Studies intercorrelations with four memory tests in a search for a general memory factor. Result negative

679. Wyatt, S. The Quantitative Investigation of Higher Mental Processes. Brit. J. of Psychol., 1913, 6, 109-133.

"The primary aim of this investigation has been to ascertain to what extent different tests correlate with a subjective estimate of intelligence."

- 680. Young, H. H. Physical and Mental Factors Involved in the Formboard Test. Psychol. Clin., 1916, 10, 149-167. The author places the form board at the head of the list of clinical tests because of the various physical and mental factors involved in its performance. An attempt is made to include in one chart many of the more elementary factors.
- 681. Young, H. H. The Witmer Formboard. Psychol. Clin., 1916, 10, 93-111. Descriptions of the test and the standard method of giving it. Four tables show the increase of form board ability with age, the necessity of half yearly norms up to age 13, and sex differences.
- 682. Young, M. H. Correlation of the Witmer Formboard and Cylinder Test. Psychol. Clin., 1916, 10, 112-116. The results were obtained from 55 men and 59 women, undergraduate students in psychology. The correlation is not high.
- 683. Yoakum, C. S., and Calfee, M. An Analysis of the Mirror-Drawing Experiment. J. of Educ. Psychol., 1913, 4, 283-292.

. Mirror drawing used to test quickness of learning and its correlation with sex and intelligence studied.

684. Ziehen, T. Die Ideenassoziation des Kindes. Berlin: Reuther u. Reichard, 1898. Pp. 66.

An investigation to determine the nature of children's associations resulting from a given initial idea. Children from 8 to 14 years of age.

685. Ziehen, T. Die Prinzipien und Methoden der Intelligenzprüfung. Berlin, 1911. Pp. 94.

Classification and description of the questions and tests used in his clinic.

(In the following section the name of the test is given in **bold-face type**. The numbers in brackets following the authors' names are the numbers of the articles previously cited.)

Adaptation Board: Goddard (482), Pintner & Paterson (597).

- Arithmetical Calculation: Aitkins & Thorndike (391), Bonser (409), Brigham (417), Burt (422), Chambers (435), Claparède (439), Descoeudres (450), Franz (467), Hollingworth (503), Jeffrey (516), Jones (520), King & M'Crory (534), Kitson (540), Maloney (554), Mullan (570), Pyle (602), Scott (620), Simpson (627), Stecher (629), Strong (635), Terman (640), Thorndike, McCall & Chapman (643), Thorndike, McCall & Ruger (644) Wells (660). Woodworth & Wells (674), Wyatt (679).
- Association, Controlled: Aitkins & Thorndike (391), Anderson & Hilliard (392), Bickersteth (400), Bingham (406), Bonser (409), Burt (421, 422), Burt & Moore (423), Carley (428), Carpenter (429), Cattell (431), Chambers (435), Chase (437), Chassel (438), Dana (445), English (462), Haines (493), Healy & Fernald (497), Hollingworth (503), Hollingworth (505), Huey (507), James (511), Jones (519), Jones (520), King & M'-Crory (534), Kitson (540). Lipsky (549), Marvin (557), McCall (560), Moore (568), Norsworthy (574), Pintner (594, 595), Pintner & Toops (599), Pintner (600), Pyle (602, 603), Report of Committee, Amer. Psychol. Assn. (606), Ries (607), Rowland & Lowden (614), Rush (615), Schmitt (616), Scott (620), Simpson (627), Strong (635), Sunne 637), Thorndike, McCall & Chapman (643), Thorndike, McCall & Ruger (644), Vickers & Wyatt (650), Weidensall (657), Wyatt (679).
- Association, Free: Andrews (393), Burt & Moore (423), Calkins (426), Cattell & Bryant (432), Cattell (433), Chase (437), Cornell (443), Dana (445), Descoendres (450), Eastman & Rosanoff (458), Franz (467), Goett (480) Hollingworth & Poffenberger (506), Huey (507), Jastrow (512, 513). Kelley (525), Kent & Rosanoff (528), Ley & Menzerath (546), Manchester (555), Mead (562), Moore (567), Murphy (572), Nevers (573), Otis (577), Pyle (602, 603), Report of Committee, Amer. Psychol. Assn. (606), Roemer (609), Rosanoff & Rosanoff (610-a), Rosanoff (611, 612), Rowland & Lowden (614), Rusk (615), Seashore (621), Tanner (639), Wells (660), White (664), Whitley (665), Winteler (670). Woodrow & Howell (672). Woodworth & Wells (674), Ziehen (684).
- Aussage: Binet & Henri (401) Chase (437), Healy & Fernald (497), Winch (669), Woolley & Fischer (677).
- Cancellation: Aitkins & Thorndike (391). Anderson & Hilliard (392), Bickersteh (400). Bingham (406), Carpenter (429), Chambers (435), Chase (437). Conway (442), Dana (445), Descoeudres (450), Doll (452), Ellis & Bingham (460), Franz (467), Hollingworth (503), Huey (507), Kitson (540), Kohnky (541), Link (548). Lipsky (549), Martin (556), Mead (562). Norsworthy (574), Pintner (595, 600), Pintner & Toops (599), Pyle (602, 603), Rowland & Lowden (614), Scott (617) Sharp (625), Simpson (627). Sunne (637), Thorndike, McCall & Chapman (643), Weidensall (657), Wissler (671), Woodrow (673), Woodworth & Wells (674). Woolley (675), Wyatt (679).

- Card Sorting: Burt & Moore (423), Calfee (425), Cornell (443), English (462), Jastrow (515), Link (548), Weidensall (657), Whitley (665), Woodrow (673).
- Color Naming: Bateman (145), Bingham (406), Cords (179), Garbini (469), Heymans & Brugmans (502), Hollingworth (503, 505), Thorndike, Mc-Call & Ruger (643), Warburg (654, 655), Whitley (665), Woodworth & Wells (674).
- Construction: Bonner (418), Bruchner (420), Dearborn, Anderson & Christiansen (446), Doll (455), Dunham (457), Goddard (483), Gwyn (490), Haines (493), Healy & Fernald (497), Katzenellenbogen (523), Kelley (526), Knox (542, 543), Paschal (579), Pintner & Paterson (597), Schmitt (616), Stenquist & Thorndike (631), Weidensall (657), Woolley & Fischer (677).
- Description of Pictures: Abelson (390), Binet & Henri (401), Carpenter (429), Cohn & Dieffenbacher (440), Descoeudres (450), Heymans & Brugmans (502), Monroe (566), Sharp (625), Strong (633).
- Directions: Bingham (406), Carley (428), Healy & Fernald (497), Huey (507), Johnson & Gregg (518), Kitson (540), Link (548), Lipsky (549), McCall (560), Pintner & Paterson (590), Pintner (595), Pintner & Toops (599), Scott (620), Weidensall (657), Wells (660). Woodworth & Wells (674), Woolley & Fischer (677).
- Form-Board: Dearborn, Anderson & Christiansen (446), Doll (456), Goddard (481, 483), Haines (493), Ide (509), Jones (520), Katzenellenbogen (523), Kephart (531), Luckey (553), Norsworthy (574), Paschal (579), Pintner & Paterson (588, 591, 597), Strong (635), Sylvester (638), Wallin (651, 652, 653), Young (680, 681, 682).
- Ink Blots: Binet & Henri (401), Kirkpatrick (535), Knox (544). Parsons (578), Pyle (602, 603), Sharp (625).
- Knox Cubes: Conway (442), Mullan (570), Pintner & Paterson (586, 597).
- McDougall's Spot Pattern: Bickersteth (400), Burt (421), English (462), Goudge (486).
- Mirror Drawing: Burt (421), Calfee (425), Stecher (629), Weidensall (657), Yoakum (683).
- Movement, Accuracy: Abelson (390), Bagley (395), Bickersteth (400), Burt (421), Burt & Moore (423), Cattell & Farrand (430), Conway (442), Descoeudres (450), Ellis & Bingham (460), English (462), Franz (467), Gates (475), Gilbert (477), Gould (487), Healy & Fernald (497), Link (548), Simpson (627), Stecher (629), Terman (640), Wissler (671).
- Movement, Rate: Abelson (390), Bagley (395), Bickersteth (400), Bingham 406), Burt (421), Burt & Moore (423), Cattell & Farrand (430), English (462), Franz (467), Gilbert (477), Healy & Fernald (497), Kelly (524), Kirkpatrick (535), Kohnky (541), Lahy (545), Link (548), Pyle (603), Seashore (621), Stecher (629), Terman (640), Weidensall (657), Wells (659), Whitley (665).
- Movement, Steadiness: Bagley (395), Conway (442), Gates (475), Lahy (545), Link (548), Stecher (629), Weidensall (657).

- Physical Measurements: Bingham (406), Burt (423), Calfee (425), Carley (428), Cattell (430), Chambers (435), Franz (467), Gilbert (477), Huey (507), Lahy (545) Pyle (603), Strong (635). Weidensall (657), Wissler (671).
- Picture Completion: Descoeudres (450), Franz (467), Gwyn (490), Healy & Fernald (497), Healy (498), Heilbronner (499), Kent (530), Lindley (547), Pintner & Anderson (596), Pintner & Paterson (597), Schmitt (616).
- Puzzles: Bingham (406, 417), Burt & Moore (423), Chase (437), Chassel (438), Descoudres (450), Healy & Fernald (497), Jones (519), Kent (529, 530), Kitson (540), Schmitt (616), Terman (640), Wells (660).
- Range of Information: Bell (399), Claparède (439), Haberman (492), King 532, 534), Scott (617), Sunne (637), Whipple (663), White (664).
- Reaction Time: Burt & Moore (423) Cattell & Farrand (430), Chase (437), Franz (467), Gates (475), Hollingworth (503, 505), Lahy (545). Rowland (613), Whipple (661), Whitley (665), Woodworth & Wells (674).
- Repetition, Discrete Elements: Anderson (392), Bickersteth (400), Binet & Henri (401), Bingham (406), Bolton (407), Bond & Dearborn (408), Bourdon (412), Burt (421, 422), Burt & Moore (423), Carpenter (429), Cattell & Farrand (430), Chambers (434, 435), Chase (437), Claparède (439), Cohn & Dieffenbacher (440), Conway (442), Cornell (443), Dana (445), Descoendres (450), English (462), Franz (467), Galton (468), Gates (471, 472, 474), Gordon (485), Haberman (492), Healy & Fernald (497) Hentschel (501), Heymans & Brugmans (502), Humpstone (508), Jacobs (510), James (511), Jones (519, 520), Kitson (540), Kohnky (541), Lipsky (549), Marvin (557), Mead (562), Meumann (563), Mulhall (569), Mullan (570), Norsworthy (574), Pintner (594, 600), Pintner & Paterson (598), Pyle (602, 603), Report of Committee Amer. Psychol. Assn. (606), Rowland (613), Rowland & Lowden (614), Scott (617), Sharp (625), Thompson (627), Strong (635), Weidensall (657), Wells (660), White (664), Whitley (665), Wissler (671), Woolley (675), Wyatt (678, 679).
- Repetition, Ideas: Abelson (390), Bickersteth (400), Bingham (406), Brigham (417), Carley (428), Carpenter (429), Chase (437), Conway (442), Dana (445), English (462), Franz (467), Gassmann & Schmidt (470), Gates (473), Gordon (485), Haberman (492), Haines (493), Healy & Fernald (497), Henderson (500), Huey (507), King & M'Crory (534), Kitson (540), Lodge & Jackson (551), Marvin (557), Mullan (570), Peterson (583), Pyle (602, 603), Report of Committee, Amer. Psychol. Assn. (606), Rowland & Lowden (614), Schmitt (616), Scott (617), Sharp (625), Shaw (626), Simpson (627), Strong (635), Travis (649), Weidensall (657), White (664), Whitley (665), Wissler (671), Woolley (678).
- Reproduction Designs: Cattell & Farrand (430), Conway (442), Haberman (492), Mulhall (569), Mullan (570), White (664), Whitley (665).
- Sensory Discrimination: Abelson (390), Bickersteth (400), Bingham (406), Bond & Dearborn (408), Burt (421, 422), Burt & Moore (423), Cattell & Farrand (430), Cattell (431). Chase (437), Descoendres (450), English (462), Gates (471, 474, 475), Gilbert (477). Kelley (524), Knox

(543), Link (548), Peterson & Doll (582), Pintner & Anderson (589), Report of Committee, Amer. Psychol. Assn. (606), Rowland (613), Scott (617), Seashore (621, 622), Seashore & Mount (624), Simpson (627), Spearman (628), Stevenson (632), Wissler (671).

- Sentence Building: Binet & Henri (401), Burt (422), Giese (476), Kitson (540), Meumann (564), Pyle (602), Rowland & Lowden (614), Sharp (625).
- Sentence Completion: Bickersteth (400), Bonser (413). Burt (422), Burt & Moore (423), Chassel (438), Cohn & Dieffenbacher (440), Dana (445), Ebbinghaus (459), Franz (467), Haines (493), Heymans & Brugmans (502), King & M'Crory (534), McCall (560), Miles & Butterworth (565), Jones (579), Pintner (592), Scott (617), Simpson (627), Stenquist, Thorndike & Trabue (631) Terman (640), Thorndike, McCall & Ruger (644), Trabue (648), Vickers & Wyatt (650), Weidensall (657), White, (664), Woolley (675), Wyatt (679).
- Substitution: Anderson & Hilliard (392), Baldwin (396), Brigham (417), Carley (428), Carpenter (429), Chassel (438), Dearborn & Brewer (447), Gates (471, 474), Gray (488), Haines (493), Healy & Fernald (497), Kohnky (541), Lough (552), Pintner & Paterson (587, 593, 597, 600), Pintner (595), Pintner & Toops (599), Pyle (602, 603), Schmitt (616), Sunne (637), Thorndike (642), Weidensall (657), Woodworth & Wells (674), Woolley (675).
- Suggestibility: Binet (403), Bingham (406), Brigham (417), Doll (453), Gilbert (477), Giroud (479), Hollingworth (503), Lahy (545), Pear & Wyatt (581), Rowland (613, 614), Town (647).
- Vocabulary: Bonser (411), Boyd (415), Claparède (439), Cornell (443), Descoeudres (450), Gregor (489), Haberman (492), King & Gold (532), Kirkpatrick (536), Thompson & Smith (641). Town (646), Wells (660), Whipple (662).
- Vocational Miniature: Hollingworth (504), Hollingworth & Poffenberger (506), McComas (561).
- Word Building: Chassel (438), Dana (445), Franz (467), Heymans & Brugmans (502), Kitson (540), Pintner (594, 595), Pyle (602, 603), Whipple (662). Wyatt (679).

