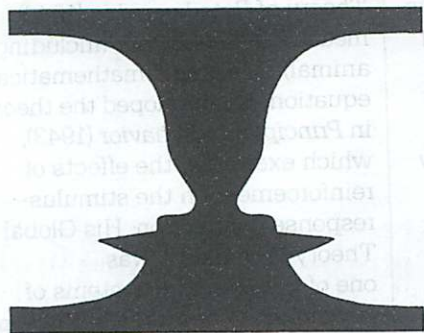


DIRECTORY



Investigation into the workings of the mind dates back to the earliest civilizations, although it was largely philosophical in nature, rather than scientific in the modern sense. It was only with major advances in the biological sciences in the second half of the 19th century that a truly scientific analysis of our mental processes became possible—giving rise to psychology as a distinct area of study. The ideas and discoveries of some of the key researchers in the field have been examined already in this book, but many more have contributed to the growth of psychology as a respected science in its own right. From structuralists to behaviorists, from psychoanalysts to cognitive therapists, the people discussed below have all helped deepen our understanding of our uniqueness as human beings.

JOHN DEWEY

1859–1952

American John Dewey greatly influenced the development of the science and philosophy of human thought in the first half of the 20th century. Although primarily a behaviorist psychologist, his application of the philosophy of pragmatism on society had a major impact on educational thinking and practice in the US.

See also: William James 38–45 ■ G. Stanley Hall 46–47

W.H.R. RIVERS

1864–1922

William Halse Rivers Rivers was an English surgeon, neurologist, and psychiatrist who specialized in the relationship between the mind and the body. He published several key papers on neurological conditions, including hysteria. He is best known for his work on “shell shock” (post-traumatic stress disorder), and is also considered one of the founders of medical anthropology. The

methods of cross-cultural analysis Rivers used on an expedition to the Torres Straits Pacific islands laid the foundations for future field study.

See also: Wilhelm Wundt 32–37 ■ Hermann Ebbinghaus 48–49 ■ Sigmund Freud 92–99

EDWARD B. TITCHENER

1867–1927

Englishman Edward Bradford Titchener studied experimental psychology, first at Oxford and then in Germany under Wilhelm Wundt. He moved to the US in 1892, where he became known as the founder of Structural Psychology, which breaks down the experiences of humanity and arranges them into elemental structures. As Structural Psychology is based on introspection, it was at odds with behaviorism, which was growing in popularity. By the 1920s, Titchener was fairly isolated in his beliefs, though he was still widely admired. He wrote several textbooks on psychology including: *An Outline of Psychology* (1896), *Experimental Psychology* (1901–1905), and *A Textbook of Psychology* (1910).

See also: Wilhelm Wundt 32–37 ■ William James 38–45 ■ J.P. Guilford 304–05 ■ Edwin Boring 335

WILLIAM STERN

1871–1938

German-born William Stern was a leading figure in the establishment of developmental psychology. His first book, *Psychology of Early Childhood* (1914), was based on observations of his own three children over 18 years. His method—“personalistic psychology”—investigated the individual developmental path, combining applied, differential, genetic, and general psychology. A pioneer in forensic psychology, he was the first to use the nomothetic-idiographic approach. Stern is best remembered for his work on the intelligence quotient (IQ) tests to calculate a child's intelligence. A single-number score is awarded by dividing the “mental age” of the test-taker by his or her “chronological age” and multiplying by 100.

See also: Alfred Binet 50–53 ■ Jean Piaget 262–69

CHARLES SAMUEL MYERS 1873-1946

At Cambridge University, Myers studied experimental psychology under W.H.R. Rivers, and in 1912 he set up the Cambridge Laboratory of Experimental Psychology. During World War I, he treated soldiers for "shell shock" (a term he invented). After the war, he was a key figure in the development of occupational psychology. His books include *Mind and Work* (1920), *Industrial Psychology in Great Britain* (1926), and *In the Realm of Mind* (1937).

See also: Kurt Lewin 218-23 ■ Solomon Asch 224-27 ■ Raymond Cattell 314-15 ■ W.R.H. Rivers 334

MAX WERTHEIMER 1880-1943

Together with Kurt Koffka and Wolfgang Köhler, Czech psychologist Max Wertheimer founded Gestalt psychology in the US in the 1930s. Gestalt built on existing theories of perceptual organization. Moving away from Wundt's molecularism, Wertheimer advocated the study of the whole, famously saying "the whole is more than the sum of its parts." He also devised *Pragnanz*, the idea that the mind processes visual information into the simplest forms of symmetry and shape.

