

MARKS FOR PHYSICAL EFFICIENCY.

TO THE EDITOR OF THE TIMES.

Sir,— I enclose a copy of a memorandum on marks for physical efficiency which the council of the British Association have just submitted to the War Office, the Admiralty, the Secretary of State for India, and the Civil Service Commissioners. The subject was brought forward by myself last autumn, before the Anthropological Section of the British Association at Newcastle (*The Times*, Sept. 13), who recommended that Government should be memorialized. The general committee of the Association concurred in this recommendation, subject, however, to the final approval of the council, after they had leisurely considered it. The council have inquired and have approved, and the memorial is now sent.

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British Association for the Advancement of Science, 22, Albemarle-street, London, W.,
March, 1890.

The council of the British Association for the Advancement of Science desire to submit the opinion expressed by the Anthropological Section of the Association last year, and subsequently confirmed by a committee appointed by the council, of the feasibility of assigning trustworthy marks for physical qualifications, and briefly to state some of the reasons for that opinion.

They feel it to be unnecessary to dwell on the desirability of including such marks in the examinations for entrance into services where high physical powers are important, but would merely allude to the fact that it was fully recognized by the War Office in 1878, at which time a joint committee of the War Office and of the Civil Service Commissioners was appointed to inquire into the question "whether the present literary examinations for the Army should be supplemented by physical competition." Also that it was agreed to almost unanimously by the various speakers in the House of Lords in connexion with that report, on May 21 and June 7, 1878, and on February 28, 1879. (See "Hansard" for those dates, pp. 352, 1,328, 1,941.) The report was presented June 28, 1878.

The recommendations of the joint committee referred almost wholly to marks to be assigned for athletic performance. Objections to this method of examination were, however, pointed out by some of the witnesses; they were appreciated by the responsible authorities, and were strongly insisted upon by them in the concluding debate. These objections applied principally to the costliness of the necessary preparation, to the difficulty of conducting the tests, to the additional strain they would impose on the already severely-taxed energies of the candidates, and to the interference of physical training with due preparation for the literary examinations. The consequence was that the recommendations of the committee were not adopted by the responsible authorities, and the subject was laid aside.

The council of the British Association now desire to point out that, in the opinion of anthropologists, athletic performance is by no means the only basis upon which trustworthy marks for physical qualifications may be assigned.

This opinion is confirmed by some experiments made at Eton College, of which an account was submitted to the British Association. Thirty two youths, most of whom were candidates for the Army, were inspected and marked by two medical men, sitting in separate rooms. The medical men had previously received the same general instructions, but otherwise acted independently. The marks they severally assigned to the youths were afterwards found to agree with considerable precision. Then, 19 of these youths were set to write an English essay, and their performances in that respect were submitted to two examiners in turn, to be marked independently by them. The marks given by these examiners agreed together only one-half as closely as those given by the medical men. No one disputes the substantial trustworthiness of such literary examinations as these, however much they may be thought capable of improvement. But this experiment (so far as it goes) proves that the trustworthiness of physical examinations would be still greater.

The difficulty of formulating a system for the use of inspectors, according to which marks should be assigned on a common and easily understood principle, is greatly lessened by the use of anthropometric tests. Much experience testifies to the quickness and adequate precision with which the chief elements of physical efficiency admit of being measured. These are the breathing capacity and the strength, both of them to be regarded with reference to the stature and to the weight; the rapidity of muscular action; the quickness of response to a signal made either to the eye or to the ear; the keenness of eyesight, and that of hearing, and whether the colour-sense is normal or not.

An experiment made at Marlborough College, which has just been published, shows how small may be the differences between the class places determined by these measures and those determined partly, in some cases, by the physical aspect, but principally by proficiency in the various school games, or, in other words, by athletic competition. Seventeen youths were measured by such apparatus as was then available at the college, and copies of their measures were distributed among the masters, to be marked by them on whatever principle they severally thought best. The individual results proved to be very discordant, but their averages, which express the result of the aggregate common sense of all the masters, ranked the boys in closely the same order as that independently assigned to them according to their proficiency in the various school games and to their apparent physique. It will be observed that, if the masters had previously conferred and come to a mutual understanding on the principle according to which the marks should be assigned, they must necessarily have arrived at identical results, as they had definite and identical *data* to work upon. There happened to be one case of failure, which was instructive. This was due to the absence of any test at the college for rapidity of muscular action, or of promptness of response to a signal. The consequence was that an agile youth was rated too low.

The council would point out that the experience gained by the measurement of about 2,000 students at Cambridge conclusively proves that success in literary examinations is in no manner connected with stature, weight, strength, or breathing capacity, and but slightly with keenness of eyesight. Such differences as there appear to be in these respects between the men who obtain high honours and those who take an ordinary degree are small, and can be accounted for. Successful literary men have probably great nervous energy, perseverance, and great power of concentrating their efforts, which would cause them to utilize such physical powers as they possessed with much effect, but they are shown to be neither superior nor inferior in the abovementioned particulars to those who fail.

The council of the British Association have noted with pleasure the opinion expressed by the Civil Service Commissioners in their report of 1889 (XXXIII. p. 15), to the effect that they anticipate no greater difficulty in ranking candidates according to their physical than according to their literary qualifications. The council thereupon beg to express the views at which they themselves have arrived, as follows:—

It seems to them that the paucity of available *data* makes it scarcely possible at the present moment to elaborate as complete a system of assigning marks for physical qualifications as is desirable, and as, in their opinion, would be otherwise feasible. They therefore think it very important that suitable steps should be taken to obtain these *data*. For instance, if a temporary system of marks were tried, with the avowed determination of reconsidering the subject after some experience had been gained, the desired information would rapidly accumulate in the hands of the inspectors; the attention of schoolmasters would be strongly aroused, and it is probable that they would attempt a variety of experiments analogous to those alluded to at Eton and Marlborough, but on a much larger scale. In a very few years it might then become feasible to arrange a system that should be generally acceptable.

In furtherance of these views the council of the British Association beg to submit the following recommendations:—

1. That an inquiry should be held as to the best system of assigning marks for physical qualifications, on the double basis of inspection and anthropometry, with a view to its early establishment as a temporary and tentative system.

2. That the marks to be given under this temporary system should be small, so as to affect the success of those candidates only who would be ranked by the present examinations very near to the dividing line between success and failure, and whose intellectual performances would consequently be nearly on a par, though they would differ widely in their physical qualifications.

3. That a determination should be expressed to reconsider the entire question after the experience of a few years.