

Early human development

Interaction between nature and nurture

A The question of whether heredity ('nature') or environment ('nurture') is more important in determining the course of human development has been debated through the centuries. For example, the seventeenth-century British philosopher John Locke rejected the prevailing notion of his day that babies were miniature adults who arrived in the world fully equipped with abilities and knowledge and who simply had to grow in order for these inherited characteristics to appear. On the contrary, Locke believed that the mind of a newborn infant is a 'blank slate' (*tabula rasa*). What gets written on this slate is what the baby experiences – what he or she sees, hears, tastes, smells and feels. According to Locke, all knowledge comes to us through our senses. It is provided by experience; no knowledge or ideas are built in.



B The advent of Charles Darwin's theory of evolution (1859), which emphasizes the biological basis of human development, led to a return of the hereditarian viewpoint. With the rise of behaviourism in the twentieth century, however, the environmentalist position once again gained dominance. Behaviourists such as John B. Watson and B.F. Skinner argued that human nature is completely malleable: early training can turn a child into any kind of adult, regardless of his or her heredity. Watson stated the argument in its most extreme form: 'Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in, and I'll guarantee to take any one at random and train him to be any type of specialist I might select – doctor, lawyer, artist, merchant-chief, and yes, beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors' (1930, p.104).

C Today most psychologists agree not only that both nature and nurture play important roles but that they interact continuously to guide development. For example, we shall see in Chapter 12 that the development of many personality traits, such as sociability and emotional stability, appear to be influenced about equally by heredity and environment; similarly, we shall see in Chapter 15 that psychiatric illnesses can have both genetic and environmental determinants.

D Even development that seems most obviously to be determined by innate biological timetables can be affected by environmental events. At the moment of conception, a remarkable number of personal characteristics are already determined by the genetic structure of the fertilized ovum. Our genes program our growing cells so that we develop into a person rather than a fish or chimpanzee. They decide our sex, the colour of