#### C. Statistical Methods

- 686. Betz, W. Ueber Korrelation Methode der Korrelationsberechnung und kritischer Bericht über Korrelations-Untersuchungen aus dem Gebiete der Intelligenz, der Anlagen und Beeinflussung durch aüssere Umstände. Zsch. f. angew. Psychol. (Beihefte 3), 1911. Pp. 88.
- 687. **Borel, É.** Eléments de la théorie des probabilités. Paris: Herman, 1909.
- 688. Bowley, A. L. Elements of Statistics. London: King, 1907.
- 689. Brinton, W. C. Graphic Methods for Presenting Facts. New York Engineering Magazine Co., 1917. Pp. XII + 371.
- 690. Brown, W. The Use of the Theory of Correlation in Psychology. Cambridge, England, 1910. Pp. 83.

- 691. Brown, W. The Essentials of Mental Measurement. Cambridge Univ. Press, 1911. Pp. 154.
- 692. Brown, W. The Effects of "Observational Errors" and other Factors upon Correlation Coefficients in Psychology. Brit. J. of Psychol., 1913, 6, 223-238.
- 693. Burt, C. Experimental Tests of General Intelligence. Brit. J. of Psychol., 1909, 3, 94-177.
- 694. Davenport, C. B. Statistical Methods. New York, 1904. Pp. 148.
- 695. Dunlap, K. Obtaining the Mean Variation with the Aid of a Calculating Machine. Psychol. Rev., 1913, 20, 154-157.
- 696. Elderton, W. P., and E. M. Primer of Statistics. London: Black, 1910.
- 697. Elderton, W. P. Frequency Curves and Correlation. London: Layton, 1906.
- 698. Hart, B., and Spearman, C. General Ability, its Existence and Nature. Brit. J. of Psychol., 1912, 5, 51-84.
- 699. Heymans, G., und Wiersma, E. Beiträge zur speziallen Psychologie auf Grund einen Massenuntersuchung. Zsch. f. Psychol., 1906, 42, 81-127, 258-301; 1906, 43, 321-373; 1907. 45, 321-333; 1909, 51, 1-72.
- Kelley, T. L. Tables to Facilitate the Calculation of Partial Coefficients of Correlation and Regression Equations. Univ. of Texas Bull., 1916, No. 27. Pp. 53.
- King, W. I. The Elements of Statistical Method. New York: Macmillan, 1917.
- 702. Krueger, F., and Spearman, C. Die Korrelation zwischen verschiedenen geistigen Leistungsfähigkeiten. Zsch. f. Psychol., 1906, 44, 50-114.
- 703. Maxfield, F. N. Some Mathematical Aspects of the Binet-Simon Tests. J. of Educ. Psychol., 1918, 9, 1-12.
- 704. Rossolimo, G. Mental Profiles. A Quantitative Method of Expressing Psychological Processes in Normal and Pathological Cases. J. of Exp. Ped., 1911, 1, 211-214.
- 705. Rugg, H. O. Statistical Methods Applied to Education. New York: Houghton, Mifflin, 1917. Pp. XVIII + 410.
- 706. Ruml, B. The Reliability of Mental Tests in the Division of an Academic Group. Psychol. Monog., 1917, 24, No. 105. Pp. 63.
- 707. Ruml, B. The Measurement of the Efficiency of Mental Tests. Psychol. Rev., 1916, 23, 501-507.
- 708. Spearman, C. "Footrule" for Measuring Correlation. Brit. J. of Psychol., 1906, 2, 89-109.
- 709. Spearman, C. General Intelligence Objectively Determined and Measured. Amer. J. of Psychol., 1904, 15, 202-292.
- 710. Spearman, C. The Proof and Measurement of Association Between Two Things. Amer. J. of Psychol., 1904, 15, 72-101.
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- 712. Titchener, E. B. Experimental Psychology. √ol. II. New York: Macmillan, 1905.

- 713. Thompson, G. H. A Hierarchy Without a General Factor. Brit. J. of Psychol., 1915-17. 8, 271-281.
- 714. Thorndike E. L. An Introduction to the Theory of Mental and Social Measurements. New York, Teachers College, Columbia Univ., 1913. Pp. XI + 277.
- 715. Whipple, G. M. Manual of Mental and Physical Tests. Baltimore: Warwick and York. 2nd Edition, Vol. I, Simpler Processes, 1914. Pp. XVI + 365. Vol. II, Complex Processes, 1915. Pp. 336.
- 716. Woodworth, R. S. Combining the Results of Several Tests. A Study in Statistical Method. Psychol. Rev., 1912, 19, 97-123.
- 717. Yule, G. U. An Introduction to the Theory of Statistics. London: Griffin, 1917. Pp. XV + 382.

## III. Group Tests

- 718. Adler, M. Mental Tests Used as a Basis for the Classification of School Children. J. of Educ. Psychol., 1914, 5, 22-28. 70 first grade pupils and 89 fourth grade pupils were tested and assigned to the advanced regular section of their grade in accordance with their standing in the tests.
- 719. Baldwin, B. T. The Learning of Delinquent Adolescent Girls as Shown by a Substitution Test. J. of Educ. Psychol., 1913, 4, 317-332. The substitution test suggested by Gray was used. Performances of negro and white girls compared.
- 720. Bell, J. C. Mental Tests and College Freshmen. J. of Educ. Psychol., 1916, 7, 381-399. Correlation between university grades and scores for different tests.
- 721. Bell, J. C. A Detailed Study of Whipple's Range of Information Test. J. of Educ. Psychol., 1917, 8, 475-482. The object of the study was to ascertain how each group of students, consisting of the four college classes, responded to each word of the test.
- 723. Bickersteth, M. E. The Application of Mental Tests to Children of Various Ages. Brit. J. of Psychol., 1917, 9, 23-73. 2,500 subjects-12 tests. Study of following correlations included: Mental age with physical age; motor tests with mental tests; intellectual ability with ability to profit by learning. Compares town and country children. Concludes that "the same test applied at different ages has greater diagnostic value than a series of externally graded tests."
- 724. Bonser, F. G., Burch, L. H., and Turner, M. R. Vocabulary Tests as Measures of School Efficiency. School and Soc., 1915, 2, 713-719. The Kirkpatrick and a new list of words were used. Children of several schools compared. The writers believe that the superiority of one school in these tests was due to its curriculum and method of work which were "shot through and through with social motives, values and ideals."
- 725. Bowler, A. C. The Trabue Completion Test as Applied to Delinquent Girls. J. of Exp. Psychol., 1916, 1, 533-539. By the application of Trabue's original list to 256 girls a "practical graded series short enough to be completed in fifteen or twenty minutes" was obtained.
- 726. Bradford, E. J. G. A Psychological Analysis of School Grading. J. of Exp. Ped., 1913-14, 2, 431-440.

Two groups of tests used, one demanding analysis of visual forms, the second being tests of association and memory. Correlations of the tests with each other, of the groups with each other and of the groups and individual tests with school grades studied.

727. Chambers, W. G. Individual Differences in Grammar Grade Children. J. of Educ. Psychol., 1910, 1, 61-75.

Physical, psychological and pedagogical tests used.

- 728. Dearborn, W. F., and Brewer, J. M. Methods and Results of a Class Experiment in Learning. J. of Educ. Psychol., 1918, 9, 63-82. Substitution test based on the code test. General principles illustrated by the experiment.
- 730. Gates, A. I. Correlations and Sex Differences in Memory and Substitutions. Univ. of Calif. Publ. in Psychol., 1916, 1, 245-250.

197 students in elementary psychology were tested.

- 731. Gates, A. I. Variations in Efficiency During the Day, Together with Practice Effects, Sex Differences and Correlations. Univ. of Calif. Pub. in Psychol., 1916, 2 (No 1), 1-156.
- 732. Gates, A. I. The Mnemonic Span for Visual and Auditory Digits. J. of Exp. Psychol., 1916, 1, 393-403. One purpose of the work was to find the exact memory span of a number of individuals. About 165 college students underwent the tests.
- 733. Gates, A. I. Experiments on the Relative Efficiency of Men and Women in Memory and Reasoning. Psychol. Rev., 1917, 24, 139-146.

For three consecutive years a pair of questions was given as the regular weekly examination on class work, the first demanding reproduction of facts and the second application of facts and principles. To corroborate the memory results a test of immediate and delayed reproduction of details of a short newspaper clioping was given.

734. Gray, C. T. A New Form of Substitution Test. J. of Educ. Psychol., 1913. 4, 293-297.

The article calls "attention to a form of the substitution test which may be used for testing a higher type of learning than that involved in most forms already adopted." The test was suggested by a wig-wag signalling code.

735. Hill, D. S. An Experimental Study of Delinquent and Destitute Boys in New Orleans, and Notes Concerning Preventative and Ameliorative Measures in the United States. New Orleans: Published by the Commission Council, 1914. Pp. 130.

> A detailed study of 61 delinquent boys. These were examined individually by the form board, Binet-Simon, color-naming and aussage tests, and as a group by the Ebbinghaus-Terman completion test and Courtis-Heck arithmetic test.

736. Humpstone, H. J. Some Aspects of the Memory Span Test. A Study in Associability. Philadelphia: The Psychol. Clinic Press, 1917. Pp. 31.

"The purpose of this experiment was to see how the memory span could be employed for diagnostic purposes." About 3,300 subjects—grammar school pupils, trades school boys and college students—were tested for their memory span for digits.

737. James, B. B. Correlations of Mental Tests and Scholarship. School and Soc., 1918, 7, 238-239.

Five tests given at the beginning of the school year. The author concludes that a teacher may get a knowledge of his pupils "which will make the rest of the semester's work easier for him and more satisfactory to all concerned."

738. Lawrence, I. A Study of the Binet Definition Tests. Psychol. Clin., 1911-12, 5, 207-216.

784 children given a written examination in Binet's 1908 definition tests.

739. Lipsky, A. School Guidance by Mental Tests. School and Soc., 1916, 3, 320-324.

Correlations between certain mental tests and success in foreign language work studied. The tests used were a specially devised memory test, some of the Woodworth and Wells "Association Tests," and a cancellation test.

740. Lobsien, M. Intelligenzprüfungen auf Grund von Gruppenbeobachtungen. Langensalza: Beltz, 1914. Pp. 59.

Forty pupils about ten years of age tested by the group method. That method of testing compared with the individual method. Correlations between teachers' estimates and test results studied.

741. Lodge, R. C., and Jackson, J. L. Reproduction of Prose Passages. Psychol. Clin., 1916, 10, 128-145.

A study of immediate memory. Includes a study of age and sex differences and a comparison of qualitative and quantitative methods of scoring.

742. McCall, W. A. Correlation of Some Psychological and Educational Measurements. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 79. Pp. 87.
Switch of results activities the results of solution for the context of the second second

Study of results obtained by testing 88 children from two 6B classes in a New York City public school. An extended experiment in group testing.

743. Mead, C. D. The Relations of General Intelligence to Certain Mental and Physical Traits. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916. Pp. 117.

A comparative study of normal and feebleminded children as regards age of walking and talking, height and weight, strength of grip and dextrality, perception (cancellation test) and memory for related and unrelated words. The feebleminded children were also tested for ability to form abstract notions and for power of association.

744. Mulhall, E. F. Tests of the Memories of School Children. J. of Educ. Psychol., 1917, 8, 294-302.

Following problems investigated: Improvement with age and grade and sex difference in achievement and variability.

- 745. Pear, T. H., and Wyatt, S. The Testimony of Normal and Mentally Defective Children. Brit. J. of Psychol., 1913-14, 6, 387-419. An interesting and very carefully worked-out "event" test used.
- 746. Peterson, H. A. The Generalizing Ability of Children. J. of Educ. Psychol., 1914, 5, 561-570.

Describes new tests for generalizing ability. Age differences studied.

- 747. Peterson, J. The Effect of Attitude on Immediate and Delayed Reproduction: A Class Experiment. J. of Educ. Psychol., 1916, 7, 523-532. An attempt to determine quantitatively the effect of the attitude "intent to learn."
- 748. Pintner, R., and Paterson, D. G. A Class Test with Deaf Children. J. of Educ. Psychol., 1915, 6, 591-600. The Digit-Symbol Test applied as a class test to 325 pupils in a school for the deaf. Pyle's norms used as a basis of comparison. See "Learning Tests with

Deaf Children."

749. Pintner, R., and Paterson, D. G. A Measurement of the Language Ability of Deaf Children. Psychol. Rev., 1916, 23, 413-436. 570 deaf children tested with Scale A of the Trabue Language scale. Language

ability is studied in relation to the method of instruction used, whether oral or manual, and the congenital deaf are compared with the adventitious deaf. "After thirteen years of instruction the language ability of the average deaf child does not reach that of a fifth-grade pupil in our hearing schools."

750. Pintner, R., and Paterson D. G. Learning Tests with Deaf Children. Psychol. Monog., 1916, 20, No. 88. Pp. 57.

Two substitution tests, the digit-symbol and the symbol-digit, were applied to 1,000 deaf children. The author concludes that the deaf child is about three years behind the hearing child in learning ability.

751. Pintner, R. A Mental Survey of the School Population of a Village. School and Soc., 1917, 5, 597-600.

An attempt to use group tests "for a rough mental survey of a school system." 154 children tested. Tests employed: Rote memory, digit-symbol, symbol-digit, word building and easy opposites.

752. Pintner, R. The Mentality of the Dependent Child, together with a Plan for a Mental Survey of an Institution. J. of Educ. Psychol., 1917, 8, 221-238.

Advocates a group of well-standardized class tests for the first rough grading according to mentality and for carrying on mental surveys on a large scale.

753. Pintner, R., and Toops, H. A. A Mental Survey of the Population of a Workhouse. J. of Deling., 1917, 2, 278-287.

A demonstration of the "practical advantage of the group test method for mental survey purposes." The group tests used were the digit-symbol, opposites, cancellation, easy directions and hard directions.

