



The Animal Behavior Management Alliance.

## **The Animal Behavior Management Alliance's Glossary of Behavior and Training Terms**

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# ABMA's Glossary of Behavior and Training Terms

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This glossary is intended to be a living document and will thus be growing and changing as time passes and new information becomes available. The following symbols will be used throughout the document where appropriate.

*\* Definition provided aims to reflect the term's use by the animal training community and is not currently included in the scientific literature*

*+ Term added since previous update*

*⇒ Definition revised since previous update*

*▶ Term has an accompanying video example (see individual [YouTube video links](#))*

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## ABCs

- An acronym for antecedents, behaviors, and consequences. Indicates that there is an interrelation amongst these elements in regards to reinforcement theory.

## Abnormal Repetitive Behavior (ARB)

- A behavior that is inappropriate, repetitive, and unvarying in either motor pattern or goal. Stereotypies and impulsive/compulsive behaviors are two subcategories of ARBs.

## Abolishing Operation (AO)

- An antecedent variable that temporarily decreases: (a) the effectiveness of a behavioral consequence, and (b) the current frequency of behavior maintained by that consequence. For example, satiation from eating plentiful food decreases the value of food as a reinforcer and makes it less likely for behaviors to occur that previously resulted in obtaining food.

## Accidental Reinforcement

- When a response is followed by a reinforcing event coincidentally rather than intentionally. Also called incidental or spurious reinforcement.

## Antecedent

- An environmental event or stimulus that immediately precedes a behavior and influences the occurrence of the behavior.

## Appetitive Behavior

- The active, exploratory, and goal-seeking component of a behavior sequence that precedes a consummatory response. This behavior is variable and flexible; is influenced by learning and prior experience; and is indicative of desire. For example, while foraging for food, the searching behaviors elicited prior to finding the food are appetitive.

## Appetitive Stimulus

- A positive reinforcer or an unconditional stimulus that an organism will approach, especially one that is made more effective through deprivation.



### Applied Behavior Analysis

- The branch of behavior analysis that solves practical problems with the use of behavior principles.

### Approximation

- A single step in a progressive series that leads to a behavioral goal.

### Asocial Learning

- Learning that occurs exclusively via an individual's personal interactions with the environment.

### Associative Learning

- The process of acquiring new information through the formation of a connection either between two stimuli or between a response and a stimulus. The two major types of associative learning are classical conditioning and operant conditioning.

### Autoshaping

- A respondent conditioning procedure in which an organism "shapes" its own behavior. This occurs when the presentation of a cue followed by a reinforcer results in a skeletal response from the organism even though reinforcer delivery is not contingent upon a response. The most common example involves a pigeon being presented first with a key light and then with grain. After several pairings of the two stimuli, the pigeon starts to peck the key light as if it were grain even though pecking is not required for the grain to be delivered. This is also an example of sign-tracking. See Sign-tracking and Goal-tracking.

### Aversive Stimulus

- Any stimulus that an organism attempts to avoid, evade, or escape.

### Avoidance

- Performance of a behavior that prevents the onset of an aversive stimulus.

### Backward Chaining

- A method of establishing a behavior chain by training the last behavior in the chain first and then working in reverse order to train each preceding behavior until the first behavior is reached. Sometimes referred to as back-chaining.

### Baiting \*

- The technique of using a reinforcer as an antecedent stimulus to guide the animal towards a specific location or position. Also known as luring.

### Baseline

- A guideline that is established and then used for comparisons. In regards to behavior, the baseline is typically the frequency that a target behavior is observed prior to any modification attempts.



## Behavior

- Anything that an organism does that can be observed or measured. This includes both overt and covert behavior.

## Behavior Analysis

- A comprehensive experimental approach to the study of the behavior of organisms, including: the discovery of principles and laws that govern behavior, the extension of these principles over species, and the development of an applied technology.

## Behavior Chain

- A continuous series of behaviors linked by cues and maintained by a reinforcer following the final behavior. Each cue functions as a discriminative stimulus for the following behavior, as well as a conditioned reinforcer for the preceding behavior.

## Behavior Modification

- A scientific approach to the assessment, evaluation, and alteration of behavior.

## Behavioral Assessment

- The systematic study of an individual's behavior patterns. The information gathered is used to clearly define a specific behavior prior to, during, and after any type of treatment or intervention.

## Behavioral Enrichment

- See Environmental Enrichment.

## Behavioral Momentum

- Refers to the strength of a reinforced behavior, or the tendency for behavior to persist following a change in environmental conditions. Increasing the rate of reinforcement increases the behavioral momentum. This applies also to increasing the likelihood that a low-probability behavior will occur by building behavioral momentum through asking for multiple high-probability behaviors immediately prior to the low-probability behavior.

## Behaviorism

- An approach to psychology that emphasizes the study of objective, observable facts rather than subjective, qualitative processes. This is also the scientific philosophy of behavior analysis.

