The Nature of Human Genetic Variation

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At the end of World War II the Galton Laboratory, Serum Unit, under the directorship of R.R. Race, had become the leading world centre for research on the human blood groups. A year later the centre, its functions, and its staff were transferred to the Lister Institute, London, where the staff and their functions were divided between two laboratories. Pure research remained under the direction of Race as the Blood Group Research Unit, while the production of tests and advice on clinical problems arose in the regional centres of the National Blood Transfusion service became the functions of the Blood Group Reference Laboratory under my direction.

Large numbers of blood samples and records of tests at other laboratories came my way, and, in collaboration with Race and others, I began to publish statistics of blood-group frequencies.

The laboratory then became involved in organizing anthropological expeditions whose objects included the collection of blood for grouping at the laboratory. We thus took part both in planning such expeditions to such places as the Himalayas and in finding support for enterprise young doctors and students, which enabled blood to be tested from anthropologically interesting populations difficult of access, such as the Aims, that in some cases proved to be of unusual and unexpected interest.

I was now consciously following up the pioneer work of Ludwig Hirsfeld on the world distribution of the ABO blood groups, done immediately after World War I, and of William Boyd of Boston, Massachusetts. I renewed my acquaintance with John Grant, who suggested the initiation of a series of books on blood groups and transfusion: one by Race, on the genetics of blood groups; one by P.L. Molli
ton, on the clinical aspects of transfusion; and one by me, on the population relations of the blood groups.

The resulting first, and relatively small, edition of The Distribution of the Human Blood Groups led to the first general recognition by anthropologists of the importance of the blood groups in human classification and marks the critical stage in the super-

session of bodily measurements by genetic statistics in such classification. For some 15 years, I continued to publish blood-group frequency data, but, by about 1960, I realized that I could not produce the much needed encyclopaedic second edition while still directing the national and international World Health Organization blood group reference laboratories. In 1965, as soon as I had found, in the late Dr. K.L.C. Goldsmith, a competent successor in this post, I set up the Serological Population Genetics Laboratory at St. Bartholomew's Hospital (superseding the Nuf-

field Blood Group Centre), with Dr. D. Tills as assistant director, Dr. A.C. Kopec as statistician, and Mrs. K. Domaniewska-Sobczak as librarian. The sec-

ond (quarto) edition by Kopec, Domaniewska-

Sobczak, and me, published in 1976, was followed by other books by the same authors, including Blood Groups and Diseases in 1978. After my retirement in 1977, I published the semipopular version of The Distribution entitled Blood Relations. It was in-

tended that Tills, in collaboration with Kopec, should publish a series of supplements to The Distribution from his anthropological blood group laboratory at the Natural History Museum, but soon after the publication in 1983 of the first of these, as one of the many restrictions imposed by the present government on the advancement of British science, Tills's laboratory was closed down.

Blood Relations has served as a valuable channel for the introduction to medical workers of the ideas put forward in our whole series of books. It has in particular served as a basis for a recent widespread revival of work on the association of genetic characters with infectious and other diseases, including bacterial meningitis, by C.C. Blackwell and others. It has also received an unusual citation, being quoted extensively (and correctly!) in a detective novel by Antonia Fraser, in which I appear almost as an off-

stage character.

Similar work is now being extended in other labor-

atories to an even wider range of characters including DNA polymorphisms, so that we are beginning to see how the various branches of humanity are de-

scended from one another and even how man him-

self is descended from the "lower" primates.


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