- 754. **Pyle, W. H.** The Examination of School Children. A Manual of Directions and Norms. New York: Macmillan, 1913. Pp. 70. Group tests for the examination of all the children of a school system. Physical tests also included.
- 755. **Pyle, W. H.** A Study of Delinquent Girls Psychol. Clin., 1914-15, 8, 143-148

The mental tests were the group tests described in the author's manual and two Ebbinghaus tests. About 240 girls examined. The results are compared with those obtained from public school girls. A close relation between mental defect and crime is indicated.

756. **Pyle, W. H.** The Mind of the Negro Child. School and Soc., 1918, 1, 357-360.

408 negro children tested and their norms compared with those of white children. The tests were substitution, free and controlled association, memory for ideas and discrete elements, ink-blots, cancellation and word-buildings.

757. Pyle, W. H. A Psychological Study of Bright and Dull Pupils. J. of Educ. Psychol., 1915, 6, 151-156.

Subjects selected according to school markings for the year. It is concluded that significant mental differences between bright and dull pupils "can be ascertained by means of simple group tests."

758. Reaney, M. J. The Correlation between General Intelligence and Play Ability as Shown in Organized Group Games. Brit. J. of Psychol., 1914, 7, 226-252.

Finds a definite correlation. Includes suggestions concerning the organized game as a part of the school curriculum.

759. Scott, C. A. General Intelligence or "School Brightness." J. of Educ. Psychol., 1913, 4, 509-524.

> A study of the intercorrelation between the average of six tests, teachers' judgments after six months' acquaintance, and the judgments of the students themselves. "It would seem that by means of such tests the teacher is placed in the position of distinct advantage in getting more quickly to understand the nature and capacity of his pupils."

760. Stenquist, J. L., Thorndike, E. L., and Trabue, M. R. The Intellectual Status of Children Who are Public Charges. Arch. of Psychol., 1915. No. 33. Pp. 52.

To 183 boys and 82 girls, 9 to 16 years of age, were applied four tests—the Steaquist test of mechanical ability, the Trabue completion test, the Goddard revision of the Binet scale, and a reading test.

761. Thorndike, E. L., McCall, W. A., and Chapman, J. C. Ventilation in Relation to Mental Work. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 78. Pp. 83.

The tests employed were the Woodworth-Wells color-naming test and two of their cancellation tests, Hollingworth's list of hard opposites, a Thorndike additiou test and a mental multiplication test. The results, as far as the effect of ventilation is concerned, are consistently negative.

762. Thorndike, E. L., McCall, W A., and Ruger, G. J. The Effect of Outside Air and Recirculated Air upon the Intellectual Achievement and Improvement of School Pupils. School and Soc., 1916, 3, 679-684.

88 New York City children of 6B grade were, by the application of six tests, divided into two groups of approximately equal ability. One of these groups was then assigned to a room in which ventilation was by means of outside air and the other to a room in which recirculated air was used. Each group was then subjected to an extensive experiment in group testing, occupying one-half hour every school day for about three months.

- 763. Thorndike, E. L., and Ruger, G. J. The Effects of Outside Air and Recirculated Air Upon the Intellectual Achievement and Improvement of School Pupils. A Second Experiment. School and Soc., 1916, 4, 260-264. See No. 762.
- 764. Trabue, M. R. Completion Test Language Scales. New York: Columbia. Univ., Teachers College Contrib. to Educ., 1916, No. 77. Pp. 118. A development of the Ebbinghaus completion tests. A series of standardized scales in which the steps are approximately equal. The statistical methods employed in deriving the scales and in measuring the intervals between the steps are presented.
- 765. Sunne, D. The Relation of Class Standing to College Tests. J. of Educ. Psychol., 1917, 8, 19-211. The object of the testing was to compare the achievement of Newcomb College girls with results obtained elsewhere and to correlate the tests with their class grades.
- 766. Thompson, G. H., and Smith, F. W. The Recognition Vocabulary of Children. Brit. J. of Psychol., 1915, 8, 48-51. Reports tests of 467 children, ranging in age from 9 to 14.
- 767. Travis, A. Reproduction of Short Prose Passages: A Study of Two Binet Tests. Psychol. Clin., 1915-16, 9, 189-209. An experiment in group testing on 69 men and 59 women.
- 768. Vickers, W., and Wyatt, S. Grading by Mental Tests. J. of Exp. Ped., 1913, 2, 187-197.

Three tests studied, analogies, opposites and sentence completion.

- 769. Winch, W. H. Mental Fatigue in Day School Children as Measured by Immediate Memory. J. of Educ. Psychol., 1912, 3, 16-28, 75-82. Found high reliability coefficients in tests of visual and auditory memory for letters. Tests a group of 13-year-old boys and another group averaging 11 years of age.
- 770. Winch, W. H. Some New Reasoning Tests Suitable for the Mental Examination of School Children Brit. J. of Psychol., 1914, 7, 190-225. Tests which demand insight into various forms of logical relation.
- 771. Woodrow, H., and Lowell, F. Children's Association Frequency Tables. Psychol. Monog., 1916, 22, No. 6. Pp. 110. One thousand school children from 9 to 12 years of age tested.
- 772. Woodrow, H. Practice and Transference in Normal and Feeble-Minded Children. J. of Educ. Psychol., 1917, 8, 85-96, 151-165.
- 773. Wyatt, S. The Inter-Relation of Memory. J. of Exper. Ped., 1913-14, 2, 292-298.

Studies intercorrelations with four memory tests in a search for a general memory factor. Result negative.

774. Yerkes, R. M., and Burtt, H. E. The Relation of Point Scale Measurements of Intelligence to Educational Performance in College Students. School and Soc., 1917, 5, 535-540.

> By the use of lantern slides and special record blanks the scale was adapted to the demands of group testing. Correlations with educational performance and sex differences studied.

# IV. RESULTS OF APPLICATION

## I. With Children (Not Feeble-minded)

- 775. Abelson, A. R. The Measurement of Mental Ability of "Backward" Children. Brit. J. of Psychol., 1911, 4, 268-314. See No. 390.
- 776. Adler, M. Mental Tests Used as a Basis for the Classification of School Children. J. of Educ. Psychol., 1914, 5, 22-28. See No. 713.
- 777. Aikens, H. A., and Thorndike, E. L. Correlation among Perceptive and Associative Processes. Psychol. Rev., 1902, 9, 374-382. See No. 391.
- Anderson, H. W., and Hilliard, G. H. The Standardization of Certain Mental Tests for Ten-Year-Old Children. J. of Educ. Psychol., 1916, 7, 400-413. See No. 392.
- 779. Andrews, M. An investigation into the Rate of Mental Association. J. of Educ. Psychol., 1917, 8, 97-142. See No. 393.
- 780. Anonymous. Mental Examinations. Albany, N. Y.: The Capitol, Eugenics and Social Welfare Bull., No. 11. Pp. 73. Reports on the mental examination of orphan asylum children, delinquent girls and women, public school children, Indian children, a special class of defective children and a re-examination of 37 children after a lapse of ten months.
- 781. Anonymous. Report on the Failures in the Public Schools of Norfolk, Va., in the February Examinations. Training School Bull., 1913, 9, 156-158.

Tables showing the relation between mental retardation as determined by the Binet scale and the number of times failed.

782. Ash, I. E. The Correlates and Conditions of Mental Inertia. Ped. Sem., 1912, 19, 425-437.

An attempt to measure objectively "independence and originality in observation and interpretation," and their relation to promptness, rank and general attitude in school. 850 eighth grade pupils tested with five pairs of questions—one of each pair requiring simply "book learning," the other original work. "Persistence in type," that is the tendency of independence in one situation to obtain in others also, is more pronounced in boys than in girls.

- Bagley, W. C. On the correlation of Mental and Motor Ability in School Children. Amer. J. of Psychol., 1901, 12, 193-205. See No. 395.
- 784. Bateman, W. G. The Naming of Colors by Children. The Binet Test. Ped Sem., 1915, 22, 469-486. See No. 145
- 785. Bell, C. F. Another Experience with the Binet Test. Training School Bull., 1913, 10, 77-78. See No. 146.
- 786. Berry, C. S. A Comparison of the Binet Tests of 1908 and 1911. J. of Educ. Psychol., 1912, 3, 444-451. See No. 148.
- 787. Berry, C. S. Eighty-two Children Retested by the Binet Tests of Intelligence. Psychol. Bull., 1913, 10, 77-78. See No. 150.
- 788. Bickersteth, M. E. The Application of Mental Tests to Children of Various Ages. Brit. J. of Psychol., 1917, 9, 23-73. See No. 400.
- 789. Binet, A. Psychologie individuelle. La description d'un objet. Année psychol., 1896, 3, 296-332. See No. 405.

- 790. Binet, A. Attention et adaptation. Année psychol., 1899, 6, 248-404. See No. 402,
- 791. Binet, A. La suggestibilité. Paris: Schleicher, 1900. Pp. 396. See No. 403.
- 792. Binet, A. L'Étude experimentelle de l'intelligence. Paris: Schleicher, 1903. Pp. 309. See No. 7.
- 793. Binet, A., et Simon, T. Application des méthodes nouvelles au diagnostic du niveau intellectual chez des enfants normaux et anormaux d'hospice et d'école primaire. Année psychol., 1905, 11, 245-336. See No. 10.
- Block, E., und Preiss, A. Ueber Intelligenzprüfung an normalen Volks-794. schulkindern nach Bobertag (methode Binet-Simon). Zsch. f. angew. Psychol., 1912, 6, 539-547. 79 boys and 76 girls tested. Girls found decidedly inferior to boys.

- 795. Bobertag, O. Ueber Intelligenzprüfungen (nach der Methode von Binet und Simon). I. Methodik und Ergebnisse der einzelnen Tests. Zsch. f. angew. Psychol., 1911, 5, 105-203. H. Gesamtergebnisse der Methode. Zsch. f. angew. Psychol., 1912, 6, 495-538. See No. 165.
- 796. Bolton, T. L. The Growth of Memory in School Children. Amer. J. of Psychol., 1891-2, 4, 362-380. See No. 407.
- Bonser, F. G. The Reasoning Ability of Children of the Fourth, Fifth 797. and Sixth Grades. New York: Columbia Univ., Teachers College Contrib. to Educ., 1910, No. 37. Pp. 113. See No. 409.
- Bonser, F. G. The Selective Significance of Reasoning Ability Tests. 798. J. of Educ. Psychol., 1916, 7, 187-200. See No. 410.
- 799. Bonser, F. G., Burch, L. H., and Turner, M. R. Vocabulary Tests as Measures of School Efficiency. School and Soc., 1915, 2, 713-719. See No. 411.
- Bourdon, B. Influence de l'âge sur la mémoire immédiate. Revue Phil., 801. 1894, 38, 148-167. See No. 412.
- Bowler, A. C. A Picture Arrangement Test. Psychol. Clin., 1917, 11, 802. 37-54. See No. 414.
- 803. Boyd, W. Definitions in Early Childhood. Child Study, 1914, 7, 66-70. See No. 415.
- 804. Bradford, E. J. G. A Psychological Analysis of School Grading. J. of Exp. Ped., 1913-14, 2, 431-440. See No. 416.
- Bridges, J. W., and Coler, L. E. The Relation of Intelligence to Social 805. Status. Psychol. Rev., 1917, 24, 1-31. See No. 171.
- Brigham, C. C. An Experimental Critique of the Binet-Simon Scale. 806. J. of Educ. Psychol., 1914, 5, 439-448. See No. 172.
- 807. Brigham, C. C. Two Studies in Mental Tests: I. Variable Factors in the Binet Tests. II. The Diagnostic Value of Some Mental Tests. Psychol. Monog., 1917, 24, No. 1. Pp. 254. . See No. 173.
- 808. Bronner, A. F. The Psychology of Special Abilities and Disabilities. Boston: Little, Brown, 1917. Pp. 269. See No. 419.
- Bruckner, L., and King, I. A Study of the Fernald Form-Board. 809. Psychol. Clin., 1915-16, 9, 249-257. See No. 420.

- 810. Burt, C. Experimental Tests of General Intelligence. Brit. J. of Psychol., 1909-10, 3, 94-177. See No. 421.
- Burt, C. Experimental Tests of Higher Mental Processes and their Relation to General Intelligence. J. of Exp. Ped., 1911-12, 1, 93-112. See No. 422.
- 812. Burt, C., and Moore, R. C. The Mental Differences between the Sexes. J. of Exp. Ped., 1911-12, 1, 273-284, 355-388. See No. 423.
- Bush, A. D. Binet-Simon Tests of a Thirty-Nine-Months-Old Child. Psychol. Clin., 1913-14, 7, 250-257.

All the four-year-old tests passed and some from superior age levels.

- 814. Call, A. D. Dr. Dawson's Inductive Study of School Children. Psychol. Clin., 1912-13, 6, 61-68. The causes of school backwardness analyzed by the use of physical and mental tests. 48 children were tested, four to five hours being given to each child.
- Campbell, C. M. The Subnormal Child—A Survey of the School Population in the Locust Point District of Baltimore. Mental Hyg., 1917, 1, 96-147.

A district in which industrial conditions keep the majority of the families "close to the poverty line." More than half the children were tested with the Goddard Revision of the Binet-Simon scale.