## Blocking

- In respondent conditioning, a conditional stimulus (CS) that has already been associated with an unconditional stimulus can block the formation of a new stimulus as a CS when the new stimulus is presented at the same time as the original CS.

## Bribe

- A stimulus that is offered as incentive to complete a behavior when an individual initially refuses or when refusal is anticipated. Although a bribe might motivate the individual to



complete the behavior, it can also reinforce the individual's refusal behavior and frequently results in increasingly more valuable bribes being needed for compliance.

#### Bridge \*

- See Bridging Stimulus.

#### Bridging Stimulus \*

- A stimulus that pinpoints the precise moment that a specified behavior is emitted. This stimulus is a conditional reinforcer and is thought to bridge the gap in time between when the behavior occurs and when the primary reinforcer is delivered. Common stimuli used include whistles, clickers, and words. Also known as a bridge, an event marker, a marker, a marker signal, a marker stimulus, and a marking stimulus.

#### Capturing \*

- Reinforcing a behavior when it spontaneously occurs in its complete form rather than in approximations. Sometimes referred to as scanning.

#### Chain

- See Behavior Chain.

#### Chaining

- The process of establishing a behavior chain. This can occur in either a forward or a backward direction. See Backward Chaining and Forward Chaining.

#### Choice

- The selection of one of two or more available options, or the ability to make such a selection.

#### Classical Conditioning

- See Respondent Conditioning.

#### Command

- While historically used to describe an antecedent stimulus that indicates what behavior should be performed, the term *command* typically has negative implications, including that compliance is mandatory and noncompliance will be punished. Modern trainers prefer the terms *cue* or *S<sup>D</sup>*.

#### Conditional

- Dependent on, limited by, or subject to conditions. This term is preferred to *conditioned* when referring to the various elements involved in operant and respondent conditioning because it better expresses the dependent relationship that each element has on another element in order to acquire its function.



### Conditional Aversive Stimulus

- A stimulus that acquires aversive properties by being paired either with an existing aversive stimulus or with a signal that indicates that no reinforcement will be available. Also known as a conditioned aversive stimulus.

### Conditional Punisher

- A stimulus that becomes an effective punisher by being paired with an existing punisher. Also known as a conditioned punisher or secondary punisher.

### Conditional Reflex

- A reflex that is acquired through respondent conditioning and which consists of a conditional stimulus followed by a conditional response. Also known as a conditioned reflex.

### Conditional Reinforcer

- A stimulus that becomes an effective reinforcer by being paired with an existing reinforcer. Also known as a conditioned reinforcer or secondary reinforcer.

### Conditional Response (CR)

- The response elicited by a conditional stimulus as a result of respondent conditioning. This response is generally similar to an unconditional response but is not necessarily identical. Also known as a conditioned response.

### Conditional Stimulus (CS)

- An arbitrary stimulus that is paired with an unconditional stimulus and comes to elicit a conditional response as a result of respondent conditioning. Also known as a conditioned stimulus.

### Conditioning

- A type of learning in which the form or frequency of an organism's behavior changes as a result of environmental influences. See Operant Conditioning and Respondent Conditioning.

### Consequence

- An environmental event or stimulus that immediately follows a behavior and influences the probability that the behavior will occur again.

### Consummatory Response

- The final response in a goal-directed behavior sequence. For example, when foraging for food, the act of eating the food is the consummatory response.

### Context Shift Effect

- A decrease in responding that occurs when the contextual stimuli that were present in the original learning environment are changed. Contextual stimuli can include any stimulus that was present in the background when the behavior was acquired, such as sights, sounds, smells, etc.



### Contiguity

- The closeness of events in space (spatial contiguity) or time (temporal contiguity).

### Contingency

- The “if-then” dependency between events.

### Contingent Reinforcement

- Reinforcement that is dependent upon the emission of a specific behavior.

### Continuous Reinforcement

- A schedule of reinforcement in which every occurrence of a particular behavior is reinforced.

### Contrafreeloading

- The phenomenon of an organism working for access to a resource even when the identical resource is also freely available.

### Control

- Having the ability and motivation to modify or maintain behavior by changing relevant conditions.

### Counterconditioning

- The process of using respondent conditioning to replace a previously established conditional response (CR) with an alternative, incompatible CR. Typically this process is used when a conditional stimulus (CS) has acquired aversive properties through pairing with an aversive unconditional stimulus (US) and therefore elicits an undesirable CR. By pairing the CS with a new US, it is possible to replace the existing CR with one that is more desirable.

### Covert Behavior

- Behavior that is observable only by the individual performing it (e.g. thinking).

### Criteria

- The specific characteristics of a behavioral response that will be reinforced. These characteristics are defined by the trainer and can include elements such as movement, duration, latency, and distance.

### Critical Period

- An interval during development when an organism is highly receptive to the influence of certain stimuli. Once the critical period is over, future learning regarding those specific stimuli is greatly inhibited.

### Cue

- An antecedent stimulus that signals that a specific behavior, if emitted, will be reinforced. Also known as an S<sup>D</sup>.



