

# Glossary

**acculturative stress** Stress that is the result of adapting to a foreign culture

**acetylcholine** A neurotransmitter that carries information between the synapses of cells believed to be involved in learning, memory and mood

**acquisition (in learning)** The learning itself; the gaining (acquiring) of knowledge or a skill

**acquisition phase (in learning)** The period of time between presentation of a stimulus and receiving reinforcement

**acquisition process (in learning)** The process of learning the conditioned response

**acronym** A mnemonic device involving constructing a pronounceable word using the first letter of each word of the information to be recalled

**acrostic** A mnemonic device that involves constructing a phrase or sentence from words that begin with the first letter of each word of the information to be recalled

**action potential** An electrical charge (nerve impulse) that sweeps down the axon of a neuron, prompting the release of neurotransmitters

**adaptive plasticity (of the brain)** A term referring to the ability of brain neurons to alter the connections between the synapses in accordance to best suit the environmental conditions, when learning something new or when re-learning something after brain injury

**adaptive theory (of sleep)** A theory that suggests that we have periods of inactivity, or sleep, when we do not need to engage in activities important to our survival

**addictive disorder** A mental disorder that involves uncontrollable maladaptive behaviours or the use of substances, relationships or activities, and a failure to resist the impulse to engage in them, to the detriment of other responsibilities

**alarm-reaction stage** The first stage of the general adaptation syndrome, where resistance to stress first drops below normal, then increases above normal

**all-or-nothing thinking** Magnifying undesirable events or situations by classifying them as absolutely right or wrong, good or bad, acceptable or unacceptable and so on

**allostasis** The process of achieving stability of systems inside the body (homeostasis) by the automatic turning on and off of the allostastic systems

**alpha waves** Brainwaves experienced during a deeply relaxed state, with a low–medium amplitude and medium–high frequency

**altered state of consciousness** A state of consciousness that is characteristically different from normal waking consciousness in terms of awareness, sensation and perception

**Alzheimer's disease** An irreversible and progressive neurodegenerative disease that gradually kills brain cells, causing severe cognitive and behavioural decline that eventually results in death

**amnesia** A temporary or permanent, partial or complete loss of memory

**amplitude** In terms of brainwaves, refers to the size of the peaks and troughs (or the intensity of the brainwave), from a baseline of zero activity

**amygdala** A cluster of neurons in the limbic system that is associated with learning and initiating fear responses

**amyloid plaques** Sticky, abnormal clusters of beta-amyloid fragments that collect on the outside of nerve cells, destroying the synapses and the conduction of nerve impulses

**antecedent** An event that comes before a response

**anterograde amnesia** A form of memory loss for events that happen after an amnesia-causing event

**anxiety** A feeling of apprehension, dread or uneasiness in response to an unclear or ambiguous threat

**anxiety disorder** A mental disorder that involves feelings of extreme anxiety, accompanied by physical and psychological symptoms, which prevents a sufferer from normal functioning

**aphasia** A language impairment, usually caused by left hemisphere brain damage to Broca's area (impairing speech production) or Wernicke's area (impairing understanding of language)

**articulatory control system** According to Baddeley and Hitch, a subsystem of working memory's phonological loop; holds the sounds we want to keep or are preparing to speak, in their order, for up to two seconds, by subvocalising them; known as the 'inner voice'

**artificiality** The unwanted effect on participant behaviour created by the unnatural environment in which an experiment is conducted

**association areas (in the brain)** All the areas of the brain's cerebral cortex that do not have a specialised sensory or motor function; they integrate information received from different brain areas and structures to enable complex mental behaviours

**atonia** A lack of tone in the muscles, or muscle paralysis, experienced during dream sleep

**attention** A voluntary or involuntary tendency to orient towards or focus on a particular stimulus and ignore other stimuli

**automatic processes** Actions that require little conscious awareness or mental effort, and do not interfere with performance on other activities

**autonomic nervous system (ANS)** The division of the peripheral nervous system that transmits motor messages from the brain to the body's internal organs and glands, which results in involuntary activity of internal organs and glands, and transmits messages back to the brain about the activity level of these organs and glands

**aversion therapy** A type of behavioural therapy that uses classical conditioning principles to change an undesirable behaviour by associating it with an unpleasant stimulus

**beta waves** Brainwaves characteristic of normal waking consciousness, with a low amplitude and high frequency

**biofeedback** The process of receiving information about autonomic physiological functions, in order to learn how to control them

**biopsychosocial model (of health and illness)** An approach that proposes that health and illness outcomes are determined by the interaction and contribution of biological, psychological and social factors

**Broca's aphasia** An impairment in the ability to produce articulate speech, caused by damage to Broca's area

**Broca's area** An area in the left frontal lobe of the brain close to the primary motor cortex that controls the muscles responsible for the production of articulate speech

**case study** An in-depth, detailed study of all aspects of a single participant, group or event, usually undertaken to gain insight into a particular psychological phenomenon

**catatonic schizophrenia** Schizophrenia marked by stupor, rigidity, unresponsiveness, posturing, mutism and, sometimes, agitated, purposeless behaviour

**categorical approach (to classifying mental illness)** A method of categorising mental illness that groups psychological problems into broad categories or groups that share common symptoms

**central executive** According to Baddeley and Hitch, an area of working memory that monitors, coordinates and integrates information received from the phonological loop, visuospatial sketchpad, episodic buffer and long-term memory

**central nervous system (CNS)** A major division of the nervous system consisting of all the nerves in the brain and spinal cord

**cerebellum** A brain structure attached to the rear of the brainstem that helps coordinate voluntary movement and balance

**cerebral cortex** The thin layer of tissue that forms the outer layer and surface of the brain's cerebrum; responsible for basic sensory and motor functions, as well as higher mental processes

**cerebral hemispheres** The two halves of the cerebrum that cover the upper part of the brain

**cerebrum** The two large hemispheres that cover the upper part of the brain

**change blindness** A perceptual anomaly or form of perceptual blindness involving a failure to notice large changes in a visual scene

