PS560

KEY TERMS AND CONCEPTS

Introduction

In this document, you will find a list of key terms and concepts, with definitions. The terms highlighted in blue actually dig even deeper into ABA vocabulary, with more specific terminology.

As you complete your education, you will develop verbal fluency with these terms and concepts. You will find it helpful to use this document to practice and prepare for and complete the final learning activity and written assignment.

Unit 2 Terms and Concepts

Environment – A complex, dynamic universe of events that differ from instance to instance. A behavior cannot exist in the absence of an environment.

Phylogeny – The history of the natural evolution of a species.

Ontogeny – The history of the development of an individual organism during its lifetime.

Antecedent – an environmental condition or stimulus change existing or occurring prior to a behavior of interest.

Stimulus – "An energy change that affects an organism through its receptor cells" (Michael, 2004, p. 7 as cited by Cooper et al., 2007)

Stimulus Class – any group of stimuli sharing a predetermined set of common topographical or functional elements.

Stimulus Control – A situation where the frequency, latency, duration, or amplitude of a behavior is altered by the presence or absence of an antecedent stimulus.

> **Discriminative Stimulus (S^D)** – stimulus in the presence of which responses of some type have been reinforced and in the absence of which the same type of response has occurred and not been reinforced.; this history of differential

reinforcement is the reason that an S^D increases the momentary frequency of the behavior.

Behavior - an organism's interaction of the environment that is characterized by detectable displacement in space through time that results in measurable change in at least one aspect of the environment (Johnston & Pennypacker, 1980, 1993 as cited by Cooper, Heron & Heward, 2007).

Response – a specific instance of behavior

Structural – refers to the form or physical characteristics of the response

Functional – refers to the effects of the behavior on the environment.

Response Class – a group of responses with the same function *(i.e. each response in the group produces the same effect on the environment.)*

Consequence – stimulus change that follows a behavior of interest.

Reinforcement – occurs when a stimulus change immediately follows a response and increases the future frequency of that type of behavior in similar conditions.

Positive Reinforcement – occurs when a behavior is followed immediately by the *presentation* of a stimulus that increases the future frequency of the behavior in similar conditions.

Negative Reinforcement – occurs when a behavior is followed immediately by the *removal* of a stimulus that increases the future frequency of the behavior in similar conditions.

Reinforcer – a stimulus change that increases the future frequency of behavior that immediately precedes it.

Conditioned Reinforcer (CR) – a stimulus change that functions as a reinforcer because of prior pairing with one or more other reinforcers. Also known as *secondary reinforcer.*

Unconditioned Reinforcer (UR) – the stimulus change that increases the frequency of any behavior that immediately precedes it irrespective of the organisms learning history with the stimulus. UR's are the product of evolutionary development of the species. Also known as a *primary reinforcer.*

Punishment – occurs when a behavior is followed by a stimulus change that decreases the future frequency of that type of behavior in similar conditions.

Positive Punishment – occurs when a behavior is followed immediately by the presentation of a stimulus that decreases the future frequency of the behavior in similar conditions

Negative punishment - occurs when a behavior is followed immediately by the removal of a stimulus that decreases the future frequency of the behavior in similar conditions.

Punisher – A stimulus change that decreases the future frequency of behavior that immediately precedes it.

Conditioned Punisher – A previously neutral stimulus change that functions as a punisher because of prior pairing with one or more other punishers; also known as secondary punishers.

Unconditioned Punisher – A stimulus change that decreases the frequency of any behavior that immediately precedes it irrespective of the organism's learning history with the stimulus.

The Four Functions of Behavior

Attention – the individual engages in a specific behavior in order to gain attention from others

Access to Tangible – The individual engages in a specific behavior in order to gain access to a desired item or activity.

Escape/Avoidance – the individual engages in a specific behavior in order to escape or avoid environmental stimuli.

Automatic Reinforcement – The individual engages in a specific behavior to access self-reinforcement, and is not socially mediated by another.

Unit 3 Terms and Concepts

Reflex – A stimulus-response relation consisting of an antecedent stimulus and the respondent behavior it elicits.

