Social Influence (Paper 1)

Compliance occurs when an individual accepts influence because they hope to achieve a favourable reaction from those around them. An attitude or behaviour is adopted not because of its content, but because of the rewards or approval associated with its adoption.

Conformity is a form of social influence that results from exposure to the majority position and leads to compliance with that position. It is the tendency for people to adopt the behaviour, attitudes and values of other members of a reference group.

Identification A form of influence where an individual adopts an attitude or behaviour because they want to be associated with a particular person or group. Informational social influence is a form of influence, which is the result of a desire to be right – looking to others as a way of gaining evidence about reality.

Internalisation occurs when an individual accepts influence because the content of the attitude or behaviour proposed is consistent with their own value system.

Normative social influence (NSI) is a form of influence whereby an individual conforms with the expectations of the majority in order to gain approval or to avoid social disapproval.

Informational social influence (ISI)- is a form of influence, which is the result of a desire to be right – looking to others as a way of gaining evidence about reality.

Social roles are the behaviours expected of an individual who occupies a given social position or status.

Obedience to authority Obedience refers to a type of social influence whereby somebody acts in response to a direct order from a figure with perceived authority. There is also the implication that the person receiving the order is made to respond in a way that they would not otherwise have done without the order.

Agentic state A person sees himself or herself as an agent for carrying out another person's wishes. Legitimate authority A person who is perceived to be in a position of social control within a situation.

Legitimate authority A person who is perceived to be in a position of social control within a situation.

Authoritarian Personality A distinct personality pattern characterised by strict adherence to conventional values and a belief in absolute obedience or submission to authority.

Dispositional Explanations of behaviours such as obedience emphasise them being caused by an individual's own personal characteristics rather than situational influences within the environment.

F scale Also known as the 'California F scale' or the 'Fascism scale', the F scale was developed in California in 1947 as a measure of authoritarian traits or tendencies.

Right-wing authoritarianism A cluster of personality variables (conventionalism, authority submission and authoritarian aggression) that are associated with a 'rightwing' attitude to life.

Externality Individuals who tend to believe that their behaviour and experience is caused by events outside their control.

Internality Individuals who tend to believe that they are responsible for their behaviour and experience rather than external forces.

Locus of control People differ in their beliefs about whether the outcomes of their actions are dependent on what they do (internal locus of control) or on events outside their personal control (external locus of control).

Social support The perception that an individual has assistance available from other people, and that they are part of a supportive network.

Commitment The degree to which members of a minority are dedicated to a particular cause or activity. The greater the perceived commitment, the greater the influence.

Consistency Minority influence is effective provided there is stability in the expressed position over time and agreement among different members of the minority.

Flexibility A willingness to be flexible and to compromise when expressing a position.

Minority influence A form of social influence where members of the majority group change their beliefs or behaviours as a result of their exposure to a persuasive minority.

Social change occurs when a society or section of society adopts a new belief or way of behaving which then becomes widely accepted as the norm.

Social norms interventions attempt to correct misperceptions of the normative behaviour of peers in an attempt to change the risky behaviour of a target population.

Memory (Paper 1)

Capacity This is a measure of how much can be held in memory. It is represented in terms of bits of information, such as number of digits.

Coding (also 'encoding') The way information is changed so that it can be stored in memory. Information enters the brain via the senses (e.g. eyes and ears). It is then stored in various forms, such as visual codes (like a picture), acoustic codes (sounds) or semantic codes (the meaning of the experience).

Duration A measure of how long a memory lasts before it is no longer available.

Long-term memory (LTM) Your memory for events that have happened in the past. This lasts anywhere from 2 minutes to 100 years. LTM has potentially unlimited duration and capacity and tends to be coded semantically.

Short-term memory (STM) Your memory for immediate events. STMs are measured in seconds and minutes rather than hours and days, i.e. a short duration. They disappear unless they are rehearsed. STM also has a limited capacity of about four items or chunks and tends to be coded acoustically. This type of memory is sometimes referred to as working memory.

Multi-store model An explanation of memory based on three separate memory stores, and how information is transferred between these stores.

Sensory register This is the information at the senses – information collected by your eyes, ears, nose, fingers and so on. Information is retained for a very brief period by the sensory registers. We are only able to hold accurate images of sensory information momentarily (less than half a second). The capacity of sensory memory is very large, such as all the cells on the retina of the eye. The method of coding depends on the sense organ involved, e.g. visual for the eyes or acoustic for the ears.

Central executive Monitors and coordinates all other mental functions in working memory.

Episodic buffer Receives input from many sources, temporarily stores this information, and then integrates it in order to construct a mental episode of what is being experienced.

Phonological loop Codes speech sounds in working memory, typically involving maintenance rehearsal (repeating the words over and over again). This is why this component of working memory is referred to as a 'loop'.

Visuo-spatial sketchpad Codes visual information in terms of separate objects as well as the arrangement of these objects in one's visual field.

Working memory model An explanation of the memory used when working on a task. Each store is qualitatively different.

Episodic memory Personal memories of events, such as what you did yesterday or a teacher you liked. This kind of memory includes contextual details plus emotional tone.

Procedural memory Memory for how to do things, for example riding a bicycle or learning how to read. Such memories are automatic as the result of repeated practice.