### Delay of Reinforcement

- The time interval between when a response occurs and a reinforcer is delivered.

### Deprivation

- Reducing the availability or accessibility of a reinforcer, thereby increasing its effectiveness as a reinforcer.

### Desensitization

- The process of decreasing an organism's reactivity to a stimulus. See Counterconditioning, Habituation, and Systematic Desensitization.

### Differential Reinforcement

- The process of selectively reinforcing certain behaviors while simultaneously extinguishing others. This is a powerful tool for changing the frequency of behavior and there are several specific applications, some of which are described below. Also known as selective reinforcement.

### Differential Reinforcement of Alternative Behavior (DRA)

- The process of reinforcing a specific alternative to an undesirable behavior while that undesirable behavior is placed on extinction.

### Differential Reinforcement of High Rates of Behavior (DRH)

- The process of reinforcing a behavior only when it is emitted at a high rate, or at least a certain number of times in a specific time period.

### Differential Reinforcement of Incompatible Behavior (DRI)

- The process of reinforcing a specific behavior that is topographically incompatible with the undesirable behavior while that undesirable behavior is placed on extinction.

### Differential Reinforcement of Low Rates of Behavior (DRL)

- The process of reinforcing a behavior only if it is emitted at a low rate, or less than a certain number of times in a specific time period.

### Differential Reinforcement of Other (or Zero Rates of) Behavior (DRO)

- The process of reinforcing any other behavior (besides the undesirable behavior) when it occurs after a specific amount of time has passed without the occurrence of the undesirable behavior.

### Discrimination

- Differential responding when two or more stimuli are presented.

### Discriminative Stimulus

- An antecedent stimulus that signals that a specific behavior, if emitted, will either be reinforced (an  $S^D$ ) or not reinforced (an  $S^A$ ).





### Displacement Behavior

- Behavior that appears out of context, irrelevant, or incongruous to the current situation. Typically this occurs due to conflict or frustration related to the individual's inability (physical or behavioral) to perform a different behavior.

### Distress

- A stress response that is detrimental to the organism. For example, stress that is intense, prolonged, or which the organism is unable to cope with can cause physical or psychological maladaptations.

### Domestication

- The process of changing the physical and behavioral characteristics of a species through selective breeding over the course of generations in order to fulfill human needs and desires.

### Dominance

- The relationship between animals in a social group that allows certain individuals to exert control over others and to have greater access to resources. Though other methods are possible, dominance is typically established and maintained through aggression.

### Dominance Hierarchy

- A social ranking order based on dominance. Also known as a pecking order because the hierarchy was first described within groups of chickens in which the more dominant individuals would peck the subordinate individuals.

### Drive

- The psychological force or motivational state that causes behavior to occur. Although this term has been used in multiple theories attempting to explain and predict behavior, generally the theories have been found to be incorrect and the term's usefulness is questionable.

### Elicit

- To cause a response to occur automatically due to the presentation of a particular stimulus (its eliciting stimulus). A conditional or unconditional stimulus elicits respondent or reflexive behavior.

### Emit

- To perform a behavior in the absence of a specific eliciting stimulus. Operant behavior is often emitted in response to a discriminative stimulus, but that stimulus does not force the behavior to occur.

### Enrichment

- See Environmental Enrichment.



### Environmental Enrichment

- An evolving process that aims to enhance the welfare of captive animals by identifying and providing the environmental stimuli that are necessary to ensure an animal's psychological and physiological needs are met. Also known as behavioral enrichment and enrichment.

### Environmental Event

- Any observable event in an organism's environment.

### Errorless Learning

- A method in which a particular discrimination is learned in such a way that few, if any, errors are made during the process. This is achieved through careful manipulation of the  $S^D$  and the  $S^A$  and systematic changes that increase the likelihood of correct responses. This method prevents extinction from playing a role in the learning process and thus eliminates the aversive effects associated with extinction.

### Escape

- The performance of a behavior that terminates an aversive stimulus.

### Establishing Operation (EO)

- An antecedent variable that temporarily increases: (a) the effectiveness of a behavioral consequence, and (b) the current frequency of behavior maintained by that consequence. For example, deprivation from having a meal withheld increases the value of food as a reinforcer and makes it more likely for behaviors to occur that previously resulted in obtaining food.

### Ethology

- The scientific study of animal behavior, particularly species-typical behavior that has evolved in natural habitats.

### Eustress

- A stress response that is beneficial to the organism. For example, stress that comes from challenging but satisfying tasks can lead to high levels of performance and a positive psychological state.

### Event

- Any occurrence or phenomenon with a distinct start and end.

### Event Marker \*

- See Bridging Stimulus.

### Extinction

- The process of decreasing the occurrence of a learned behavior or response. In operant conditioning, this occurs when a previously reinforced behavior is no longer reinforced. In respondent conditioning, this occurs when a conditional stimulus is no longer presented contingently with an unconditional stimulus.



### Extinction Burst

- A sudden increase in the frequency and intensity of a behavior when extinction is first implemented.

### Extinction Stimulus

- See S<sup>A</sup>.