**chunking (of memory)** Grouping separate items of information to form a larger single information unit (chunk) so our short-term memory can hold more than the usual seven single items of information at any given moment

**circadian rhythm** Our internal body clock, which cycles approximately every 24 hours

**classical conditioning** A form of learning where two normally unrelated stimuli are repeatedly linked so that existing reflex responses are elicited by new stimuli; also known as Pavlovian or respondent conditioning

**cognition** Thinking, knowing or mentally processing information

**cognitive behavioural therapy (CBT)** The application of learning principles to change thought processes and human behaviour, especially maladaptive behaviour

**cognitive processes** Brain processes that involve thinking, knowing or mentally manipulating information

**cognitive remediation therapy (CRT)** A treatment for psychotic disorders that teaches problem-solving skills and improvement of cognitive problems

**computerised tomographic scan (CT)** A brain neuroimaging technique that takes clear X-rays of the brain at different angles to produce a computer-enhanced 2-D image of a cross-section of the brain

- conclusion** A decision or judgement about the meaningfulness of the results of a study
- conditioned response (CR)** A reflex response to a previously neutral stimulus that occurs after learning has taken place
- conditioned stimulus (CS)** A stimulus that evokes a specific response due to learning
- confidentiality** A participant's right to privacy in terms of access, storage and disposal of information related to a research study in which they participated
- confounding variable** An uncontrolled variable that has had an unwanted effect on the dependent variable and might be confused with the effect of the independent variable
- consciousness** Our awareness of internal and external environments at any given moment in time
- consequence** An event that comes after a response; the effect of the response
- consolidation (of memory)** The process by which a relatively permanent long-term memory is formed
- consolidation theory (of memory)** The theory that during learning and in the approximately 30 minutes after learning, changes in brain cells occur as information is transferred from short-term memory to long-term memory for relatively permanent storage
- construct validity** Whether scores on a test are consistent with the trait (or construct) being measured
- content validity** Whether the content (types of questions) of a test measures what it claims to measure
- context-dependent cues (for memory)** Environmental cues in the specific context or environment where the memory was formed, which enhance the retrieval of memories formed in that context
- continuous reinforcement** A schedule of reinforcement in operant conditioning where a reinforcer follows every correct response
- control group** In a controlled experiment, the group of participants exposed to all conditions or variables except the independent variable
- controlled processes** Actions that require a high level of conscious awareness, attention and mental effort
- controlled variable** An extraneous variable whose influence has been eliminated from an experiment so that it cannot affect results; it has been controlled
- convenience sampling** An experimental sampling technique involving the selection of participants because they are readily available to the researcher
- corpus callosum** A thick band of nerve fibres in the middle of the brain that connects the left and right hemispheres and transfers information registered in one hemisphere to the other hemisphere for processing
- counterbalancing** A method used to control order effect, where half the participants in an experiment are exposed to the control condition first and the other half are exposed to the experimental condition first; this is then reversed in the second instance
- counter-conditioning** A behavioural therapy based on classical conditioning principles, which conditions new, pleasant responses to stimuli that trigger unwanted responses
- countershock** The second stage of alarm-reaction in the general adaptation syndrome, where resistance to stress rises above normal levels due to the activation of the sympathetic nervous system
- critical period** A time of increased sensitivity to environmental influences when the conditions are optimal for certain capacities to emerge in an organism
- cue** A piece of information that helps you retrieve information from long-term memory
- cued recall** Recalling information from memory with some cues or hints for assistance
- cultural relativity** The idea that judgements about normality are made relative to the values of one's culture
- data** The observed facts that constitute the results of an experiment
- daydreaming** An altered state of consciousness characterised by a shift in concentration from external stimuli to internal thoughts, feelings, memories and images
- debriefing** Informing participants of the true purpose of an experiment once it has ended; correcting mistaken attitudes or beliefs; providing the opportunity to gain information about the study; providing information about services to help with distress resulting from participation
- decay theory** A theory of forgetting that states that forgetting occurs due to the gradual fading of memory traces over time due to disuse
- deception** When information about the true purpose of a study is not given to participants of a study before a study begins
- declarative memory** A type of long-term memory for specific factual information that can be expressed in words; subgroups are semantic memory and episodic memory
- deep processing (of memory)** According to Craik and Lockhart, the processing of information using semantic encoding
- delta waves** Brainwaves experienced during the deepest stages of sleep, with high amplitude and low frequency
- delusion** A belief or thought that is not supported by or connected to reality
- demand characteristics** When participants' knowledge of the aim of a study causes them to behave in a way that is not normal for them; this affects the results of the study
- dementia** A general term that describes the symptoms of a variety of brain illnesses that progressively kill brain cells and result in irreversible structural and chemical changes in the brain that lead to permanent and severe cognitive loss
- dependent variable (DV)** The condition in an experiment or aspect of the participant's behaviour that is affected by changes in the independent variable (IV); it is used as a measure of the IV's effect
- descriptive statistics** Statistics used to describe, summarise, organise and analyse data
- developmental plasticity** Changes in neurons and synaptic connections that occur as a specific consequence of developmental processes
- Diagnostic and Statistical Manual of Mental Disorders, Edition IV, Text Revision (DSM-IV-TR)** A manual published by the American Psychiatric Association that groups psychological problems into categories based on similar symptoms, in order to try to diagnose and treat mental disorders
- diathesis** A pre-existing and ongoing vulnerability to something
- dimensional approach (to categorising mental illness)** A method of categorising mental illness where an individual has a profile of scores on different continuums of diagnoses and symptoms
- direct brain stimulation** An invasive brain stimulation technique; involves stimulation of the brain by surgically opening the skull and delivering a measured electrical current to a specific brain area or structure
- disorganised schizophrenia** Schizophrenia marked by incoherence, grossly disorganised behaviour, bizarre thinking and flat or grossly inappropriate emotions
- distracter (in memory recognition)** A false item, similar to the correct item, that is included with items to be recognised and can lead to unreliable identification
- distress** A 'bad' type of stress that has a negative effect on an individual and their performance
- divided attention** When an individual simultaneously focuses on two or more stimuli, or simultaneously undertakes two or more tasks
- dopamine** A neurotransmitter that is involved with behaviour, cognition, voluntary movement, motivation, punishment and reward, among other functions
- double-blind procedure** An experimental procedure where neither the experimenter nor the participants know which experimental condition the participants have been allocated to
- dream** A series of images, thoughts and emotions that passes through the mind during sleep
- dualism** A variety of views regarding the relationship between mind and matter
- echoic memory** The subsystem of sensory memory that receives and stores an unlimited amount of auditory information in the form of an echo for up to 3–4 seconds
- elaborative rehearsal (of memory)** The rehearsal technique involving linking new information in some meaningful way with information already stored in long-term memory, or with other pieces of new information, to hold it in short-term memory for longer than the usual 18–20 seconds
- electrocardiograph (ECG)** A machine used to detect, amplify and record the electrical activity of the heart
- electroencephalograph (EEG)** A machine used to detect, amplify and record the brain's electrical activity, measured in the form of brainwaves
- electromyograph (EMG)** A machine used to record the electrical activity created by active muscles of the body, using electrodes attached to the skin's surface
- electrooculargraph (EOG)** A machine used to detect, amplify and record the electrical activity of the muscles surrounding the eyes
- encoding** The process that converts information into a usable form (code) that can be stored and represented in the memory system
- encoding specificity principle (for memory)** The theory that the more closely retrieval cues match the original learning conditions, the greater the chance of recalling the information
- episodic buffer** According to Baddeley and Hitch, an area of working memory that briefly stores a limited amount of sound-based information from the phonological loop and visual and spatial information from the visuospatial sketchpad with information retrieved from long-term memory, and integrates it into a single multi-dimensional representation or 'episode'
- episodic memory** A type of declarative memory for personally significant events associated with specific times and places

