

THE PSYCHOLOGICAL BULLETIN

GENERAL REVIEWS AND SUMMARIES.

COMPARISON OF THE SEXES IN MENTAL TRAITS

BY LETA S. HOLLINGWORTH

Teachers College, Columbia University

To give this review a satisfactory title has not been altogether easy. It is the custom of the BULLETIN to publish from time to time summaries showing the results of experimental investigations in which the sexes are compared in mental traits, and the present review is intended to perpetuate this custom for the years 1916-1918. To entitle it "Sex Differences in Mental Traits" would lead the reader falsely to infer that all or most of the comparisons have shown differences. To call it "The Mental Traits of Sex" would imply that it discloses mental traits which are sex-limited. On the other hand, a title like "Sex Identity in Mental Traits" would be unfair, especially to such expressions of opinion as are to be included, which take the time-honored view that there are, and must be notable, inherent psychological differences between the sexes. Simply to adopt for a title "The Psychology of Sex" would give the erroneous impression that the review treats of literature pertaining to the sexual instinct. The title finally chosen seems to circumvent most of these difficulties.

From the standpoint of the experimental behaviorist no conclusions should be noted in a review under this title, except such as were based on the quantitative study of large numbers of both sexes, selected at random, or on exactly the same basis. And any difference found between the two groups thus selected and studied, could be announced as a sex difference only if it reliably exceeded the probable error of the average or median; or, being within the

probable error, was found constantly to occur in a large number of comparisons of similar groups with each other. Furthermore, a reliable difference thus found could be called an *inherent* sex difference only if it were shown to be present when the training and environment of both groups had been similar. The only point in pausing thus to state the obvious is that investigators sometimes neglect these principles of scientific method, and announce any difference found between two groups, arbitrarily segregated on the basis of sex, as a "sex difference." They forget that a chance difference would be found if the individuals composing the groups were re-segregated on the basis of any incidental factor—say eye-color or presence and absence of freckles.

The reviewer who would confine himself exclusively to results gained by the experimental method outlined above would, however, automatically tend to do himself out of his review. He would have very little to report. It was formerly a kind of convention among psychologists to include in the summary of results of a study where both male and female subjects participated, a paragraph on "sex differences." There seems now to be a growing tendency among those who have studied individual differences most extensively to omit this customary paragraph. For instance, Pintner and Pater-son (14) make no reference to sex differences in their recent standardization of performance tests. On the basis of the extensive data from which his *Mental Survey* is derived, Pintner (16) states merely that "sex differences in these tests are too slight to justify separate norms for boys and girls." In the standardization of the picture completion test, Pintner and Anderson (15) say, "the test is equally well adapted to boys and to girls." Pressey and Pressey (17) postpone discussion of sex differences for a later paper.

Two comparisons of the sexes in memory tests have come to notice: E. F. Mulhall (13) tested 285 boys and 353 girls for recall and recognition, with various kinds of materials. She found that "for memory of words and syllables the averages are slightly higher for the girls, for forms slightly higher for boys," and that "there appears to be no marked sex difference in variability." A. I. Gates (5) from tests of adults concludes that women show slightly better performance than men in memory, and that men are slightly superior to women in reasoning. The amount of overlapping and the reliability measures are not given.

Marsh (11) presents results on two individuals, a man and a woman, who subjected themselves to a long fast, during which

mental tests were administered in order to detect possible changes in performance and feeling. "The sensory and passive sides of the self are not greatly affected, generally speaking, but sexually show male sensitivity for pain and perceptivity for dots increased, and for touch decreased; while for the female the reverse is true. Some improvement for both sexes is shown in mental clearness and accuracy, though not decisively; and a most pronounced effect upon the memory, disadvantageous for the male subject, and advantageous for the feminine. The feelings, usually acute for several days, and then usually apathetic for a time, were on the whole ambiguous indices of the grades of objective performance, less so for the male than for the female." What justification there could be for entitling such a study "sex differences" is hard to see, since it includes but one man and one woman, each of whom might easily differ as much or more from others of the same sex, as from each other.

The experiments of Berliner (3) with æsthetic judgments of school children, made on 180 girls and 180 boys of grammar school ages, show that "the ranking of a group of pictures is to a high degree the same for both sexes"; that "different groups of girls agree more closely in their æsthetic judgments than groups of boys"; that "the average positions of the pictures differ more from one another in groups of girls than in groups of boys"; that "inside the group the girls agree more closely in their æsthetic judgment than boys"; that "boys agree more closely in their dislikes than in their likes; girls agree more in their likes than in their dislikes,"—a result contradictory to results previously announced by H. L. Hollingworth and by E. K. Strong, Jr.; and that "the variability between the extreme and middle pictures tends to be greater in groups of girls than in groups of boys."

