MEAN INTELLIGENCE SCORES OF A RANDOM SAMPLE OF OCCUPATIONS

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A paper and pencil intelligence test * was given to Army recruits at training centres during the early part of the war. This report is based on the resultant scores of 10,000 individuals taken at random from all centres. Age and a description of civilian occupation were recorded for each individual in addition to test score.

The descriptions of civilian occupations were given sometimes in general and sometimes in specific terms. Classification was based on the exact description supplied by the individual—i.e. avoiding any grouping of nearly similar descriptions. There were 760 occupations, 39 of which were represented by 50 or more individuals each.

The mean value and standard deviation of test scores were calculated for each of the 39 main occupations (Table 1). Each occupation's mean score was compared with every other occupation's mean score, to see whether the difference between them indicates a real difference in the averages of intelligence in both occupations. (The significance of difference between means was determined by 'Student' 't' method, using $P=0.05$ as criterion of significance.)

The table shows the results obtained. Each occupation's mean score and standard deviation are given, and also the number of occupations whose mean scores are not significantly removed.

Fig. 1-8 show the test score distributions for certain occupations. In each figure the histogram shows the occupational distribution, expressed as the percentages falling into each test score interval. The continuous line is introduced for comparative purposes, and gives the distribution (also in percentages) of all 39 occupations.

Four points must be mentioned before considering the implications of the results.

(i) The recruits were asked to describe their civilian occupations as a routine matter on joining

the Army. The accuracy of their statements was not checked.

(ii) No information was available as to the duration of their employment in the occupation.

(iii) No information was available as to their proficiency in the occupation.

(iv) The medically unfit, volunteers for other services, and those (in certain occupations) reserved as key men are not included.

Conclusions

There appears to be some evidence that intelligence operates as a selection factor in both high-grade and low-grade occupations. The highest grade occupations select to some extent, by rejecting those with too low an intelligence, but the range of intelligence within any occupation is large. The middle range of occupations show much overlapping of intelligence levels, and include representatives of each intelligence level in approximately the same proportions as the general population. The lower grade occupations show slight selective effects, but it is noteworthy that several of the higher scoring labourers are better at the test than several of the lower scoring schoolmasters and teachers. It is impossible to say whether this is a form of labour wastage or whether there are other factors which make the higher scoring labourers unsuitable for higher grade work.

It would appear, therefore, that a wide range of intelligence is tolerated in most occupations. The highest grade occupations are exceptions to this to some degree. A person of average intelligence has a wide choice of occupations open to him as far as intelligence requirements are concerned. For vocational guidance or selection this means that, except at the extremes of the intelligence scale, factors other than intelligence must be considered in fitting individuals to their most suitable occupations.

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* The test was constructed to provide a rough measure of the mental level of Army recruits during the war. It is a paper and pencil group test, including synonyms, anonyms, number series, analogies, and inferences. The time allowed is ten minutes, and the maximum possible score is 60. The correlation with the Progressive Matrices Test is + 0.67.

FIG. 1.—Schoolmasters and Teachers.

FIG. 2.—Clerks.

FIG. 3.—Shop Managers.

FIG. 4.—Fitters and Fitters' Mates.

FIG. 5.—Warehousemen.

FIG. 6.—Gardeners.

FIG. 7.—Drivers (all grades).

FIG. 8.—Labourers.

TABLE 1
TEST SCORES OF THIRTY-NINE OCCUPATIONS

Occupation	No. tested	Mean test score	Standard deviation	No. of occupations with higher mean not significantly different	No. of occupations with lower mean not significantly different
Schoolmaster	92	40.65	7.46	0	1
Teacher	109	39.68	7.22	1	0
Student	237	37.66	7.72	0	0
Bank Clerk	104	34.97	7.83	0	0
Railway Clerk	180	31.79	7.72	0	0
Clerk	197	28.93	9.77	0	1
Messenger	54	25.80	7.75	0	2
Electrician	50	25.78	10.13	2	3
Baker	63	23.30	7.22	2	3
Shop Assistant	118	22.76	8.89	2	4
Shop Manager	136	22.76	7.65	3	3
Grocer	57	21.51	8.15	3	16
Fitter	70	20.48	8.24	3	14
Wood Machinist	110	20.33	7.80	2	10
Shoe Operative	52	20.33	7.75	5	13
Bus Conductor	99	20.15	7.75	4	11
Postman	61	19.21	9.62	5	16
Mechanic	56	19.16	7.84	6	13
Fitter's Mate	50	19.05	8.94	7	16
Van Driver	112	18.88	7.81	8	10
Carpenter	60	18.88	8.94	9	14
Salesman	63	18.78	8.62	10	13
Storekeeper	70	18.45	8.25	11	12
Motor Driver	229	18.31	7.88	11	8
Roundsman	119	18.18	7.59	12	10
Warehouseman	219	18.16	8.64	11	8
Builder's Lab.	58	17.98	7.64	15	8
Lorry Driver	416	17.94	7.56	11	6
Butcher	64	17.73	8.02	16	8
Driver's Mate	79	16.73	8.63	13	7
Painter	98	16.38	8.46	12	6
Driver	133	16.32	8.49	12	5
Porter	68	16.31	8.64	15	4
Gardener	139	16.25	8.19	11	3
Railway Porter	59	15.76	8.31	14	2
Miner	60	14.90	8.31	7	3
Cleaner	50	14.68	8.67	8	2
Labourer	1113	13.40	7.80	2	1
Carter	50	12.04	8.56	3	0