- 816. Carey, N. Factors in the Mental Processes of School Children. 1 Visual and Auditory Imagery. II. On the Nature of Specific Mental Factors. III. Factors Concerned in School Subjects. Brit. J. of Psychol., 1915, 7, 453-73; 1915, 8, 70-92; 1916, 8, 170-182. See No. 23.
- 817. Carley, L. A. Mental Tests and Practical Judgment. J. of Crim. Law and Criminol., 1915-16, 6, 249-259. See No. 428.
- 818. Carpenter, D. F. Mental Age Tests. J. of Educ. Psychol., 1913, 4, 538-544. See No. 429.
- 819. Chambers, W. G. Memory Types of Colorado Pupils. J. of Phil., Psychol. and Sci. Methods, 1906, 3, 231-234. See No. 434.
- 820. Chambers, W. G. Individual Differences in Grammar Grade Children. J. of Educ. Psychol., 1910, 1, 61-75. See No. 435.
- 821. Chapman, J. C. Individual Differences in Ability and Improvement and their Correlations. New York: Columbia Univ., Teachers College Contrib. to Educ., 1914, No. 63. Pp. 45. See No. 436.
- 822. Claparède, E. Développement (âge) et Aptitude. Extrait du Bulletin de la Societé pédagogique. Genevoise. Mars, 1916. See No. 439.
- 823. Cohn, J., und Dieffenbacher, J. Untersuchungen über Geschlecht-Altersund Begabungs-Unterschiede bei Schülern. Beiheften zur Zsch. f. Angew. Psychol., 1911, Heft. 2. Pp. 213.
- 824. Collins, E. R. The Correlation of Secondary School Grades with Certain Standard Mental Tests as Evidence of General Intelligence. Bull. of the State Normal School, Moorhead, Minn., 1914, 10, No. 4. See No. 441.
- 825. Conway, C. E. Performance Norms for Thirteen Tests. The Capitol, Albany, N. Y. Eugenics and Social Welfare Bull., No. 8, 1917. Pp. 142. See No. 442.
- 826. Cords, R. Die Farbenbenennung als Intelligenzprüfung bei Kindern. Zsch. f. päd. Psychol., 1910, 11, 311-314. See No. 179.

- 827. Cornell, C. B. A Graduated Scale for Determining Mental Age. J. of Educ. Psychol., 1917. 8, 539-549. See No. 443.
- Coxe, W. E. The Woolley Tests Applied to a Prevocational Class of Boys. School Rev., 1916, 24, 521-532. See No. 444.
- 829. Cruchet, R. Les tests de Binet dans le tout Jeune âge. J. of méd. de Bordeaux, 1912, 42, 17-32. See No. 183. The scale is unsatisfactory for young children.
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- 831. Decroly, O., et Boulenger. Les tests mentaux chez l'enfant. 2. Congr. de Neurol., Bruxelles, 1907.
- 832. Decroly, O., et Degand, J. Le mesure de l'intelligence chez les enfants.
  2. contribution critique. La méthode de De Sanctis. Archiv. intern. d'hyg. scaloire, 1904, 4, 230-303. See No. 186.
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- 834. Decroly, O., et Degand, J. Le mesure de l'intelligence chez des enfants normaux d'apres les tests de MM. Binet et Simon. Arch. de Psychol., 1909-10, 9, 81-108. See No. 191.
- 835. Decroly, O., and Degand, J. Tests Bearing on the Early Ideas of Number and Quality. Tr. and abridged by T. G. Tibbey. Child Study, 1913, 6, 125-127. See No. 448.
- 836. Descoeudres, A. Les tests de Binet et Simon et leur valeur scolaire. Arch. de Psychol., 1911, 11, 331-350. See No. 197.
- 837. Dockerill, W. H. A., and Fennings, A. J. A New Test of Reasoning. J. of Exp. Ped., 1914, 2, 356-361. See No. 451.
- 838. Dumville, B. A Trial of Binet's Tests on Five-Year-Olds. J. of Exp. Pedag., 1913, 2, 113-118.
  89 subjects.
- 839. Dunham, F. L. The Arrow Board. An Adult "Form-Board" Test. Ped. Sem., 1916, 23, 283-289. See No. 457.
- 840. Dougherty, M. L. Report on the Binet-Simon Tests Given to Four Hundred and Eighty-three Children in the Public Schools of Kansas City, Kansas. J. of Educ. Psychol., 1913. 4, 338-352.
- Ebbinghaus, H. Ueber eine neue Methode zur Pr
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- 842. Engelsperger, A., und Ziegler, O. Beiträge zur Kenntnis der physischen und psychischen Natur des Sechsjährigen in die Schule eintretenden Kinder. Exp. Päd., 1905, 1, 173-235; 2, 49-95. Investigated 200 children in Munich.
- 843. English, H. B. An Experimental Study of Mental Capacity of School Children, Correlated with Social Status. Psychol. Monog., 1917, 23 (No. 3), 266-331. See No. 462.
- 844. Ferguson, G. O. The Psychology of the-Negro. An Experimental Study. Arch. of Psychol., 1916, No. 36. Pp. 138. See No. 463.

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- 846. Garbini, A. Evoluzione del Senso Cromatico nella Infanzia. Arch. per l'antrop. e la etnol., Vol. 24, 71-98, 193-220. See No. 469.
- 847. Garrison, C. G., Burke, A., and Hollingworth, L. S. The Psychology of a Prodigious Child. J. of Appl. Psychol., 1917. 1, 101-110. The Stanford Revision of Binet-Simon scale was used to determine the child's mental level. His physical measurements and personal history are also given.
- 848. Gassman, E., und Schmidt, E. Das Nachsprechen von Sätzen in seiner Beziehung zur Begabung. Experimentelle Untersuchungen über den Sprachlichen Auffassungsumfang des Schulkindes. (Wiss. Beitr. z. Päd. u. Psychol., Heft. 3.) Leipzig: Quelle u. Meyer, 1913. Pp. 101. See No. 470.
- 849. Giese, F. Die Dreiwortmethode bei Intelligenzpr
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  äd. Psychol., 1913, 14, 524-534, 550-555. See No. 476.
- 850. Gilbert, J. A. Researches on the Mental and Physical Development of School Children. Yale Psychol. Studies, 1894, 2, 40-100. See No. 477.
- 851. Giroud, A. Étude d'un procédé nouveau pour la mesure du niveau intellectuel. Bull. Soc. libre Étude psychol. de l'Enfant, 1911, 11, 156-169. See No. 478.
- 852. Giroud, A. La suggestibilité chez des enfants d'école de sept à douze ans. Année psychol., 1912, 18, 362-388. See No. 479.
- 853. Goddard, H. H. Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence. Ped. Sem., 1911, 18, 232-259. The results arrange themselves on a normal curve of distribution which, according to the author, "amounts to practically a mathematical demonstration of the accuracy of the tests."
- 854. Goddard, H. H. Echelle métrique de l'intelligence. Résultats obtenus en Amérique, à Vineland. Année psychol., 1912, 18, 288-326. Similar report to that on the "Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence."
- 855. Goddard, H. The Form Board as a Measure of Intellectual Development in Children. Training School Bull., 1912, 9, 49-52. See No. 481.
- 856. Goett, T. Assoziationsversuche an Kindern. Zsch. f. Kinderheilkunde, 1911, 1, 241-345. See No. 480.
- 857. Gordon, K. A Study of an Imagery Test. J. of Phil., Psychol. and Sci. Methods, 1915, 12, 574-579. See No. 484.
- 858. Gordon, K. Some Tests on the Memorizing of Musical Themes. J. of Exp. Psychol., 1917, 2, 93-99. See No. 485.
- 859. Gregor, A. Untersuchungen über die Entwicklung einfacher logischer Leistungen. Zsch. f. angew. Psychol., 1915, 10, 339-451. See No. 489. Children and adults tested as to their ability to define various concrete and abstract terms.
- 860. Healy, W. A Picture Completion Test. Psychol. Rev., 1914, 21, 189-203. See No. 498.
- 861. Henderson, E. N. A Study of Memory for Connected Trains of Thought. Psychol. Monog., 1903, 5, No. 6. Pp. 87. See No. 500.
- Hentschel, M. Die Gedächtnisspanne. Zsch. f. päd. Psychol., 1912, 13, 562-579. See No. 501.

- 863. Heymans, G., und Burgmans, H. J. T. W. Intelligenzpr
  üfungen mit Studierenden. Zsch. f. angew. Psychol., 1913, 7, 317-331. See No. 233.
- 864. Hicks, V. C. The Value of the Binet-Simon Mental Age Tests for First Grade Entrants. ]. of Educ. Psychol., 1915, 6, 157-166. The subjects were the entire membership of a kindergarten. 34 in all. The details of the comparison are presented in tabular form.
- 865. Hoffman, A. Vergleichende Intelligenzpr
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  ülern und Volkssch
  ülern. Zsch. f. angew. Psychol., 1913-14, 8, 102-120. 91 children from the Volksschule and 65 from the Vorschule were tested with Bobertag's modification of the Binet-Simon scale. The latter did almost twice as well as the former in tests above their age level. The results for the two schools about equal in tests at the age level.
- Hoke, K. J. Placement of Children in the Elementary Grades. A Study of the Schools of Richmond, Va. Washington: Bureau of Educ. Bull., 1916, No. 3. Pp. 93. The last 30 pages present a detailed statistical study of the application of the Binet tests to 743 children.
- 867. Humpstone, H. J. Some Aspects of the Memory Span Test. A Study in Associability. Philadelphia: The Psychol. Clinic Press, 1917. Pp. 1. See No. 508.
- 868. Ide, G. G. The Witmer Formboard and Cylinders as Tests for Children Two to Six Years of Age. Psychol. Clin., 1918, 12, 65-88. See No. 509.

Conclusions with regard to (1) "the age level of these tests," (2) "their clinical value," (3) "the earliest passing age," (4) "analytic determination of the causes of failure" and (5) "the value of their employment as tests of educability." Case studies.

- 869. Irwin, E. A. A Study of the Feeble-minded in a West Side School in New York City. Training School Bull., 1913, 10, 67-76. Survey of a school situated in the midst of American-born tenement dwellers. Classification of 201 children by the Binet scale and an intensive study, with the emphasis on heredity, of those who were found to be feebleminded.
- 870. Irwin, E. A. Truancy: A Study of the Mental, Physical and Social Factors of the Problem of Non-Attendance at School. Public Educ. Assoc., New York City, 1915. Pp. 66.

A study of 150 truants with an intensive investigation of 54 cases, classified as borderline by the application of the Binet scale.

- 871. Jacobs, J. Experiments in Prehension. Mind, 1887, 12, 75-79. See No. 510.
- James, B. B. Correlations of Mental Tests and Scholarship. School and Soc., 1918, 7, 238-239. See No. 511.
- 873. Jeffrey, G. R. Some Observations on the use of the "Reckoning Test" in School Children. J. of Experimental Ped., 1911, 1, 392-396. See No. 516.
- 874. Jeronutti, A. Applicazione della "Scala metrica dell' intelligenza" di Binet e Simon, e dei "reattivi" di Sante De Sanctis, per l'accertamento del grado dell' intelligenza nei fanciulli normale e del grado d'insufficienza mentale nei fanciulli anormalie deficienti Esperienze, comparazionie critiche. Rivista Pedagog., 1909, 3, 263-281. See No. 244.
- 875. Jeronutti, A. Ricerche psicologiche sperimentali sugli alunni molto intelligenti. Lab. di Psicol. Sperim. della Reg. Univ. Roma, 1912. Out of tifteen hundred school and kindergarten children, ages five to twelve, four-

teen were selected by the teachers as the brightest. The Binet test showed them to be from one to three years in advance of their chronological ages.

- 876. Johnson, K. L. M. Binet's Method for the Measurement of Intelligence. Some Results. J. of Exper. Pedag., 1911-12, 1, 24-31. Also School World, 1910, 12, 391-392.
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- 877. Johnson, R. H., and Gregg, J. M. Three New Psychometric Tests. Ped. Sem., 1912, 19, 201-203. See No. 518.
- 878. Jones, E. E. Individual Differences in School Children. Psychol. Clin., 1912-13, 6, 241-251. See No. 520.
- 879. Kelley, T. L. A Constructive Ability Test. J. of Educ. Psychol., 1917, 7, 1-16. See No. 526.
- 880. Kelley, T. L. Educational Guidance. An Experimental Study in the Analysis and Prediction of Ability of High School Pupils. New York: Columbia Univ., Teachers College Contrib. to Educ., 1914. Pp. 116.

Correlated his tests with elementary school marks and with high school marks, thus testing the reliability of estimates of a pupil's ability to perform a task.

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- 882. Kent, G. H. A Graded Series of Colored Picture Puzzles. J. of Exper. Psycol., 1916, 1, 242-246. See No. 530.
- 883. Kent, G. H. A Graded Series of Geometrical Puzzles. J. of Exper. Psychol., 1916, 1, 40-50. See No. 529.
- 884. Kephart, A. P. Clinical Studies of Failures with the Witmer Formboard. Psychol. Clin., 1918, 11, 229-253. See No. 531.
- Kirkpatrick, E. A. Individual Tests of School Children. Psychol. Rev., 1900, 7, 274-280. See No. 535.
- 886. Kirkpatrick, E. A. A Vocabulary Test. Pop. Sci. Mo., 1907, 70, 157-164.
- **Knox, H. A.** A Test for Adult Imbeciles and Six-Year-Old Normals.
   N. Y. Med. J., 1913, 98, 1017-1018. See No. 542.
- 888. Kohnky, E. Preliminary Study of the Effect of Dental Treatment Upon the Physical and Mental Efficiency of School Children. J. of Educ. Psychol., 1913, 4, 571-578. See No. 541.
- 889. Kohs, S. C. Practicability of the Binet Scale and Question of the Borderline Cases. Training School Bull., 1916, 12, 211-224. Frequency distribution of 335 cases examined by the Binet scale. Case studies and a discussion of supplementary tests. Gives the lower and upper limiting ages of borderlinity for cases investigated. Finds Binet entirely satisfactory for purposes of mental diagnosis.
- 890. Kuhlman, F. A Revision of the Binet-Simon System for Measuring the Intelligence of Children. J. of Psycho-Asthen., Monog. Suppl., 1912, No. 1. Pp. 41. See No. 262.
- 891. Kuhlmann, F. Some Results of Examining a Thousand Public School Children with a Revision of the Binet-Simon Tests of Intelligence by Untrained Examiners. J. of Psycho-Asthen., 1914, 18, 150-179, 233-269. See No. 264.

- 892. Lacy, W. I. A Study of 880 Children in Bloomington, Ind., Tested by the Binet Scale. School and Soc., 1917, 6, 206-209. The Binet-Goddard scale was used. The author compares his results with those Terman found with his 1,000 unselected pupils.
- 893. Lacy, W. I. A Study of 100 Retarded Fourth Grade Pupils Tested by the Binet Scale. Psychol. Clin., 1918, 12, 16-23. The Stanford Revision used with "slow process children of the 4th grade." On the basis of the results it is recommended that intelligence tests be used for promotion, that the I. Q. should be found for all children as an aid in adapting subject matter and methods of instruction to intellectual capacity and that white and colored children be placed in separate schools.
- 894. Lapie, P. Avancés et retardés. Année psychol., 1912, 18, 233-270. See No. 68.
- Lawrence, I. A Study of the Binet Definition Tests. Psychol. Clin., 1911-12, 5, 207-216.