**ethics** Moral principles and codes of behaviour

**eustress** A 'good' type of stress that helps the body perform at an optimal level

**expectancy (in social learning)** The anticipation that making a certain type of response will lead to reinforcement

**experiment** A research method that involves gathering data under controlled conditions to test a hypothesis by exposing participants to a treatment and observing and measuring its effect

**experimental group** In a controlled experiment, the group of participants exposed to the independent variable

**experimental hypothesis** A broad and general prediction about the direction of the relationship between variables in an experiment – i.e. whether the variables increase or decrease in relation to one another

**experimental method** A scientific research method that uses participants in a formal trial to confirm or disconfirm a hypothesis

**experimenter effect** Changes in participants' behaviour that are caused by the unintended influence of the experimenter rather than the independent variable

**external validity** The extent to which a study is valid for a range of people and a range of times, not just a small subset of a population

**extinction (in learning)** The gradual decrease in strength or frequency of a conditioned response when the unconditioned stimulus is no longer available

**extraneous variable** In an experiment, a variable other than the independent variable that might cause unwanted changes in the dependent variable

**eye-witness testimony** A statement from an individual who has viewed an event (e.g. crime or accident), giving their personal account of that event

**filopodia** Finger-like extensions of growth cones (structures at the tips of axons and dendrites) that search for target cells during the process of synaptogenesis

**fixed action pattern (FAP)** The innate predisposition – essentially identical among most members of a species – to behave in a certain way in response to a specific environmental stimulus; also known as species-specific behaviour

**fixed interval (reinforcement)** A type of partial reinforcement in operant conditioning where, after a correct response is made, a reinforcer is given after a fixed amount of time has passed

**fixed ratio (reinforcement)** A type of partial reinforcement in operant conditioning where a set number of correct responses must be made before obtaining reinforcement

**flooding** A form of behavioural therapy whereby an individual with a phobia is exposed to the fear-producing object or situation in a 'flood-like' manner, so they are completely immersed in the situation

**focused attention** Attending to a particular stimulus while ignoring others; it requires a high level of awareness

**forgetting** The inability to retrieve information previously stored in long-term memory

**forgetting curve** A graph that displays the rate and amount of information that is lost, or forgotten, over time

**free recall** Recalling information from memory in any order with no cues for assistance

**frequency** In terms of brainwaves, refers to the number of brainwaves per second

**frontal lobe** The upper front half of each cerebral hemisphere of the brain; associated with complex mental abilities and the control of voluntary movement

**functional approach (to normality)** Defines normality by the level of one's ability to interact and involve oneself in society

**functional MRI (fMRI)** A brain neuroimaging technique that detects changes in oxygen levels in the blood flowing through the brain and combines this data into a detailed, computer-enhanced 3-D representation of the active brain

**galvanic skin response (GSR)** The measurement of the electrical conductivity of the skin's surface

**gamma amino butyric acid (GABA)** An inhibitive neurotransmitter linked with reducing and blunting the stress response

**general adaptation syndrome (GAS)** According to Hans Selye, the body's typical response pattern in terms of resistance to stress over time, comprising three stages: alarm reaction, resistance and exhaustion

**generalisation** A decision or judgement about whether results obtained from a sample are representative of the relevant population

**genetic factors (in health)** Biological factors that commonly enhance (or reduce) an individual's risk of, or vulnerability to, developing a particular condition

**glutamate** An excitatory neurotransmitter particularly involved in cognitive functions

**graduated exposure/systematic desensitisation** A type of behavioural therapy used to reduce a phobia, involving exposing a person to their phobia-causing stimulus or situation very slowly, by degrees, under relaxed conditions until the fear response is extinguished

**guided imagery** A method of relaxation involving the intentional visualisation of images that are calming, relaxing or beneficial in other ways

**hallucination** A sensory experience (e.g. seeing or hearing something) that does not actually exist

**health** A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity

**hippocampus** A brain structure buried deep within the brain and extending into the temporal lobes; associated with memory formation and storage

**historical approach (to normality)** Defines normality by the period of time, century or era in which the judgement is made

