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## *Ethnic Differences in Temperament*

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Over a century ago, Sir Francis Galton began modern questionnaire research into temperament with his study of "Good and Bad Temper in English Families" (Galton, 1865). He was also the first to advocate the study of human twins and of selective breeding studies of animals to disentangle the effects of heredity and environment. And it was Galton who first contrasted the taciturn reserve of American Indians, and the complacency of the Chinese, with the talkative impulsivity of Africans. He further noted that these temperamental differences persisted irrespective of climate (from the frozen north through the equator), and religion, language, or political system (whether self-ruled or governed by the Spanish, Portuguese, English, or French). Anticipating later studies of transracial adoptions, Galton observed that the majority of individuals adhered to racial type even after being raised by White settlers. Modern evidence shows that Galton's views were largely correct.

Temperament refers to an individual's characteristic or habitual modes of behavioral and emotional responding that are present at an early age and often believed to have some basis in biological processes partly determined by heredity. It is typically discernible at birth. That infants differ systematically is shown by research observations starting in the first few days or weeks of life and extending, in some cases, for over a decade. In their book, *Temperament and Behavior Disorders in Children*, Thomas, Chess, and Birch (1968) were able to classify babies shortly after their birth into three types—"easy children" (adaptable, cheerful, regular in habits), "difficult children" (irritable, crying, withdrawn, irregular in habits), and "slow-to-warm-up children" (inactive, slow to adapt, gentle). About 70% of the difficult babies later developed behavioral problems calling for psychiatric attention; only 18% of the easy ones had such problems (Thomas & Chess, 1984).

### GENETICS AND TEMPERAMENT

One of the best known analyses of genetics and temperament was published in 1974 by Daniel G. Freedman. He observed 20 pairs of newborn twins of the same gender, some identical (monozygotic, sharing 100% of their genes), and others fraternal (dizygotic, sharing at least 50% of their genes). Until their observations were complete, the investigators did not know which type of twin they were studying (and neither, at the time, did the parents). The investigators rated the infants for behavioral tendencies such as being responsive to others, displaying fear of a new situation, and having a long attention span. Overwhelmingly, the identical twins were more similar in behavior than the fraternal twins, especially with regard to fearfulness, social awareness, and the tendency to smile and vocalize.

Other twin studies confirm the heritability of temperament. Several investigators have videotaped toddlers to determine how shy they were in dealing with new situations (such as a stranger arriving at the home or a stranger offering toys). A study of activity level in 3- to 12-year-olds counted the number of times children "got up and down" while "watching television" and "during meals." In all these studies, identical twins were found to be much more similar than fraternal twins, with the genetic contribution typically ranging from 27% to 56% (Rowe, 1994).

Several studies have been carried out on temperament traits in adults. In one, my colleagues and I gave questionnaires to 573 pairs of 19- to 60-year-old twins measuring nurturant and aggressive tendencies. The questionnaires included a 20-item altruism scale, a 33-item empathy scale, a 16-item nurturance scale, and many items assessing aggression. As shown in Table 3.1, 50% of the variance on each scale was associated with genetic effects, virtually 0% with the twin's common environment, and the remaining 50% with each twin's specific environment. When the estimates were corrected for unreliability of measurement, the genetic contribution increased to 60% (Rushton, Fulker, Neale, Nias, & Eysenck, 1986).

High heritabilities were also found in an examination of violent reactions such as the destruction of property, fighting, carrying and using a weapon, and struggling with a police officer (Rushton, 1996). At least the heritabilities were high for men. In this study, however, environmental factors were predominant for women. More generally, women averaged a significantly gentler temperament than men; they were typically more empathetic, less prone to anger, less prone to aggression, and less prone to acts of violence. Women also had a smaller variance of scores on measures of violence.

**TABLE 3.1**  
Genetic and Environmental Contributions to Altruism and Aggression Questionnaires  
in 573 Adult Twin Pairs

Trait	Additive Genitive Variance		Common Environmental Variance		Specific Environmental Variance	
	Altruism	51%	(60%)	2%	(2%)	47%
Empathy	51%	(65%)	0%	(0%)	49%	(35%)
Nurturance	43%	(60%)	1%	(1%)	56%	(39%)
Aggressiveness	39%	(54%)	0%	(0%)	61%	(46%)
Assertiveness	53%	(69%)	0%	(0%)	47%	(31%)

*Note.* From Rushton, Fulker, Neale, Nias, & Eysenck (1986). Altruism and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology*, 50, 1194. Copyright © 1986 by the American Psychological Association. Adapted by permission. Estimates in parentheses are corrected for measurement unreliability.

Corroborating the twin work on antisocial behavior are several American, Danish, and Swedish adoption studies. Children who were adopted in infancy were at greater risk for criminal convictions if their biological parents had been convicted of a crime than if their adoptive parents had been. For example, in a Danish study of some 14,000 adoptees, if boys had neither adoptive parents nor biological parents who were criminals, their rate of criminal conviction was 14%. If the adoptive, but not the biological parents were criminals, boys still had a conviction rate of only 15%. But if the biological, but not the adoptive parents were criminal, the rate increased to 20%. And, if both biological and adoptive parents were criminals, the rate increased to 25%. Moreover, whereas siblings raised apart showed 20% concordance for criminality, half-siblings showed only 13% concordance, and pairs of unrelated children reared together only 9% concordance (Mednick, Gabrielli, & Hutchings, 1984).

### ETHNIC DIFFERENCES IN TEMPERAMENT

I cannot emphasize enough that the profiles I am about to describe reflect *average* differences. Not all Africans or East Asians (and their descendants) are the same as each other and different from Europeans (and their descendants). There is much overlap and the full range of temperament and behavior is found in every ethnic group. Moreover, I obviously engage in much oversimplification by dividing all the world's people into just three categories: East Asian, European, and African (although I do provide a wide