Semantic memory Shared memories for facts and knowledge. These memories may be concrete, such as knowing that ice is made of water, or abstract, such as mathematical knowledge.

Interference An explanation for forgetting in terms of one memory disrupting the ability to recall another. This is most likely to occur when the two memories have some similarity.

Proactive interference (PI) Past learning interferes with current attempts to learn something.

Retroactive interference (RI) Current attempts to learn something interfere with past learning.

Cues are things that serve as a reminder. They may meaningfully link to the material to be remembered or may not be meaningfully linked, such as environmental cues (a room) or cues related to your mental state (being or sad or drunk).

Retrieval failure occurs due to the absence of cues. An explanation for forgetting based on the idea that the issue relates to being able to retrieve a memory that is there (available) but not accessible. Retrieval depends on using cues.

Eyewitness testimony The evidence provided in court by a person who witnessed a crime, with a view to identifying the perpetrator of the crime.

Leading question A question that, either by its form or content, suggests to the witness what answer is desired or leads him or her to the desired answer.

Misleading information Supplying information that may lead a witness' memory for a crime to be altered.

Post-event discussion A conversation between co-witnesses or an interviewer and an eyewitness after a crime has taken place which may contaminate a witness' memory for the event.

Anxiety An unpleasant emotional state that is often accompanied by increased heart rate and rapid breathing, i.e. physiological arousal.

Cognitive interview A police technique for interviewing witnesses to a crime, which encourages them to recreate the original context of the crime in order to increase the accessibility of stored information. Because our memory is made up of a network of associations rather than of discrete events, memories are accessed using multiple retrieval strategies.

Attachment (Paper 1)

Attachment is an emotional bond between two people. It is a two-way process that endures over time. It leads to certain behaviours such as clinging and proximity-seeking, and serves the function of protecting an infant.

Caregiver Any person who is providing care for a child, such as a parent, grandparent, sibling, other family member, childminder and so on.

Interactional synchrony When two people interact they tend to mirror what the other is doing in terms of their facial and body movements. This includes imitating emotions as well as behaviours. This is described as a synchrony – when two (or more) things move in the same pattern.

Reciprocity Responding to the action of another with a similar action, where the actions of one partner elicit a response from the other partner. The responses are not necessarily similar as in interactional synchrony.

Multiple attachment Having more than one attachment figure.

Primary attachment figure The person who has formed the closest bond with a child, demonstrated by the intensity of the relationship. This is usually a child's biological mother, but other people can fulfil the role – an adoptive mother, a father, grandmother and so on. Throughout these lessons when we say 'mother' we are referring to the person who fulfils the role of primary attachment figure.

Separation anxiety The distress shown by an infant when separated from his/her caregiver. This is not necessarily the child's biological mother.

Stranger anxiety The distress shown by an infant when approached or picked up by someone who is unfamiliar.

Imprinting An innate readiness to develop a strong bond with the mother which takes place during a specific time in development, probably the first few hours after birth/ hatching. If it doesn't happen at this time it probably will not happen.

Classical conditioning Learning through association. A neutral stimulus is consistently paired with an unconditioned stimulus so that it eventually takes on the properties of this stimulus and is able to produce a conditioned response.

Learning theory The name given to a group of explanations (classical and operant conditioning), which explain behaviour in terms of learning rather than any inborn tendencies or higher order thinking.

Operant conditioning Learning through reinforcement.

Social learning theory Learning through observing others and imitating behaviours that are rewarded.

Continuity hypothesis The idea that emotionally secure infants go on to be emotionally secure, trusting and socially confident adults.

Critical period A biologically determined period of time, during which certain characteristics can develop. Outside of this time window such development will not be possible.

Internal working model A mental model of the world which enables individuals to predict and control their environment. In the case of attachment the model relates to a person's expectations about relationships.

Monotropy (monotropic) The idea that the one relationship that the infant has with his/her primary attachment figure is of special significance in emotional development.

Social releaser A social behaviour or characteristic that elicits caregiving and leads to attachment.

Insecure-avoidant A type of attachment which describes those children who tend to avoid social interaction and intimacy with others.

Insecure-resistant A type of attachment which describes those infants who both seek and reject intimacy and social interaction, i.e. resist.

Secure attachment This is a strong and contented attachment of an infant to his or her caregiver, which develops as a result of sensitive responding by the caregiver to the infant's needs. Securely attached infants are comfortable with social interaction and intimacy. Secure attachment is related to healthy subsequent cognitive and emotional development.

Strange Situation A controlled observation designed to test attachment security.

Cultural variations The ways that different groups of people vary in terms of their social practices, and the effects these practices have on development and behaviour.

Deprivation To be deprived is to lose something. In the context of child development deprivation refers to the loss of emotional care that is normally provided by a primary caregiver.

Institutionalisation The effect of institutional care. The term can be applied widely to the effects of an institution but our concern focuses specifically on how time spent in an institution such as an orphanage can affect the development of children. The possible effects include social, mental and physical underdevelopment. Some of these effects may be irreversible.

Internal working model A mental model of the world which enables individuals to predict and control their environment. In the case of attachment the model relates to a person's expectations about relationships.