**homeostasis** The body's balanced and healthy state

**hypnic jerk** A reflex muscle contraction that occurs during Stage 1 NREM sleep as the body is relaxing

**hypnagogic state** A state that is experienced just before falling asleep and is characterised by slow, rolling eye movements and deep relaxation

**hypochondria** A preoccupation with minor bodily problems and the presence of illnesses that appear to be imaginary

**hypothesis** A testable prediction of the relationship between two variables

**hypothetical construct** A concept used to describe something that is believed to exist, because we can measure its effects, but we cannot directly observe or measure it

**iconic memory** The subsystem of sensory memory that receives and stores an unlimited amount of visual information in the form of a visual image for approximately 1/3 to 1/2 of a second

**imagery** Forming a mental representation, or mental picture, of an item or scene

**immune system** A system that mobilises the body's defences, such as white blood cells, against illnesses and diseases

**inattention blindness** A perceptual anomaly involving the failure to notice an object that is fully visible in the environment, because attention was not focused on it

**independent variable (IV)** The condition that an experimenter systematically manipulates (changes or varies) in order to gauge its effect on another variable (the dependent variable)

**independent-groups design** An experimental design where participants are randomly allocated to either the experimental group or control group

**inferential statistics** Statistics that allow an experimenter to make inferences and conclusions about data; they are often used to interpret results of a study

**informed consent** Where a participant gives their written consent to participate in a study after being fully informed of the true nature and purpose of the experiment (where appropriate), any foreseeable risks and their rights before an experiment commences

**insight** A sudden understanding of knowledge or information

**interference theory (of forgetting)** Theory of forgetting that refers to the tendency for other memories, either new or old, to impair the retrieval of a required memory

**intermediate processing (of memory)** According to Craik and Lockhart, the processing of information using phonemic encoding

**internal consistency** The degree to which a test measures the same variable to the same extent every time

**International Classification of Diseases, Edition 10 (ICD-10)** An international standard of diagnosing and categorising all health problems, published by the World Health Organization, which provides details on the incidence and prevalence of diseases and morbidity and mortality rates

**interview** A form of qualitative data-collection where individuals are asked to comment on their attitude towards a particular issue(s)

**K-complex** A short burst of high-amplitude brainwaves, experienced in Stage 2 NREM sleep

**labelling** When a certain characteristic of an individual is used as a name or brand to describe them

**latent learning** Learning that occurs without obvious reinforcement, and which remains hidden until reinforcement is provided

**law of effect (in operant conditioning)** The probability of a response being repeated is determined by the effect of that response

**leading question** A question that features incorrect information as a means of implanting false memories

- learning** A relatively permanent change in behaviour (or behaviour potential) due to experience
- learned helplessness** An acquired inability to overcome and avoid aversive stimuli or situations
- levels of processing model (of memory)** According to Craik and Lockhart, the theory that after information leaves sensory memory, its storage varies along a continuum of levels of processing ranging from shallow to deep processing; the level of processing used during encoding determines how long and how well information is stored
- limbic system** A number of brain structures that form a doughnut-shaped neural system between the hindbrain and the cerebral hemispheres
- long-term memory (LTM)** The third memory system in the multi-store model of memory; used for relatively permanent storage of an unlimited amount of information
- magic number 7 (+ or - 2)** The number of single items of information that the average short-term memory can hold at any one time, according to the multi-store model of memory
- magnetic resonance imaging (MRI)** A brain neuroimaging technique that uses a magnetic field and radio waves to vibrate brain neurons and produce a detailed, still, computer-enhanced 3-D image of brain areas or structures
- maintenance rehearsal (of memory)** The rehearsal technique involving the repetition of information a number of times so it can be held in short-term memory for longer than the usual 18–20 seconds
- major depression** A mood disorder characterised by lasting and extreme low emotions, such as feelings of hopelessness and helplessness
- matched-participants design** An experimental design where participants are paired (matched) on the basis of similar characteristics that can influence the DV, with one of the pair being allocated to the experimental group and the other to the control group
- maturation** The physical growth and development of the body, brain and nervous system at fairly predictable ages in the life cycle
- maturation behaviours** Innate, age-related behaviours that result from the physical growth and development (maturation) of the body, brain and nervous system at fairly predictable ages in the life cycle
- mean** A measure of central tendency found by adding up all the values and dividing the total by the number of values
- measure of central tendency** A measure of the tendency for a majority of scores to fall in the mid-range of possible values
- median** A measure of central tendency found by arranging scores from the highest to the lowest, and selecting the score that falls in the middle
- medical approach (to normality)** Defines normality in terms of physical health and well-being; an individual with an illness that has an underlying physical cause would be considered abnormal
- meditation** A purposely-induced altered state of consciousness characterised by deep physical and mental relaxation
- melatonin** A hormone that is secreted to regulate the sleep–wake cycle and cause drowsiness
- memory** An active information-processing system that receives, stores, organises and recovers information
- memory reconstruction** Remembering past events and features of these events and putting them together during memory recall
- memory trace** A physical or chemical change that is believed to occur in brain cells as they store information during memory formation
- mental association (in memory)** Creating a meaningful connection between information to be learnt and information already stored in memory
- mental health** The psychological state of someone who is functioning at a satisfactory level of emotional and behavioural adjustment
- mental illness** The psychological state of someone who has emotional or behavioural problems serious enough to require psychiatric intervention
- method of loci** A mnemonic device that involves visualising items to be recalled in a well-known series of locations, then taking a mental or physical journey through those locations to recall that information
- microsleep** A short period of sleep, where the individual appears to be awake
- mnemonic device** A system or technique that aids memory retention
- mode** A measure of central tendency found by selecting the most frequently occurring score in a group of scores
- model** Someone who serves as an example in observational learning
- mood disorder** A mental disorder that involves major disturbances in emotion (mood), such as depression or mania
- motion after-effect** A perceptual anomaly experienced after viewing a moving object for a period of time and then viewing a static object – which then appears to move in the opposite direction to the original moving stimulus
- motivated forgetting** A theory of forgetting that states that forgetting of long-term memories occurs because of a conscious or unconscious desire to block painful or traumatic memories from entering our conscious awareness
- multi-store model of memory** The memory model that visualises memory as a system consisting of multiple memory stores through which a stream of data flows for processing
- narcissistic personality** A personality attribute that is characterised by grandiose ideas about an individual's ability to control events and predict outcomes
- narrative chaining** A mnemonic device that involves linking unrelated items to create a story-like sequence of events
- negative reinforcement** When a response removes, reduces or prevents an unpleasant stimulus and creates a positive consequence; it increases or strengthens the likelihood of that response occurring again
- nervous system** A system of networks of specialised cells (neurons) that connect different parts of the body to each other and the brain via electrochemical signals
- neurodegenerative disease** A disease that gradually and progressively kills nerve cells and results in nervous system dysfunction and permanent loss of ability
- neurofibrillary tangles** Twisted strands of tau protein found in the centre of dead and dying nerve cells
- neurogenesis** The production of new brain cells
- neuroimaging devices** Non-invasive devices used to take still or moving images of live brains, in order to aid our understanding of brain function
- neuron** An individual nerve cell that receives, transmits and processes information
- neuroscientist** A scientist who studies the brain and the nervous system
- neurotransmitters** Brain chemicals released at the synapse that transmit messages between neurons
- neutral stimulus (NS)** A stimulus that does not naturally elicit any specific response
- nonsense syllables** Meaningless sets of three letters that are strung together – usually consisting of two consonants and a vowel, in any order
- noradrenaline** A neurotransmitter that is responsible for the body's reaction to stressful situations
- norm** A general 'rule' or standard
- normal curve (in statistics)** A bell-shaped curve with a large number of scores in the middle, tapering to very few extremely high and low scores
- normal waking consciousness (NWC)** A state of consciousness characterised by clear and organised alertness to internal and external stimuli
- normality** Patterns of behaviour or personality traits that are typical, or that conform to some standard of proper and acceptable ways of behaving
- NREM sleep** A type of sleep that is broken into four stages, where the sleeper falls into a deeper and deeper sleep as the stages progress; characterised by relaxation of the muscles, a slowing down of physiological functions and brainwaves that decrease in frequency and increase in amplitude
- objective data** Measurements of behaviour collected under controlled conditions, which allow data to be directly observed or measured
- observational learning** When learning occurs by watching (observing) others and noting the consequences of their actions, then imitating or not imitating their behaviour
- observational studies** A method of data-collection that involves watching and recording the behaviour of another person(s) or animal(s) within a specific environment and drawing conclusions based on the recorded observations
- observer bias** Bias in results of an observational study that occurs when an observer sees what he or she expects to see, or records only selected details of an observed behaviour
- observer effect** Changes in the behaviour of a person being observed in an experiment, caused by their awareness of the presence of an observer
- occipital lobe** An area located at the back of each cerebral hemisphere in the brain; associated with processing visual information
- one-trial learning** A form of classical conditioning where learning occurs after a single pairing of a neutral stimulus and an unpleasant stimulus; one instance of pairing creates a lasting association between the stimuli
- operant conditioning** A learning process in which the likelihood of a behaviour being repeated is determined by the consequences of that behaviour
- operant extinction** When the learnt response in operant conditioning gradually decreases in strength or rate of response after reinforcement stops