### Fading

- The gradual transfer of stimulus control from one stimulus or set of stimuli to another. A stimulus can either be faded in or faded out. Commonly, this term is used to refer to the fading out of a prompt, as when the use of a prompt to cue a behavior is gradually reduced until the behavior occurs in the presence of the S<sup>D</sup> alone.

### Fixed Action Pattern

- See Modal Action Pattern.

### Fixed-interval Schedule

- An intermittent schedule of reinforcement in which reinforcement is delivered for the first occurrence of a particular behavior following a specified time interval since the previous reinforcement.

### Fixed-ratio Schedule

- An intermittent schedule of reinforcement in which reinforcement is delivered following the completion of a specified number of correct responses since the previous reinforcement.

### Flooding

- The process of exposing an individual to an anxiety-provoking stimulus without allowing any means of escape. The stimulus is typically presented at maximum-intensity for a prolonged period of time without any attempts made to lessen the individual's anxiety or fear. Repeated exposure can result in habituation to the anxiety-provoking stimulus but often causes great discomfort during the process.

### Fluency

- A measure of learning that takes into account accuracy and rate of responding. Behaviors that are performed accurately at a high rate are considered fluent. Once fluency is achieved, the behavior is less likely to be forgotten or to be affected by distractions and is more likely to be able to be combined with other fluent behaviors in novel and productive ways.

### Forward Chaining

- A method of establishing a behavior chain by training the behaviors in the same order in which they will be performed. Generally, this method is more challenging to use than backward chaining due to the possibility that the behaviors at the beginning of the chain will be extinguished while those towards the end of the chain are being shaped.



### Free Contact

- A situation in which a person works with an animal without any barriers between them and without the animal being restrained.

### Frustration

- The emotional state that occurs when an organism is prevented from obtaining something that it expects and desires.

### Functional Analysis

- Part of a functional assessment during which consequences are systematically manipulated and tested in order to determine their functional relation to a target behavior.

### Functional Assessment

- The process of systematically evaluating how specific antecedents, behaviors, and consequences are related and using this information to develop effective behavior change plans.

### Generalization

- The process by which the effects of learning spread. The two most researched types of generalization are stimulus generalization and response generalization. Stimulus generalization occurs when a learned behavior occurs in the presence of stimuli that are similar but different to those present during the initial training. Response generalization occurs when a change in frequency of one behavior affects the probability that a similar behavior will occur.

### Goal-tracking

- A response that can occur during respondent conditioning procedures where after repeated pairings of a cue and a reinforcer, the presentation of the cue will cause the organism to approach the site of reinforcer delivery. See Autoshaping and Sign-tracking.

### Group Contingencies

- Contingencies that depend on the behavior of a group. This can include situations in which the behavior of one individual determines the consequences delivered to the entire group, or the behavior of the group as a whole determines the consequences delivered to each individual.

### Habit

- A recurrent behavior or behavior pattern that is well learned and highly resistant to change. It is relatively situation specific and over time can occur without conscious awareness.

### Habituation

- A progressive decrease in the intensity or probability of an elicited response that occurs as a result of repeated exposure to the eliciting stimulus.



### High Probability Behavior

- A behavior that is performed at a higher rate than alternative behavior options.

### Hypothetical Construct

- A complex idea or concept that is postulated to exist due to commonalities among empirically verifiable and measurable phenomena, but which itself is not directly observable and is therefore problematic when used to explain behavior.

### Imitation

- A learning process in which an individual emits a novel behavior after observing a model perform a similar behavior.

### Imprinting

- A form of learning in which a young animal is exposed to specific stimuli to which it forms a social attachment. Imprinting occurs during a critical period in the animal's life and is generally irreversible. It affects behavior patterns both when it occurs (e.g. identifying a parent) as well as later in life (e.g. identifying a sexual partner).

### Incidental Reinforcement

- See Accidental Reinforcement.

### Incompatible Behavior

- A behavior that interferes with another specific behavior, or which cannot be performed at the same time as that other behavior.

### Innate

- Existing in an organism from birth.

### Instinct

- See Modal Action Pattern.

### Instinctive Drift

- The tendency during operant learning for behavior patterns to emerge that interfere with the target behavior and drift towards a behavior characteristic of the learner's species.

### Instrumental Conditioning

- A form of learning in which behavior is influenced by its consequences. Although often used as a synonym for Operant Conditioning, this term is more accurately used in reference to situations involving elicited behavior with a focus on the associative mechanisms at work between the stimulus and the response.

### Intermediate Bridge \*

- This term is sometimes used to describe a training technique in which the trainer continuously gives instantaneous feedback to the animal as it progresses towards completing a desired behavior. By using a steady stream of signals, the trainer is able to indicate to the animal that it is progressing in the correct direction. If the animal deviates



from the desired direction, the signals stop and the animal learns to alter its behavior until the signals start again. When the behavior is successfully completed, the stream of signals ends in a terminal bridge.

