14 August 1944

W.A.B. Hopkin, Esq.,
Assistant Secretary,
Royal Commission on Population,
Ministry of Health.

Dear Sir,

Thank you for your letter of July 14th and copy of Dr Thomson's report. With the latter I am in very substantial agreement, save for one, perhaps small, point, on which I send the enclosed note.

The terms of reference of your Commission are so wide that it would seem impossible, short of writing you a book, to set forth my ideas on these subjects. I think, therefore, you are wise in asking my opinion whenever wanted on a specific point, as on

Professor Thomson's statement.   As you probably know, the last
five chapters of my book on the <u>Genetical Theory of Natural
Selection</u> are devoted to an analysis of the evolutionary problems
presented by the human race.

Yours faithfully,

On page 7 I think Dr Thomson exaggerates the difference between Cattell's and Fraser Roberts' estimate of the rate of fall per generation in the average Intelligent Quotient.   It should of course, be made clear that the estimates mentioned by Thomson are on the Binet I.Q. scale, not on the Otis I.B. scale, which is rather more than twice as wide.   Fraser Roberts' data for mean intelligence of children belonging to families of different sizes(Table IV,p.186, Annals of Eugenics, Volume VIII) are on an Index of Brightness scale, and give a mean for all children 99.768, compared with a mean for all families of at least one child of 103.906, difference 4.138, representing the average fall in intelligence in one generation, ignoring all of the last generation who have no children.   If to translate this rate of change into the I.Q. scale we aye the regression of Binet I.Q. on Otis I.B., namely b = 0.3906640(p.191), the corresponding I.Q. value is 1.6167.   If the regression of Otis I.B. on Binet I.Q. is used, b = 2.026859(p.192), and the value is 2.0418 I.Q. in each generation.   If, as appears to be generally agreed, the Binet I.Q. test is more accurate than the Otis I.B., the latter value will be more proper.   If Fraser Roberts ~~uses~~ gives the figure 1.5 ascribed to him by Thomson(which I have not been able to verify) it is somewhat an understatement of what his data indicate. There is in any case no reason a priori for supposing that the rate of decline of intelligence is necessarily the same in Leicester and

in Bath.   For reasons which both authors give, the value of about 2 points I.Q. per generation obtained at Bath and of 3 points per generation at Leicester are doubtless both appreciably underestimates.

A repetition of the same ~~treatment~~ r_x, r_1 with approximately the same numbers at Bath, after a generation, e.g. in 1965, would doubtless show a significant change ∧ _is the average intelligence_ though it would not estimate it accurately, since the standard error of the comparison would be about 0.8 units I.Q. per generation.   Such a direct test would include the influence of those leaving no children.   In the meanwhile tests closely conforming with that of Fraser Roberts at Bath should be carried out in a number of large towns.