**operant reinforcer** Any event that follows a response and increases the probability of the response being repeated (or strengthened)

**operant spontaneous recovery** The reappearance of a previously reinforced response after a period of apparent extinction

**operant stimulus discrimination** In operant conditioning, the ability to differentiate between stimuli similar to the stimuli that signal reinforcement and non-reinforcement

**operant stimulus generalisation** In operant conditioning, the tendency to respond to stimuli similar to stimuli that precede operant reinforcement

**operational variable** A variable defined or described in terms of the procedures used to observe and measure it

**order effect** Where prior knowledge of a task or situation influences a participant's performance, which in turn influences the results of the experiment; also known as the practice effect

**overgeneralisation** Blowing a single event out of proportion by extending it to a large number of unrelated situations

**paranoid schizophrenia** Schizophrenia marked by a preoccupation with delusions or by frequent auditory hallucinations related to a single theme, especially grandeur or persecution

**parasympathetic nervous system** The branch of the autonomic nervous system that maintains an energy level appropriate for normal bodily functioning and physically calms us after high arousal by reversing the changes in bodily functioning caused by the domination of the sympathetic nervous system

**parietal lobe** An area of each cerebral hemisphere located behind the frontal lobe; mostly associated with processing sensations but also involved in the coordination of senses and movement

**partial reinforcement** A schedule of reinforcement in operant conditioning where a reinforcer follows only some (not all) correct responses

**participant variables** Individual differences in the personal characteristics of research participants that, if not controlled, can confound the results of the experiment

**participants** The people or animals whose behaviour, characteristics or responses are investigated and measured as part of an experiment

**participants' rights** The individual rights of all participants that must be respected by the researcher, as outlined in ethical guidelines relating to psychological research

**pathological gambling** A persistent and maladaptive gambling behaviour characterised by a failure to resist the impulse to gamble despite severe and devastating personal, family and occupational consequences; it is classified as an impulse-control/addictive mental disorder

**peg-word method** A mnemonic device involving using a recognisable or easily-remembered rhyme to visually associate items to be remembered

**perceptual anomaly** A perceptual irregularity due to deviation from the normal mental processes used to give meaning to stimuli

**peripheral nervous system (PNS)** A major division of the nervous system consisting of all the nerves outside of the central nervous system (CNS); transmits sensory information inwards to the CNS and transmits motor messages from the brain outwards to the rest of the body

**phobia** An intense and irrational fear of an object, situation or thing, which persists over time

**phonemic encoding (of memory)** According to Craik and Lockhart, the encoding of information according to the sound of the word used to identify the information