784 children given a written examination in Binet's 1908 definition tests.

896. Lickley, E. J. Causes of Truancy Among Boys. Los Angeles: Univ. of Southern California Press. Sociological Monog., 1917, No. 3. Pp. 12.

Based on the study of 1,554 truants. Binet-Simon tests were given to 122 of them. About four times as much feeblemindedness as among regular school pupils.

- 897. Lipman, O. The Examination of Intelligence in Children. School World, 1910, 12, 366-369. Includes a "diagram showing the general agreement in the results of observations with school children" by Bobertag, Binet and Simon, McDougall, and Galton.
- 898. Lipsky, A. School Guidance by Mental Tests. School and Soc., 1916, 3, 320-324. See No. 549.
- 899. Lobsien, M. Intelligenzprüfungen auf Grund von Gruppen beobachtungen. Langensalza: Belt, 1914. Pp. 59. See No. 550.
- 900. Martin, L. A Contribution to the Standardization of the De Sanctis Tests. Training School Bull., 1916, 13, 93-100. 207 normal and 150 feebleminded subjects tested. It is concluded that the tests not only fulfill their author's claim by indicating grades of defect, but that "they mark grades of development of normal mind."
- 901. Martin, M. A. The Transfer Effects of Practice in Cancellation Tests. Arch. of Psychol., 1915, 4 (No. 32). Pp. 68.
- 902. McCall, W. A. Correlation of Some Psychological and Educational Measurements. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916, No. 79. Pp. 87. See No. 560.
- 903. Mead, C. D. The Relations of General Intelligence to Certain Mental and Physical Traits. New York: Columbia Univ., Teachers College Contrib. to Education, 1916. Pp. 117. See No. 71. A comparative study of normal and feebleminded children as regards age of walking and talking, height and weight, strength of grip and dextrality, perception (cancellation test) and memory for related and unrelated words. The feebleminded children were also tested for ability to form abstract notions and for power of association.
- 904. Melville, N. J. An Organized Mental Survey in Philadelphia Special Classes. Psychol. Clin., 1916, 9, 258-263.

Binet-Simon scale, 1911 revision, used. A chart is given showing the classification by mental level and age differences of 850 pupils.

- 905. Meumann, E. Intelligenzprüfungen an Kindern der Volksschule. Die Experimentelle Pädagogik, 1905, 1, 35-101. See No. 563. Tested 800 Zurich school children for their memory for concrete and abstract. Emphasizes the degree of the understanding of the abstract as a measure for
  - Emphasizes the degree of the understanding of the abstract as a measure for intelligence.
     Meumann, E. Ueber eine neue Methode der Intelligenzprüfung und
- 906. Meumann, E. Ueber eine neue Methode der Intelligenzprüfung und über den Wert der Kombinationsmethoden. Zsch. f. päd. Psychol., 1912. 13, 145-163. See No. 564.
- 907. Monroe, W. S. Perception of Children. Ped. Sem., 1914, 11, 498-507. See No. 566.
- 908. Moore, R. C. The Application of the Binet-Simon Scale to Normal English Children. J. of Exp. Ped., 1917, 4, 113-128. 491 children ranging in age from 4 to 13 tested. A study of the individual tests of the 1911 revision and a graphic presentation of results.
- 909 Morle, M. L'influence de l'état social sur degré de l'intelligence des enfants. Bull. Soc. libre Educ. psychol. d'enfant. 1911, 12, 8-15. School children from a poor part of Paris compared with those from a school in a wealthy district. A difference of about three-fourths of a year (Binet-Simon) found.
- 910. Morse, J. A Comparison of White and Colored Children, Measured by the Binet Scale of Intelligence. 4. Intern. Congr. School Hyg., Buffalo, 1913. 5, 655-662. Also Pop. Sci. Mo., 1914, 84, 75-79. "Negro children" from six to twelve and possibly fifteen years, are mentally different, and also younger than American white children of corresponding ages, and that this condition is due, partly at least, to causes that are native and racial.
- 911. Mulhall, E. F. Tests of the Memories of School Children. J. of Educ. Psychol., 1917, 8, 294-302. See No. 569.
- 912. Mullan, E. H. Mental Status of Rural School Children. Report of the Preliminary Sanitary Survey made in New Castle Co., Delaware, with a Description of the Tests Employed. Public Health Reports, 1916, 31, 3174-87. See No. 570.
- 913. Norsworthy, N. The Psychology of Mentally Deficient Children. Arch. of Psychol., 1906, No. 1. Pp. 111. See No. 574.
- 914. Otis, M. Study of Association in Defectives. J. of Educ. Psychol., 1915, 6, 271-288. See No. 577.
- 915. Parsons, C. J. Children's Interpretations of Ink-Blots. (A Study in Some Characteristics of Children's Imagination.) Brit. J. of Psychol., 1917, 9, 74-92. See No. 578.
- 916. Paschal, F. C. A Report on the Standardization of the Witmer Cylinder Tests. Psychol. Clin., 1918, 12, 54-59. See No. 579.
- 917. Paschal, F. C. The Witmer Cylinder Test. Hershey. Pa.: The Hershey Press, 1918. Pp. 54. See the reference above.
- 918. Pear, T. H., and Wyatt, S. The Testimony of Normal and Mentally Defective Children. Brit. J. of Psychol., 1913-14, 6, 387-419. See No. 581.
- 919. Peterson, A. M., and Doll, E. A. Sensory Discrimination in Normal and Feeble-Minded Children. An Experimental Study of Discrimination of Lifted Weights in Relation to Mental Age. Training School Bull., 1914. 11, 110-118, 135-144. See No. 582.

- 920. Peterson, H. A. The Generalizing Ability of Children. J. of Educ. Psychol., 1914, 5, 561-570. See No. 584.
- 921. Phillips, B. A. The Binet Tests Applied to Colored Children. Psychol. Clin., 1914-15, 8, 190-196.

A study in race differences between white and colored. This investigation, dealing with psychological retardation, is supplementary to a former one, which dealt with pedagogical retardation (Psychol. Clin., 1912-13, **6**, 79-90, 167-121), and seems to corroborate it. An attempt was made to limit the comparison to subjects of similar home conditions, though the results are also given for the entire group studied, 86 colored children and 137 white.

- 922. Pintner, R. The Standardization of Knox's Cube Test. Psychol. Rev., 1915, 22, 377-401. See No. 586.
- 923. Pintner, R., and Paterson, D. G. The Formboard Ability of Young Deaf and Hearing Children. Psychol. Clin., 1915-16, 9, 234-237. See No. 588.
- 924. **Pintner, R.** The Value of Mental Testing in the Elimination of the Repeater. School and Soc., 1916, **4**, 909-911. See No. 81.
- 925. Pintner, R., and Anderson, M. M. The Müller-Lyer Illusion with Children and Adults. J. of Exp. Psychol., 1916, 1, 200-210. See No. 589.
- 926. Pintner, R., and Paterson, D. G. A Discussion of the Index of Formboard Ability. Psychol. Clin., 1916-17, 10, 192-198.
- 927. Pintner, R., and Reamer, J. C. Children Tested by the Point Scale and the Performance Scale. Psychol. Clin., 1917, 11, 142-151. 178 children were tested by both scales. The two scales were found to supplement each other.
- 928. Pintner, R., and Anderson, M. M. The Picture Completion Test. Baltimore: Warwick & York, Educ. Psychol. Monog., 1917, No. 20. Pp. 101. See No. 596.
- 929. Pintner, R., and Paterson, D. G. A Scale of Performance Tests. New York: Appleton, 1917. Pp. 218. See No. 597.
- 930. Pintner, R. A Mental Survey of the School Population of a Village. School and Soc., 1917, 5, 597-600. See No. 594.
- 931. Pintner, R. The Mental Indices of Siblings. Psychol. Rev., 1918, 25, 252-255. See No. 600.
- 932. Porteus, S. D. The Measurement of Intelligence: Six Hundred and Fifty-three Children Examined by the Binet and Porteus Tests. J. of Educ. Psychol., 1918, 9, 13-31. See No. 386.
- 933. Pyle, W. H. The Examination of School Children. A Manual of Directions and Norms. New York: Macmillan, 1913. Pp. 70. See No. 603.
- 934. Pyle, W. H. Standards of Mental Efficiency. J. of Educ. Psychol., 1913, 4, 61-70. See No. 602.
- 935. **Pyle, W. H.** A Study of Delinquent Girls. Psychol. Clin., 1914-15, 8, 143-148.

The mental tests were the group tests described in the author's manual and two Ebbinghaus tests. About 240 girls examined. The results are compared with those obtained from public school girls. A close relation between mental defect and crime is indicated.

936. Pyle, W. H. A Psychological Study of Bright and Dull Pupils. J. of Educ. Psychol., 1915, 6, 151-156. See No. 601.

- 937. **Pyle, W. H.** The Mind of the Negro Child. School and Soc., 1915, 1, 35-360. See No. 604.
- 938. Race, H. V. A Study of a Class of Children of Superior Intelligence. J. of Educ. Psychol., 1918, 9, 91-98. An "Opportunity Class" composed of children with an I. Q. above 120 (Stanford revision).
- 939. Reaney, M. J. The Correlation between General Intelligence and Play Ability as Shown in Organized Group Games. Brit. J. of Psychol., 1914, 7, 226-252. See No. 605.
- 940. Ries, G. Beiträge zur Methodik der Intelligenzprüfung. Zsch. f. Psychol., 1910, 56, 321-343. See No. 607.
- 941. Roemer, F. Assoziationsversuche an geistig zurückgebliebenen Kindern. Fortschritte der Psychol., 1914, 3, 43-101. See No. 609.
- 942. Rogers, A. L., and McIntyre, J. L. The Measurement of Intelligence in Children by the Binet-Simon Scale. Brit. J. of Psychol., 1914-15, 7, 265-299.

Based on the application of all the tests of the 1908 and 1911 scales to 217 Scottish children ranging in age from 4 to 14.

943. Rogers, M. A Case Study fom the Indiana University Clinic. Psychol. Clin., 1912-13, 6, 144-151.

A case study, including Binet record, question by question.

- 944. Rosanoff, I. R., and Rosanoff, A. J. A Study of Association in Children. Psychol. Rev., 1913, 20, 43-89. See No. 610A.
- 945. Rossy, C. S., and Sawyer, M. H. Comparison of Mental Gradings by the Yerkes-Bridges Point Scale and the Binet-Simon Scale Ped. Sem., 1916, 23, 452-467.

Exact agreement between the two scales in only four per cent. of the cases.

946. Rowe, E. C. Five Hundred Forty-seven White and Two Hundred Sixtyeight Indian Children Tested by the Binet-Simon Tests. Ped. Sem., 1914, 21, 454-468.

Includes a critical discussion of the Binet tests and a comparative study of the 1908 and 1911 versions, as well as the study in race differences. "The Indians arc everywhere inferior to the whites."

- 947. Rusk, R. R. Experiments on Mental Association in Children. Brit. J. of Psychol., 1909-10, 3, 349-385. See No. 615.
- 948. Rusk, R. R. A Case of Precocity. Child Study, 1917, 10 21-27. Chronological age, 5 years and 2 months. Mental age, according to the Binet scale, 1911 version, 8.6 years. When retested 2 years and 7 months later he was found to have a mental age of over 15.
- 949. Saffiotti, F. U. Résumé des résultats d'un controle a l'échelle métrique de l'intelligence de Binet et Simon suivant la méthode Tréves-Saffiotti.
  1. Congr. intern. de Pédol., Bruxelles, 1911.

666 subjects. Criticisms and suggestions.

950. Saffiotti, F. U. "Note Psicologiche" su due gemelle. Riv. d. Antrop., 1913, 18.

Tests applied to a pair of twins in an attempt to determine whether the Binet scale measures inborn intelligence.

951. Saffiotti, F. U. Die Erziehung der Abnormen in Italien. Eos, 1913, 9, 34-44.

The plan of work in Italy, including the use of the scale. The results of nearly one thousand testings confirm him in the belief that the scale does not measure intelligence.

- 952. Schreuder, A. J. Some Dutch Experiences with the Binet Scale. 4. Intern. Congr. School Hyg., Buffalo, 1913, 5, 690-692.
  Many of the Binet tests "are suitable for international application and this proves again the superiority of the work of Binet."

(Kohs).

