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Environment, not Genes, Key in Family Relationships

Nature or nurture? It's the eternal question for so many human interactions and personality traits. Now, it appears, nature may play a larger role than nurture when it comes to family relationships between adolescents and their parents.

Researchers from the University of Texas at Austin and George Washington University in Washington, D.C., used data on 674 families, each with a same-sex adolescent pair, to evaluate the factors that made up the relationships and individual personalities.

They broke down adolescent/parent relationships into nine variables – six measuring adolescent adjustment and three assessing family relationships, and then further divided them into genetic and environmental components to explore the connections between them.

The adolescent variables were antisocial behavior, autonomy, classroom engagement and success, depressive symptoms, sociability, and social responsibility. The family relationship variables were positivity (parent/child warmth and support), negativity (parent-child coercion and conflict) and parental monitoring and control. All variables were measured from multiple perspectives: the adolescent's, the mother's, the father's, and in some cases, observers' ratings of videotaped family interactions.

Because the data the researchers were using came from sibling pairs of varying degrees of genetic relatedness, ranging from identical twins to genetically unrelated children in families formed by remarriages, the researchers were able to identify those traits that had a greater correlation with environmental components and those that related more to a genetic background.

The researchers completed a factor analysis of the data, finding three factors to explain the nine attributes:

- **Overall good or poor adjustment.** This explained positivity or negativity in family relationships, social responsibility, antisocial behavior, and depressive symptoms.
- **Independence and peer relationships.** This related to autonomy and sociability.
- **Parental monitoring and control.**

“Our results are consistent with the notion that there are distinct gene-based systems lying within and helping to shape family interaction systems,” said lead author John C. Loehlin,

Ph.D., professor emeritus in the University of Texas-Austin's psychology department. "But direct evidence of this and of the details of such a process must await appropriate longitudinal studies."

"While these findings in themselves have no immediate practical implication," he continued. "But they should help guide future research into the important question of how children's genes help shape family interaction systems."

Summarized from Child Development, Vol. 76, Issue 5, *Genetic and Environmental Components of Adolescent Adjustment and Parental Behavior: A Multivariate Analysis* Loehlin JC (University of Texas at Austin), and Neiderhiser JM and Reiss D (George Washington University). Copyright 2005 The Society for Research in Child Development, Inc. All rights reserved.