**phonological loop** According to Baddeley and Hitch, an area of working memory that stores a limited number of sounds (speech-based and acoustic) received from the echoic memory and/or long-term memory for up to two seconds unless the information is rehearsed

**phonological store** According to Baddeley and Hitch, a subsystem of working memory's phonological loop; holds representations of sounds for up to two seconds; known as the 'inner ear'

**physical exercise** Any activity of exerting oneself physically in order to maintain or increase fitness

**pineal gland** A gland located in the centre of the brain that helps regulate body rhythms and sleep cycles

**placebo** A fake treatment that has no active effect, such as a fake pill or injection

**placebo effect** Changes in behaviour caused by the belief that one has been exposed to a treatment that will affect them in some way

**plasticity (of the brain)** The ability of the brain to change its structure and relocate functions to different areas and/or neuronal networks

**population** The larger group of research interest from which a sample in a research study has been drawn

**positive reinforcement** When a pleasant or desirable event follows a response and generally increases or strengthens the likelihood of that response occurring again

**positron emission tomography (PET)** A brain neuroimaging technique involving the injection of radioactive glucose into the bloodstream, tracking the blood flow to the brain and combining this data into a series of computer-generated colour-coded images of the level of activity in various brain areas while engaged in different tasks

**post-synaptic neuron** A neuron that receives a nerve impulse sent across the synapse from another neuron (pre-synaptic neuron)

**pre-synaptic neuron** A neuron that sends a nerve impulse across the synapse to another neuron (post-synaptic neuron)

**primacy effect (in memory)** The serial position effect where recall is best for the first items on the list, then for items at the end of the list, then for items in the middle of the list

**primary appraisal** In the transactional model of stress and coping, when we decide if a situation is threatening or positive, relevant or irrelevant to our situation

**primary auditory cortex** The area of the brain's temporal lobes that registers and processes auditory (sound) information

**primary motor cortex** An area at the rear of the frontal lobe in the brain that directs the body's skeletal muscles and controls voluntary movement

**primary reinforcer** A natural, non-learned reinforcer that produces comfort, ends discomfort, or fills an immediate physical need

**primary somatosensory cortex** A strip of neurons located at the front of the brain's parietal lobe, adjacent to the primary motor cortex, which registers and processes sensory information from receptors in the body

**primary visual cortex** The area at the base of the brain's occipital lobe that registers, processes and interprets visual information sent from each eye

**proactive interference** The tendency for previously learnt information to obstruct the retrieval of newly learnt information

**procedural memory** A type of long-term memory for learnt actions and skills that can usually only be expressed as actions

**progressive muscle relaxation** A method of physically relaxing the entire body by progressively tightening and relaxing all the muscles in given areas of your body

**protective factors (in health)** Factors that enhance or have a positive effect on the health of an individual

**psychoeducation** Professional education and the provision of information about psychological issues

**psychological situation (in social learning)** How a person interprets or defines their situation

**psychoneuroimmunology** The study of links among behaviour, stress, disease and the immune system

**psychopathology** The scientific and systematic study of abnormal experience, cognition and behaviour; also a term used to refer to psychologically unhealthy behaviour (e.g. someone demonstrating evidence of psychopathology)

**psychosis** A withdrawal from reality marked by hallucinations and delusions, disturbed thought and emotions, and personality disorganisation

**psychosomatic illness** Physiological symptoms that arise as a result of psychological stressors or factors

**psychotherapy** A psychological technique in the treatment of mental disorders, used to facilitate positive changes in personality, behaviour or adjustment

**psychotic disorder** A mental disorder that involves disturbances in conscious thought and perceptions, and a loss of contact with reality (psychosis)

**punisher** Any unpleasant stimulus that reduces the likelihood of an unwanted behaviour occurring again

**punishment** Any event following a response that decreases the likelihood of the response occurring again because it introduces an unpleasant stimulus

**qualitative data** Data that describe the changes in the quality of a behaviour; often accounts of personal attitudes or experiences, or descriptions of feelings

**quantitative data** Data collected through systematic and controlled methodology and presented in numerical form

**questionnaire** A written set of standardised questions that can be administered face-to-face, by mail, by telephone or via the Internet

**random allocation** A procedure for assigning participants to either the experimental group or control group in an experiment, ensuring that all participants have an equal chance of being allocated to either group

**random sampling** An experimental sampling technique ensuring that every member of the population of interest has an equal chance of being selected for the sample being used in a study

**random-stratified sampling** A form of experimental stratified sampling that involves random samples of each stratum being selected

**raw data** The actual data collected from a study, before it is sorted or analysed

**recall** A measure of retention that involves retrieving stored information using few or no cues for assistance

**recency effect (in memory)** The serial-position effect where recall is best for items at the end of a list, then for items at the beginning, then for items in the middle of the list

**reciprocal inhibition (in psychotherapy)** The concept that one emotional state is used to block another, as is the case in graduated exposure/systematic desensitisation

**recognition** A measure of retention that involves identifying previously learnt information from a list or group of alternatives

**reflex action** A simple, automatic, involuntary response to a specific stimulus that comes directly from the nervous system and is basically the same each time it occurs

**rehearsal (of memory)** The active manipulation of information in short-term memory in order to hold it for longer than the usual 18–20 seconds

**reinforcement** Any event that increases the likelihood that a response or behaviour will occur again

**reinforcement value (in social learning)** Attaching different subjective values to various activities or rewards

**relaxation response** An innate physiological pattern that opposes activation of the body's fight-flight mechanisms

**relearning** A measure of retention that involves learning information that has been previously learnt and stored in LTM as a means of assessing whether any information was retained from the original learning

**reliability** The extent to which an assessment instrument consistently measures what it is supposed to measure

**REM behaviour disorder** A disorder whereby there is a failure of the muscle paralysis that occurs during REM sleep

**REM (sleep) rebound** The process whereby an individual experiences extra amounts of REM sleep after being deprived of it

**REM sleep** A type of sleep characterised by brainwaves with high frequency and low amplitude; the muscles of the body are in a state of paralysis and dreams may be experienced