See also: Abraham Maslow 138-39 ■ Solomon Asch 224-27

ELTON MAYO 1880-1949

In the 1930s, while Professor of Industrial Management at Harvard, Australian Elton Mayo carried out his groundbreaking Hawthorne

Experiments. Using disciplines drawn from psychology, physiology, and anthropology, he examined over a five-year period the productivity and morale of six female workers as he made changes to their working conditions. The most surprising outcome was the way the workers responded to the research itself. The Hawthorne Effect, as it is now known, is an alteration in human behavior that occurs when people know they are being studied. This discovery had a lasting impact on industrial ethics and relations, and research methods in social science.

See also: Sigmund Freud 92-99 ■ Carl Jung 102-07

HERMANN RORSCHACH 1884-1922

As a Swiss schoolboy, Rorschach was called Klek (Inkblot), because he was always drawing. He later devised the inkblot test, whereby responses to specific blots may reveal emotional, character, and thought disorders. He died, aged 37, a year after his "form interpretation test" *Psychodiagnostics* (1921) was published. Others later developed the test, but this gave rise to four different methods, each flawed. In 1993, American John Exner united them all in the Comprehensive System—one of the most enduring psychoanalytical experiments.

See also: Alfred Binet 50-53 ■ Sigmund Freud 92-99 ■ Carl Jung 102-07

CLARK L. HULL 1884-1952

American Clark Leonard Hull's early studies included psychometrics and hypnosis. He published *Aptitude*

Testing (1929) and *Hypnosis and Suggestibility* (1933). Informed by his objective behaviorist approach, Hull's *Mathematico-Deductive Theory of Rote Learning* (1940) measured all behavior (including animal) by a single mathematical equation. He developed the theory in *Principles of Behavior* (1943), which examined the effects of reinforcement on the stimulus-response connection. His *Global Theory of Behavior* was one of the standard systems of psychological research at the time.

See also: Jean-Martin Charcot 30 ■ Alfred Binet 50-53 ■ Ivan Pavlov 60-61 ■ Edward Thorndike 62-65

EDWIN BORING 1886-1968

One of the most important figures in experimental psychology, Boring specialized in human sensory and perceptual systems. His interpretation of W.E. Hill's reversible old woman/young maid drawing led to it becoming known as the Boring Figure. At Harvard in the 1920s, Boring moved the psychology department away from psychiatry, turning it into a rigorously scientific school that unified structuralism and behaviorism. His first book, *A History of Experimental Psychology* (1929), was followed by *Sensation and Perception in the History of Experimental Psychology* (1942).

See also: Wilhelm Wundt 32-37 ■ Edward B. Titchener 334

FREDERIC BARTLETT 1886-1969

Frederic Bartlett was Cambridge University's first Professor of Experimental Psychology (1931-51).

He is known for his memory experiments where participants were asked to read an unfamiliar, mythical story composed by Bartlett (such as *The War of the Ghosts*) before retelling it. Many added details that were not in the original story, or changed meanings to fit their own specific culture. Bartlett concluded that they were not remembering but rather reconstructing the text.

See also: Endel Tulving 186-91 ■ Gordon H. Bower 194-95 ■ W.H.R. Rivers 334

CHARLOTTE BÜHLER

1893-1974

German-born Bühler founded the Vienna Institute of Psychology in 1922 with her husband, Karl. Her studies of childhood personality and cognitive development expanded to include the course of human development throughout life. Rather than Jung's three stages of life, she proposed four: birth-15; 16-25; 26-45; and 46-65. Bühler found links between adult emotions and early childhood. Her World Test is a therapeutic device that uses a set of numbered miniatures to reveal a child's inner emotional world. After publishing *From Birth to Maturity* (1935) and *From Childhood to Old Age* (1938), she moved to the US. In the 1960s, Bühler helped to develop humanistic psychology.

