

twinning is regarded as a happy event. In this case the worship of twins entrusts them, namely, with power over water allowing to confer fertility to the soil and also to women and animals.

In the past, the mother of twins was often executed with her offspring, or simply banished. In many tribes she is still compelled to go through elaborate purification in order to forestall the evil omen. If twins are welcomed their parents are similarly respect-

ed, as they symbolize the fertility power of the clan.

Superstitions and myths pertaining to twinning are universal and often present converging features among cultures without mutual contact. This would indicate the twin cult as one of the earliest religious beliefs of mankind.

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2. The Demography of the Twinning Phenomenon

IS WEINBERG'S METHOD VALID?

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Suppose that L like-sexed and U unlike-sexed twins have been observed. Weinberg's method estimates the numbers of dizygotic and monozygotic twins as $DZ = 2U$ and $MZ = L - U$. This method is based on the assumptions that (1) the sex ratio in DZ twins is $\frac{1}{2}$ and (2) the sexes of DZ twins are determined independently and with the same probability in all parents; in consequence there should, on average, be equal numbers of like-sexed and unlike-sexed DZ twins.

The first assumption is not exactly true, but the necessary correction is negligible. Departures from the second assumption would probably lead to an excess of like-sexed over unlike-sexed DZ twins; in consequence, Weinberg's method would underestimate the numbers of DZ twins and overestimate the numbers of MZ twins. The literature on the frequencies of like-sexed and unlike-sexed pairs among twins known to be DZ through other genetic markers is reviewed. It is concluded that there is no evidence of an excess of like-sexed twins among them, and that there is therefore no reason to doubt the validity of Weinberg's method. The extension of Weinberg's method to estimate the zygosity types of triplets and quadruplets is described; it is shown that the resulting estimates agree well with the results of direct zygosity determination by blood grouping.

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RETROSPECTIVE STUDIES OF THE TWINNING RATE IN SCANDINAVIA

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The human twinning was studied in Sweden and Finland since the 1650s. The material comprises continuous series of data of single and multiple maternities compiled from the parish records and from various other, partly unpublished, sources in the archives of statistics.

Until recent times the twinning rate in these countries, and particularly on the Åland Islands, has been one of the highest known among Whites. Highly significant temporal fluctuations in the rates of multiple maternities were noted. There was a secular decline in the DZ twinning, particularly during the last generation. In Sweden the twinning rate during the last part of the eighteenth century was almost twice as high as it was in 1966-70. The triplet and quadruplet rates were about three to four times as high as they are today.

The extent to which the frequency of multiple maternities has depended on changes in maternal age, parity, marital status, and socio-economic conditions, was analysed. These environmental factors do not wholly explain the steep downward trend in the twinning rate. The marked decline in the twinning rates in Nordic populations about one generation after the break-up of isolates has been interpreted as evidence for the hypothesis that the degree of relationship between the parents of the mothers of twins