Psychopathology (Paper 1)

Cultural relativism The view that behaviour cannot be judged properly unless it is viewed in the context of the culture in which it originates.

Deviation from social norms Abnormal behaviour is seen as a deviation from unstated rules about how one 'ought' to behave. Anything that violates these rules is considered abnormal.

DSM (Diagnostic and Statistical Manual of Mental Disorders) A list of mental disorders that is used to diagnose mental disorders. For each disorder a list of clinical characteristics is given, i.e. the symptoms that should be looked for.

Statistical infrequency Abnormality is defined as those behaviours that are extremely rare, i.e. any behaviour that is found in very few people is regarded as abnormal.

Deviation from ideal mental health Abnormality is defined in terms of mental health, behaviours that are associated with competence and happiness. Ideal mental health would include a positive attitude towards the self, resistance to stress and an accurate perception of reality.

Failure to function adequately People are judged on their ability to go about daily life. If they can't do this and are also experiencing distress (or others are distressed by their behaviour) then it is considered a sign of abnormality.

Depression A mood disorder where an individual feels sad and/or lacks interest in their usual activities. Further characteristics include irrational negative thoughts, raised or lowered activity levels and difficulties with concentration, sleep and eating.

Obsessive-compulsive disorder (OCD) An anxiety disorder where anxiety arises from both obsessions (persistent thoughts) and compulsions (behaviours that are repeated over and over again). Compulsions are a response to obsessions and the person believes the compulsions will reduce anxiety.

Phobias A group of mental disorders characterised by high levels of anxiety in response to a particular stimulus or group of stimuli. The anxiety interferes with normal living.

Classical conditioning Learning through association. A neutral stimulus is consistently paired with an unconditioned stimulus so that it eventually takes on the properties of this stimulus and is able to produce a conditioned response.

Operant conditioning Learning through reinforcement or punishment. If a behaviour is followed by a desirable consequence then that behaviour is more likely to occur again in the future.

Two-process model A theory that explains the two processes that lead to the development of phobias – they begin through classical conditioning and are maintained through operant conditioning.

Flooding A form of behavioural therapy used to treat phobias and other anxiety disorders. A client is exposed to (or imagines) an extreme form of the threatening situation under relaxed conditions until the anxiety reaction is extinguished.

Systematic desensitisation A form of behavioural therapy used to treat phobias and other anxiety disorders. A client is gradually exposed to (or imagines) the threatening situation under relaxed conditions until the anxiety reaction is extinguished.

ABC model A cognitive approach to understanding mental disorder, focusing on the effect of irrational beliefs on emotions.

Negative triad A cognitive approach to understanding depression, focusing on how negative expectations (schema) about the self, world and future lead to depression.

Schema A cognitive framework that helps organise and interpret information in the brain. A schema helps an individual to make sense of new information.

Cognitive-behavioural therapy (CBT) A combination of cognitive therapy (a way of changing maladaptive thoughts and beliefs) and behavioural therapy (a way of changing behaviour in response to these thoughts and beliefs).

Irrational thoughts Rational thinking is flexible and realistic, where beliefs are based on fact and logic. Irrational thinking is rigid and unrealistic and lacks internal consistency.

Concordance rate A measure of genetic similarity. In a sample of, for example, 100 twin pairs, one twin of each pair has a phobic disorder. The number of times their other twin also shows the illness determines the concordance rate, so if 40 have phobic disorder, then the concordance rate is 40%.

Dopamine One of the key neurotransmitters in the brain, with effects on motivation and 'drive'.

Gene A part of the chromosome of an organism that carries information in the form of DNA.

Neurotransmitter Chemical substances that play an important part in the workings of the nervous system by transmitting nerve impulses across a synapse.

GABA (gamma-aminobutyric acid) A neurotransmitter that regulates excitement in the nervous system, thus acting as a natural form of anxiety reducer.

Noradrenaline A neurotransmitter found mainly in areas of the brain that are involved in governing autonomic nervous system activity, e.g. blood pressure or heart rate.

Serotonin A neurotransmitter implicated in many different behaviours and physiological processes, including aggression, eating behaviour, sleep and depression.

Approaches (Paper 2)

Empiricism The belief that all knowledge is derived from sensory experience. It is generally characterised by the use of the scientific method in psychology.

Introspection The process by which a person gains knowledge about his or her own mental and emotional states as a result of the examination or observation of their conscious thoughts and feelings.

Scientific method Refers to the use of investigative methods that are objective, systematic and replicable, and the formulation, testing and modification of hypotheses based on these methods.

Behaviourist People who believe that human behaviour can be explained in terms of conditioning, without the need to consider thoughts or feelings.

Classical conditioning When a neutral stimulus is consistently paired with an unconditioned stimulus so that it eventually takes on the properties of this stimulus and is able to produce a conditioned response.

Operant conditioning Learning through reinforcement or punishment. If a behaviour is followed by a desirable consequence then that behaviour is more likely to occur again in the future.

Punishment Involves the application of an unpleasant consequence following a behaviour, with the result that the behaviour is less likely to occur again in the future.

Reinforcement Anything that strengthens a response and increases the likelihood that it will occur again in the future.

Identification is a form of influence where an individual adopts an attitude or behaviour because they want to be associated with a particular person or group.