See also: Carl Rogers 130-37 ■ Abraham Maslow 138-39 ■ Viktor Frankl 140 ■ Gordon Allport 306-13

DAVID WECHSLER

1896-1981

During World War I, Wechsler, a Romanian-born American, worked as an army psychologist alongside

Edward Thorndike and Charles Spearman, administering the Army Alpha Test for group intelligence. He later developed Binet's tests, adding nonverbal reasoning. Wechsler believed intelligence lies not only in the ability to think rationally, but also in the ability to act purposefully and to deal effectively with one's environment. In 1939, the Wechsler-Bellevue Intelligence Scale was published, followed a decade later by the Wechsler Intelligence Scale for Children (1949). The Wechsler Adult Intelligence Scale (1955) is still the most widely used intelligence test.

See also: Francis Galton 28-29 ■ Alfred Binet 50-53 ■ David C. McClelland 322-23

NANCY BAYLEY

1899-1994

Nancy Bayley, an eminent American child developmental psychologist, specialized in the measurement of motor and intellectual development. For her doctorate, she measured fear in children by analyzing the sympathetic nervous system via moisture levels in sweat glands. Her *Bayley Scales of Mental and Motor Development* (1969) remains the worldwide standard measure of mental and physical development in infants from one to 42 months.

See also: Edwin Guthrie 74 ■ Simon Baron-Cohen 298-99

MILTON ERICKSON

1901-1980

Nevada-born Erickson's trial-and-error observations of hypnosis over many years led him to become a world authority on hypnosis and trance. He is well known for his Ericksonian Handshake that

induces a trance by confusing the mind with a moment of "behavioral void" as the flow of the handshake is interrupted. Considered the founder of hypnotherapy treatment, Erickson was also a major influence on the growth of family therapy, solution-focused therapy, systemic therapy, and a number of brief-therapy treatments, including NLP (neuro-linguistic programming).

See also: B.F. Skinner 78-85 ■ Stanley Milgram 246-53.

ALEXANDER LURIA

1902-1977

Born in Kazan, Russia, Luria studied at Moscow's Institute of Psychology. His work on reaction times and thought processes resulted in his "combined motor method" and the first ever lie-detector machine. He then went to medical school and specialized in neurology. Balancing the physical and the mental, he made breakthroughs in brain damage, memory loss, perception, and aphasia (language disorders). The stories he told in books such as *The Man with a Shattered World: The History of a Brain Wound* (1972) helped to popularize neurology.

See also: Sigmund Freud 92-99 ■ B.F. Skinner 78-85 ■ Noam Chomsky 294-97

DANIEL LAGACHE

1903-1972

Frenchman Daniel Lagache was inspired to study experimental psychology, psychopathology, and phenomenology by the lectures of Georges Dumas. A forensics and criminology expert, Lagache's key books included *Jealousy* (1947) and *Pathological Mourning* (1956). After

being expelled from the International Psychoanalytical Association in 1953 for his criticism of Sacha Nacht's medical authoritarianism, he set up the breakaway French Society of Psychoanalysis with Jacques Lacan. A Freudian theorist, Lagache also played an important role in promoting psychoanalysis among the general public, particularly by linking it with clinical experience.
See also: Jacques Lacan 122-23

ERNEST R. HILGARD 1904-2001

In the 1950s, Ernest Ropiequet "Jack" Hilgard collaborated on his pioneering hypnosis studies at Stanford University with his wife Josephine and, in 1957, they founded the Laboratory of Hypnosis Research. There, with André Muller Weitzenhoffer, he developed the *Stanford Hypnotic Susceptibility Scales* (1959). His controversial neodissociation theory and the "hidden-observer effect" (1977)—which asserts that under hypnosis several subsystem states of consciousness are regulated by an executive control system—have stood the test of time. His textbooks *Conditioning and Learning* (with D.G. Marquis, 1940) and *Introduction to Psychology* (1953) are still studied.
See also: Ivan Pavlov 60-61 ■ Leon Festinger 166-67 ■ Eleanor E. Maccoby 284-85

GEORGE KELLY 1905-1967

Kelly made an important contribution to the psychology of personality through *The Psychology of Personal Constructs* (1955). His humanistic idea suggests that individuals make

their own personalities through their cognitive appraisal of events. From this theory came the "role construct repertory test," which is used to research and diagnose the nature of personality. Valued in cognitive psychology and counseling, it is also used in organizational behavior and educational studies.