#### Intermittent Reinforcement

- A schedule of reinforcement in which not every occurrence of a particular behavior is reinforced. Also known as partial reinforcement.

#### Intermittent Reinforcement Effect

- See Partial Reinforcement Effect (PRE).

#### Intermittent Schedule

- A schedule based on intermittent reinforcement rather than continuous reinforcement or extinction.

#### Interval Schedules

- Schedules of reinforcement that are based on intervals of time. See Fixed-interval Schedule and Variable-interval Schedule.

#### Jackpot \*

- A reinforcer that is larger and/or higher in value than normal and is contingent upon a marked improvement in performance.

#### Keep Going Signal \*

- This term is sometimes used to describe a signal that indicates to an animal that it is behaving correctly and should continue to do what it is doing.

#### Latency

- The time between an event, typically the presentation or onset of a stimulus, and the occurrence of a behavior.

#### Latent Learning

- Learning that occurs without conscious effort, awareness, intention, or reinforcement, and the effects of which are not evident until some time after the learning occurred.

#### Law of Effect

- Behavior is a function of its consequences. This paraphrase of Edward Thorndike's statement regarding the principle of reinforcement summarizes his observations that the past effects of a behavior influence the probability that the behavior will occur again in the future.

#### Learned Helplessness

- The phenomenon that occurs when an organism learns, due to repeated exposure to inescapable stressors or insoluble problems, that it has no behavioral control over environmental events. This causes the organism to cease responding and to act helpless, even in future situations where the organism's behavior would have an effect.



## Learning

- A change in behavior due to experience.

## Least Reinforcing Scenario (LRS) \*

- A technique used to respond to the occurrence of an incorrect behavior during a training session. After the incorrect behavior is emitted, a brief pause occurs when no reinforcement is available to the animal. During this pause, the trainer creates no changes to the environment and watches for the animal to be calmly attentive. Following the pause, the trainer may choose to reinforce the animal's appropriate behavior during the pause or to cue a subsequent behavior (either the same behavior that was previously performed incorrectly or a different behavior). Correct use of this technique can decrease the frequency of aggression caused by the lack of reinforcement following an incorrect behavior.

## Limited Hold

- A short period of time during an interval schedule when reinforcement is available. If no response is made during the limited hold, then no reinforcement will be delivered during that interval.

## Low Probability Behavior

- A behavior that is performed at a lower rate than alternative behavior options.

## Luring \*

- The technique of using a reinforcer as an antecedent stimulus to guide the animal towards a specific location or position. Also known as baiting.

## Magnitude of Reinforcement

- The quantity, intensity, or duration of a reinforcer.

## Marker \*

- See Bridging Stimulus.

## Marker Signal \*

- See Bridging Stimulus.

## Marker Stimulus \*

- See Bridging Stimulus.

## Marking Stimulus \*

- See Bridging Stimulus.

## Matching Law

- The principle that the relative rate of responding on two or more concurrent reinforcement schedules will match the rate of reinforcement available on each schedule. In other words, when given a choice, an animal tends to perform whichever behavior produces more reinforcement.



### Mimicry

- Mimicry can occur in various forms. Behavioral mimicry occurs when one organism copies the physical movements, behavior patterns, or vocalizations of another organism. Morphological mimicry occurs when the physical traits of one species (the mimic) resemble the traits of another species (the model) so closely that observers confuse the two.

### Modal Action Pattern

- An innate, species-specific sequence of responses typically triggered by a particular stimulus. The sequence is often highly stereotyped and, once initiated, is performed in its entirety. Formerly called instinct, this term is also called a fixed action pattern. The shift towards using the term modal action pattern acknowledges the behavioral flexibility of these patterns based on individual and environmental variations.

### Modeling \*

- The process of one individual (the model) demonstrating a behavior that another individual must learn to imitate in order to receive reinforcement.

### Molding \*

- The process of pairing the physical manipulation of an animal's body with reinforcement in order to teach the animal to move in a certain way or assume a specific position. This technique often utilizes negative rather than positive reinforcement.

### Motivating Operation (MO)

- An antecedent variable that temporarily alters (increases or decreases): (a) the effectiveness of a behavioral consequence, and (b) the current frequency of behavior maintained by that consequence. Types of motivating operations include abolishing operations and establishing operations.

### Motivation

- A hypothetical construct that includes all of the contingencies for responding (i.e. the reasons for an organism to behave).

### Negative

- In regards to consequences, negative refers to the removal of a stimulus.

### Negative Punisher

- A consequence that is removed from the environment in order to decrease the future frequency of the behavior that it follows.

### Negative Punishment

- The procedure of removing a consequence from the environment in order to decrease the future frequency of the behavior that it follows.





### Negative Reinforcement

- The procedure of removing a consequence from the environment in order to increase the future frequency of the behavior that it follows.

### Negative Reinforcer

- A consequence that is removed from the environment in order to increase the future frequency of the behavior that it follows.

### Neutral Stimulus

- A stimulus that, prior to conditioning, does not reliably elicit the specific response to which it might later be paired.