Imitation The action of using someone or something as a model and copying their behaviour.

Mediational processes Refer to the internal mental processes that exist between environmental stimuli and the response made by an individual to those stimuli.

Modelling A form of learning where individuals learn a particular behaviour by observing another individual performing that behaviour.

Social learning theory Learning through observing others and imitating behaviours that are rewarded.

Vicarious reinforcement Learning that is not a result of direct reinforcement of behaviour, but through observing someone else being reinforced for that behaviour.

Cognitive Relates to mental processes such as perception, memory and reasoning.

Cognitive neuroscience An area of psychology dedicated to the underlying neural bases of cognitive functions.

Computer model Refers to the process of using computer analogies as a representation of human cognition.

Inference/inferring means reaching a logical conclusion on the basis of evidence and reasoning.

Schema A cognitive framework that helps to organise and interpret information in the brain. Schemas help an individual to make sense of new information.

Theoretical models In cognitive psychology, models are simplified, usually pictorial, representations of a particular mental process based on current research evidence.

Biological approach Views humans as biological organisms and so provides biological explanations for all aspects of psychological functioning.

Evolution Refers to the change over successive generations of the genetic make-up of a particular population. The central proposition of an evolutionary perspective is that the genotype of a population is changeable rather than fixed, and that this change is likely to be caused by the process of natural selection.

Gene A part of the chromosome of an organism that carries information in the form of DNA.

Genotype The genetic make-up of an individual. The genotype is a collection of inherited genetic material that is passed from generation to generation.

Natural selection The process by which inherited characteristics that enhance an individual's reproductive success (or 'fitness') are passed on to the next generation, and so become more widespread in the population over time.

Neurochemistry The study of chemical and neural processes associated with the nervous system.

Phenotype The observable characteristics of an individual. This is a consequence of the interaction of the genotype with the environment.

Defence mechanisms Unconscious strategies that protect our conscious mind from anxiety. Defence mechanisms involve a distortion of reality in some way, so that we are better able to cope with a situation.

Psychoanalysis A term used to describe the personality theory and therapy associated with Sigmund Freud.

Psychodynamic Refers to any theory that emphasises change and development in the individual, particularly those theories where 'drive' is a central concept in development. The best known psychodynamic theory is Freudian psychoanalysis.

Unconscious That part of the human mind that contains repressed ideas and memories, as well as primitive desires and impulses that have never been allowed to enter the conscious mind.

Conditions of worth Conditions imposed on an individual's behaviour and development that are considered necessary to earn positive regard from significant others.

Congruence If there is similarity between a person's ideal self and self-image, a state of congruence exists. A difference represents a state of incongruence.

Free will The ability to act at one's own discretion, i.e. to choose how to behave without being influenced by external forces.

Hierarchy of needs The motivational theory proposed by Abraham Maslow, often displayed as a pyramid. The most basic needs are at the bottom and higher needs at the top.

Humanistic Refers to the belief that human beings are born with the desire to grow, create and to love, and have the power to direct their own lives.

Self Our personal identity, used synonymously with the terms 'self-image' and 'self-concept'.

Self-actualisation A term used in different ways. Rogers used it as the drive to realise one's true potential. Maslow used it to describe the final stage of his hierarchy of needs.

Determinism Behaviour is determined by external or internal factors acting upon the individual.

Nature Behaviour is seen to be a product of innate (biological or genetic) factors.

Nurture Behaviour is a product of environmental influences.

Science A systematic approach to creating knowledge. The method used to gain scientific knowledge is referred to as the scientific method.

Biopsychology (Paper 2)

Autonomic nervous system (ANS) Governs the brain's involuntary activities (e.g. stress, heartbeat) and is self-regulating (i.e. autonomous). It is divided into the sympathetic branch (fight or flight) and the parasympathetic branch (rest and digest).

Brain That part of the central nervous system that is responsible for coordinating sensation, intellectual and nervous activity.

Central nervous system (CNS) Comprises the brain and spinal cord. It receives information from the senses and controls the body's responses.

Peripheral nervous system (PNS) The part of the nervous system that is outside the brain and spinal cord.

Somatic nervous system (SNS) The part of the peripheral nervous system responsible for carrying sensory and motor information to and from the central nervous system.

Spinal cord A bundle of nerve fibres enclosed within the spinal column and which connects nearly all parts of the body with the brain.

Motor neurons form synapses with muscles and control their contractions.

Neurotransmitter Chemical substances that play an important part in the workings of the nervous system by transmitting nerve impulses across a synapse.

Relay neurons These neurons are the most common type of neuron in the CNS. They allow sensory and motor neurons to communicate with each other.

Sensory neurons carry nerve impulses from sensory receptors to the spinal cord and the brain.

Synapse The conjunction of the end of the axon of one neuron and the dendrite or cell body of another.

Synaptic transmission refers to the process by which a nerve impulse passes across the synaptic cleft from one neuron (the presynaptic neuron) to another (the postsynaptic neuron).

Endocrine glands Special groups of cells within the endocrine system, whose function is to produce and secrete hormones.

Endocrine system A network of glands throughout the body that manufacture and secrete chemical messengers known as hormones.