Respondent Behavior – The response component of a reflex; behavior that is elicited, or induced, by antecedent stimuli. (Respondent behaviors are unlearned and involuntary).

Respondent Conditioning – A stimulus- stimulus pairing procedure in which a neutral stimulus (NS) is presented with an unconditioned stimulus (US) until the neutral stimulus becomes conditioned stimulus that elicits the conditioned response. Also called Classical Conditioning.

Stimulus-Stimulus Pairing – A procedure in which two stimuli are presented at the same time, usually repeatedly for a number of trials, which often results in one stimulus acquiring the function of the other stimulus.

Unconditioned Stimulus (US) – The stimulus component of an unconditioned reflex; a stimulus change that elicits respondent behavior without any prior learning.

Neutral Stimulus (NS) – A stimulus change that does not elicit respondent behavior.

Conditioned Stimulus (CS) – The stimulus component of a conditioned reflex; a formerly neutral stimulus change that elicits respondent behavior only after it has been paired with an unconditioned stimulus (US) or another CS

Respondent Extinction – The repeated presentation of a conditioned stimulus (CS) in the absence of the unconditioned stimulus (US); the CS gradually loses its ability to elicit the conditioned response until the conditioned reflex no longer appears in the individual's repertoire.

Higher Order Conditioning – Development of a conditioned reflex by pairing of a neutral stimulus (NS) with a conditioned stimulus (CS). Also known as secondary conditioning.

Respondent Conditioning "Equation":

*In this equation ** NS = CS and UR = CR**

(Neutral stimulus will be the same as the Conditioned Stimulus AND Unconditioned Response will be the same as the Conditioned Response)

US (meat) = UR (Salivation)

US + NS = UR

(Meat + Bell) (Salivation)

CS = CR

(Bell) (Salivation)

Stimulus/Stimulus Pairing – Repeated pairing of the two stimuli so that the NS gains stimulus control (is conditioned) to elicit the response.

Unit 4 Terms and Concepts

Operant Behavior – behavior that is selected, maintained, and brought under stimulus control as a function of its consequences; each person's repertoire of operant behavior is a product of his history of interactions with the environment (Ontogeny).

Operant Conditioning – the basic process by which operant learning occurs; consequences (stimulus changes immediately following responses) resulting in increased (reinforcement) or decreased (punishment) frequency of the same type of behavior under similar motivational and environmental conditions in the future.

Contingency – refers to dependents and/or temporal relations between operant behavior and its controlling variables.

Three-term Contingency – the basic unit of analysis in the analysis of operant behavior; encompasses the temporal end possibly dependent relations among an antecedent stimulus, behavior, and consequence.

REVIEW OF RELEVANT TERMS FROM Unit 2

Reinforcement –occurs when a stimulus change immediately follows a response and increases the future frequency of that type of behavior in similar conditions.

The following 3 terms are additional terms related to reinforcement, originally discussed in Unit 2:

> **Automaticity of Reinforcement** – refers to the fact that behavior is modified by its consequences irrespective of the person's awareness; the person does not have to recognize or verbalize the relation between their behavior and the reinforcement consequence, or even know that a consequence has occurred, for reinforcement to "work".
>
> **History of Reinforcement** – an inclusive term referring in general to all of the person's learning experiences and more specifically, to past conditioning with respect to particular response classes or aspects of a person's repertoire.
>
> **Premack Principle** – a principle that states that making the opportunity to engage in a high probability behavior contingent on the occurrence of a low-frequency behavior will function as reinforcement for the low-frequency behavior.

TYPES OF REINFORCEMENT:

Positive Reinforcement – occurs when a behavior is followed immediately by the *presentation* of a stimulus that increases the future frequency of the behavior in similar conditions.

Negative Reinforcement – occurs when a behavior is followed immediately by the *removal* of a stimulus that increases the future frequency of the behavior in similar conditions.

The following 4 terms are additional terms related to reinforcement, originally discussed in Unit 2:

Avoidance Contingency – a contingency in which a response prevents or postpones the presentation of the stimulus.

