

Thus, approximately two-thirds of the variance in artistic creativity may be due to genetic factors.

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## THE ROLE OF GENETIC FACTORS IN THE CHILD DRAWING BEHAVIOR

### A Preliminary Twin Study

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The Draw-A-Family Test has been administered to a sample of 59 (27 MZ and 32 DZ) same-sexed twin pairs, aged 6 to 12 years, in an effort to contribute to the assessment of the role of genetic factors in the child drawing behavior—a fairly important expression of the child personality development.

The drawings were analysed with respect to graphic-structural factors (such as line, hand pressure, area of the drawing, dimensions of the pictures, distribution, and shading) and contents (space representation and cotwin valuation). Significantly higher concordance values were found in MZ than DZ twins.

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## TWINS: RELATIONSHIPS BETWEEN CHARACTERISTIC BEHAVIORS AND MENTAL STATUS DURING INFANCY

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Ratings on Bayley's Infant Behavior Record (IBR) and mental test scores were analyzed for 60 female and 50 male infants

at 6, 12, 18, and 24 months of age. Significant relationships were found between certain behaviors and mental test scores. Composite scores were calculated for two behavioral clusters — one composed of behaviors relating to *Primary Cognition* and the other to *Extraversion* — and these composite scores were correlated with both concurrent and subsequent mental test scores. The Primary Cognition composite was strongly associated with concurrent mental test scores for both sexes and it furnished good predictive correlations with later-age scores. By contrast, the Extraversion composite was related to concurrent mental scores only for females, and it had no predictive power for later age scores.

When a zygoty analysis was performed for the behavior entering into each composite, it was found that MZ twins were more concordant than DZ twins during the first year for almost all behaviors. In the second year, however, MZ twins were more concordant only for the behaviors entering into the Primary Cognition composite. The results are discussed in terms of developmental changes in the behaviors assessed by the Infant Behavior Record, and their susceptibility to environmental influence.

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## HERITABILITY OF PERSONALITY AND BEHAVIOR PATTERNS AND THEIR CORRELATIONS WITH RISK FACTORS FOR CORONARY HEART DISEASE

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As part of the National Heart and Lung Institute multi-center study of twins, 190 twin pairs (93 MZ, 97 DZ) residing in California and aged 44-55 years were comprehensively studied for all risk factors for