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Bureau propose à l'assemblée de procéder au vote par scrutin de liste. Il restera encore plusieurs places vacantes qu'il serait désirable de remplir avant la Session de 1893. Cette session pourrait avoir lieu aux États-Unis, où la grande Exposition universelle de Chicago offrira des attraits que le monde ne retrouvera pas de longtemps probablement en Amérique. À la fin de la session, l'Institut international aura à se prononcer sur cette question.

Le Bureau pense que le moment est arrivé, où il doit placer sous les yeux de l'assemblée générale le bilan financier de l'Institut international. Ce bilan est satisfaisant; et votre président étudie, avec le concours toujours bienveillant de votre secrétaire général et de ses autres collègues du Bureau, les moyens de donner une forme, et peut-être une étendue nouvelle à vos publications.

Pour conclure, Messieurs, je dirai que l'expérience des sessions de Rome et de Paris offre une solide garantie de l'esprit sérieux et pratique qui continuera à vous animer dans les discussions de la présente session. Permettez moi cependant de vous faire observer que les questions portées sur notre programme sont très nombreuses, et que dans le nombre il s'en trouve plusieurs à propos desquelles peuvent se produire de grandes différences d'opinion. Nos discussions pourraient facilement dépasser les limites du temps dont nous disposons; je vous prie donc de ménager scrupuleusement ce temps, et je recommande aux orateurs la brièveté. Ils savent d'ailleurs qu'elle est une des conditions de la véritable éloquence. Nous avons le bonheur de compter parmi nous les représentants de plusieurs grandes administrations, et nous voulons qu'ils puissent, à leur retour, rendre compte à leurs ministres que l'œuvre de l'Institut est digne de l'appui des Gouvernements; que les questions qui nous occupent ont une importance vraiment internationale; que les travaux des sessions manifestent, comme je l'ai dit, un caractère sérieux et pratique; que les discussions tendent véritablement au développement de questions administratives d'un intérêt universel, et qu'elles méritent l'attention et le concours personnel des hommes d'état de tous les pays, et des fonctionnaires chargés de l'administration des affaires économiques, ou sociales.

N° 5-D.

Communication from Mr. Francois Galton on international anthropometry.

To SIR RAWSON W. RAWSON, K. C. M. G., etc.
President of the International Statistical Institute.

Dear Sir Rawson,

The establishment of an Anthropometric Section of the Statistical Institute, as proposed by Dr. Engel, seems to me to be an excellent idea, especially as the details of any anthropometric investigation on a large scale ought to be preceded by much discussion by competent persons, and in many cases by tentative investigations, all of which the Institute is eminently qualified to promote.

With pleasure I contribute, at your request, a few of my own ideas on the subject, premising that the word « anthropometry » is frequently used in a very restricted sense; but that the sense in which I myself understand it, and in which I propose to employ it now, is equivalent to the « Measurement of Human Faculty » generally, and includes that of the effects of fatigue.

One important inquiry might be set on foot at once. It is on the effect of school and college life upon physical development, so as to ascertain the existence of any hygienic faults, in order that they may be discovered, and remedied in time. Dr. Venn has submitted to the International Demographic Congress an admirable example of such an inquiry. He has discussed a few thousand measurements, made during recent years, of the students at the University of Cambridge. He shows that they form a group which is remarkably homogenous in respect to social antecedents; also that they can be sorted into three sub-divisions, in which the mean amount of the literary and mental effort of the men they include, differs widely. The first sub-division consists of those who take high honours; the second, of those who succeed in taking low honours only; the third, of those who content themselves with an ordinary pass-degree, and do not aspire to honours at all. He solves the question whether the strenuous literary and intellectual labour undergone by those who take high honours affects their physique injuriously under the healthful conditions of the life of a student at Cambridge. He clearly proves that the evils that formerly were, at least, supposed to have existed, are now statistically *nil*. The severe literary and mental work of the high honour men does *not* affect either their eyesight, their chest capacity, or their muscular powers, with one or two trifling reservations that are not worth describing here in detail.

An analogous inquiry might very properly be directed into the Universities of other countries. So far as severe study may there be found prejudicial to the eyesight, to the chest capacity, or to the muscular powers, it is to be inferred from the experience at Cambridge that the injury is not caused by the study in itself, but to faulty light, ill-ventilated rooms, omitted exercise, and other hygienic errors, all of which are remediable. This, then, is an example of the sort of inquiry that the Institute might further at once. It proceeds on clear lines, the apparatus it requires is of the simplest kind, and it does not demand a serious amount of labour. The principle by which the students should be sorted into subdivisions corresponding to those at Cambridge would, of course, have to be considered carefully for each different University.

It is unnecessary here to dwell on the value of anthropometric data concerning men of different ranks of society, and occupations, and origin. This is the usual object of anthropometric inquiry, and the necessary data and methods to be employed are fairly well understood, though the particular course to be followed in each several inquiry would have to be carefully considered. On this familiar topic it is here needless to say more. But further inquiries might well be made as to how far the promises of youth are fulfilled in after life. Those who buy and sell young cattle of any description have a fair knowledge of how they will turn out, and find little difficulty in pricing them satisfactorily. But we know much less about the probable future of youths. They undergo many examinations, and a certain number of their qualifications are repeatedly

measured, but the relation between their college successes or failures and their achievements in after life has never been determined as carefully as the subject deserves. Neither has the relation between the physical qualities of a youth, including race, type, and temperament, with his future capacity of resisting the evil effects of various special conditions in after life, ever been satisfactorily investigated. I am myself endeavouring to draw attention to this, so far as concerns the ability to preserve health in tropical countries, but I now refer to occupations generally.

The inspection of children at elementary schools in order to trace incipient signs, if any, of nervous exhaustion has been attempted on a large scale by Dr. Francis Warner, who describes the results in a paper submitted at the same time as that of Dr. Venn to the International Congress of Hygiene and Demography. The methods he has hitherto used, and the signs on which he relies in these earlier steps, are likely, as in all analogous cases, to be improved by other inquirers, who shall begin at the point to which he has shown the way. Much tentative inquiry into the most trustworthy and measurable symptoms of incipient fatigue is highly desirable, and might very properly be promoted by the proposed anthropometric section.

Before concluding, I would venture to remark that, though anthropometry owes an immense debt to Quetelet, we must be careful not to follow his principles and methods blindfold. We must recollect that Quetelet lived in pre-Darwinian times, at a date when the fixity of races was an established scientific belief. His central principle consequently was that the *mean* man is the *perfect* man. The theory of evolution now assures us of what common sense never doubted — that this principle is radically wrong. The most desirable man is not the one who is mediocre in his wits, in his honesty, and in his aspirations; or, again, in the proportions of his figure, in his muscular power, and in his ability to endure fatigue. Anthropologists, as a rule, are behindhand in their studies of men of superior types, who rank above the mediocrity of their race in every respect, and are not to be confounded with those who rank above the majority in only a few conspicuous ways, through the sacrifice of other qualities which are no less essential, but of a less showy kind.

The general purport of my remarks is to urge that the attention of the proposed Section should be primarily directed to the investigation of methods, and only to such practical applications of them on a considerable scale as are obviously capable of yielding unambiguous and useful results. The Section would probably at the present time more usefully exert its influence in encouraging numerous small investigations of a tentative character and in various directions, in the hopes rather of extending the powers of measurement than in promoting any very large anthropometric work on old lines, which are hardly varied enough to give results of a value commensurate to the labour of obtaining the data.