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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

BETHESDA 14, MD.

NATIONAL INSTITUTES OF HEALTH
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In reply refer to:
NBI-D

Dr. Joshua Lederberg
Professor of Genetics
Stanford University School of Medicine
Stanford Medical Center
300 Pasteur Drive
Palo Alto, California

Dear Josh:

I was very pleased to receive a copy of your grant application to the National Institute of Child Health and Human Development. A major area of their responsibility will be the general problem of reproduction, and your studies would certainly fall within this area.

I personally have been very much interested in the question of the genetic factor in mental retardation. At the moment, the great emphasis has to do with the impact of socioenvironmental opportunities, though I have found very little to support the view that environment is a major determinant. It is interesting that recently the Russians have had to revise their views of equal potentiality of intellect, and are now admitting that mathematicians are born as well as made.

I do not know of population studies which provide exactly the information which you are requesting. You are probably acquainted with the 1947 Scottish Mental Survey, which is probably the closest thing to it. This was a study of the intelligence of the entire 11-year old population of Scotland in 1947. In one of the reports of this survey, entitled "Social Implications of the 1947 Scottish Mental Survey" (University of London Press, 1953), there are rather extensive correlations between intelligence and social status. Of particular interest to me was the fact that height and weight paralleled intelligence in these populations. I have some figures derived from these data which are enclosed.

There have been rather extensive studies of the intelligence of siblings conducted by Dr. Frazier Roberts. In my view, he has made some very solid contributions to the study of familial aspects of intelligence. On a much smaller scale, Sir Cyril Burt has made some important contributions to the understanding of genetic aspects in intellectual capability. The enclosed graph is derived from his data.

Another rather interesting bit of information is that which is derived from some very important pioneer studies of Marie Skodak and Harold M. Skeels. They made a study of adopted children, and were able to demonstrate that the intelligence of an adopted child is much superior on the average to that of the real parent. Recently Marjorie Honzik reworked these same data and showed that in spite of this fact there was still a much closer correlation between the intelligence of the child and the education of its real parents than was the correlation with the education of the foster parent. One of the enclosed charts is from Dr. Honzik's data on this point.

In 1955, in my survey on mental retardation, I visited Dr. Willard Clifford Olson at the School of Education in the University of Michigan, Ann Arbor. Dr. Olson has been making very interesting observations of the intellectual growth curves of children within the school where they do their educational research at Ann Arbor. He has observed that individuals' intellectual development may differ in weight and in characteristic--going through sudden unexpected spurts at various ages. He has now enough records from two generations to suggest that some of these unusual intellectual growth patterns have occurred in several generations in the same family.

I hope that these few random observations will be of interest. There is really nothing on the scale which you are proposing.

Sincerely yours,

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Richard L. Masland, M.D.
Director, National Institute of
Neurological Diseases and Blindness

Enclosures