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### 3. With the Feeble-Minded

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- 1105. Anonymous. Mental Examinations. Albany, N. Y.: The Capitol. Eugenics and Social Welfare Bull., No. 11. Pp. 73. Reports on the mental examination of orphan asylum children, delinquent girls and women, public school children, Indian children, a special class of defective children and a re-examination of 37 children after a lapse of ten months.
- 1106. Berry, C. S. A Comparison of the Binet Tests of 1908 and 1911. J. of Educ. Psychol., 1912, 3, 444-461. See No. 148.
- 1107. Berry, C. S. Eighty-two Children retested by the Binet Tests of Intelligence. Psychol. Bull., 1913, 10, 77-78. See No. 150.
- 1108. Binet, A., et Simon, T. Application des méthodes nouvelles au diagnostic du niveau intellectuel chez des enfants normaux et anormaux d'hospice et d'école primaire. Année psychol., 1905. 11, 245-336. Analysis of age differences found in tests of about 50 pupils.
- 1109. Binet, A., et Simon, T. Les enfants anormaux. Guide pour l'admission des Enfants anormaux dans les classes de Perfectionnement. Paris: Colin, 1907. Pp. 211. Tr. by W. B. Drummond. (With an appendix containing the Binet-Simon Tests of Intelligence by H. Drummond.) New York: Longmans, Green, 1914. Pp. 180. See No. 11.
- 1110. Binet, A., et Simon, T. L'intelligence des imbéciles. Année psychol., 1909, 15, 1-147. See No. 13.
- 1111. Bloch, E., und Lippa, H. Die Intelligenzprüfungsmethode von Binet-Simon (1908) an schwachsinnigen Kindern. Zsch. f. angew. Psychol., 1913, 7, 397-409. See No. 160.
- 1112. Bloch E., und Lippa, H. Ueber Wiederholung der Binet-Simonschen Intelligenzprüfungen an schwachsinnigen Kindern nach einem Jahre. Zsch. f. angew. Psychol., 1915, 9, 512-515. See No. 161.
- 1113. Bloch, E. Ueber Wiederholung der Binet-Simonscher Intelligenzpr
  üfung an denselben schwachsinnigen Kindern nach Ablauf eines Jahres. Zsch. f
  ür. d. ges. Neur. u. Psychiat., 1915, 28, 445-455. See No. 162.
- 1114. Boulenger, M. I testi di Binet e Simon applicati a fanciulli anormal<sup>§</sup> inglesi e belgi. Riv. di psicol., 1915, 11, 227-234.
- 1115. Brigger, G. A Study of Twenty-five Repeaters at the Associated Charities, Portland, Oregon. J. of Delinq., 1916, 1, 187-194. Examined with the Stanford revision. Case studies of the six who were found to be feebleminded.
- 1116. Bronner, A. F. A Research on the Proportion of Mental Defectives Among Delinquents. J. of Crim. Law and Criminol., 1914-15, 5, 561-568. Based on the study of more than 500 cases.
- 1117. Campbell, C. M. The Subnormal Child—A Survey of the School Population in the Locust Point District of Baltimore. Mental Hyg., 1917, 1, 95-147. See No. 815.
- 1118. Chotzen, F. Die Intelligenzprüfungsmethode von Binet-Simon bei schwachsinnigen Kindern. (Unter Mitwirkung von Dr. M. Nicolauer.) Zsch. f. angew. Psychol., 1912, 6, 411-494. See No. 178.

1119. Cronin, J. J. The Results of Applied Therapeutics to So-called Mentally Deficient Children. 4. Intern. Congr. on School Hyg., Buffalo, 1913, 3, 444-485.

217 case studies of children who had been assigned to public school classes for mental defectives. Application of the Binet scale included in the investigation and 123 found mentally deficient.

1120. Cummings, R. A. A Study of Defective Pupils in the Public Schools of Tacoma, Wash. Psychol. Clin., 1914-15, 8, 153-169.
A study which started out "with no particular object in view, but simply to study the situation and record observations." Ten pupils from the special room were studied for a year and a half. The Binet scale was used, numerous informal tests,

some laboratory tests, form-board, needle-threading and de Sauctis tests. Anthropological metrical measurements were also taken. Some of the results are presented in the form of graphic individual charts.

- 1121. Decroly, O. Intelligenzmessungen bei normalen und abnormalen Kindern. 2. Kongr. exper. Psychol., Würzburg, 1906, pp. 187-193. Leipzig: Barth, 1907. See No. 188.
- 1122. Descoeudres, A. Exploration de quelques tests d'intelligence chez des enfants auormaux et arriérés. Arch. de Psychol., 1911, 11, 351-375. See No. 450.
- 1123. Doll, E. A. The A-test with the Feeble-minded. Training School Bull., 1913, 10, 49-57. See No. 452.
- Doll, E. A. The DeMoor Size-Weight Illusion. Training School Bull., 1913, 9, 145-149. See No. 453.
- 1125. Doll, E. A. The Maze Test with the Feeble-Minded. Training School Bull., 1914, 11, 63-65. A motor-coördination test. 233 mentally defective children ranging in age from 1 to 11 tested.
- 1126. Doll, E. A. Form Board Speeds as Diagnostic Age Tests. J. of Psycho-Asthen., 1916. 20, 53-62. See No. 456.
- 1127. Doll, E. A. Clinical Studies in Feeble-mindedness. Boston: Richard Badger, 1917. See No. 30.
- 1128. Dosai-Révész, M. Experimentelle Beiträge zur Psychologie der moralisch verkommenen kinder. Zsch. f. angew. Psychol., 1911, 5, 272-330. See No. 31.
- 1129. Eastman, F. C., and Rosanoff, A. J. Association in Feeble-Minded and Delinquent Children. Amer. J. of Insan., 1912, 69, 125-141. See No. 458.
- 1130. Galton, F. Supplementary Notes on "Prehension" in Idiots. Mind, 1887, 12, 79-82. See No. 468.
- 4131. Gifford, E. G., and Goddard, H. H. Defective Children in the Juvenile Court. Training School Bull., 1912, 8, 132-135
  100 cases from the Juvenile Court of Newark, N. J. Presumably tested by the Binet scale, but that information is not given. 66 per cent, found to be distinctly feebleminded. Bright individual cases described as fair samples.
- 1132. Goddard, H. H. The Form Board as a Measure of Intellectual Development in Children. Training School Bull., 1912, 9, 49-52. See No. 481.
- 1133. Goddard, H. H. The Adaptation Board as a Measure of Intelligence. Training School Bull., 1915, 11, 182-188. See No. 482.

- 1134. Goddard, H. H. Four Hundred Feeble-Minded Children Classified by the Binet Method. Ped. Sem., 1910, 17, 387-397. See No. 215.
- 1135. Goddard, H. H., and Hill, H. F. Feeble-Mindedness and Criminality. Training School Bull., 1911, 8, 3-6. Twelve convicted criminals from the New Jersey State Hospital for the Insane given the Binet tests. Ranged in age from 11 to 50 or more. Ten found to be clear cases of feeblemindedness; two were insane. Most of the article given to description of individual cases.
- 1136. Goddard, H. H. The Improvability of Feeble-minded Children. J. of Psycho-Asthen., 1913, 17, 121-131. See No. 37.
- 1137. Goddard, H. H. The Responsibility of Children in the Juvenile Court. J. of Crim. Law and Criminol., 1912, 3, 3-13.

"Twenty-five per cent., at least, of the children who come before our Juvenile Courts are feebleminded." Conclusion based on the examination of 100 cases selected at random from the Juvenile Court of New York City.

- 1138. Goddard, H. H. Feeble-Mindedness. Its Causes and Consequences. New York: Macmillan, 1914. Pp 599. See No. 38.
- 1139 Goddard, H. H. School Training of Defective Children. School Efficiency Series. Yonkers-on-Hudson: World Book Company, 1914. Pp. 97. See No. 39.
- 1140. Goett, T. Assoziationsversuche an Kindern. Zsch. f. Kinderheilkunde, 1911, 1, 241-235. See No. 480.
- 1141. Gwyn, M. K. The Healy Puzzle Picture and Defective Aliens. Med. Rec., 1914, 85, 197-199.

22 feebleminded aliens tested and the results given in tabulated form.

- 1142. Haines, T. H. High-Grade Defectives at the Psychopathic Hospital during 1913. Boston Med. and Surg. J., 1914, 171, 854-856. Includes a brief account of "fifty-three psychological examinations of defective delinquents by Binet-Simon and performance" tests. A classification of mental processes as those "in which delinquents are defective," those "in which they show proficiency," and those "in which they occupy a middle ground."
- 1143. Haines, T. H. Feeble-Mindedness Among Adult Delinquents. J. of Crim. Law and Criminol., 1916-17, 7, 702-721.
   100 inmates of the Ohio penitentiary examined. The point scale and ten performance scales used.
- 1144. Hall, G. E. Reports on 52 Border-line cases in the Rome State Custodial Asylum. N. Y. State Bd. of Char. Eugenics and Social Welfare, Bulletins 4 and 6.
- 1145. Healy, W. A Picture Completion Test. Psychol. Rev., 1914, 21, 189-.
   203. See No. 498.
- 1146. Hinckley, A. C. The Binet Tests Applied to Individuals over Twelve Years of Age. J. of Educ. Psychol., 1915, 6, 43-58. See No. 236.
- 1147. Healy, W. Some Types of Mental Defectives J. of Psycho-Asthen., 1913-14, 18, 111-116. See No. 237.
- 1148. Hollingworth, L. S. The Frequency of Amentia as Related to Sex. Med. Rec., 1913, 84, 753-756. Results based on data obtained from 1,000 consecutive cases diagnosed at the New York Clearing House for Mental Defectives. All had been examined by the Binet scale. The greater frequency of amentia among men is apparent rather than real, due to the inequality of social pressure as applied to the two sexes.
- 1149. Huey, E. B. Backward and Feeble-Minded Children. Baltimore: Warwick and York, Educ. Psychol. Monog., 1912. Pp. 221. See No. 541.

- 1150. Irwin, E. A. A Study of the Feeble-Minded in a West Side School in New York City. Training School Bull., 1913, 10, 67-76. See No. 869.
- 1151. Jeronutti, A. Applicazione della "Scala metrica dell' intelligenza" di Binet e Simon, e dei "reattivi" di Sante de Sanctis, per l'accertamento del grado dell' intelligenza nei fanciulli normale e del grado d'insufficienza mentale nei fanciulli anormalie deficienti Esperienze, comparazione critiche. Rivista Pedagog., 1909, 3, 263-281. See No. 244.
- 1152. Johnson, G. E. Contribution to the Psychology and Pedagogy of Feeble-Minded Children. Ped. Sem., 1894, 3, 246-301. See No. 58.
- 1153. Katzenellenbogen, E. W. A Critical Essay on Mental Tests in their Relation to Epilepsy. 1912-14, 4, 140-173. See No. 523.
- 1154. Kelly, R. L. Psycho-Physical Tests of Normal and Abnormal Children-A Comparative Study. Psychol. Rev., 1903, 10, 345-372.
- 1155. Kent, G, H. A Graded Series of Geometrical Puzzles. J. of Exp. Psychol., 1916, 1, 40-50. See No. 529.
- 1156. Knox, H. A. A Test for Adult Imbeciles and Six-Year-Old Normals. N. Y. Med. J., 1913, 98, 1017-1018. Two form-board tests.
- 1157. Knox, H. A. Two New Tests for the Detection of Defectives. N. Y. Med. J., 1913, 98, 522-524. See No. 543.
- 1158. Knox, H. A. A Comparative Study of the Imaginative Powers in Mental Defectives. Med. Rec., 1914, 85, 748-751. 25 average and 25 mentally deficient Italians tested by the ink blot test.
- 1159. Kohs, S. C. The Distribution of the Feeble-Minded Arranged by Mental Age (Binet). J. of Delinq., 1916, 1, 61-71. An attempt to visualize the combined results of his own and several other important investigations.
- 1160. Kuhlman, F. A Revision of the Binet-Simon System for Measuring the Intelligence of Children. J. of Psycho-Asthen., Monog. Suppl., 1912, No. 1. Pp. 41. See No. 262.
- 1161. Kuhlmann, F. The Degree of Mental Deficiency in Children as Expressed by the Relation of Age to Mental Age. J. of Psycho-Asthen., 1913, 17, 132-143. Also 4. Intern. Congr. School Hyg., Buffalo, 1913, 5, 629,636. See No. 263.
- 1162. Kuhlman, F. The Results of Grading Thirteen Hundred Feeble-Minded Children with the Binet-Simon Tests. J. of Educ. Psychol., 1913, 4, 261-268. See No. 261.
- 1163. Lewis, E. O. The Binet and Point Scale Methods of Testing Intelligence. J. of Exp. Psychol., 1917-18, 4, 192-202. See No. 270.
- 1164. Lickley, E. J. Causes of Truancy Among Boys. Los Angeles: Univ. of Southern California Press. Sociological Monog., 1917, No. 3. Pp. 12. See No. 896.
- 1165. Lindley, M. A Picture Test. Training School Bull., 1918, 14, 156-161. See No. 547.
- 1166. Luckey, B. M. Correlation between Form Board Improvement and Ability to Improve Industrially. Training School Bull., 1918, 14, 140-142. See No. 553.

- 1167. Martin, L. A Contribution to the Standardization of the De Sanctis Tests. Training School Bull., 1916, 13, 93-110. See No. 379.
- 1168. Mead, C. D. The Relation of General Intelligence to Certain Mental and Physical Traits. New York: Columbia Univ., Teachers College Contrib. to Educ., 1916. Pp. 117. See No. 562.
- 1169. Melville, N. J. An Organized Mental Survey in Philadelphia Special Classes. Psychol. Clin., 1916, 9, 258-265. Binet-Simon scale, 1911 revision, used. A chart is given showing the classification by mental level and age differences of 850 pupils.
- 1170. Morrow, L., and Bridgman, O. Delinquent Girls Tested by the Binet Scale. Training School Bull., 1912, 9, 33-36. Out of 60 girls examined "only 20 at most will be able to take anything like a normal place in society."
- 1171. Norsworthy, N. The Psychology of Mentally Deficient Children. Arch. of Psychol., 1906, No. 1. Pp. 111. See No. 574.
- 1172. Ordahl, L. E., and Ordahl, G. Qualitative Differences between Levels of Intelligence in Feeble-Minded Children. J. of Psycho-Asthen. Monog. Suppl., 1915, 1 (No. 2), 1-50. See No. 575.
- 1173. Otis, M. A Studyof Association in Defectives. J. of Educ. Psychol., 1915, 6, 271-288. See No. 577.
- 1174. Paddon, M. E. A Study of Fifty Feeble-Minded Prostitutes. J. of Delinq., 1918, 3, 1-11. The Binet scale was used as a starting point in this investigation, but the emphasis is laid on the social and economic status of the subjects.
- 1175. Pear, T. H., and Wyatt, S. The Testimony of Normal and Mentally Defective Children. Brit. J. of Psychol., 1913-14, 6, 387-419. See No. 581.
- 1176. Peterson, A. M., and Doll, E. A. Sensory Discrimination in Normal and Feeble-Minded Children. An Experimental Study of Discrimination of Lifted Weights in Relation to Mental Age. Training School Bull., 1914, 11, 110-118, 135-144. See No. 582.
- 1177. Pintner, R., and Paterson, D. G. Experience and the Binet-Simon Tests. Psychol. Clin., 1914-15, 8, 197-200. See No. 285.
- 1178. Pintner, R. The Standardization of Knox's Cube Test. Psychol. Rev., 1915, 22, 377-401. See No. 586.
- 1179. Pintner R., and Paterson, D. G. A Psychological Basis for the Diagnosis of Feeble-Mindedness. J. of Crim. Law and Criminol., 1916-17, 7, 32-55. See No. 82.
- 1180. Porteus, S. D. Mental Tests for Feeble-Minded. A New Series. J. of Psycho-Asthen., 1915, 19, 200-213.
- 1181. Porteus, S. D. Motor Intellectual Tests in Mental Defectives. J. of Exp. Ped., 1915-16, 3, 127-135. See No. 384.
- 1182. Porteus, S. D. The Measurement of Intelligence: Six Hundred and Fifty-three Children Examined by the Binet and Porteus Tests. J. of Educ. Psychol., 1918, 9, 13-31. See No. 386.
- 1183. Roemer, F. Assoziationsversuche an geistig zurückgebliebenen Kindern. Fortschritte der Psychol., 1914, 3, 43-101. Comparison of 120 mentally retarded with 441 normal children in a free association test.