See also: Johann Friedrich Herbart 24-25 ■ Carl Rogers 130-37 ■ Ulric Neisser 339

MUZAFAER SHERIF 1906-1988

Raised in Turkey, Sherif gained his PhD in the US at Columbia, with a dissertation on how social factors can influence perception. Published as *The Psychology of Social Norms* (1936), it became known as "the autokinetic effect" experiments. One of Sherif's legacies was combining successfully experimental methods in the laboratory and the field. He worked with his wife, Carolyn Wood Sherif, notably on the Robbers Cave Experiment (1954). In this, a number of boy campers were divided into two groups. Posing as a janitor, Sherif observed the origins of prejudice, conflict, and stereotype in social groups. His resulting Realistic Conflict theory still underpins our understanding of group behavior. With Carl Havland, he also developed the Social Judgement theory (1961).
See also: Solomon Asch 224-27 ■ Philip Zimbardo 254-55

NEAL MILLER 1909-2002

American psychologist Miller was a research fellow in Vienna under Anna Freud and Heinz Hartman. After reading K.M. Bykov's *The*

Cerebral Cortex and the Internal Organs (1954), Miller set out to prove that internal organs and their functions could also be manipulated at will. His findings led to the treatment technique of Biofeedback, which aims to improve patients' conditions by training them to respond to signals from their own bodies.

See also: Anna Freud 111 ■ Albert Bandura 286-91

ERIC BERNE 1910-1970

Berne, a Canadian psychiatrist and psychoanalyst, developed the theory of transactional analysis, which put verbal communication at the center of psychotherapy. The words of the first speaker, the Agent, were called a Transaction Stimulus; the reply of the Respondant was a Transaction Response. Every personality was split into alter-egos: child, adult, and parent; each stimulus and response was seen as playing one of these "parts." Exchanges were studied as an "I do something to you, and you do something back" transactional analysis. His *Games People Play* (1964) suggested that "games," or behavior patterns, between individuals can indicate hidden feelings or emotions.

See also: Erik Erikson 272-73 ■ David C. McClelland 322-23

ROGER W. SPERRY 1913-1994

American neurobiologist Sperry's successful separation of the corpus callosum—the bundles of nerve fibers that transfer signals between left and right brain hemispheres—led to a dramatic breakthrough in

the treatment of a certain kind of epilepsy. In 1981, with David Hubel and Torsten Wiesel, he was awarded the Nobel Prize for Physiology and Medicine for his work on his split-brain theory, which showed that the left and right hemispheres had separate specializations.

See also: William James 38–45 ■ Simon Baron-Cohen 298–99

SERGE LBOVICI 1915–2000

Lebovici was a French Freudian who specialized in adolescent, child, and infant development, especially the bonding process between baby and mother. He is credited with introducing child psychoanalysis to France. His many books include *Psychoanalysis in France* (1980) and *International Annals of Adolescent Psychiatry* (1988).

See also: Sigmund Freud 92–99 ■ Anna Freud 111

MILTON ROKEACH 1918–1988

Rokeach, a Polish-American social psychologist, studied how religious belief affects values and attitudes. He saw values as core motivations and mental transformations of basic psychological needs. His theory of dogmatism examined the cognitive characteristics of closed- and open-mindedness (*The Open and Closed Mind*, 1960). Rokeach's Dogmatism Scale, an ideology- and content-free way to measure closed-mindedness, is still used, and the Rokeach Value Survey is viewed as one of the most effective ways of measuring beliefs and values in particular groups. In *The Great American Values Test*, Rokeach *et al.* measured changes

in opinions to prove that television could alter people's values.

See also: Leon Festinger 166–67 ■ Solomon Asch 224–27 ■ Albert Bandura 286–91

RENE DIATKINE 1918–1997

Diatkine, a French psychoanalyst and psychiatrist, was central to the development of dynamic psychiatry. He emphasized emotions and their underlying thought processes, rather than observable behavior. Diatkine was also very active in developing institutional mental health, helping to set up *The Association De Santé Mentale* in 1958. His book on primal fantasies, *Precocious Psychoanalysis* (with Janine Simon, 1972), is one of his most enduring works.

