

Scandinavia, 80 (1989): 566–572; Coffey, C. E., ed. *Clinical Science of Electroconvulsive Therapy*. Washington, DC: American Psychiatric Press, 1993.

EMDR See EYE MOVEMENT DESENSITIZATION AND REPROCESSING

EMOTIONAL INTELLIGENCE Emotional intelligence (sometimes referred to as EQ) is the ability to perceive, understand, express, and control emotions. The concept was popularized in a 1995 book by Daniel Goleman, in which he argues that emotional intelligence counts more for success in life than IQ does. The book was specifically driven by the observation that people with high IQ scores sometimes fail to accomplish much, while people with less impressive intellectual gifts prosper. Goleman argues that one of the reasons IQ tests fail to predict success is that they do not measure emotional competence.

The term *emotional intelligence* was coined by Peter Salovey and John Mayer in 1990, who described it as consisting of five traits:

- *Emotional Self-Awareness*: The ability to monitor your own feelings and recognize emotional states as they occur.
- *Self-Management*: The ability to control impulses, ensure that emotional reactions are appropriate, and understand what underlies those feelings.
- *Self-Motivation*: The ability to channel emotions towards the achievement of personal goals. This includes the ability to delay gratification and stifle impulses.
- *Empathy*: The ability to read other people's emotional cues and to take their perspective, being sensitive to how their feelings may be different.
- *Managing Relationships*: The ability to react appropriately to the emotions of others as well as manage one's own; social competence.

As with the sorts of intelligence measured by standard IQ tests, emotional intelligence is clearly a set of traits on which large individual differences exist in the human population.

As often happens with popular books in psychology, Goleman's *Emotional Intelligence* has generated a whole industry devoted to spreading the gospel of emotional intelligence, little of it driven by science. The educational profession has wholeheartedly embraced the concept, with many elementary schools providing lessons designed to increase children's EQ. Many books have followed in the wake of Goleman's initial offering, including at least two by Goleman himself, concerning the applicability of his ideas to the workplace. In *Working with Emotional Intelligence*, Goleman asserts that EQ is a better predictor of success than IQ for any job and that it is essentially the only useful determinant of leadership ability. As Robert Sternberg has pointed out, this statement may be true, but that is only because Goleman has expanded the definition of emotional intelligence to the point of including within it essentially every measurable human trait other than IQ; including such things as confidence, conscientiousness, service orientation, and trustworthiness, typically classified as personality traits rather than as elements of intelligence.

At present, little empirical research exists by which to evaluate the claims made for emotional intelligence, and no valid, reliable test has surfaced to measure it.

The concept of emotional intelligence is promising, nevertheless, and it has echoes in many other theories of intelligence. Howard GARDNER's theory of multiple intelligences, for example, incorporates the concepts of interpersonal and intrapersonal intelligences as something beyond the scope of traditional IQ; but even Gardner, whose theory postulates seven or more different varieties of intelligence, has criticized Goleman for stretching the definition of emotional intelligence too far. Much more research is needed before the validity and usefulness of this intriguing new theory may be properly judged (*see also* INTELLIGENCE).

Further Reading: Goleman, Daniel. *Emotional Intelligence: Why It Can Matter More than IQ*. New York: Bantam, 1995; Goleman, Daniel. *Working with Emotional Intelligence*. New York: Bantam, 1998; Sternberg, R. J. "Review of *Working with Emotional Intelligence*." *Personnel Psychology*, 52(3) (1999): 780.

EPILEPSY Epilepsy is a BRAIN disorder in which the primary symptom is the experience of seizures. In a seizure a cluster of neurons in the brain begins to signal abnormally; frequently this involves a synchronous pattern of firing by cells that would not normally be firing in unison. This disturbed pattern of neuronal activity creates a variety of symptoms, including, but not limited to, odd sensations, emotional states, and behaviors; as well as, in the more serious seizures, convulsions, muscle spasms, and loss of consciousness.

The major convulsive seizures are sometimes called grand mal (French for *big bad*) seizures; the small ones, petit mal. A seizure can be caused by anything that disrupts the usual pattern of brain activity, including drugs, brain damage, abnormal brain development, fever, or altered levels of neurotransmitters. Simply having a seizure does not mean that a person has epilepsy. Only when a person has had two or more seizures is a diagnosis of epilepsy made. PET scans and fMRI (*see* BRAIN IMAGING TECHNIQUES) have made diagnosis of epilepsy far more precise than it used to be.

Modern treatment of epilepsy usually involves drugs, which are effective in controlling seizures in about 80 percent of cases. Brain surgery was far more common as a treatment in the past, prior to the advent of better drugs; and now when surgery is done, it is much less invasive than some of the past procedures, which included completely severing the connection between the hemispheres (*see* SPLIT-BRAIN SURGERY).

For those patients whose epilepsy hasn't responded well to drugs, another treatment has recently become available. In 1997 the FDA (Food and Drug Administration) approved an electronic device called the vagus nerve stimulator (VNS) for use in epileptic patients. About the size and shape of a thin hockey puck, the VNS is implanted in the chest and connected to the vagus nerve, one of the major nerves that allows the brain to communicate with various parts of the body. The VNS works by periodically stimulating the vagus nerve. How it achieves an anti-epileptic effect is unclear, but it may be that it interrupts the