### No Reward Marker \*

- A stimulus that pinpoints the precise moment that an undesirable behavior is emitted. This stimulus is a conditional punisher. If used correctly, it can decrease the future frequency of a behavior, but it also has the potential to cause various harmful side effects that are associated with punishment.

### Nonassociative Learning

- The process of changing behavior through repeated exposure to a single stimulus without the formation of an association with another stimulus or response. The two major types of nonassociative learning are habituation and sensitization.

### Noncontingent Reinforcement

- The procedure of delivering a reinforcer independent of what behavior is occurring.

### Nonintermittent Schedule

- A schedule in which every occurrence of a particular behavior is either reinforced (continuous reinforcement) or not reinforced (extinction).

### Observational Learning

- Learning that occurs through the observation of events and their consequences. This type of learning can occur in a social or an asocial context, depending on whether another individual (a model) is present. Social observational learning is also known as vicarious learning and occurs when an individual learns by observing the performance and consequences of a model's behavior. Imitation of the model's behavior is not required for learning to occur, and based on the consequences of the model's behavior, the individual might learn what behavior to avoid rather than to perform. Asocial observational learning occurs when an individual learns by observing events and their consequences without the involvement of a model.

### Operant

- A class of responses that is defined by the effect that the responses have on the environment rather than their particular topography.



### Operant Behavior

- Behavior that is emitted and can be modified by its consequences. Operant behavior is voluntary and can occur without any prior conditioning.

### Operant Conditioning

- A form of learning in which behavior is influenced by its consequences. The probability that a behavior will occur again in the future increases if it is followed by a reinforcer and decreases if it is followed by a punisher.

### Operational Definition

- A description that includes the specific observable and measurable operations (procedures, actions, or processes) by which a concept can be assessed. Often used to clarify the meaning of a hypothetical construct.

### Operationalize

- To describe a concept using the specific observable and measurable operations with which it can be assessed.

### Orienting Response

- In regards to respondent behavior, the orienting response refers to a behavioral reaction to an unexpected stimulus. This typically involves turning the head or body towards the source of the stimulus and is frequently accompanied by physiological changes (e.g. altered heart rate or dilation of pupils). In regards to operant behavior, the orienting response puts the individual in a position to perceive a discriminative stimulus or to emit other responses.

### Overshadowing

- In respondent conditioning, overshadowing occurs when the more salient property of a compound stimulus becomes a conditioned stimulus and the less salient property does not. For example, if a light and a sound are presented at the same time prior to an unconditional stimulus, but the organism attends more strongly to the light, then the sound will be “overshadowed” and only the light will come to elicit the conditional response.

### Overt Behavior

- Behavior performed by an individual that is observable by others (e.g. blinking).

### Partial Reinforcement

- See Intermittent Reinforcement.

### Partial Reinforcement Effect (PRE)

- The tendency for intermittent reinforcement schedules to generate greater resistance to extinction than continuous reinforcement schedules. Although higher rates of reinforcement create greater resistance to change, the difference between continuous reinforcement and extinction is more rapidly discriminated than the difference between



intermittent reinforcement and extinction, thus the PRE. Also known as the partial reinforcement extinction effect (PREE) and the intermittent reinforcement effect.

#### Pavlovian Conditioning

- See Respondent Conditioning.

#### Performance

- An organism's behavior over a particular period of time.

#### Persistence

- The continuance of a particular behavior despite the initiation of an extinction procedure.

#### Plateau

- A period in which the rate of learning decreases or stops temporarily and so the learning curve flattens or "plateaus." This can occur for various reasons, including loss of motivation, boredom, fatigue, or change in skill level requirements.

#### Positive

- In regards to consequences, positive refers to the addition of a stimulus.

#### Positive Punisher

- A consequence that is added to the environment in order to decrease the future frequency of the behavior that it follows.

#### Positive Punishment

- The procedure of adding a consequence to the environment in order to decrease the future frequency of the behavior that it follows.

#### Positive Reinforcement

- The procedure of adding a consequence to the environment in order to increase the future frequency of the behavior that it follows.

#### Positive Reinforcer

- A consequence that is added to the environment in order to increase the future frequency of the behavior that it follows.

#### Precursor Behavior

- A behavior that is frequently observed prior to, and is predictive of, another behavior.

#### Premack Principle

- The theory that the opportunity to perform a high probability behavior can serve as a reinforcer for the performance of a low probability behavior.

#### Primary Aversive Stimulus

- A stimulus that is innately aversive due to species history.



### Primary Punisher

- A stimulus that is innately punishing due to species history. Also known as an unconditional punisher or an unconditioned punisher.

### Primary Reinforcer

- A stimulus that is innately reinforcing due to species history. Also known as an unconditional reinforcer or an unconditioned reinforcer.

### Prompt

- An antecedent stimulus that increases the likelihood that the desired behavior will occur in response to a discriminative stimulus.

### Protected Contact

- A situation in which a person works with an animal with a barrier between them that limits the space they can share and the way they can interact.