Hormones The body's chemical messengers. They travel through the bloodstream, influencing many different processes including mood, the stress response and bonding between mother and newborn baby.

Pituitary gland The 'master gland', whose primary function is to influence the release of hormones from other glands.

Fight-or-flight response A sequence of activity within the body that is triggered when the body prepares itself for defending or attacking (fight) or running away to safety (flight). This activity involves changes in the nervous system and the secretion of hormones that are necessary to sustain arousal.

HPA axis describes the sequence of bodily activity in response to stress that involves the hypothalamus, pituitary and adrenal cortex.

Broca's area An area in the frontal lobe of the brain, usually in the left hemisphere, related to speech production.

Localisation of function Refers to the belief that specific areas of the brain are associated with specific cognitive processes.

Motor cortex A region of the brain responsible for the generation of voluntary motor movements.

Somatosensory cortex A region of the brain that processes input from sensory receptors in the body that are sensitive to touch.

Wernicke's area An area in the temporal lobe of the brain important in the comprehension of language.

Hemispheric lateralisation refers to the fact that some mental processes in the brain are mainly specialised to either the left or right hemisphere.

Split-brain research Research that studies individuals who have been subjected to the surgical separation of the two hemispheres of the brain as a result of severing the corpus callosum.

Brain plasticity refers to the brain's ability to modify its own structure and function as a result of experience.

Functional recovery refers to the recovery of abilities and mental processes that have been compromised as a result of brain injury or disease.

Electroencephalogram (EEG) A method of recording changes in the electrical activity of the brain using electrodes attached to the scalp.

Event-related potential (ERP) A technique that takes raw EEG data and uses it to investigate cognitive processing of a specific event. It achieves this by taking multiple readings and averaging them in order to filter out all brain activity that is not related to the appearance of the stimulus.

Functional magnetic resonance imaging (fMRI) A technique for measuring brain activity. It works by detecting changes in blood oxygenation and flow that indicate increased neural activity.

Post-mortem examinations Ways of examining the brains of people who have shown particular psychological abnormalities prior to their death in an attempt to establish the possible neurobiological cause for this behaviour.

Circadian rhythm A pattern of behaviour that occurs or recurs approximately every 24 hours, and which is set and reset by environmental light levels.

Sleep–wake cycle refers to alternating states of sleep and waking that are dependent on the 24-hour circadian cycle.

Infradian rhythms Rhythms that have a duration of over 24 hours, and may be weekly, monthly or even annually.

Ultradian rhythms Cycles that last less than 24 hours, such as the cycle of sleep stages that occur throughout the night.

Endogenous pacemakers Mechanisms within the body that govern the internal, biological bodily rhythms.

Exogenous zeitgeber An environmental cue, such as light, that helps to regulate the biological clock in an organism.

Research Methods (Paper 2)

Aims A statement of what the researcher(s) intend to find out in a research study.

Debriefing A post-research interview designed to inform participants of the true nature of the study and to restore them to the state they were in at the start of the study. It may also be used to gain useful feedback about the procedures in the study. Debriefing is not an ethical issue; it is a means of dealing with ethical issues.

Ethical issues concern questions of right and wrong. They arise in research where there are conflicting sets of values between researchers and participants concerning the goals, procedures or outcomes of a research study.

Experiment A research method where causal conclusions can be drawn because an independent variable has been deliberately manipulated to observe the causal effect on the dependent variable.

Extraneous variables (EV's) do not vary systematically with the IV and therefore do not act as an alternative IV but may have an effect on the dependent variable. They are nuisance variables that muddy the waters and make it more difficult to detect a significant effect.

Hypothesis A precise and testable statement about the assumed relationship between variables. Operationalisation is a key part of making the statement testable.

Independent variable (IV) Some event that is directly manipulated by an experimenter in order to test its effect on another variable – the **dependent variable (DV).**

Informed consent Participants must be given comprehensive information concerning the nature and purpose of the research and their role in it, in order that they can make an informed decision about whether to participate.

Operationalise Ensuring that variables are in a form that can be easily tested. A concept such as 'educational attainment' needs to be specified more clearly if we are going to investigate it. For example it might be operationalised as 'GCSE grade in Maths'.

Standardised procedures A set of procedures that are the same for all participants in order to be able to repeat the study. This includes standardised instructions – the instructions given to participants to tell them how to perform the task.

Confounding variable (CV) A variable under study that is not the IV but which varies systematically with the IV. Changes in the dependent variable may be due to the confounding variable rather than the IV, and therefore the outcome is meaningless. To 'confound' means to cause confusion.

Control Refers to the extent to which any variable is held constant or regulated by a researcher.

External validity The degree to which a research finding can be generalised: to other settings (ecological validity); to other groups of people (population validity); over time (historical validity).

Extraneous variables (EV's) do not vary systematically with the IV and therefore do not act as an alternative IV but may have an effect on the dependent variable. They are nuisance variables that muddy the waters and make it more difficult to detect a significant effect.

Internal validity The degree to which an observed effect was due to the experimental manipulation rather than other factors such as confounding/extraneous variables.

Mundane realism Refers to how a study mirrors the real world. The research environment is realistic to the degree to which experiences encountered in the research environment will occur in the real world.

