21 June 1932.

Dr. A. Landsborough Thomson,
Medical Research Council,
38 Old Queen Street,
Westminster,
London, S.W. 1.

Dear Dr. Thomson:

Thanks for sending me the report of the Anthropometric Committee. I can now quite understand why the matter was dropped as hopeless, since the easy course of finding fault with the data, and excusing a rather sketchy analysis (as on p. 14) instead of using the information available to test objectively what defects, if any, it contained, and to plan explicitly a more satisfactory enquiry.

The fundamental fault of the enquiry was evidently due to asking for additional observations instead of concentrating upon the more complete standardisation (if that is really necessary) of those already taken. (p. 8):

"...unfortunately the exigencies of the School Medical Service at that time and the urgent need for economy had the effect of restricting the inquiry in the majority of instances to those age groups with which the School Medical Officers were dealing in the course of their routine duties."

In my opinion the enquiry should have been confined to those age groups, and would then have obtained representative
material from all districts in which the routine is carried out.

The second disadvantage introduced is that the enquiry terminated soon after the officers interested had become competent or expert in the procedure, and the opportunity was lost of confirming doubtful differences by subsequent and independent experience. A very unnecessary weight was therefore thrown on to the tests of significance, and the door was opened to all that vacillation on theoretical procedure. (p. 11):

"Checking every card so received" (against what?) "occupied a considerable amount of time and labour; in some instances cards had to be returned to Local Authorities in order that obviously, or probably erroneous entries might be scrutinised and, if necessary put right, for it was scarcely to be expected that in an undertaking of this magnitude every record and observation would conform to the high standard of accuracy required of the investigators".

This seems a perfect example of 'How not to do it'. The result of the high standard of accuracy required, is a low accuracy due to paucity of numbers in the results, and unintelligibility due to the unrepresentative quality of the sample. It is difficult to see how the Committee were "driven" (p. 12) to the method of sampling, still less to unrepresentative sampling. They seem to have chosen this course voluntarily, through giving no thought to the question of what constitutes statistical precision.
The report makes it very clear to me, as I suspected, that a simple record from each authority or officer of the frequency for the two variates Age (by months) and Height (by inches or \( \frac{1}{2} \) inches, certainly no closer), compiled annually for 'leavers' only would constitute a very valuable record, and that a small permanent Committee to receive these data, that is to consider their defects, and how they might be repaired, would probably find it possible to make inexpensive recommendations and gradually to perfect the machinery, and apply it to such possible uses as the effects of cousin marriages.

Yours sincerely,