See also: Anna Freud 111 ■ Jacques Lacan 122–23

PAUL MEEHL 1920–2003

The work of American Paul Meehl has had a lasting impact on mental health and research methodology. In *Clinical Versus Statistical Prediction: A Theoretical Analysis and a Review of the Evidence* (1954), he argued that behavioral statistics were better examined using formulaic mathematical methods rather than clinical analysis. In 1962, he found a genetic link to schizophrenia, which until then had been attributed to poor parenting. His studies of determinism and free will focusing on quantum indeterminacy were published as *The Determinism-Freedom and Mind-Body Problems* (with Herbert Feigl, 1974).

See also: B.F. Skinner 78–85 ■ David Rosenhan 328–29

HAROLD H. KELLEY 1921–2003

American social psychologist Kelley gained his PhD under Kurt Lewin at Massachusetts Institute of Technology. His first major work, *Communication and Persuasion* (with Hovland & Janis, 1953), split a communication into three parts: "who," "says what," and "to whom." The idea was widely adopted, and it changed the way people such as politicians presented themselves. In 1953, he began working with John Thibaut. Together they wrote *The Social Psychology of Groups* (1959), followed by *Interpersonal Relations: A Theory of Interdependence* (1978).

See also: Leon Festinger 166–67 ■ Kurt Lewin 218–23 ■ Noam Chomsky 294–97

STANLEY SCHACHTER 1922–1997

New York-born Schachter is best known for the two-factor theory of emotion (the Schachter-Singer Theory), developed with Jerome Singer. The pair showed that physical sensations are linked to emotions—for example, the way in which people experience increased heartbeat and muscle tension before feeling afraid—and that cognition is affected by an individual's physiological state.

See also: William James 38–45 ■ Leon Festinger 166–67

HEINZ HECKHAUSEN 1926–1988

German psychologist Heinz Heckhausen was a world expert on motivational psychology. He

completed a postdoctoral dissertation on hopes and fears of success and failure, and his early work on childhood motivational development led to the Advanced Cognitive Model of Motivation (Heckhausen & Rheinberg, 1980). His book *Motivation and Action* (1980), coauthored with his psychologist daughter, Jutta, has had a lasting influence.

See also: Zing-Yang Kuo 75 • Albert Bandura 286-91 • Simon Baron-Cohen 298-99

ANDRE GREEN 1927-

André Green, an Egyptian-born French psychoanalyst, developed an interest in communications theory and cybernetics while an intern for Jacques Lacan in the 1950s. He later became a harsh critic of Lacan who, he said, put too much emphasis on symbolic and structural form, which invalidated his Freudian claims. In the late 1960s, Green returned to the Freudian roots of analysis with his exploration of the negative. This was most elegantly expressed in his paper, *The Dead Mother* (1980), in which the mother is psychologically dead to the child, but, as she is still there, confuses and frightens him.

See also: Sigmund Freud 92-99 • Donald Winnicott 118-21 • Jacques Lacan 122-23 • Françoise Dolto 279

ULRIC NEISSER 1928-

The best-known book by German-American Neisser is *Cognitive Psychology* (1967), which outlines a psychological approach focused on mental processes. He later criticized cognitive psychology, feeling that

its development had neglected the role of perception. His specialism is memory, and in 1995 he chaired the American Psychological Association task force "Intelligence, Knowns and Unknowns," which examined theories of intelligence testing. His papers were published as the book *The Rising Curve: Long-Term Gains in IQ and Related Measures* (1998).

See also: George Armitage Miller 168-73 • Donald Broadbent 178-85

JEROME KAGAN 1929-

Kagan, a leading American figure in developmental psychology, believed that physiology had more influence on psychological characteristics than the environment. His work on the biological aspects of childhood development—apprehension and fear-revealed effects on self-consciousness, morality, memory, and symbolism—laid foundations for research on the physiology of temperament. His work influenced studies of behavior in fields far beyond psychology, including crime, education, sociology, and politics.

See also: Sigmund Freud 92-99 • Jean Piaget 262-69

MICHAEL RUTTER 1933-

British psychiatrist Michael Rutter has transformed our understanding of child development issues and behavior problems. In *Maternal Deprivation Reassessed* (1972), he rejected John Bowlby's selective attachment theory, showing that multiple attachments in childhood were normal. His later research revealed a split between deprivation (a loss of something) and privation

(never having had something), and linked antisocial behavior to family discord rather than maternal deprivation.