Discriminated Avoidance – a contingency in which responding in the presence of a signal prevents the onset of a stimulus from which escape is the reinforcer.

Escape Contingency – a contingency in which a response terminates (or provides escape from) an ongoing stimulus.

Free operant avoidance – a contingency in which responses at any time during an interval prior to the scheduled onset of an aversive stimulus delays the presentation of the aversive stimulus.

Reinforcer – a stimulus change that increases the future frequency of behavior that immediately precedes it.

Conditioned Reinforcer (CR) – a stimulus change that functions as a reinforcer because of prior pairing with one or more other reinforcers. Also known as *secondary reinforcer.*

Unconditioned Reinforcer (UR) – a stimulus change that increases the frequency of any behavior that immediately precedes it irrespective of the organisms learning history with the stimulus. UR's are the product of evolutionary development of the species. Also known as a *primary reinforcer.*

The remaining terms listed for this unit are additional terms related to reinforcement, originally discussed in Unit 2:

SCHEDULES OF REINFORCEMENT – A rule specifying the environmental arrangements and response requirements for reinforcement; a description of a contingency of reinforcement.

Continuous Schedule of Reinforcement (CRF) – a schedule of reinforcement that provides reinforcement for each occurrence of the target behavior.

Intermittent Schedule of Reinforcement (INT) – a contingency of reinforcement in which some, but not all, occurrences of the behavior produce reinforcement.

Ratio Schedule – requires a number of responses before one response produces reinforcement.

Fixed Ratio (FR) – a schedule of reinforcement requiring a fixed number of responses for reinforcement. ***(****Ex. an FR 4 schedule of reinforcement follows every fourth response).*

Variable Ratio (VR) – a schedule of reinforcement requiring a varying number of responses for reinforcement. The number of responses required varies around a random number; the mean number of responses required for reinforcement is used to describe the schedule. *(Ex. On a VR 5 schedule, an average of 5 responses must be emitted for reinforcement, the number of responses required following the last reinforced response might range from 1 to 10 or more.)*

Interval schedule – requires an elapse of time before a response produces reinforcement.

Fixed Interval (FI) – a schedule of reinforcement in which reinforcement is delivered for the first response emitted following the passage of a fixed duration of time since the last response was reinforced. *(ex. on an FI 3 minute schedule, the first response following the passage of three minutes is reinforced).*

Variable Interval (VI)- a schedule of reinforcement that provides reinforcement for the first correct response following the elapse of variable durations of time occurring in a random or unpredictable order. The mean duration of the intervals is used to describe the schedule. *(Ex. On a VI 5 minutes schedule, reinforcement is delivered for the first response following an average of five minutes since the last reinforced response, but the time that you lapses following the last reinforced response might range from 30 seconds or less to 10 minutes or more.)*

Progressive Schedules of Reinforcement – systematically thins each successive reinforcement opportunity independent of the participant's behavior. Often used for reinforcer assessments.

Compound Schedules of Reinforcement – is schedule of reinforcement consisting of two or more elements of continuous reinforcement (CRF), the four intermittent schedules of reinforcement (FR, FI, VR, VI), differential reinforcement of various rates of responding (DRL/DRH), and extinction.

Concurrent Schedules – a schedule of reinforcement in which two or more contingencies of reinforcement operate independently and simultaneously for two more behaviors.

> **Matching Law –** the allocation of responses to choices available on concurrent schedules of reinforcement; rate of responding across choices are distributed in proportions that match the rate of reinforcement received from each choice alternative.

Unit 5 Terms and Concepts

Differential Reinforcement – reinforcing only those responses within a response class that meet a specific criterion along some dimension (such as frequency, topography, duration, latency, or magnitude) and placing all other responses in the class on extinction.

Differential Reinforcement of Other Behaviors (DRO) – a procedure for decreasing problem behavior in which reinforcement is contingent on the absence of the problem behavior during or at specific times.

