

infant mortality rate varies in the ratio of 1 : 2·2 over the same range, and this latter variation is considered by the report to be "large." It therefore seems unreasonable of the Committee to regard the death-rate from congenital malformations as varying comparatively little and pointing to an absence of genetic factors. Actually, the disentangling of hereditary and environmental factors in this sort of situation is a very difficult proposition, and we can say little more than that there is a good *prima facie* case for the importance of both.

The second paper deals with *Reproductive Capacity and the Birth Rate*. It discusses the possibility that there has been a decline in actual reproductive capacity since the 1870's, and considers that the greater part of the reduction of the birth-rate is due to the spread of family limitation. Direct evidence of the existence of a decline in reproductive capacity is lacking. Some general considerations suggest that modern urban life brings with it a reduction of sexual activity as compared with the predominantly rural conditions of earlier times. It is thought that the greater nervous strain of town life and the increased number of alternative outlets for free time and energy might give rise to a decline. Again, certain statistical studies have shown a lower frequency of intercourse in urban, as compared with rural areas. On the other hand, the general improvement in diet and health, and the reduction of disease, might be expected to have the opposite effect. Moreover, evidence presented in Vol. I of the present series supports the hypothesis that the number of births which might be expected per married woman to-day, if contraception were not practised, is substantially the same as that achieved by Victorian married couples.

The final paper deals with *Involuntary Childlessness*. The main distinction here is between a failure to effect fertilisation and a failure of successful fertilisation finally to result in a live birth. Various contributory causes and curative procedures are discussed. There is no evidence that medically approved birth control methods impair intrinsic fecundity, but further investigation is required. Reliable data on this subject are difficult to obtain, but it is tentatively suggested that perhaps 15 to 20 per cent. of involuntarily childless matings are preventable by known methods.

The three papers taken as a whole, while collecting together much material having an important bearing on the problems in hand, place far too great an emphasis on the desirability of a mere increase in numbers. While it may well be true that certain measures will reduce much unnecessary reproductive wastage and promote fertility and childbearing, we have little information as to whether the net result would be, on average, eugenic or dysgenic. We do not wish to be thought to support those who oppose progress in social and medical welfare with some specious argument about interfering with Nature or preventing the survival of the fittest. On the other hand when measures are advocated, which if successful would result in an increase in quantity, it would have been wise to have enquired about the probable quality of the new recruits. NORMAN T. J. BAILEY.

THE TREND OF SCOTTISH INTELLIGENCE : A Comparison of the 1947 and 1932 Surveys of the Intelligence of Eleven-year-old Pupils. Publications of the Scottish Council for Research in Education, XXX. University of London Press, 1949. Pp. xxviii + 151. Price 7s. 6d.

In 1932 the Scottish Council for Research in Education conducted a Mental Survey of 11-year-old Scottish children, using a group intelligence

test ; a report was given in *The Intelligence of Scottish Children* (University of London Press, 1933). It was intended that the survey should be repeated on some later occasion. A repeat was in fact made in 1947, and the book under review constitutes a preliminary report on it. The investigation was organised by a Committee under the chairmanship of Sir Godfrey Thomson. The main part consisted of a group intelligence test and a brief sociological enquiry, applied to all children born in 1936, or rather to as many as possible of them, about 94 per cent. This was supplemented by some special small-scale sampling enquiries, in which an individual intelligence test (Terman-Merrill revision of the Binet test) was used and more detailed sociological information was obtained.

The successful conduct of such a survey involves making many compromises between conflicting needs. Much information that one would like to have is either too costly to obtain or of a sort that many persons questioned would refuse to give. For one as little acquainted with the background of this work as the reviewer, it would be rash to express an opinion as to the soundness of the compromises actually made. But one can say at least that the book is written with admirable clarity, and its authors show themselves always fully aware of the difficulties of interpreting their material. The very great task of carrying out the survey seems to have been accomplished remarkably successfully ; and a detailed account of it is given, from the preliminary circularising of schools to the marking and coding of scripts and schedules. Some of the results are summarised here, and it is intended that further volumes will be issued when more detailed analyses have been completed.

The immediate reason for conducting this survey only fifteen years after the 1932 survey was the fear that a negative correlation between size of family and intelligence of children was leading to a decline in average intelligence. The 1947 survey has shown this negative correlation clearly, but has surprisingly also shown a small but significant rise in average score in the group test, not a fall ; while the individual tests have revealed no significant change in Binet I.Q. Possible reasons for this effect are suggested.

The investigation is clearly of great general interest, and may prove eventually to be also of great value. It is proposed that further researches should include a follow-up of the careers of a sample of the children. Professor Thomson remarks in the preface : " Our hope is that from this work we, or rather our successors, may learn how to smooth the path of the able, to help along the less well endowed, to give guidance about schooling and careers, to advise those in authority who make regulations and control finance, and generally to help Scotland and Scots yet unborn to a life of greater happiness, of less hardship, and less frustration." If that hope is realised, not only Scots will benefit. F. J. ANSCOMBE.

**DISCUSSION ON THE PRESENT STATUS OF RADIATION GENETICS**, given at Information Meeting for Biology and Medicine of the Atomic Energy Commission sponsored by The Biology Division, Oak Ridge National Laboratory, U.S.A., March 1948. Published by The Wistar Institute of Anatomy and Biology, Philadelphia. 1950. Pp. 210. *J. Cell. Comp. Physiol.*, 35 : Sup. 1.

The present symposium (held at Oak Ridge in 1948 and published in 1950) covers nearly all aspects of present inquiry into the biological effects of radiation. It was the first conference to use "Declassified" information on this subject in the United States.