See also: John Bowlby 272-77 • Simon Baron-Cohen 298-99

FRIEDEMANN SCHULZ VON THUN 1944-

German psychologist Friedemann Schulz von Thun is famous for his Communication Model, published in the three-volume *To Talk With Each Other* (1981, 1989, 1998). Von Thun says there are four levels of communication in every part of a conversation: speaking factually; making a statement about ourselves; commenting on our relationship to the other person; or asking the other person to do something. He says that when people speak and listen on different levels, misunderstandings occur.

See also: B.F. Skinner 78-85 • Kurt Lewin 218-223

JOHN D. TEASDALE 1944-

British psychologist Teasdale investigated cognitive approaches to depression. With Zindel Segal and Mark Williams, he developed the technique called Mindfulness-Based Cognitive Therapy (MBCT). This combines cognitive therapy with mindfulness and Eastern meditation techniques, asking patients with recurrent major depression to engage with negative thoughts intentionally, rather than automatically, and to observe them from a more detached perspective.

See also: Gordon H. Bower 194-95 • Aaron Beck 174-77

GLOSSARY

Anecdotal method The use of observational (often unscientific) reports as research data.

Archetypes In Carl Jung's theory, the inherited patterns or frameworks within the **collective unconscious** that act to organize our experiences. Archetypes often feature in myths and narratives.

Association i) A philosophical explanation for the formation of knowledge, stating that it results from the linking or association of simple ideas to form complex ideas. ii) A link between two psychological processes, formed as a result of their pairing in past experience.

Associationism An approach that claims that inborn or acquired neural links bind stimuli and responses together, resulting in distinct patterns of behavior.

Attachment An emotionally important relationship in which one individual seeks proximity to and derives security from the presence of another, particularly infants to parental figures.

Attention A collective term for the processes used in selective, focused perception.

Autism The informal term for autistic spectrum disorder (ASD)—a cluster of mental dysfunctions that is characterized by extreme self-absorption and lack of empathy, repetitive motor activities, and the impairment of language and conceptual skills.

Behavior modification The use of proven behavior change techniques to control or modify the behavior of individuals or groups.

Behaviorism A psychological approach that insists that only observable behavior should form the object of study, as this can be witnessed, described, and measured in objective terms.

Central traits In Gordon Allport's theory, the six or so main personality traits that are used to describe a person, such as "shy" or "good natured." These are the "building blocks" of personality.

Classical conditioning A type of learning in which a neutral stimulus acquires the capacity to trigger a particular response by becoming paired with an unconditional stimulus.

Cognitive To do with mental processes, such as perception, memory, or thinking.

Cognitive dissonance An inconsistency between beliefs or feelings, which leads to a state of tension.

Cognitive psychology A psychological approach that focuses on the mental processes involved in learning and knowing, and how the mind actively organizes experiences.

Cognitive style The habitual way in which an individual processes information.

Collective unconscious In Carl Jung's theory, the deepest level of the psyche, which contains inherited psychic dispositions through the **archetypes**.

Conditioned response (CR) A particular response elicited by an initially neutral stimulus that has been paired with an **unconditioned stimulus**, which naturally provokes that response.

Conditioned stimulus (CS) In classical conditioning, a stimulus that comes to elicit a particular (conditioned) response by virtue of having been paired with an **unconditional stimulus**.

Contiguity The close occurrence of two ideas or events. This is thought to be necessary for **association**.

Control group Participants in an experiment who are not exposed to the manipulation of the researchers during an experiment.

Correlation A statistical term for the tendency of two data sets or variables to vary in a similar way in a certain set of circumstances. It is often mistaken for causation.

Crystallized intelligence The collected skills, cognitive abilities, and strategies acquired through the use of fluid intelligence. It is said to increase with age.

Defense mechanisms In psychoanalytic theory, mental reactions that occur to ward off anxiety by unconscious means.

Desensitize A process of weakening a strong response to an event or thing by repeated exposure to that stimulus.

Depression A mood disorder characterized by feelings of hopelessness and low self worth, accompanied by apathy and loss of pleasure. In extreme cases, depression may impair normal functioning and can lead to thoughts of suicide.

Determinism The doctrine that all events, acts, and choices are determined by past events or previously existing causes.