Validity Refers to whether an observed effect is a genuine one.

Confederate An individual in a study who is not a real participant and has been instructed how to behave by the investigator.

Directional hypothesis (one-tailed test) States the direction of the predicted difference between two conditions or two groups of participants.

Non-directional hypothesis (two-tailed test) Predicts simply that there is a difference between two conditions or two groups of participants, without stating the direction of the difference.

Pilot study A small-scale trial run of a study to test any aspects of the design, with a view to making improvements.

Counterbalancing An experimental technique used to overcome order effects when using a repeated measures design. Counterbalancing ensures that each condition is tested first or second in equal amounts.

Experimental design A set of procedures used to control the influence of factors such as participant variables in an experiment.

Independent groups design Participants are allocated to two (or more) groups representing different levels of the IV. Allocation is usually done using random techniques.

Matched pairs design Pairs of participants are matched in terms of key variables such as age and IQ. One member of each pair is allocated to one of the conditions under test and the second person is allocated to the other condition.

Order effect In a repeated measures design, an extraneous variable arising from the order in which conditions are presented, e.g. a practice effect or fatigue effect.

Random allocation Allocating participants to experimental groups or conditions using random techniques.

Repeated measures design Each participant takes part in every condition under test, i.e. each level of the IV.

Field experiment A controlled experiment conducted outside a laboratory. The IV is still manipulated by the experimenter, and therefore causal relationships can be demonstrated. Field experiments tend to have lower internal validity (more difficult to control extraneous and confounding variables) and higher external validity (greater mundane realism). Participants are usually unaware that they are participating in an experiment; thus their behaviour may be more natural and they are less likely to respond to cues from the experimenter.

Laboratory experiment An experiment carried out in a controlled setting. Lab experiments tend to have high internal validity because good control over all variables is possible. They tend to have low ecological validity because participants are aware they are being studied and also the tasks involved tend to be more artificial.

Natural experiment A research method in which the experimenter has not manipulated the independent variable (IV) directly. The IV would vary whether or not the researcher was interested. The researcher records the effect of the IV on a dependent variable (DV) – this DV may be measured in a lab. Strictly speaking, an experiment involves the deliberate manipulation of an IV and random allocation to conditions by the experimenter – neither of which apply to a natural experiment and therefore causal conclusions can only tentatively be drawn.

Quasi-experiments Studies that are 'almost' experiments. The independent variable is actually not something that varies at all – it is a condition that exists. The researcher records the effect of this 'quasi-IV' on a dependent variable (DV). As with a natural experiment, the lack of manipulation of the IV and the lack of random allocation means that causal conclusions can only tentatively be drawn.

Demand characteristics A cue that makes participants unconsciously aware of the aims of a study or helps participants work out what the researcher expects to find.

Investigator effect (sometimes referred to as investigator or experimenter bias). Anything that an investigator does that has an effect on a participant's performance in a study other than what was intended. This includes direct effects (as a consequence of the investigator interacting with the participant) and indirect effects (as a consequence of the investigator designing the study). Investigator effects may act as a confounding or extraneous variable.

Bias A systematic distortion.

Generalisation Applying the findings of a particular study to the population.

Opportunity sample A sample of participants produced by selecting people who are most easily available at the time of the study.

Population The group of people that the researcher is interested in. The group of people from whom a sample is drawn. The group of people about whom generalisations can be made.

Random sample A sample of participants produced by using a random technique such that every member of the target population being tested has an equal chance of being selected.

Sampling The method used to select participants, such as random, opportunity and volunteer sampling, or to sample behaviours in an observation such as event or time sampling.

Stratified sample A sample of participants produced by identifying subgroups according to their frequency in the population. Participants are then selected randomly from the subgroups. Systematic sample A sample obtained by selecting every nth person (where n is any number). This can be a random sample if the first person is selected using a random method; you then select every nth person after that.

Volunteer bias A form of sampling bias (distortion) because volunteer participants have special characteristics, such as usually being more highly motivated than randomly selected participants.

Volunteer sample A sample of participants that relies solely on volunteers to make up the sample. Also called a self-selected sample.

Confidentiality Concerns the communication of personal information from one person to another, and the trust that the information will be protected.

Deception A participant is not told the true aims of a study (e.g. what participation will involve) and thus cannot give truly informed consent.

Informed consent Participants must be given comprehensive information concerning the nature and purpose of the research and their role in it, in order that they can make an informed decision about whether to participate.

Privacy A person's right to control the flow of information about themselves.

Protection from harm During a research study, participants should not experience negative physical or psychological effects, such as physical injury, lowered self-esteem or embarrassment.

Right to withdraw Participants can stop participating in a study if they are uncomfortable in any way. This is especially important in cases where it was not possible to give fully informed consent. Participants should also have the right to refuse permission for the researcher to use any data they produced.

Cost-benefit analysis A systematic approach to estimating the negatives and positives of any research.

Debriefing A post-research interview designed to inform participants of the true nature of the study and to restore them to the state they were in at the start of the study. It may also be used to gain useful feedback about the procedures in the study. Debriefing is not an ethical issue; it is a means of dealing with ethical issues.

Ethical guidelines (code of conduct) A set of principles designed to help professionals behave honestly and with integrity.

