

THE SALK INSTITUTE

January 31, 1977

Sir Peter Medawar, C.H., F.R.S.
MRC, Clinical Research Centre
Transplantation Biology Section
Watford Road
Harrow
Middlesex HA1 3UJ
England

Dear Peter,

I always read eagerly anything you write and it was with great pleasure that I sailed through your article 'Unnatural Science' in the recent issue of the New York Review of Books. Of course you are quite correct that an I.Q. test only gives you a single number whose meaning and significance is largely obscure, that the relative influence of nature and nurture depends on the circumstances and that Cyril Burt's results are not to be relied on (said some time ago by Jensen, please note). In fact I enjoyed it all till I came to the last page and then I must confess I was disappointed. I find your conclusion only partly convincing and, what is worse, I think you evaded the larger issue.

This issue is, broadly, should the bulk of people generally regarded as valuable to society (not necessarily especially valuable but at least above average) be encouraged to have more children and those who are a handicap be encouraged to have less. Leaving aside, for the moment, how this might be done, the scientific problem is, what overall effect would it have on the quality (again in the broad sense) of future generations. I should admit straight away that I am biased. That I feel that a fairly moderate shift in fertility would make for a much more attractive and acceptable set of people and moreover I feel that such a policy in the long run (i.e. within the next 100 years) is virtually certainly to be tried.

Now what really emerges from all the fuss and fa-la-la is that the present data is less than adequate. What sort of a subject is it that still has to rely on experimental results of 50 years ago? It conforms nicely to my definition of a scientifically backward

Sir Peter Medawar

- 2 -

January 31, 1977

field, namely one in which the "classical" experiments have never been repeated! So any serious review of the present position should end with a plea (and in this context it is not the conventional pious request one gets from any committee designed to look into so and so, but a real and urgent need) for more and better data. Moreover you clearly indicate what is needed; more studies of identical (and fraternal) twins separated at birth. Now twins are not rare, nor is adoption. If people could be persuaded that a) all (or at least most) adopted twins should, if possible, be separated at adoption and b) a special research unit be set up to register them, follow them through life, test them at intervals, etc., then within a space of 30 years we should have a really useful body of data. Moreover such a unit could also carry out retrospective research which yields results rather sooner, though not nearly so reliably. See, for example, 'Heredity, Environment and Personality' by J. C. Locklin and R. C. Nichols, University of Texas Press, Austin and London, 1976, and the review 'Human Behaviour Genetics' by Childs et al in 'Advances in Human Genetics', Vol. 7, 1976, especially the work on schizophrenics.

There are some obvious objections people will make but I feel they are trivial. There is no need for compulsion. Moderate social pressure plus a small subsidy for the adopting parents and/or the twins should produce enough cases. It does constitute a certain degree of invasion of privacy but so does a driving test to say nothing of conscription. The justification is the social advantage expected. It would be better to avoid issues of race (although it seems to me the supposed differences between Chinese and Jews, Caucasians, American Indians and Blacks, to name a few poorly defined categories are probably real) because the real issue is not race but "class"; again, very broadly, between the rich and the poor. Again I do not suggest that only the very rich or the very intellectual should have children (what a thought!) but roughly that upper and upper-middle class families be encouraged to have say 3 or 4 on average and manual laborers and obviously dim and disturbed people have 0 or 1. Nor do I suggest any form of compulsion. Merely the force of social opinion (this already operates against large families, for example, which wasn't true 10 years ago) plus a little bribery (e.g. a lump sum plus a pension) to persuade socially irresponsible people not to breed. Nor do I feel there should be any let up on attempts to improve educational methods though education is in such a mess that I don't see cause for a lot of optimism there. New methods, not surprisingly, are usually easier to devise for the "advantage" children (i.e. the type I'd like to see more of) than the disadvantage. Nor am I impressed by people who say, we don't know what to breed for. Provided there is no monolithic policy, which is clearly biologically undesirable, I believe that any reasonable selection of social virtues would produce significant and possibly massive results.

THE SALK INSTITUTE

Sir Peter Medawar

- 3 -

January 31, 1977

Oddly enough, a motivated politician might say (as I would not) that the twin studies were unnecessary! To find out the effects of any broad policy it could be tested, in part, by a retrospective reconstruction. To take an extreme case, suppose that in the past generation everybody with an income above the median were imagined to have had 4 children and those below the median to have none, what would the present population be like? You can see that there are second-order effects due to an increase of family size, availability of schools, etc., but such a "forecast" could be done today. It neatly takes both nature and nurture into account, so why bother to separate them, a politician would argue. Personally, I would like to see any policy supported by proper research to discover the various factors involved but this might be considered scientific pedantry.

However, the main reason for suggesting the twin studies is that public opinion is not yet ready for a policy of "quality control" (as it was not ready 25 years ago for the social acceptance of quality control -- "stop at two") whereas one might get away with the twin studies.

Finally let me say that I absolutely do not accept your final argument about people's opinion. Lewontin, in particular, is known to be strongly politically biased and himself admits to being scientifically unscrupulous on these issues. That is, he takes them as political ones and therefore feels justified in the use of biased arguments. The issue of blacks vs. whites is a red herring though an unavoidable problem in this country. The real issue is the "rich" versus the "poor" -- don't take the terms too literally. How many sober geneticists deny that there are no heritable differences there? And what is heritability (in our present society) for I.Q. between these two populations? I find it very hard to believe its zero or very small and yet, to prove this, only properly designed twin studies will do. (the

One last point. You are unfair to 'culture free tests'. Of course they may not do for bushmen, but between black and white or rich and poor, they seem pretty well-designed to me. Have you actually looked at them?

We shall be here till some time in May so if I've needled you into a reply please send it here. You can ignore the wider issues. What about promoting the 'Separated Twins' Institute?

Yours sincerely,

Franck

F. H. C. Crick
Ferkauf Foundation Visiting Professor