are considerable and in all probability significant. In general the range diminishes from unskilled labor to intellectually difficult professions.

The data of this occupational study, which are merely sampled by Fig. 12, suggest both the possibility and desirability of preparing intelligence specifications for use in connection with civilian occupations. Such specifications, if satisfactorily prepared, should be useful alike as partial basis for educational advice and procedure and subsequently for vocational guidance. It must be emphasized in this connection that the data of Fig. 12 are not strictly comparable with such information as may be gathered concerning civilian groups because various selectional factors operate in the army.

The Applicability of Mental Measurements.—The utilization of methods of mental testing by the army has at once increased military efficiency by the improved utilization of brain power and demonstrated the applicability of the group method of measuring intelligence to educational and industrial needs. The army methods, although not adapted to the usual educational or industrial requirements, can readily be modified or used as a basis for the development of similar procedures.

There are abundant indications that the future will witness the rapid development of varied methods for improving scientific placement and vocational guidance. It is highly probable that grading in the public schools, in colleges and professional schools will shortly be based in part upon measurement of mental ability instead of exclusively on measurements of acquisition. The war has worked a miracle for what may properly be called mental engineering by precipitating expectations, surmises and desires which have long sought expression. Yesterday a few men believed in the probability of the early appearance and practical usefulness of this new branch of engineering; to-day scores of business men, educators and men of other scientific professions are convinced that it has arrived and demand its rapid and effective development.

The complete scientific report on the psychological data which the army has supplied and of which mere glimpses have been given in this article should constitute the basis for further important advances in methods of mental measurement and should greatly add to the knowledge of the distribution of intelligence and its varied and significant relations. These reports are in preparation and it is hoped that they may be published without undue delay.

SCIENTIFIC EVENTS

PROPOSED MAP OF BRAZIL ON THE SCALE OF ONE TO A MILLION

WE learn from the *Geographical Journal* that a further important advance in the mapping of South America is to be expected from the decision of the "Club de Engenharia" of Rio de Janeiro to celebrate the approaching centenary of Brazilian Independence (1922) by the compilation of a map of Brazil which shall also serve as a contribution to the scheme for a general map of the world on the scale of 1/1,000,000. We have received from Senhor Paulo de Frontin, President of the Engineering Club, copies of a memoir printed in 1916 describing the general features of the proposal (the execution of which has, it seems, already been begun) and the methods which it is proposed to adopt. It is pointed out that the great extension of the Republic renders it not feasible to construct a general map, capable of being combined into a whole even as a wall-map, on a larger scale than 1/2M (1:2,000,000), and that on the millionth scale the sheets would necessarily be used separately or combined with neighboring sheets only, Even on half this scale the conjoint map would measure 8 feet by 7½. The original compilation of the new map (the "Mother-map" as it is termed in the United States) will be on the

scale of 1/200,000, each sheet embracing one square degree, and including at least one point whose coordinates shall be fixed with satisfactory precision; for this the polyhedrical projection will be employed. In view of the enormous extent of the territory a complete new survey will be dispensed with, any trustworthy material already existing being employed and supplemented by reconnaissances and astronomical determinations of position. It is reckoned that about 8,000 kilom. have already been surveyed on the scale of 1/100,000, and that about 1,700,000 kilom., or one fifth of the total area of Brazil, have been mapped on other scales. To resurvey the whole on the 1/100,000 scale would, it is calculated, occupy 690 years, and the small state of Rio de Janeiro alone four years. But a map free from important errors and giving a good general representation of the country could be made in twenty-one years, or less if existing material is taken into account. Thus it is hoped that a satisfactory mapping of half the whole area may be completed in time for the Centenary celebration, the other half being left for the second century of independence.

SCIENTIFIC MEETING OF THE BRITISH MEDICAL ASSOCIATION

DURING the four years of the war, the scientific meetings of the British Medical Association were suspended and only the political meetings of the representatives were held. The last ordinary annual general meeting was held in July, 1914, and it had been arranged to hold the following meeting at Cambridge, under the presidency of Sir Clifford Allbutt. This meeting was abandoned, because of the strain on the profession owing to the war. The London correspondent of the *Journal* of the American Medical Association writes that it has been found impossible for Cambridge to arrange to receive the association this year, but it hopes to do so in 1920. It was therefore suggested that a special meeting might be arranged this year for the discussion of clinical and scientific subjects, but on a smaller scale than usual. At a meeting, the proposal was laid before Lieutenant General Sir John Goodwin, the director general of the army medical service, and representatives of the medical services of the British navy and air force and of the medical services of the Dominions and of the United States. In opening the proceedings, Sir Clifford Allbutt said that the time had come to relay old tracks and make plans for reconstruction, but that it had not been considered advisable to hold a full dress meeting this year. A short scientific meeting could be held this year in London without any attempt at large organization or elaborate entertaining. Dr. J. A. MacDonald, chairman of the council, said that the main object would be to bring together workers from at home, the Dominions and the United States to garner knowledge and ideas from those who had studied war medicine and surgery. Lieutenant General Sir John Goodwin thought that such a congress was most desirable. Much scientific work of the highest value had been done during the war, and the results were now being analyzed. It would be an immense advantage that they should be examined. All possible facilities would be given to assemble research workers from the forces overseas. Colonel A. M. Whaley, United States liaison medical officer with the War Office, welcomed the idea on behalf of the American medical officers serving in Europe. Approval was also expressed by representatives of the Canadian, Australian and New Zealand medical service. All agreed that the meeting would be valuable in crystallizing the knowledge gained during the war. In view of the approaching departure of many medical officers, it was felt that the meeting should be held as soon as possible. It was provisionally agreed that the meeting should be held early in April and should last two or three days.

PROPOSED MAGNETIC AND ALLIED OBSERVATIONS DURING THE TOTAL SOLAR ECLIPSE OF MAY 29, 1919

SPECIAL magnetic and allied observations will be made at certain stations inside and outside the shadow belt of the total solar eclipse of May 29, 1919, by the Department of