Ethics committee A group of people within a research institution that must approve a study before it begins.

Presumptive consent A method of dealing with lack of informed consent or deception, by asking a group of people who are similar to the participants whether they would agree to take part in a study. If this group of people consents to the procedures in the proposed study, it is presumed that the real participants would also have agreed.

Controlled observation A form of investigation in which behaviour is observed but under conditions where certain variables have been organised by the researcher.

Covert observations Observing people without their knowledge. Knowing that behaviour is being observed is likely to alter a participant's behaviour.

Inter-observer reliability The extent to which there is agreement between two or more observers involved in observations of a behaviour.

Naturalistic observation An observation carried out in an everyday setting, in which the investigator does not interfere in any way but merely observes the behaviour(s) in question.

Non-participant observation The observer is separate from the people being observed.

Observer bias Observers' expectations affect what they see or hear. This reduces the validity of the observations.

Overt observation Observational studies where participants are aware that their behaviour is being studied.

Participant observation Observations made by someone who is also participating in the activity being observed, which may affect their objectivity.

Behavioural categories Dividing a target behaviour (such as stress or aggression) into a subset of specific and operationalised behaviours.

Event sampling An observational technique in which a count is kept of the number of times a certain behaviour (event) occurs.

Sampling The method used to select participants, such as random, opportunity and volunteer sampling, or to select behaviours in an observation such as event or time sampling.

Structured observation A researcher uses various systems to organise observations, such as behavioural categories and sampling procedures.

Time sampling An observational technique in which the observer records behaviours in a given time frame, e.g. noting what a target individual is doing every 15 seconds or 20 seconds or 1 minute. The observer may select one or more behavioural categories to tick at this time interval.

Interview A research method or technique that involves a face-to-face, 'real-time' interaction with another individual and results in the collection of data.

Interviewer bias The effect of an interviewer's expectations, communicated unconsciously, on a respondent's behaviour.

Questionnaire Data are collected through the use of written questions.

Social desirability bias A distortion in the way people answer questions – they tend to answer questions in such a way that presents themselves in a better light.

Structured interview Any interview in which the questions are decided in advance.

Unstructured interview The interview starts out with some general aims and possibly some questions, and lets the interviewee's answers guide subsequent questions.

Closed questions Questions that have a predetermined range of answers from which respondents select one. Tend to produce quantitative data – but, for example, Yes/No answers are qualitative. They then can be counted to produce quantitative data.

Open questions Questions that invite respondents to provide their own answers rather than select one of those provided. Tend to produce qualitative data.

Qualitative data Non-numerical data.

Quantitative data Data in numbers.

Co-variable The two measured variables in a correlational analysis. The variables must be continuous.

Continuous variable A variable that can take on any value within a certain range. Liking football (on a scale of 1 to 10) is continuous whereas the football team a person supports isn't. The latter could be arranged in any order.

Correlation Determining the extent of an association between two variables; co-variables may not be linked at all (zero correlation), they may both increase together (positive correlation), or as one co-variable increases, the other decreases (negative correlation).

Correlation coefficient A number between −1 and +1 that tells us how closely the co-variables in a correlational analysis are associated.

Curvilinear correlation A non-linear relationship between co-variables.

Intervening variable A variable that comes between two other variables, which is used to explain the association between those two variables. For example, if a positive correlation is found between ice cream sales and violence this may be explained by an intervening variable – heat – which causes the increase in ice cream sales and the increase in violence.

Linear correlation A systematic relationship between co-variables that is defined by a straight line.

Scattergram A graphical representation of the association (i.e. the correlation) between two sets of scores.

Significance A statistical term indicating that the research findings are sufficiently strong for us to accept the research hypothesis under test.

Case study A research investigation that involves a detailed study of a single individual, institution or event. Case studies provide a rich record of human experience but are hard to generalise from.

Content analysis A kind of observational study in which behaviour is observed indirectly in written or verbal material such as interviews, conversations, books, diaries or TV programmes.

Effect size A measure of the strength of the relationship between two variables.

Meta-analysis A researcher looks at the findings from a number of different studies and produces a statistic to represent the overall effect.

Review A consideration of a number of studies that have investigated the same topic in order to reach a general conclusion about a particular hypothesis.

Fraction, percentage, ratio Methods of expressing parts of a whole.

Order of magnitude A means of expressing a number by focusing on the overall size (magnitude). This is done by expressing the number in terms of powers of 10.

Significant figure Refers to the number of important single digits used to represent a number. The digits are 'important' because, if removed, the number would be quite different in magnitude.

Standard form A means of expressing very large or very small numbers, a number between 1 and 10 multiplied by 10 (to the power of a number).

Mean The arithmetic average of a data set. Takes the exact values of all the data into account.

Measure of central tendency A descriptive statistic that provides information about a 'typical' value for a data set.

Measure of dispersion A descriptive statistic that provides information about how spread out a set of data are.

Median The middle value of a data set when the items are placed in rank order.

Mode The most frequently occurring value or item in a data set.

Quantitative data Data measured in numbers.

Range The difference between the highest and lowest item in a data set. Usually 1 is added as a correction.

Standard deviation (SD) shows the amount of variation in a data set. It assesses the spread of data around the mean.