> **Fixed Interval DRO –** A DRO procedure in which reinforcement is available at the end of intervals of fixed duration and delivered contingent on the absence of the problem behavior during each interval.
>
> **Variable Interval DRO –** a DRO procedure in which reinforcement is available at the end of intervals of the variable duration and delivered contingent on the absence of problem behavior during the interval.
>
> **Momentary DRO –** fixed and variable momentary DRO schedules use the same procedures as interval DRO, except that reinforcement is contingent on the absence of the problem behavior only when each interval ENDS rather than throughout the entire interval.

Differential Reinforcement of Alternative Behaviors (DRA) – a procedure for decreasing the problem behavior in which reinforcement is delivered for a behavior that serves as a desirable alternative to the behavior targeted for reduction and withheld following instances of the problem behavior.

Differential Reinforcement of Incompatible Behaviors (DRI) – a procedure for decreasing problem behavior in which reinforcement is delivered for a behavior that is topographically incompatible with the behavior targeted for reduction and withheld following instances of the problem behavior.

Differential Reinforcement of Low Rates of Behavior (DRL) – a schedule of reinforcement in which reinforcement (a) follows each occurrence of the target behavior that is separated from the previous response by a minimum intro response time, or (b) is contingent on the number of responses within a period of time not exceeding a predetermined criterion. *DRL schedules are used to decrease the rate of behaviors that should be maintained but occur too frequently in the learner's repertoire.*

Full Session DRL – reinforcement is delivered at the end of an instructional or treatment session if during the entire session the target behavior occurred at a number equal to or below a predetermined criterion.

Interval DRL – the practitioner divides a total session into a series of equal intervals of time and provides reinforcement at the end of each interval in which the number of occurrences of the problem behavior during that interval is equal to or below a criterion limit.

Spaced Responding DRL – the practitioner delivers a reinforcer following an occurrence of a response that is separated by at least a minimum amount of time (Interresponse time) from the previous response.

Differential Reinforcement of High Rates of Behavior (DRH) – a schedule of reinforcement in which reinforcement is provided at the end of a predetermined interval contingent on the number of responses emitted during the interval being greater than a gradually increasing criterion based on the individual's performance in previous intervals. *DRH schedules are used to increase the rate of behaviors that occur too infrequently in the learner's repertoire.*

Unit 6 Terms and Concepts

Punishment occurs when a behavior is followed by a stimulus change that decreases the future frequency of that type of behavior in similar conditions.

Positive Punishment (Type I) occurs when a behavior is followed immediately by the presentation of a stimulus that decreases the future frequency of the behavior in similar conditions.

New terms related to positive punishment:

Reprimands: A verbal stimulus that is delivered in response to problem behavior.

Response Blocking: A procedure in which the therapist physically intervenes as soon as the learner begins to emit a problem behavior to prevent completion of the target behavior.

Contingent Exercise: An intervention in which the person is required to perform a response that is not topographically related to the problem behavior.

Overcorrection: A behavior reduction tactic in which, contingent on each occurrence of the problem behavior, the learner is required to engage in effortful behavior that is directly or logically related to the problem.

Contingent Electrical Stimulation: The presentation of a brief electrical stimulus immediately following an occurrence of the problem behavior.

Negative punishment (Type II) occurs when a behavior is followed immediately by the removal of a stimulus that decreases the future frequency of the behavior in similar conditions.

Time Out: The contingent withdrawal of the opportunity to earn positive reinforcement or the loss of access to positive reinforcers for a specified time.

Non-exclusionary: A procedure for implementing a timeout in which, contingent on the occurrence of the target behavior, the person remains within the setting, but does not have access to reinforcement for a specified period.

Exclusionary: A procedure for implementing timeout and

which, contingent on the occurrence of a target behavior, the person is removed physically from the current environment for a specified period.

Response Cost: The contingent loss of reinforcers producing a decrease in the frequency of behavior.

Fines: The removal of a specific amount of the reinforcer contingent on the occurrence of the target behavior.

Bonus Response Cost: A procedure for implementing response cost in which the person is provided a reservoir of reinforcers that are removed in a predetermined amount contingent on the occurrence of the target behavior.