**repeated-measures design** An experimental design method where the same group of participants makes up both the experimental and control groups

**repression** A form of motivated forgetting, where an individual unconsciously blocks painful or traumatic memories from entering conscious awareness

**research hypothesis** A hypothesis that operationalises the variables by precisely defining and describing how each variable is measured, and predicts the exact effect the independent variable is expected to have on the behaviour of the population from which the sample has been selected

**response** Any identifiable behaviour, external or internal, that is elicited by a stimulus

**response cost** When a reinforcer or positive state of affairs is removed following a response, and this decreases the likelihood that this response will occur again

**restorative theory (of sleep)** A theory that states that sleep is vital for replenishing and revitalising the mind and body to keep them functioning at optimal levels

**reticular activating system (RAS)** A network of neurons extending from the top of the spinal cord up to the thalamus; filters incoming sensory stimuli and redirects them to the cerebral cortex, activating the cortex and influencing our state of physiological arousal and alertness

**retrieval (of memory)** The process of locating information stored in memory and bringing it into consciousness when needed, to complete a cognitive task

**retrieval failure theory (of forgetting)** A theory of forgetting that states that memories are inaccessible because retrieval cues that were present when the memory was formed are missing at the time of retrieval

**retroactive interference** The tendency for new information to obstruct the retrieval of previously learnt information

**retrograde amnesia** A form of memory loss for events occurring before an amnesia-causing event

**risk factors (in health)** Factors that impede or have a negative effect on the health of an individual

**sample** The group of participants in a research study selected from, and representative of, a population of research interest

**savings score (in relearning)** A formula that calculates the percentage of information retained from original learning after relearning has occurred

**schema** A preconceived idea that represents an aspect of the world or the things in it, influenced by culture and experience

**schizophrenia** A psychosis characterised by delusions, hallucinations, apathy and a 'split' between thought and emotion

**scientific method** A data-gathering method that involves testing a hypothesis by means of careful measurement and controlled observation

**secondary appraisal** In the transactional model of stress and coping, when we assess what resources are available to us to help combat or cope with the stressor

**secondary reinforcer** A reinforcer that has no value of its own but can be exchanged for a primary reinforcer that does have value

**selective attention** The ability to redirect our attention focus to a specific or limited range of stimuli while ignoring others

**selective perception** Perceiving only certain (negative) stimuli among a larger set of possibilities

**self-fulfilling prophecy** A prediction that prompts people to act in a way that makes the prediction come true

**self-referencing (of memory)** An elaborative rehearsal technique involving linking new information to the self or to personal experience to hold it in short-term memory for longer than the usual 18–20 seconds and to increase its chances of transfer to and retrieval from long-term memory

**self-report** A data-collection technique in which individuals are asked to freely express their attitudes (verbally or in writing) by answering questions

**semantic encoding (of memory)** According to Craik and Lockhart, the encoding of information according to its meaning

**semantic memory** A type of declarative memory for impersonal factual knowledge about the world

**semantic network theory** The theory of how information in long-term memory is stored and organised in a hierarchical network of linked meanings

**sensation** The immediate response in the brain caused by excitation of a sensory organ

**sensory memory** The first stage of the multi-store model of memory; it receives and stores an unlimited amount of sensory information for up to a few seconds

**sensory register** A subsystem of sensory memory that receives and stores specific sensory information received from a sense organ

**serial recall** Recalling information from memory in the order or sequence in which it was learnt, with no cues for assistance

**serial-position effect (in memory)** A pattern of recall for list items, where recall is better for items at the beginning or end of a list than for items in the middle

**serotonin** A neurotransmitter involved with appetite, sleep, learning, memory and mood

**shallow processing (of memory)** According to Craik and Lockhart, the processing of information using structural encoding

**shaping** An operant training technique that involves reinforcing successive responses that closely resemble or progress towards the desired response

**shock** The first stage of alarm-reaction in the general adaptation syndrome, where resistance to stress drops below normal and the body acts as though it is injured; blood pressure and body temperature decrease

**short-term memory (STM)** The second and most active memory system in the multi-store model of memory; stores a limited amount of information entering from sensory memory or retrieved from long-term memory for a short period of time unless the information is rehearsed

**single photon emission computed tomography (SPECT)** A nuclear brain imaging technique involving the injection of a radioactive tracer substance into the blood stream and resulting in 3-D images of internal brain structure and functioning

**single-blind procedure** An experimental procedure where participants do not know which experimental condition they have been assigned to, but the experimenter does

**situational approach (to normality)** Defines normality by the social situation, behavioural setting or general circumstances in which a behaviour takes place

**sleep** An altered state of consciousness that features the suspension of awareness of the external environment and is accompanied by a number of physiological changes to the body

**sleep deprivation** Going without or not getting sufficient amounts of sleep

**sleep laboratory** A controlled environment that enables electronic recording and measurement of sleep

**sleep spindles** A type of brain activity characterised by a short burst of high-frequency brainwaves, experienced during Stage 2 NREM sleep

**sleep-deprivation psychosis** A disruption of mental and emotional functioning as a result of lack of sleep

**slow wave sleep (SWS)** A sleep state characterised by the emergence of delta waves; SWS is experienced during Stages 3 and 4 NREM sleep

**social gambling** Gambling behaviour that occurs with family and friends and lasts for a limited period of time, with predetermined and acceptable losses

**social nonconformity** Failure to conform to societal norms or the usual minimum standards for social conduct

**social support** Support gained by forming close, positive relationships with other people

**sociocultural approach (to normality)** Defines normality by determining whether behaviour is typical according to the cultural values and beliefs of a particular society

**somatic nervous system** The division of the peripheral nervous system that transmits sensory information received from sensory receptor cells inwards towards the central nervous system (CNS), and motor messages from the CNS to the body's voluntary skeletal muscles; also known as the skeletal nervous system

**spatial neglect** A tendency to ignore the left or right side of one's body or the left or right side of visual space resulting from damage to one of the cerebral hemispheres in the brain