Rosanoff, Martin and Rosanoff (19) in extending the studies of free association previously undertaken by Kent and Rosanoff and by Rosanoff and Rosanoff, have made special comments in comparison of the sexes. They state that "all conditions being approximately equal, no difference is found in the showings of the two sexes, as regards our most significant measure—the sum of 'high standard' values; but male subjects show very consistently a tendency to give either individual reactions or common reactions having no 'high standard' value, where female subjects furnish failure of reaction instead." They state also that "a tendency to give individual reactions or common reactions without 'high standard'

value, where normal subjects fail of reaction, seems to characterize neuropathic subjects, independently of sex."

Terman (21) and his collaborators have now published in monograph form the data from which The Stanford Revision of The Binet-Simon Scale is derived. Here the curves representing the performance of the two sexes are seen to be practically identical. No sex differences in variability appear. The conclusion of the authors is that the norms for general intelligence apply equally to both sexes.

Elizabeth E. Farrell (4) reports statistics from a survey of certain ungraded classes for children of exceptionally low mentality, in New York City. In these classes there were 258 boys and 103 girls. The investigator comments as follows: "The fact that more boys than girls are found in these ungraded classes permits of explanations other than that of greater variability in males. One of these is based on the fact that boys have greater freedom, are less restrained. Because of this they come into conflict with their school environment. This maladjustment makes it imperative that some notice be given to them, and some explanation sought." Race (17) selecting pupils for an ungraded class of superior children in a city school system, found 10 boys and 11 girls who were eligible on the basis of exceptionally high intelligence, and physical fitness.

In the field of animal psychology Bagg (2) has contributed a quantitative study of individual differences in the performance of white rats, which reveals no sex differences.

Turning from conclusions based on quantitative data, we wish to note recent expressions of theory and opinion, bearing on the behavior of the sexes. These are mainly discussions of the psychological considerations involved in the changing social status of women. Hull (7) has published an article pointing out the implications of psychoanalytic concepts in the study of the behavior of women and girls. The concept of hysterical and irrational reaction as the result of chronic blocking of strong, fundamental conations, by taboo, social suppression, economic nonentity, and the like, is brought to the attention of those who would understand the efforts of women to find another "place." In this same vein are chapters of Adler's work (1), published some years ago, but not translated into English until recently.

Moxcey (12) has written a readable book, based with discrimination on the data of psychology, and intended for those whose work has to do with the guidance of adolescent girls. L. S. Hollingworth

(6) has advanced the theorem that the traditional division of labor between the sexes implies no sex difference in mental traits; that it is to be explained solely on the basis of sex difference in the physiological function of reproduction, which has always bound the female to the house and offspring, leaving the male relatively free vocationally; that the traditional division of labor is what we should expect to find, even though there were no sex differences in mental traits.

Russell (20) expresses the belief that the concept of maternal instinct has been greatly overworked, in the service of social control, and that women will become increasingly resistant to exaggeration of its importance as a determinant of their careers. Jastrow (8) is convinced that "the feminine mind" is a type, different qualitatively and quantitatively from "the masculine mind," and has again presented his opinions in a chapter of his recent volume, *The Psychology of Conviction*. Wells (22) occasionally implies the existence of sex differences in instinctive equipment, as when he discusses work trends and mastery trends in connection with the masculine pronoun, and parental trends in connection with the feminine pronoun. On the whole, however, the reader is left to infer that the mechanisms of adjustment work independently of sex.

It is quite certain that not all the literature which compares the sexes in mental traits, and which would deserve comment, has been seen by the present reviewer. For example, publications have appeared under titles which would imply that they contain such comparisons, by Lipmann (9) and by Lombroso-Ferraro (10) respectively, but they have not been accessible to the reviewer. Now that the war is finished, foreign contributions will doubtless begin to become available once more. They are conspicuously absent from this report.

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THEORETICAL ETHNOLOGY

BY ROBERT H. LOWIE

American Museum of Natural History

The theory of a worldwide diffusion of cultural traits, which Graebner brought so prominently before the ethnological public about a decade ago, has been most vigorously championed of late years, though in a different form, by the British anatomist Elliot Smith, who has founded what may be called the Manchester school of anthropology. His most recent publication (9) presents a complete sketch of the origin of human civilization and an exposition of the psychological factors that operate in its evolution. The principle of psychic unity which has played so prominent a rôle in anthropological speculation is definitely abandoned. All cultural similarities must be the result of borrowing, for the phenom-