Punisher: A stimulus change that decreases the future frequency of behavior that immediately precedes it.

Unconditioned Punisher: A stimulus change that decreases the frequency of any behavior that immediately precedes it irrespective of the organism's learning history with the stimulus.

Conditioned Punisher: A previously neutral stimulus change that functions as a punisher because of prior pairing with one or more other punishers; also known as secondary punishers.

Generalized Conditioned Punisher: A stimulus change that, as a result of having been paired with many other punishers, functions as punishment under most conditions because it is free from the control of motivating conditions for specific types of punishment.

Behavioral Contrast: The phenomenon in which a change in one component of the multiple schedules that increases or decreases the rate of responding on that component is accompanied by a change in the response rate in the opposite direction on the other, an altered composition of the schedule.

Motivating Operations

Motivating Operations (MO): An environmental variable that (a) alters (increases or decreases) the reinforcing or punishing effectiveness of some stimulus, object, or event; and (b) alters (increases or decreases) the current frequency of all behavior that has been reinforced or punished by that stimulus object or event.

Establishing Operation (EO): A motivating operation that establishes (increases) the effectiveness of some stimulants, object, or event as a reinforcer. For example, food deprivation establishes food as an effective reinforcer.

Abolishing Operation (AO): A motivating operation that decreases the reinforcing effectiveness of the stimulus, object, or event. For example, the reinforcing effectiveness of food is abolished as a result of food ingestion.

Behavior-altering effect: An alteration in the current frequency of behavior that has been reinforced by the stimulus that is altered in effectiveness by the same motivating operation. For example, the frequency of behavior that has been reinforced with food is increased or decreased by food deprivation or food ingestion.

Evocative Effect: An increase in the current frequency of behavior that has been reinforced by the stimulus that is increased in reinforcing effectiveness by the same motivating operation. For example, food deprivation evokes (increases the current frequency of) behavior that has been reinforced by food.

Abative Effect: A decrease in the current frequency of behavior that has been reinforced by the stimulus that is increased in reinforcing effectiveness by the same motivating operation. For example, food ingestion abates (decreases the current frequency of) behavior that has been reinforced by food.

Value-altering effect: An alteration in the reinforcing effectiveness of a stimulus, object, or event as a result of a motivating operation. For example, the reinforcing effectiveness of food is altered as a result of food deprivation and food ingestion.

Unconditioned Motivating Operations: A motivating operation losing value altering effect does not depend on a learning history. For example, food deprivation increases the reinforcing effectiveness of food without the necessity of any learning history.

Conditioned Motivating Operations: A motivating operation whose value altering effect depends on a learning history. For example, because of the relation between locked doors and keys, having to open a locked door is a CMO that makes keys more effective as reinforcers and evokes behavior that has obtained such keys.

CMO-S (Surrogate CMO) – a stimulus that has been paired with another MO

CMO-R (Reflexive CMO) – a stimulus that has systematically preceded some form of worsening or improvement.

CMO -T – a stimulus that alters the value of another stimulus.

Extinction

Extinction (operant): The procedure occurs when reinforcement of a previously reinforced behavior is discontinued; as a result, the frequency of that behavior decreases in the future.

Extinction Burst: An increase in the frequency of responding when an extension procedure is initially implemented.

Escape extinction: Behaviors maintained with negative reinforcement are placed on an escape extinction when those behaviors are not followed by termination of the aversive stimulus; emitting the target behavior does not enable the person to escape the aversive stimulus.

Resistance to extinction: The relatively low frequency with which operant behavior is emitted during extinction.

Spontaneous Recovery: The behavioral effect associated with extinction in which the behavior suddenly begins to occur after its frequency has decreased to its pre- reinforcement level or stopped entirely.

Unit 7 Terms and Concepts

Stimulus Class

Stimulus Class: A group of stimuli that share specific common elements along formal (size, color), temporal (antecedent/consequence), and or functional (discriminative stimulus) dimensions.