Dichotic listening Listening to two different messages that are presented simultaneously, one to each ear.

Ego A psychoanalytic term for one of three elements of the human persona (see also **id**, **superego**); the ego is the rational aspect of personality that is in touch with the outer world and its requirements, and is responsible for controlling the instincts.

Empiricism A philosophical and psychological approach that assigns the attribution of all knowledge to experience.

Encoding The processing of sensory information into memory.

Ethology The scientific study of animal behavior under natural conditions.

Extraversion A personality type that focuses energy primarily toward the external world and other people (see also **introversion**).

Extinction i) The elimination of something, especially a species.
ii) The weakening of a strength of response in conditioned learning, due to a lack of reinforcement.

False memory A recovered memory or pseudomemory of an event that did not take place. It is thought to arise through suggestion.

Family therapy A general term denoting therapies that treat a whole family, rather than one person, on the assumption that problems lie in the interrelationships within the family system.

Field theory Kurt Lewin's model of human behavior, which uses the concept of force fields to explain the "life space" or field of social influences around an individual.

Fluid intelligence The ability to deal with totally new problems. It is said to decrease with age.

Free association A technique used in psychotherapy, in which the patient says the first thing that comes to mind after any given word.

Freudian slip An act or word that is close but different to the one consciously intended, and reflects unconscious motives or anxieties.

Functionalism A psychological approach that is concerned with investigating the adaptive functions of the mind in relation to its environment.

Fundamental attribution error The tendency to explain other people's behavior by reference to personality traits rather than external situational factors.

General intelligence ("g") As defined by Charles Spearman, a general factor of intelligence or ability determined through the correlation of scores on various mental tests; Spearman saw it as a measurement of mental energy, but others view it as an individual's abstract reasoning ability.

Gestalt psychology A holistic psychological approach that emphasizes the role of the organized "whole," as opposed to its parts, in mental processes such as perception.

Humanistic psychology A psychological approach that emphasizes the importance of free will and **self-actualization** in determining good mental health.

Hypnosis The induction of a temporary, trancelike state of heightened suggestibility.

Hypothesis A prediction or statement tested for verification or refutation by experimentation.

Id A psychoanalytic term for one of three elements of the human persona (see also **ego**, **superego**); the id is the source of psychic energy and is allied with the instincts.

Individual differences All the psychological characteristics that are susceptible to variation between individuals, such as personality or intelligence.

Inferiority complex A condition, suggested by Adlerian (after founder Alfred Adler) psychoanalysis that is said to develop when a person is unable to deal with real or imagined feelings of inferiority and becomes either belligerent or withdrawn.

Imprinting In ethology, an innate system of rapid learning that takes place in animals immediately subsequent to birth; it commonly involves developing an attachment to a specific individual or object.

Innate Inborn or present in an organism from birth; it may or may not be genetically inherited.

Instincts Natural drives or propensities. In psychoanalysis, these are the dynamic forces that motivate personality and behavior.

Instrumental conditioning A form of conditioning in which the animal is instrumental in the outcome of events; an example of this type of conditioning would be an animal's negotiation of a maze.

Intelligence quotient (IQ) An index of intelligence that allows individuals to be allocated comparative levels of intelligence. First suggested by William Stern, it is calculated by dividing an individual's mental age by their chronological age, and then multiplying by 100.

Introspection The oldest psychological method; it consists of self-observation: "looking (spec)tion within (intro)" one's own mind to examine and report on one's own inner state.

Introversion A personality type that focuses energy primarily toward its own internal thoughts and feelings (see also **extraversion**).

Just noticeable difference The smallest difference that can be detected by an individual between two physical stimuli.

Law of Effect Proposed by Edward Thorndike, this is the principle that, where several responses to an event are possible, those that lead to reward tend to become more strongly associated with the event, while those that lead to punishment become more weakly associated.

Materialism The doctrine that views only the physical realm as real, and sees mental phenomena as explicable through physical terms.

Mental age The age at which children of average ability can perform particular tasks, as indicated by levels of performances in standardized tests.

Mind-body problem The problem of defining the interaction of mental and physical events, first raised by René Descartes.

Negative reinforcement In instrumental or **operant conditioning**, the strengthening of a response through the removal of a negative stimulus.

Neuron A type of nerve cell involved in transmitting messages (as nerve impulses) between different parts of the brain.

