

01 - 1. Conceptualizing development

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In psychology, maturity refers to the ability to respond to the environment in an appropriate manner, usually with a learnt response. Maturity refers to the production of expected behaviour and actions in a given situation in an age-appropriate manner. Psychosocial maturity is a key factor in the development of a sense of autonomy and includes processes involving cognitive, emotional, social and moral development. Nature vs. Nurture: Development is influenced by both nature (genetic disposition) and nurture (environmental influences). But the proportional contribution of genetics and environment to the psychosocial development of personality, intelligence and sexuality is fiercely debated to date. Studies estimate a heritability of 40-50% for human IQ. But several observations warrant consideration in this regard.

1. Heritability of IQ varies with age: While the heritability is around 30% in children, it increases to 80% among adults. This suggests that either the genetic determinants of intelligence are age-specific or that the non-genetic maturational factors are much more influential in shaping human intelligence at younger ages.
2. Heritability of IQ is affected by demographics: Scarr et al. observed greater genetic effects on intelligence in middle-class white groups than in lower-class African American groups, suggesting that among lower socioeconomic groups, nongenetic influences operate on development. Irving Gottesman, the proponent of endophenotype concept, famously stated that genes are weaker than poverty.
3. Genetic influences are likely to be variable: For a construct such as intelligence, which is made of several sub-constructs, it is likely that no single gene or genetic complex will be sufficient to account for the variations. Furthermore, at various stages of development, the genetic factors operating to influence intelligence could vary.
4. Effect of the shared environment: genetic influences are often inferred from the observation that closer biological relatives (e.g. identical twins) are more similar in their

intelligence than less closely related pairs (non-twin siblings). But, in fact, several observations suggest that there is indeed a greater similarity between pairs of family members than would be predicted on the basis of their biological relationship, indicating the effect of shared environment on intelligence (Deary et al., 2010).

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