> **Antecedent Stimulus Class:** A set of stimuli that share a common relationship. All stimuli in an antecedent stimulus class evoke the same operant behavior, or elicit the same respondent behavior.
>
> **Arbitrary Stimulus Class:** Antecedent stimuli that evoke the same response but do not resemble each other in physical form or share a relational aspect such as bigger or under (e.g. Peanuts, cheese, and chicken are members of an arbitrary stimulus class if they evoke the response “sources of protein”.)
>
> **Feature Stimulus Class:** Stimuli that share common physical forms or structures (example: made from wood, four legs, blue) or common relative relationships (example: bigger than, hotter than, higher than, next to).

Stimulus Control

Stimulus Control: A situation in which the frequency, latency, duration, or amplitude of a behavior is altered by the presence or absence of an antecedent stimulus.

> **Discriminative Stimulus (SD):** A stimulus in the presence of which responses of some type have been reinforced and in the absence of which the same type of responses have occurred and not been reinforced. This history of differential reinforcement is the reason an SD increases the momentary frequency of the behavior.
>
> **Stimulus Delta (S):** A stimulus in the presence of a given behavior has not produced reinforcement in the past.
>
> **Stimulus Equivalence**: The emergence of accurate responding to untrained unreinforced stimulus– stimulus relations following the reinforcement of responses to some stimulus– stimulus relations.
>
> > **Reflexivity:** A type of stimulus to stimulus relation in which the learner, without any prior training or reinforcement for doing so, selects a comparison stimulus that is the same as the sample stimulus (ex. A = A).

Symmetry: A type of stimulus to stimulus relationship in which the learner, without prior training or reinforcement for doing so, demonstrates the reversibility of matched sample and comparison stimuli (ex. A = B, then B = A).

Transitivity: An untrained stimulus-stimulus relation that emerges as a product of training to other stimulus-stimulus relations. (ex. if A = B and B = C, then A = C)

Match to Sample (MTS): A procedure for investigating conditional relations and stimulus equivalence. A match to sample begins with the participant making a response that presents or reveals the sample stimulus. With two or more comparison stimuli presented, the participant selects one of the comparison stimuli, where those that match the sample stimulus are reinforced.

Stimulus Generalization: When an antecedent stimulus has a history of evoking a response that has been reinforced in its presence, the same type of behavior tends to be evoked by stimuli that share similar physical properties with the controlling antecedent stimulus.

Stimulus Discrimination: The conventional procedure requires one behavior and two antecedent stimulus conditions. Responses are reinforced in the presence of one stimulus condition, the SD, but not in the presence of the other stimulus, S-Delta - S)

Concept Formation: A complex example of stimulus control that requires stimulus generalization within a class of stimuli and discrimination between classes of stimuli.

Response Maintenance: The extent to which a learner continues to perform the target behavior after a portion or all of the intervention responsible for the behavior's initial appearance in the learner's repertoire has been terminated.

Response Generalization: The extent to which a learner emits untrained responses that are functionally equivalent to the trained target behavior.

Setting/Situational Generalization: The extent to which a learner emits the target behavior in a setting or stimulus situation that is different from the instructional setting.

Instructional Setting: The environment where instruction occurs; includes all aspects of the environment, planned and unplanned, that may influence the learner's acquisition and generalization of the target behavior

Generalization Setting: Any place or stimulus situation that differs in some meaningful way from the instructional setting and in which performance of the target behavior is desired.

Generalization across subjects: Changes in the behavior of people not directly treated by an intervention as a function of treatment contingencies applied to other people.

Naturally existing contingency: Any contingency of reinforcement or punishment that operates independent of the practitioner's efforts; includes socially mediated contingencies contrived by other people and already in effect in the relevant setting.

Contrived Contingency: Any contingency of the reinforcement or punishment designed and implemented by a practitioner to achieve the acquisition, maintenance, and/or generalization of a targeted behavior change.

Unit 8 Terms and Concepts

Verbal Behavior: behavior whose reinforcement is mediated by a listener; includes both vocal- verbal behavior (i.e. saying, "Water, please") and non-vocal verbal behavior (i.e. pointing to a glass of water to get water). Encompasses the subject matter usually treated as a language and topics such as thinking, grammar, composition, and understanding.