### Punisher

- Any consequence of a behavior that decreases the future frequency of that behavior.

### Punishment

- The procedure by which a consequence decreases the future frequency of the behavior it follows.

### Rate of Reinforcement

- A measure of how many reinforcers are delivered per unit of time.

### Rate of Responding

- A measure of how frequently a response occurs per unit of time.

### Ratio Schedules

- Schedules of reinforcement that are based on the number of responses an organism performs. The ratio refers to the number of responses for each reinforcer. See Fixed-ratio Schedule and Variable-ratio Schedule.

### Recall \*

- The behavior of returning to a specific location when cued.

### Redirected Behavior

- Behavior that is contextually appropriate but directed towards an inappropriate recipient.

### Reflex

- A unit of elicited behavior comprised of a specific stimulus and a corresponding response.



### Regression

- This term is commonly used in reference to an individual's behavioral performance reverting to an earlier stage in the learning process. Historically it was also used to describe the phenomenon that is now more frequently referred to as Resurgence.

### Reinforcement

- The procedure by which a consequence increases the future frequency of the behavior it follows.

### Reinforcement Schedule

- See Schedule of Reinforcement.

### Reinforcer

- Any consequence of a behavior that increases the future frequency of that behavior.

### Remote Training

- Training that occurs without any direct interaction between the animal and the trainer. The process is designed such that an animal learns a specific behavior in an environment in which the trainer is not present.

### Repertoire

- All of the behaviors an organism is capable of emitting at any given moment.

### Resilience

- The ability to adapt to difficult or challenging experiences and to avoid the deleterious effects of stress.

### Resistance to Extinction

- The extent to which an operant behavior perseveres once it is no longer reinforced.

### Respondent

- A class of responses that is defined by the stimuli that reliably produce them.

### Respondent Behavior

- Behavior that is elicited by an antecedent stimulus. Respondent behavior is involuntary and does not depend on consequences, and it can be elicited by either a conditional or an unconditional stimulus.

### Respondent Conditioning

- A form of learning in which an organism comes to respond to a new stimulus through repeated stimulus-stimulus pairings. An unconditional stimulus (US) naturally elicits an unconditional response (UR). After repeated presentations of a neutral stimulus with the US, that neutral stimulus becomes a conditional stimulus (CS) and is able to elicit a conditional response (CR) in the absence of the US. The CR is similar in form but not necessarily identical to the UR. Also known as classical conditioning or Pavlovian conditioning.



### Response

- A clearly defined, measurable unit of behavior.

### Response Cost

- A negative punishment procedure in which the occurrence of a specific behavior results in the loss of a conditional reinforcer.

### Response Generalization

- See Generalization.

### Resurgence

- The temporary recurrence of a previously established (but not currently occurring) behavior when the reinforcement conditions for the current behavior worsen. This phenomenon was traditionally described in the context of extinction procedures but has more recently been found to have wider applications.

### Reward

- A consequent stimulus that is presumed by the giver to be desirable or valued. The term reward is not synonymous with reinforcer, since it does not necessarily increase the future frequency of the behavior it follows.

### Saliency

- The quality of a stimulus that makes it more noticeable to an individual. Typically a more intense stimulus is more salient.

### Satiation

- Increasing the availability or accessibility of a reinforcer, thereby decreasing its effectiveness as a reinforcer.

### Scanning \*

- See Capturing.

### Schedule of Reinforcement

- A rule describing which occurrences of a particular behavior will be reinforced. Only the most commonly referenced schedules are listed below and described in this glossary.
  - o Nonintermittent Schedules
    - Continuous reinforcement
    - Extinction
  - o Intermittent Schedules
    - Fixed-interval
    - Fixed-ratio
    - Variable-interval
    - Variable-ratio



## S<sup>D</sup>

- A discriminative stimulus that signals that a specific behavior, if emitted, will be reinforced. Pronounced *ess-dee*. Also known as a cue.

## S<sup>Δ</sup>

- A discriminative stimulus that signals that a specific behavior, if emitted, will not be reinforced. Pronounced *ess-delta*. Also known as an extinction stimulus.

## Secondary Punisher

- A stimulus that becomes an effective punisher by being paired with an existing punisher. Also known as a conditional punisher or conditioned punisher.

## Secondary Reinforcer

- A stimulus that becomes an effective reinforcer by being paired with an existing reinforcer. Also known as a conditional reinforcer or conditioned reinforcer.

## Selective Reinforcement

- See Differential Reinforcement.

## Semi-protected Contact

- A situation in which a person works with an animal with a partial restriction on the space they can share or the movement that can occur, but without total protection for either the person or the animal.

## Sensitive Period

- An interval during development when an organism is highly receptive to the influence of certain stimuli.

## Sensitization

- A progressive increase in the intensity or probability of an elicited response that occurs as a result of repeated exposure to the eliciting stimulus.

## Setting Events

- Antecedent events (such as environmental contexts, conditions, or situational influences) that affect the behavior-consequence contingencies that follow.

