organizations (some staffed by ex-gang members) that help people who want to leave gangs.

Further Reading

Further Information
National Youth Gang Information Center. 4301 Fairfax Dr., Suite 730, Arlington, VA 22203, (800) 446–4264.

Howard Earl Gardner

American psychologist, educator, and creator of theory of multiple intelligence.

Howard Earl Gardner was born and raised in Scranton, Pennsylvania. His parents, Ralph and Hilde (maiden name Weilheimer), were refugees from Nazi Germany. Gardner was a good student who greatly enjoyed playing the piano. In fact, he became an accomplished pianist as a child and considered becoming a professional pianist. While Gardner did not pursue becoming a professional pianist, he did teach piano from 1958 to 1969. The arts and teaching are interests he has pursued throughout his career.

Gardner received his B.A. summa cum laude in social relations from Harvard College in 1965 and his Ph.D. in psychology from Harvard University in 1971. At Harvard he studied with the renowned developmental psychologists Jerome Bruner and Erik Erikson, and the philosopher Nelson Goodman. He had thought he would research children and their artistic abilities but became fascinated with neuropsychology after attending a lecture on the subject given by Norman Geschwind, a well-known neuropsychologist. Indeed, Gardner went on to do a postdoctoral fellowship under Geschwind at the Boston Veterans Hospital where he worked for 20 years.

His research has focused for the most part on the nature of human intelligence, the nature of and development of abilities in the arts and how they relate to and reflect intelligence, and on educational processes. For numerous years, Gardner conducted research in symbol-using capacities in normal and gifted children, and in adults who had experienced brain damage. Through his efforts to bring these two areas of work together, he developed his theory of multiple types of intelligence, which he introduced in Frames of Mind (1983). Drawing on research in neuropsychology, he proposes that there are seven distinct types of intelligence, each based in a different area of the brain. Thus intelligence is not one general factor that underlies different abilities—the predominant belief upon which most intelligence tests had been based.

In the mid-1980s Gardner started to become involved in efforts to reform schools in the United States. He started to teach at the Harvard Graduate School of Education in 1986. He is now Co-Director of Harvard Project Zero, which he joined in the mid-1980s. Project Zero is a research group that studies human cognition, focusing on the arts in particular. Among other things, he and his colleagues have worked on designing performance-based tests and using the theory of multiple types of intelligence to create more individualized teaching and testing methods. Most recently, Gardner has become involved in carrying out long-term case studies of successful leaders and creators. One aspect of this work investigates the relationship between a person’s production of exemplary work and his or her personal values.

Gardner is currently the John H. and Elisabeth A. Hobbs Professor in Cognition and Education at the Harvard Graduate School of Education. In addition he is Adjunct Professor of Psychology at Harvard University, and Adjunct Professor of Neurology at the Boston University School of Medicine.

Gardner has written more than 400 research articles and twenty books. In The Mind’s New Science (1985) Gardner discussed how cognitive science has the potential to understand creativity. Two later books, The Unschooled Mind (1991) and Multiple Intelligences: The Theory in Practice (1993) spell out how his perspectives can be put into practice in education. Gardner’s work has been highly influential. His books have been translated into 20 languages. In addition, he has been given honors by numerous psychological and educational organizations.

Gardner is married to Ellen Winner. He was divorced from the well-respected developmental psychologist, educator, and author Judith (Krieger) Gardner, who passed away in 1994. Gardner has four children.

See also Culture-fair test; Emotional intelligence

Marie Doorey

Further Reading
Gender bias

Differences in the treatment of males and females.

Gender bias, and its corollary, gender equity, describe the comparison of opportunities and treatment available to males with those available to females. Today, gender bias is observed and discussed in societies and cultures worldwide. Parents and teachers of young people are especially concerned with unequal treatment of boys and girls, particularly the effect these differences have on child development. Economic development professionals have observed that, from subsistence to advanced economies, women are assigned different workloads, have different responsibilities for child and family welfare, and receive different rewards for performance.

In the United States, the Education Amendments of 1972 were passed by the U.S. Congress. These included Title IX, introduced by Representative Edith Green of Oregon, requiring educational institutions that receive federal funds to provide equal opportunities in all activities for girls and boys. Title IX applies to all schools, public and private, that receive money from the federal government, from kindergarten through higher education.

However, in 1992 a study published by the American Association of University Women (AAUW) revealed that enforcement of this law has been lax nationwide. The AAUW’s report, “How Schools Shortchange Girls,” which compiled results from hundreds of research studies and articles on gender bias at every educational level, concluded that schools continue to perpetuate subtle discrimination against girls, stereotyping them as studious and well-behaved, while more aggressive students, usually the boys, may receive more attention from the teacher. Additionally, a 1989 study of books used in high school literature classes found that 90 percent of the most frequently assigned books were written by males; a year later, an evaluation of school textbooks specified written to comply with gender-equity guidelines in California revealed lingering bias toward males in both language usage and accounts of historical milestones.

Female students are affected by gender bias in many subtle but significant ways. Girls have lower expectations for their success in math and science; are more likely to attribute academic success to luck rather than to ability, and are more likely to equate academic failure to lack of ability (boys are more likely to attribute failure to lack of effort). Boys are more likely that girls to challenge the teacher when they do not agree with an answer. Generally, girls earn higher grades than boys, but boys outperform girls on standardized tests. Boys with higher SAT scores are more likely than girls with equal or better grades to be awarded academic scholarships.

The ramifications of gender bias are not limited to the educational arena. Researchers have shown that in most cultures the lack of decision-making power among females regarding sexual and economic matters contributes to population growth and confines women to subservient roles to men—usually their fathers, and later, their husbands. Although women make up 45 percent of the workforce in the United States, 60 percent of professional women are in traditionally female occupations such as nursing and teaching.

Gender stereotypes defining appropriate activities and behavior for men and women are prevalent in every culture, even though they may differ slightly from culture to culture. Awareness of the existence of these biases will help to overcome their negative effects.

Further Reading


Gender constancy

A child’s realization that gender is fixed and does not change over time.

The concept of gender constancy, influenced by the cognitive development theory of Jean Piaget, was introduced by Lawrence Kohlberg (1927-1987). Addressing the formation of gender identity in terms of cognitive development, Kohlberg advanced the idea that the development of sex roles depends in large part on a