Bar chart A graph used to represent the frequency of data; the categories on the x-axis have no fixed order and there is no true zero.

Histogram Type of frequency distribution in which the number of scores in each category of continuous data are represented by vertical columns. There is a true zero and no spaces between the bars.

Negative skewed distribution Most of the scores are bunched towards the right. The mode is to the right of the mean because the mean is affected by the extreme scores tailing off to the left.

Normal distribution A symmetrical bell-shaped frequency distribution. This distribution occurs when certain variables are measured, such as IQ or the life of a light bulb. Such 'events' are distributed in such a way that most of the scores are clustered close to the mid-point; the mean, median and mode are at the mid-point.

Positive skewed distribution Most of the scores are bunched towards the left. The mode is to the left of the mean because the mean is affected by the extreme scores tailing off to the right.

Skewed distribution A distribution is skewed if one tail is longer than another, signifying that there are a number of extreme values to one side or the other of the mid-score.

Primary data Information observed or collected directly from first-hand experience.

Qualitative data Information in words that cannot be counted or quantified. Qualitative data can be turned into quantitative data by placing them in categories and counting frequency.

Quantitative data Information that represents how much or how long, or how many, etc. there are of something, i.e. a behaviour is measured in numbers or quantities.

Secondary data Information used in a research study that was collected by someone else or for a purpose other than the current one. For example published data or data collected in the past.

Calculated value The value of a test statistic calculated for a particular data set.

Critical value In an inferential test the value of the test statistic that must be reached to show significance.

One-tailed test Form of test used with a directional hypothesis.

Probability (p) A numerical measure of the likelihood or chance that certain events will occur.

Sign test A statistical (inferential) test to determine the significance of a sample of related items of data.

Significance A statistical term indicating that the research findings are sufficiently strong for us to accept the research hypothesis under test.

Table of critical values A table that contains the numbers used to judge significance. The calculated value of the test statistic is compared to the number in the table (called the critical value) to see if the calculated value is significant.

Test statistic A statistical test is used to calculate a numerical value. For each test this value has a specific name such as S for the sign test.

Two-tailed test Form of test used with a non-directional hypothesis.

Peer review The practice of using independent experts to assess the quality and validity of scientific research and academic reports.

Coding The process of placing quantitative or qualitative data in categories.

Content analysis A kind of observational study in which behaviour is usually observed indirectly in visual, written or verbal material. May involve either qualitative or quantitative analysis, or both.

Thematic analysis A technique used when analysing qualitative data. Themes or categories are identified and then data is organised according to these themes.

Case study A research method that involves a detailed study of a single individual, institution or event. Case studies provide a rich record of human experience but are hard to generalise from.

Inter-observer reliability The extent to which there is agreement between two or more observers involved in observations of a behaviour.

Reliability is consistency – the consistency of measurements. We would expect any measurement to produce the same data if taken on successive occasions.

Test–retest reliability The same test or interview is given to the same participants on two occasions to see if the same results are obtained.

Concurrent validity A means of establishing validity by comparing an existing test or questionnaire with the one you are interested in.

Ecological validity The ability to generalise a research effect beyond the particular setting in which it is demonstrated to other settings.

Face validity The extent to which test items look like what the test claims to measure.

Mundane realism Refers to how a study mirrors the real world. The research environment is realistic to the degree to which experiences encountered in the research environment will occur in the real world.

Temporal validity Concerning the ability to generalise a research effect beyond the particular time period of the study.

Validity Refers to whether an observed effect is a genuine one.

Empirical A method of gaining knowledge which relies on direct observation or testing, not hearsay or rational argument.

Falsifiability The possibility that a statement or hypothesis can be proved wrong.

Paradigm 'A shared set of assumptions about the subject matter of a discipline and the methods appropriate to its study' (Kuhn, 1962).

Alternative hypothesis A testable statement about the relationship (difference, association etc.) between two or more variables.

Null hypothesis An assumption that there is no relationship (difference, association, etc.) in the population from which a sample is taken with respect to the variables being studied.

Probability (p) A numerical measure of the likelihood or chance that certain events will occur. A statistical test gives the probability that a particular sample did not occur if the null hypothesis for the population was true, i.e. there was no real effect.

Type I error occurs when a researcher rejects a null hypothesis that is true.

Type II error occurs when a researcher accepts a null hypothesis that was not true.

Calculated value The value of a test statistic calculated for a particular data set.

Critical value In a statistical test the value of the test statistic that must be reached to show significance.

Degrees of freedom (DF) The number of values that are free to vary given that the overall total values are known.

Levels of measurement Refers to the different ways of measuring items or psychological variables; the lower levels are less precise.

One-tailed test Form of test used with a directional hypothesis.

Significance A statistical term indicating that the research findings are sufficiently strong to enable a researcher to reject the null hypothesis under test and accept the research hypothesis.

Statistical test Procedures for drawing logical conclusions (inferences) about the population from which samples are drawn.

Test statistic The name given to the value calculated using a statistical test. For each test this value has a specific name such as S for the sign test.

Two-tailed test Form of test used with a non-directional hypothesis.

Correlation coefficient A number between −1 and +1 that tells us how closely the co-variables in a correlational analysis are related.