## Shaping

- The process of reinforcing successive approximations of a desired behavior.

## Sign-tracking

- A response that can occur during respondent conditioning procedures where after repeated pairings of a cue and a reinforcer, the presentation of the cue will cause the organism to approach and interact with the cue as if it were the reinforcer. See Autoshaping and Goal-tracking.



### Skinnerian Conditioning

- See Operant Conditioning.

### Social Learning

- Learning that occurs via direct or indirect observation of another individual.

### Socialization

- The process by which an organism acquires the behavioral skills required to function effectively in a social group.

### Spontaneous Recovery

- The temporary reappearance of a response following a delay in an extinction procedure. Typically the response is only partially restored and has a lower magnitude than prior to the beginning of the extinction procedure.

### Spurious Reinforcement

- See Accidental Reinforcement.

### Station (noun) \*

- A specific location that an animal is trained to go to.

### Station (verb) \*

- The behavior of moving to a specific location (the station) and remaining there.

### Stereotypic Behavior

- This term is often described as: a repetitive, unvarying, and apparently functionless behavior. Questions have been raised, however, regarding the latter two parts of that description, thus an alternative definition has been proposed: a repetitive behavior caused by frustration, repeated attempts to cope, and/or brain dysfunction.

### Stimulus

- Any external or internal event that is capable of affecting behavior.

### Stimulus Control

- The extent to which a behavior is influenced by the presentation of specific stimuli. The behavior is under stimulus control if it tends to occur exclusively in the presence of an  $S^D$  and not in the presence of an  $S^A$ .

### Stimulus Delta

- See  $S^A$ .

### Stimulus Generalization

- See Generalization.





### Strength

- This term refers to the resistance of behavior to change. It is also used as a general term to describe the state of a response based on a variety of different behavioral characteristics that are assumed to vary together. These characteristics can include anything measurable, such as rate, duration, latency, intensity, etc.

### Stress

- An organism's physiological response to an internal or external stressor. See Distress and Eustress.

### Successive Approximations

- A sequence of responses that includes increasingly closer versions of the desired behavior.

### Superstitious Behavior

- Behavior that occurs repeatedly due to accidental reinforcement.

### Systematic Desensitization

- The process of exposing an individual to an anxiety-provoking stimulus in a stepwise manner while a state of relaxation is maintained. The goal is to gradually increase the intensity of the stimulus until the maximum-intensity stimulus does not elicit anxiety. Throughout the process it is important to always keep the stimulus below the threshold that causes anxiety.

### Target (noun) \*

- An object that an animal is trained to touch with a specific body part.

### Target (verb) \*

- The behavior of touching a specific body part to an object (the target).

### Teaching

- A process in which one individual (the teacher) purposely behaves in a way that allows another individual to gain knowledge or learn a skill more efficiently than would otherwise be possible.

### Team-based Contingencies

- A type of group contingency in which the group is further divided into subgroups or teams in order to introduce an element of competition. The individuals on each team earn consequences based on the behavior of the team as a whole.

### Terminal Bridge \*

- A bridging stimulus that pinpoints the precise moment that a specified behavior is emitted following a series of intermediate bridges.



### Tertiary Reinforcer

- A stimulus that becomes an effective reinforcer by being paired with a secondary reinforcer.

### Threshold

- The minimum intensity of a stimulus that is required for a response to occur.

### Time Out from Positive Reinforcement

- A negative punishment procedure in which access to reinforcers is withheld for a certain period of time contingent upon the occurrence of an undesirable behavior.

### Timing\*

- Refers to the contiguity of the occurrence of the desired behavior and the delivery of the reinforcer. To be most effective, the reinforcer should be delivered immediately following the behavior.

### Topography

- The physical characteristics or form of a response.

### Training

- Synonymous with *teaching*.

### Unconditional

- Not dependent on, limited by, or subject to conditions.

### Unconditional Punisher

- A stimulus that is innately punishing due to species history. Also known as a primary punisher or an unconditioned punisher.

### Unconditional Reflex

- A reflex that does not depend on prior conditioning and which consists of an unconditional stimulus followed by an unconditional response. Also known as an unconditioned reflex.

### Unconditional Reinforcer

- A stimulus that is innately reinforcing due to species history. Also known as a primary reinforcer or an unconditioned reinforcer.

### Unconditional Response (UR)

- The response elicited by an unconditional stimulus. This response is unlearned, involuntary, and biologically based. Also known as an unconditioned response.

### Unconditional Stimulus (US)

- A stimulus that elicits an unconditional response. Also known as an unconditioned stimulus.



### Variable-interval Schedule

- An intermittent schedule of reinforcement in which reinforcement is delivered for the first occurrence of a particular behavior following a variable time interval since the previous reinforcement. The time intervals vary around a specified mean.

### Variable-ratio Schedule

- An intermittent schedule of reinforcement in which reinforcement is delivered following the completion of a varying number of correct responses since the previous reinforcement. The ratios vary around a specified mean.

### Vicarious Learning

- See Observational Learning.



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