Neuropsychology A subdiscipline of psychology and neurology that is concerned with the structure and function of the brain, and studies the effects of brain disorders on behavior and cognition.

Nonsense syllables Syllables of three letters that do not form recognized words. They were first used experimentally by Hermann Ebbinghaus in a study of learning and memory.

Oedipus complex According to psychoanalytic theory, a developmental state that arises around the age of five, during which a boy experiences unconscious desire for his mother and the wish to replace or destroy his father.

Operant conditioning A form of conditioning in which the outcome depends upon an animal operating upon its environment, such as pressing a lever to obtain food.

Personality A person's stable and enduring mental and behavioral traits and characteristics, which incline him or her to behave in a relatively consistent way over time.

Phenomenology An approach to knowledge based on immediate experience as it occurs, without any attempt to categorize it through preconceptions, assumptions, or interpretations.

Phobia An anxiety disorder, characterized by intense and usually irrational fear.

Positive reinforcement A key concept in behaviorism, this is the process of increasing the probability of a response by immediately following the required response with a reward or positive stimulus.

Pragmatism The doctrine that sees ideas as rules for action; the idea's validity is measured by its practical consequences.

Psychoanalysis Sigmund Freud's set of theories and therapeutic methods, which explore the unconscious processes that influence human behavior.

Psychophysics The scientific study of the relations between mental and physical processes.

Psychosexual stages In psychoanalytic theory, the developmental stages of childhood, centering on zones of the body through which pleasure is derived.

Psychotherapy A collective term for all therapeutic treatments that use psychological rather than physical or physiological means.

Purposive behaviorism Edward Tolman's theory, which says all behavior is directed toward some ultimate goal.

Reality principle The set of rules, in psychoanalysis, which govern the ego and take account of the real world and its demands.

Reflex An automatic reaction to a stimulus.

Reinforcement In classical conditioning, the procedure that increases the likelihood of a response.

Replication Repetitions of research or an experiment in all details that lead to the same results. Replication is essential to establish validity of findings.

Repression In psychoanalytic theory, an ego-defense mechanism that pushes unacceptable thoughts, memories, impulses, or desires beyond conscious awareness. Anna Freud also called it "motivated forgetting."

Retrieval Recovering information stored in the memory through a process of search and find.

Schizophrenia A group of severe mental disorders (originally known as dementia praecox) that cause impairment in multiple areas of functioning. It is characterized by marked disturbance of thought, flat or inappropriate emotions, and distorted visions of reality.

Self-actualization The full development of one's potentialities and realization of one's potential. According to Abraham Maslow, this is the most advanced human need.

Shaping In behaviorism, the shaping of behavior is the procedure of providing positive reinforcement for successive approximations of a desired response or standard.

Social learning A theory of learning based on observing the behavior of others and the consequences of those behaviors. Albert Bandura was the foremost proponent of this theory.

Stimulus Any object, event, situation, or factor in the environment that an individual can detect and respond to.

Stream of consciousness William James's description of consciousness as a continuous flowing process of thoughts.

Structuralism A psychological approach that investigates the structure of the mind.

Superego In psychoanalysis, the term for the portion of the psyche that is derived from internalizing parental and societal values and standards. It is governed by moral restraints.

Trait theory The view that individual differences depend largely on underlying character attributes (traits) that remain essentially consistent across time and context.

Transference In psychoanalysis, the tendency for a patient to transfer emotional reactions from past relationships (particularly parental) onto the therapist.

Trial and error learning A theory of learning initially proposed by Edward Thorndike that claims learning occurs through the performance of several responses, with the repetition of those that produce desirable results.

Unconditional positive regard In Carl Rogers' client-centered therapy, the absolute acceptance of someone purely because he or she is a human being.

Unconditioned response In classical conditioning, a reflexive (unconditioned, natural) response produced in response to a particular stimulus (e.g. moving a limb away from a painful stimulus).

Unconditioned stimulus In classical conditioning, a stimulus that elicits a reflexive (unconditioned, natural) response.

Unconscious In psychoanalysis, the part of the psyche that cannot be accessed by the conscious mind.

Validity The extent to which a test measures what it is supposed to measure.

Zeigarnik effect The tendency to recall incomplete or unfinished tasks more easily than completed ones.