**spinal cord** A part of the central nervous system that consists of a cable of nerve fibres stretching from the base of the brain to the lower back; connects the brain to the peripheral nervous system (PNS) and transmits sensory information from the PNS to the brain and motor messages from the brain to the PNS

**split-brain operation** Brain surgery involving the cutting of an area of the corpus callosum to interrupt the flow of information between the two cerebral hemispheres

**spontaneous recovery (in learning)** The reappearance of a conditioned response to the conditioned stimulus after a period of apparent extinction

**stage of exhaustion** The final stage of the general adaptation syndrome, where the body's resources are depleted and its resistance to stress falls below normal

**stage of resistance** The second stage of the general adaptation syndrome, where the resistance to stress remains above normal levels; cortisol is released to help repair the damage caused by stress on the body

**standardisation** Establishing standards for administering a test and interpreting scores

**state of consciousness** An individual's level of awareness of internal and external stimuli at any given moment

**state-dependent cues (for memory)** Retrieval cues associated with your internal physiological or psychological state at the time the memory was formed, which enhance the retrieval of memories formed in that state

**statistical approach (to normality)** Defines normality according to the experiences and behaviours of the statistical majority

**statistical significance** A number obtained from inferential statistics that provides an estimate of how often experimental results could have occurred by chance alone; expressed as ' $p$ -value'

**stigma** Social disapproval of an individual's personal characteristics or beliefs, or social disapproval of a type of behaviour

**stimulus** Any object or event that elicits a response

**stimulus discrimination (in learning)** The ability to discriminate between stimuli so that only a specific stimulus produces the conditioned response

**stimulus generalisation (in learning)** When stimuli similar to the conditioned stimulus produce the conditioned response

**storage (of memory)** The retention of information in the memory system over time

**stratified sampling** An experimental sampling technique that ensures the sample contains the same proportions of participants that are found in the population

**stress** A state of mental or physical tension that occurs when an individual must adjust or adapt to their environment but they do not feel they have the capacity to do so

**stress management** The application of strategies to reduce stress and improve coping skills

**stress reactions** The physical and psychological responses to stress

**stress-diathesis model** An explanation of how a stressful influence can act on a pre-existing or on-going vulnerability (a diathesis) to unmask the symptoms of schizophrenia in an individual

**stressor** The object or the event that causes a feeling of stress

**structural encoding (of memory)** According to Craik and Lockhart, the encoding of information according to its basic (structural) perceptual features

**suppression** A form of motivated forgetting, where an individual consciously/deliberately blocks painful or traumatic memories from entering conscious awareness

**sympathetic nervous system** The branch of the autonomic nervous system that alters the activity level of internal muscles, organs and glands to physically prepare our body for increased activity during times of high emotional or physical arousal

**synaesthesia** A perceptual anomaly where information taken in by one sense is experienced in a way normally associated with another sense

**synaptogenesis** The process by which synapses are formed between neurons

**taste aversion** A type of one-trial learning that is a learnt avoidance of a particular food after it has been associated with just one unpleasant experience

**temporal lobe** An area located on either side of each cerebral hemisphere in the brain; associated with processing auditory information; also believed to be involved in memory, facial recognition, object identification and emotion

**thalamus** A structure that sits on top of the brainstem (hindbrain) through which all sensory information, except smell, passes; re-directs this information to the appropriate sensory area of the cerebral cortex for processing

**theta waves** Brainwaves experienced during the early stages of sleep, with a mix of medium-high amplitude and a low-medium frequency

**tip-of-the-tongue (TOT) phenomenon** When we remember some information about the word/information we are trying to recall but we cannot remember the actual word/information needed

**token economy** An operant training technique where desirable behaviour is rewarded with a symbolic reinforcer (a token) that can be exchanged at a later date for a tangible reinforcer

**token reinforcer** A tangible secondary reinforcer

**transactional model of stress and coping** A model that proposes that stressful experiences are a transaction between a person and their environment; if demands exceed resources, stress is the likely result

**transcranial magnetic stimulation (TMS)** A non-invasive brain stimulation technique; involves stimulating the brain by delivering magnetic pulses to nerve cells in the brain

**trial-and-error learning** When an organism continues to explore their environment until they discover a response that will allow them to reach their desired goal

**unconditioned response (UCR)** The natural, automatic response to a specific unconditioned stimulus

**unconditioned stimulus (UCS)** A specific stimulus that is innately capable of eliciting a reflex response

**uncontrolled variable** An extraneous variable whose influence has not been eliminated from an experiment because the experimenter was not aware of it

**undifferentiated schizophrenia** Schizophrenia lacking the specific features of catatonic, disorganised or paranoid types

**validity** The extent to which an assessment instrument actually measures what it is supposed to measure

**variable** Any event, condition or characteristic that changes (varies) or can be made to change

**variable interval (reinforcement)** A type of partial reinforcement in operant conditioning where a reinforcer is only given for the first correct response after a varied amount of time

**variable ratio (reinforcement)** A type of partial reinforcement in operant conditioning where a varied number of correct responses must be made before receiving reinforcement

**visuospatial sketchpad** According to Baddeley and Hitch, the area of working memory that briefly stores the visual and spatial information that is received from sensory memory or long-term memory

**voluntary participation** Participation in a study whereby participants agree to take part in an experiment free from pressure or fear of negative consequences

**Wernicke's aphasia** An impairment in the ability to understand language and formulate coherent, meaningful speech, caused by damage to Wernicke's area

**Wernicke's area** An area of the left temporal lobe of the brain responsible for the comprehension of language and the formulation of meaningful sentences

**withdrawal rights** A participant's right to withdraw from a study or research at any time without experiencing any negative consequences

**working memory** According to Baddeley and Hitch, an active subsystem of short-term memory that temporarily stores and manipulates a limited amount of information needed to perform cognitive tasks

**Yerkes-Dodson curve** A graph that demonstrates the relationship between arousal and performance, showing the optimal level of performance; insufficient or excessive arousal results in insufficient performance