- 1184. Saffiotti, F. U. Die Erziehung der Abnormen in Italien. Eos. 1913, 9, 34-44. See No. 301.
- 1185. Schmitt, G. Standardization Tests for Defective Children. Psychol. Monog., 1915, 19, No. 83. Pp. 81. See No. 616.
- 1186. Schubert, A. Versuch einer Anwendung der Methode von Binet auf die Erforschung der russischen defektiven Kindern. (Original in Russian 1. Russ. Congr. Exper. Pedag., 1910.) Also Archiv, f. d. gesamt. Psychol., 1913, 26, ——. Trans. H. Reybekiel. See No. 309.
- 1187. Sylvester, R. H. The Form Board Test. Psychol. Monog., 1915, 15, No. 65. Pp. 56. See No. 638.
- 1188. Terman, L. M. A Survey of Mentally Defective Children in the Schools of San Luis Obispo, California. Psychol. Clin., 1912-13, 6, 131-139. See No. 320.
- 1189. Town, C. H. A Study of Speech Development in Two Hundred and Eighty-five Idiots and Imbeciles. J. of Psycho-Asthen., 1912, 17, 7-15. See No. 646.
- 1190. Vaney, V. Le diagnostic des arriérés scolaires. L'Enfance Anorm., 1913, 20, 509-514. See No. 337.
- 1191. Wallin, J. E. W. Experimental Studies of Mental Defectives. Baltimore: Warwick and York. Educ. Psychol. Monog., 1912, No. 7. Pp. 155. See No. 125.
- 1192. Wallin, J. E. W. The Mental Health of the School Child. Contributions to a New Science of Orthophrenics and Orthosomatics. New Haven: Yale Univ. Press, 1914. Pp. 450. See No. 123.
- 1193. Wallin, J. E. W. Psycho-Motor Norms for Practical Diagnosis. Psychol. Monog., 1916, 22, No. 94. Pp. 102. See No. 651.
- 1194. Wallin, J. E. W. The Phenomenon of Scattering in the Binet-Simon Scale. Psychol. Clin., 1917, 11, 179-195. See No. 347.
- 1195. Wallin, J E. W. Wide Range versus Narrow Range Binet-Simon Testing. J. of Delinq., 1917, 2, 315-330. See No. 348.
- 1196. Wallin, J. E. W. Problems of Subnormality. Yonkers-on-Hudson, N. Y., World Book Co., 1917. Pp. 485. See No. 126.
- 1197. Williams, J. H. Classification of Fifty Backward and Feebleminded School Children. Psychol. Clin., 1915-16, 9, 97-106. Those children selected by their teachers because of backwardness, were tested by the Stanford Revision of the Binet-Simon scale. They were found to range in intelligence from middle grade morons to superior normal.
- 1198. Williams, J. H. Backward and Feeble-Minded Children in Salt Lake City. Training School Bull., 1915, 12, 123-129. 108 children examined by the Stanford Revision and their chronological and mental ages compared in a curve. No discussion of the tests.

#### 4. With the Psychopathic

- 1199. Anderson, V. V. A Proper Classification of Border-Line Mental Cases Amongst Offenders. Boston Med. and Surg. J., 1915, 173, 466-469. Also J. of Crim. Law and Criminol., 1916, 6, 689-695. See No. 2.
- 1200. Baroncini, L., e Sarteschi, U. Richerche di Psicologia individuale nei dementi. Riv. di psicol., 1910, 6, 1-23.

The application of the Binet tests to sixty dements (Kohs).

- 1201. Bechterew, W., von, und Władyczko, S. Beiträge zur Methodik der objektiven Untersuchung von Geisteskranken. Zsch. f. Psychother. u. Med. Psychol., 1911, 2, 87-109. See No. 398.
- 1202. Binet, A., et Simon, T. Nouvelle théorie psychologique et cliuique de la démence. Année psychol., 1909, 15, 168-272. See No. 157.
- 1203. Brown D. L. F. Testing Epileptics. Training School Bull., 1917, 14, 12-16. See No. 174.
- 1204. D'Allonnes, G. R. L'affaiblissment ntellectuel chez les déments. Paris: Alcan, 1912. Pp. 228.

Thirty cases examined. The method employed was similar to that of Binet-Simon in their "Nouvelle Théorie de la démence" (Kohs).

1205. Decroly, O., et Degand, J. Les tests de Binet et Simon pour la mesure del 'intelligence: contribution critique. Arch. de Psychol., 1906, 6, 27-130.

Account of individual responses.

1206. Ellis, F. W., and Bingham, T. Report of Mental Examination. Reprint from 7th Annl. Rept. of N. Y. Prob. and Prot. Assoc., Sept., 1915.

Describes Neurological Institute Mental Tests and gives representative cases.

1207. Griffith, A. H. Mental Tests for Use with Defective Children. Child, 1916, 6, 455-460.

Epileptic patients annually examined by a modified form of the Binet scale. "Some method of mental testing is absolutely necessary in determining the prognosis in regard to patients suffering from epilepsy."

- 1208. Haines, T. H. High-Grade Defectives at the Psychopathic Hospital During 1913. Boston Med. and Surg. J., 1914, 171, 854-856. Includes a brief account of "fifty-three psychological examinations of defective delinquents by Binet-Simon and performance" tests. A classification of mental processes as those "in which delinquents are defective," those "in which they show proficiency" and those "in which hey occupy a middle ground."
- 1209. Hart, B., and Spearman, C. Mental Tests of Dementia. J. of Abnorm-Psychol., 1914, 9, 217-264. See No. 45.
- 1210. Karpas, M. J. Remarks on Neurology and Psychiatry in Berlin, with Special Reference to Ziehen's Intelligence Test. Utica, N. Y.: State Hosp. Bull., 1910-11, 3, 393-402.
- 1211. Karpas, M. J. Psychic Constitutional Inferiority. N. Y. Med. J., Mar. 22, 1913. Includes Ziehen's Tests.
- 1212. Katzenellenbogen, E. W. A Critical Essay on Mental Tests in their Relation to Epilepsy. Epilepsia, 1912-14, 4, 130-173. See No. 523.
- 1213. Kent, G. H., and Rosanoff, A. J. A Study of Association in Insanity-Amer. J. of Insan., 1910-11, 67, 37-96, 317-390. See No. 528.
- 1214. Kramer, F. Die Intelligenzprüfung bei kriminellen und psychopathischen Kindern. 1. deut. Kongr. f. Jugenbdg. u. Jugendkde., Dresden,... 1911. Also Leipzig: Teubner, Arbeiten des Bundes für Schulreform... 1911. Pp. 28. See No. 257.
- 1215. Kramer, F. Die Intelligenzprüfung bei kriminellen und psychopathischen Kindern. Vortrag, 1911. See No. 259.
- 1216. Ley, A., et Menzerath, P. L'étude expérimentale de association des idées dans les maladies mentales. Gand: Van der Haeghen, 1911. Pp. 200.

- 1217. MacDonald, J. B. The Binet Tests in a Hospital for the Insane. Training School Bull, 1910, 7, 250-251. See No. 272.
- 1218. Rossy, C. S., and Sawyer, M. H. Comparison of Mental Gradings by the Yerkes-Bridges Point Scale and the Binet-Simon Scale. Ped. Sem., 1916, 23, 452-467. See No. 296.
- 1219. Sarteschi, U. Ricerche di Psicologia individuale nei dementi. Riv. di psicol., 1916, 6, 441-488. Many case studies.
- 1220. Stelzner, H. Die psychopathischen Konstitutionen und ihre sociologische Bedeutung. 1911. Compiled a series of 13 tests.
- 1221. Strong, E. K., Jr. A Comparison between Experimental Data and Clinical Results in Manic-Depressive Insanity. Amer. J. of Psychol., 1913, 24, 66-98. See No. 634.
- 1222. Wallin, J. E. W. The Mental Health of the School Child. The Psycho-Educational Clinic in Relation to Child Welfare. Contributions to a New Science of Orthophrenics and Orthosomatics. New Haven: Yale Univ. Press, 1914. Pp. 450. See No. 123.
- 1223. Wallin, J. E. W. Wide Range versus Narrow Range Binet-Simon Testing. J. of Delinq., 1917, 2, 315-330. See No. 348.
- 1224. Wender, Louis. The Applicability of Binet-Simon Intelligence Tests in Psychoses of the Senium. N. Y. Med. J., Vol. CI., No. 10, Whole No. 1892, Mar. 6, 1915. See No. 354.

# 5. With Delinquents

- 1225. Anderson, V. V. A Proper Classification of Border-Line Mental Cases Amongst Offenders. Boston Med. and Surg. J., 1915, 173, 466-469. Also J. of Crim. Law and Criminol., 1916, 6, 689-695. See No. 2.
- 1226. Anonymous. Mental Examinations. Albany, N. Y.: The Capitol. Eugenics and Social Welfare Bull., No. 11. Pp. 73. See No. 780.
- 1227. Baldwin, B. T. The Learning of Delinquent Adolescent Girls as Shown by a Substitution Test. J. of Educ. Psychol., 1913, 4, 317-332. See No. 396.
  - 1228. Beanblossom, M. L. Mental Examination of Two Thousand Delinquent Boys and Young Men. Jeffersonville, Ind.: Indiana Reformatory Print, 1916. Pp. 23. See No. 397.
  - 1229. Bluemel, C. S. Binet Tests on Two Hundred Juvenile Delinquents. Training School Bull. 1915, 12, 187-193. See No. 163.
  - 1230. Bowler, A. C. The Trabue Completion Test as Applied to Delinquent Girls. J. of Exp. Psychol., 1916, 1, 533-539. See No. 413.
- -1231. Bronner, A. F. A Comparative Study of the Intelligence of Delinquent Girls. New York: Columbia Univ., Teachers College Contrib. to Educ., No. 68. Pp. 95.

Four groups tested: Delinquent girls; college students; a group of working girls attending evening classes, and a group whose only wage earning occupation had been that of domestic service. The tests employed were easy and hard opposites, two memory tests and a completion test. These were supplemented by two ethical discrimination tests. So far as intelligence was concerned the first and last groups were found about equal.

- 1232. Bronner, A. F. A Research on the Proportion of Mental Defectives among Delinquents. J. of Crim. Law and Criminol., 1914-15, 5, 561-568. Based on the study of more than 500 cases.
- 1233. Bronner, A. F. "Construction Test A" of the Healy-Fernald Series. Psychol. Clin., 1916-17, 10, 40-44. See No. 418.
- 1234. Bronner, A. F. The Psychology of Special Abilities and Disabilities. Boston: Little, Brown, 1917. Pp. 269. See No. 419.
- 1235. Carley, L. A. Mental Tests and Practical Judgment. J. of Crim. Law and Criminol., 1915-16, 6, 249-259. See No. 428.
- 1236. Decroly, O. L'examen des délinquants juvéniles. 3. Congr. intern. de Neurol. et Psychiat. Bruxelles, 1913.
- 1237. Doll, E. A. Supplementary Analysis of H. B. Hickman's Study of Delinquents. Training School Bull., 1915, 11, 165-168. Hickman's results (Training School Bull., 1915, 11, 159-164) summarized in six tables. The coefficients of correlation between chronological age and mental age are found; between chronological age and school grade and between mental age and school grade. These coefficients are compared with those found by Goddard with his "Two Thousand Normal Children."
- 1238. Eastman, F. C., und Rosanoff, A. J. Association in Feeble-Minded and Delinquent Children. Amer. J. of Insan., 1912, 69, 125-141. See No 458.
- 1239. Ellis, F. W., and Bingham, A. T. Report of Mental Examinations. Reprint from 8th Annl. Rept. of N. Y. Prob. and Prot. Assoc., Sept., 1916.

Gives statement of purpose and background of Mental Testing and cases of individual delinquents.

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- 1241. Fernald, G. G. An Achievement Capacity Test. A Preliminary Report. J. of Educ. Psychol., 1912, 3, 331-336. A test of "persistence or spunk."
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  - 1243. Fernald, G. M. Report of the Psychological Work of the California School for Girls. J. of Delinq., 1916, 1, 22-32. See No. 212.
  - 1244. Fernald, M. R. Practical Applications of Psychology to the Problems of a Clearing House. J. of Crim. Law and Criminol., 1917, 7, 722-731. See No. 209.
  - 1245. Gifford, E. G., and Goddard, H. H. Defective Children in the Juvenile Court. Training School Bull., 1912, 8, 132-135. See No. 1131.
  - 1246. Gilliland, A. R. The Mental Ability of 100 Inmates of the Columbus (Ohio) Workhouse. J. of Crim. Law and Criminol., 1916-17, 7, 857-866.

Tested with the Yerkes point scale. Results considered in relatiou to the crimes committed, the school grades attained, and the race of the prisoners.

