30th May, 1935

Dr. J.C. Drummond,
Department of Physiology & Biochemistry,
University College
W.C.1

My dear Drummond,

I confess that I did not altogether like the tone of Simpson and Wood's article: e.g., I can understand that the word "balance" has some application to such things as ratio of carbon to nitrogen or of fats to carbohydrates when applied to a whole ration without being able to see that it means anything when applied to a small addition to a ration otherwise unknown.

In thinking over the large Lanarkshire experiment, it occurred to me that one quite important factor whenever the same children receive the same addition over a long period, is that it will certainly be liable to be compensated, more or less, in the uncontrolled remainder of the diet: I mean that a child who receives, let us say, a glass of milk, daily, in the morning, which his brothers and sisters do not receive, would, in most families, after a time receive less, and might even be less inclined to take milk at other meals. It is important that the experiment, as contrasted with the
dieting of each individual child, shall be carried round a complete year. There is therefore a good deal to be said for alternating periods, with or without the added precaution of neutral intervals, in addition to the advantage which this gives of testing the different diets on identical groups of children.

In the special case of a comparison of pasteurised against raw milk, the factor of conscious or unconscious compensation is probably unimportant; and it may be important to give a long run of each treatment, so as to catch any cumulative effect of vitamin deficiencies.

The important thing here would seem to be to ensure that in each school the parallel groups are assigned strictly at random, i.e., by the actual shuffling of number cards, or by such a collection of random sampling numbers as Tippett's, and that the effects, if any, of initial age, height and weight jointly, be eliminated later from the results, rather than to attempt the impossible by trying to assign pairs of children of the same age, height and weight to the two nutrients.

Yours sincerely,