

BIBLIOGRAPHY

ON PRENATAL AND NATAL INFLUENCES IN TWINS*

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These references concern the problems discussed in the following paper:

PRICE, B. 1950. Primary biases in twin studies; a review of prenatal and natal difference-producing factors in monozygotic pairs. *Am. J. Human Genetics* 2: 293-352.

In order to save space, titles of articles were omitted for most of the references given at the end of that review. The same references are given herein with their full titles, and some 260 additional references are included. Except for a few items of historical interest, reports on "concordant" monozygotic pairs are omitted since there is little about them that should not be expected and the majority are probably of dichorial type. The list below pertains to the view that differences observed in monozygotic twins are due less often to postnatal influences than to unusual or extreme environmental factors acting before or during the twins' birth (see abstract).

Abstract

The author agrees with earlier writers that most of the differences observed in monozygotic pairs are due to unusual or extreme environmental factors acting before or during the twins' birth. Although they are typical of development in twins, these environmental factors can hardly be considered typical of development in other individuals. This point, as a review of the literature shows, is often overlooked by those who study twins in the childhood or adult age ranges. As a result the inferences drawn from twin differences are frequently mistaken, or at least quite exaggerated so far as the significance of postnatal influences in non-twins is concerned. At the same time, if allowance is made for the environmental biases peculiar to twin studies, the findings may be said to establish more about the importance of heredity in the medical and behavior sciences than most investigators have thought. In the author's opinion the largest single source of bias is the mutual circulation that exists during prenatal development of the majority of monozygotic pairs. Data on that circulation's difference-producing effects are reviewed and related to studies of mature twins. Effects of lateral inversions (asymmetry reversals) and of "natal" factors (chiefly conditions of delivery) are also reviewed, and methods of judging the importance of all three of the biasing conditions are outlined. Need for obtaining systematic and complete information about the natal factors is stressed.

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* *Editor's note:* This list, with comments, was prepared by Price in 1950 and reproduced in mimeograph with the title "References to Twin Studies". Mentioned in the 1950 paper, it was widely distributed in response to requests. We reproduce it here as mimeographed except for addition of four references given by Price in a later correspondence, a correction in one author's name, and corrections made by Price on his own copy.

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