- 1247. Goddard, H. H., and Hill, H. F. Delinquent Girls Tested by the Binet Scale. Training School Bull., 1911, 8, 50-56. Fifty-six reformatory girls out on probation tested. All but four found to be feebleminded. Twelve individual cases described.
- 1248. Goddard, H. H., and Hill, H. F. Feeble-Mindedness and Criminality. Training School Bull., 1911, 8, 3-6. See No. 1135.
- 1249. Goddard, H. H. The Responsibility of Children in the Juvenile Court. J. of Crim. Law and Criminol., 1912, 3, 3-13. See No. 1137.
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- 1251. Haines, T. H. Mental Examination of Delinquent Boys and Girls. Ill. Med. J., 1915, 28, 283-290. See No. 225.
- 1252. Haines, T. H. Diagnostic Value of Some Performance Tests. Psychol. Rev., 1915, 22, 299-305. See No. 493.
- 1253. Haines, T. H. Relative Value of Point-Scale and Year-Scale Measurements of One Thousand Minor Delinquents. J. of Exp. Psychol., 1916, 1, 51-82. See No. 226.
- 1254. Haines, T. H. Feeble-Mindedness among Adult Delinquents. J. of Crim. Law and Criminol., 1916-17, 7, 702-721. 100 inmates of the Ohio penitentiary examined. The point scale and ten performance scales used.
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- 1256. Healy, W., and Fernald, G. M. Tests for Practical Mental Classification. Psychol. Monog., 1911, 13, No. 2. Pp. 53. See No. 497.
- 1257. Healy, W. Some Types of Mental Defectives. J. of Psycho-Asthen., 1913-14, 18, 111-116. See No. 237.
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- 1260. Hickman, H. B. Delinquent and Criminal Boys Tested by the Binet Scale. Training School Bull., 1915, 11, 159-164. See No. 234.
- 1261. Hill, D. S. An Experimental Study of Delinquent and Destitute Boys in New Orleans, and Notes Concerning Preventative and Ameliorative Measures in the United States. New Orleans: Published by the Commission Council, 1914. Pp. 130.

A detailed study of 63 delinquent boys. These were examined individually by the form-board, Binet-Simon, color naming and aussage tests and as a group by the Ebbinghaus-Terman completion test and Courtis-Heck arithmetic test.

- 1262. Jennings, H. M., and Hallock, A. L. Binet-Simon Tests and the George Junior Republic. J. of Educ. Psychol., 1913, 4, 471-475. See No. 246.
- 1263. Kelley, T. L. The Mental Aspects of Delinquency. Austin, Texas: Univ. of Texas Bull., 1917. Pp. 125.

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- 1264. Kramer, F. Die Intelligenzprüfung bei kriminellen und psychopathischen Kindern. Vortrag, 1911. See No. 259.
- 1265. Morrow, L. and Bridgman, O. Delinquent Girls Tested by the Binet Scale. Training School Bull., 1912, 9, 33-36. Out of 60 girls examined "only 20 at most will be able to take anything like a
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- 1267. Ordahl, G. A Study of 341 Delinquent Boys. J. of Delinq., 1916, 1, 72-86.

Examined by the Stanford and Faribault revisions.

1268. Ordahl, G. Mental Defectives and the Juvenile Court. J. of Delinq., 1917, 2, 1-13.

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1269. Ordahl, L. E., and Ordahl, G. A Study of Delinquent and Dependent Girls. J. of Delinq., 1918, 3, 41-73.

State Training school for Girls, Geneva, Ill. 432 girls examined by means of the Faribault revision of the Binet-Simon scale and by the Stanford revision. Pedagogical retardation also studied. In the case studies emphasis is laid on the environmental conditions.

1270. Otis, M. The Binet Tests Applied to Delinquent Girls. Psychol. Clin., 1913-14, 7, 127-134.

> Examined 172 subjects. On the basis of results the girls were classified as Defectives, Morons and Normal. The number of correct answers was then tabulated and "the percentage estimated, not only for the whole group, but for each of the classes." The results are presented in one table and four graphs and discussed in detail as well.

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1272. Pintner, R. One Hundred Juvenile Delinquents Tested by the Binet Scale. Ped. Sem., 1914, 21, 523-531.

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- 1273. Pintner, R., and Toops, H. A. A Mental Survey of the Population of a Workhouse. J. of Delinq., 1917, 2, 278-287. See No. 599.
- 1274. Pintner, R., and Reamer, J. Mental Ability and Future Success of Delinquent Girls. J. of Delinq., 1918, 3, 74-79. See No. 291.
- 1275. Porteus, S. D. Mental Tests with Delinquents and Australian Aboriginal Children. Psychol. Rev., 1917, 24, 32-42. See No. 385.
- 1276. Porteus, S. D. The Measurement of Intelligence: Six Hundred and Fifty-three Children Examined by the Binet and Porteus Tests. J. of Educ. Psychol., 1918, 9, 13-31. See No. 386.
- 1277. Pyle, W. H. A Study of Delinquent Girls. Psychol. Clin., 1914-15, 8, 143-148.

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- 1281. Sullivan, W. C. La mesure du développement intellectuel chez les jeunes délinquantes. Année psychol., 1912, 18, 341-361. See No. 108.
- 1282. Wallin, J. E. W. Criminal Irresponsibility. J. of Delinq., 1916, 1, 250-253. See No. 345.
- 1283. Weidensall, J. Psychological Tests as Applied to the Criminal Woman. Psychol. Rev., 1914, 21, 370-375. See No. 351.
- 1284. Weidensall, J. The Mentality of the Criminal Woman. A Comparative Study of the Criminal Woman, the Working Girl, and the Efficient Working Woman in a Series of Mental and Physical Tests. Baltimore: Warwick and York. Educ. Psychol. Monog., 1916, No. 14. Pp. 332. See No. 657.
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- 1286. Williams, J. H. Intelligence and Delinquency. A Study of Two Hundred and Fifteen Cases. J. of Crim. Law and Criminol., 1915-16, 6, 696-705.

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- 1289. Bridges, J. W., and Coler, L. E. The Relation of Intelligence to Social Status. Psychol. Rev., 1917, 24, 1-31.
- 1290. Brigger, G. A Study of Twenty-five Repeaters at the Associated Charities, Portland, Oregon. J. of Delinq., 1916, 1, 187-194. Examined with the Stanford revision. Case studies of the six who were found 'o be feebleminded.
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- 1293. Burt, C. Experimental Tests of Higher Mental Processes and their Relation to General Intelligence. J. of Exp. Ped., 1911-12, 1, 93-112. See No. 422.
- 1294. Burt, C., and Moore, R. C. The Mental Differences between the Sexes. J. of Exp. Ped., 1911-12, 1, 273-284, 355-388. See No. 423.
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- 1303. Ordahl, L. E., and Ordahl, B. A Study of Delinquent and Dependent Girls. J. of Delinq., 1918, 3, 41-73. See No. 1269.
- 1304. Pintner, R., and Anderson, M. M. The Picture Completion Test. Baltimore: Warwick and York, Educ. Psychol. Monog., 1917, No. 20. Pp. 101. See No. 596.
- 1305. Pintner, R. The Mentality of the Dependent Child, together with a Plan for a Mental Survey of an Institution. J. of Educ. Psychol., 1917, 8, 221-238. See No. 595.
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# 10. Vocational Selection

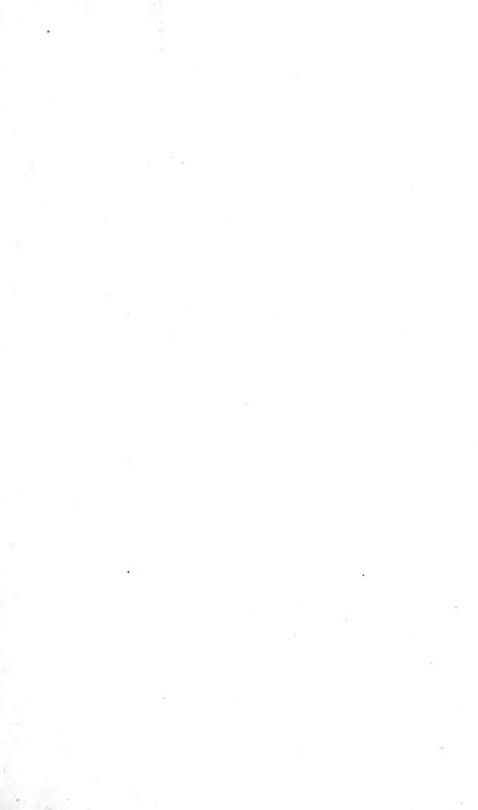
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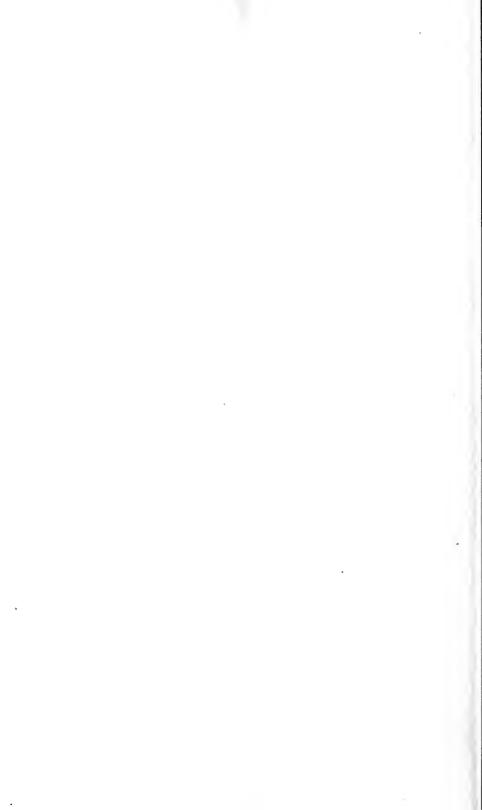
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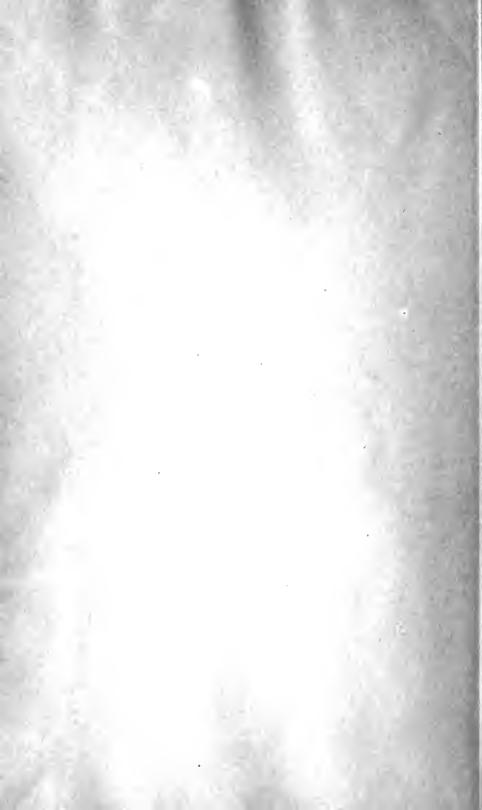
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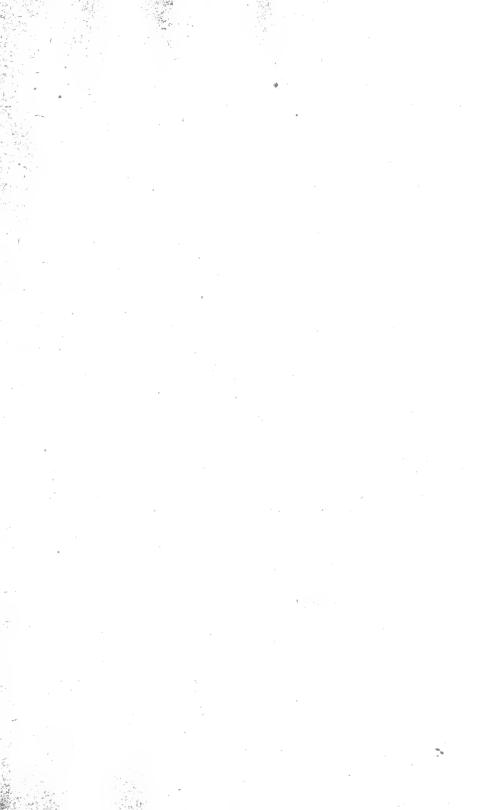
The scores from the tests gave high correlation with the salaries of the men.

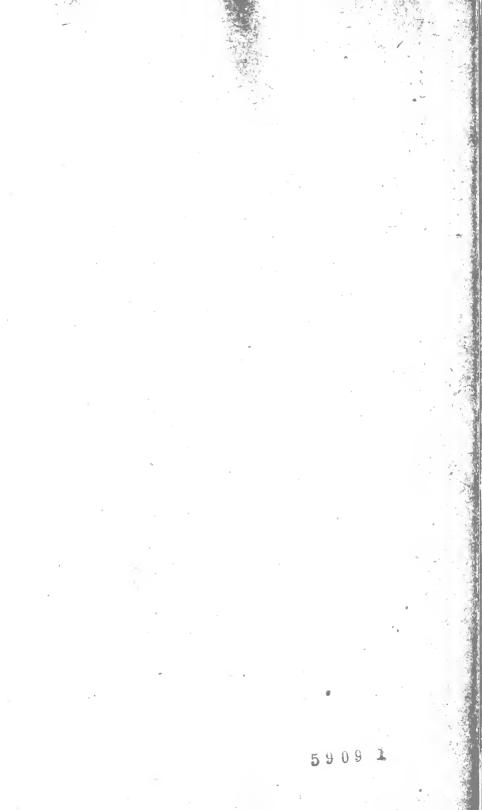






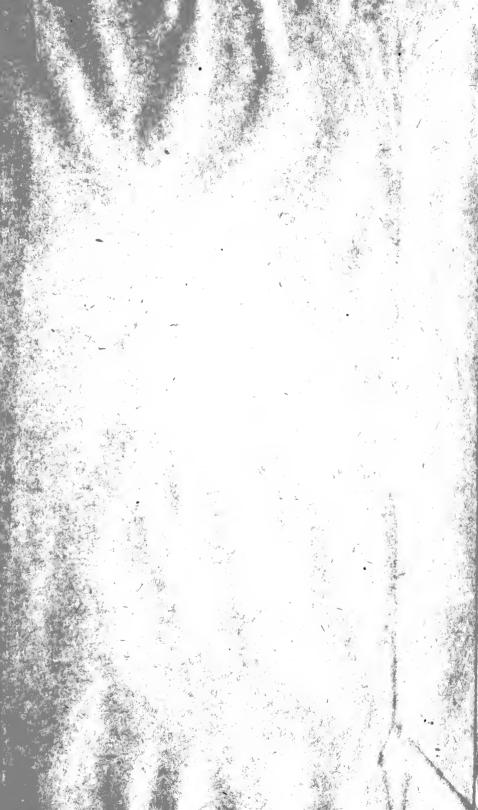












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