Formal properties of language: Topography (form, structure) of the verbal response. (ex. part of speech, grammar, syntax, phonology, articulation, etc.)

Functional properties of language: Involves the causes of the response (see Verbal Operants).

Formal Similarity: A situation that occurs when the controlling antecedent stimulus and the response or response product share the same sense mode and physically resemble each other. The verbal operants with formal similarities are echoic, copying a text, and imitation as it relates to sign language.

Point to Point Correspondence: A relation between the stimulus and response or response product that occurs when the beginning, middle, and end of the verbal stimulus matches the beginning, middle, end of the verbal response. The verbal operants with point-to-point correspondence are echoic, copying a text, imitation as it relates to sign language, textual, and transcription.

Speaker: Someone who engages in verbal behavior by emitting mands, tacts, intraverbals, autoclitics, and so on. A speaker is also someone who uses sign language, gestures, signals, written words, codes, pictures, or any form of verbal behavior.

Listener: Someone who provides reinforcement for verbal behavior. A listener may also serve as an audience evoking verbal behavior.

Verbal Operant: The unit of analysis of verbal behavior which denotes a functional relation between a type of responding and (a) motivating variables, (b) discriminative stimuli, and (c) consequences (Skinner, 1957 as cited by Cooper, et al, 2007).

> **Mand:** An elementary verbal operant that is evoked by an MO and followed by specific reinforcement.
>
> **Tact:** An elementary verbal operant evoked by a nonverbal discriminative stimulus and followed by generalized conditioned reinforcement.

Echoic: An elementary verbal operant involving a response that is evoked by a verbal discriminative stimulus that has point-to-point correspondence and formal similarity with the response.

Intraverbal: An elementary verbal operant that is evoked by a verbal discriminative stimulus and does not have point-to-point correspondence with that verbal stimulus.

Textual: An elementary verbal operant involving a response that is evoked by a verbal discriminative stimulus that has point to point correspondence, but not formal similarity, between the stimulus and the response product.

Transcription: An elementary verbal operant involving a spoken verbal stimulus that evokes a written, typed, or finger-spelled response. Like the textual, there is point-to-point correspondence between the similar list and the response product, but no formal similarity.

Unit 9 Terms and Concepts

Stimulus Equivalence: The emergence of accurate responding to an untrained unreinforced stimulus– stimulus relations following the reinforcement of responses to some stimulus– stimulus relations.

Reflexivity: A type of stimulus to stimulus relation in which the learner, without any prior training or reinforcement for doing so, selects a comparison stimulus that is the same as the sample stimulus (ex. A = A).

Symmetry: A type of stimulus to stimulus relationship in which the learner, without prior training or reinforcement for doing so, demonstrates the reversibility of matched sample and comparison stimuli (ex. A = B, then B = A).

Transitivity: An untrained stimulus-stimulus relation that emerges as a product of training to other stimulus-stimulus relations. (ex. if A = and B = C, then A = C)

Match to Sample (MTS): A procedure for investigating conditional relations and stimulus equivalence. A match to sample begins with the participant making a response that presents or reveals the sample stimulus. With two or more comparison stimuli presented, the participant selects one of the comparison stimuli, where those that match the sample stimulus are reinforced.

Derived Stimulus Relations: A relation between two or more stimuli that is not directly trained or taught and is not based solely on the physical properties of the stimuli. (Example – if a basketball is bigger than a golf ball, but a marble is smaller than a golf ball, then you can derive that a marble is smaller than a basketball given that relation.)

> **Arbitrary Stimulus Class:** Antecedent stimuli that evoke the same response but do not resemble each other in physical form or share a relational aspect such as bigger or under (e.g. Peanuts, cheese, and chicken are members of an arbitrary stimulus class if they even took the response "sources of protein".)
>
> **Feature Stimulus Class:** Stimuli that share common physical forms or structures (example: made from wood, four legs, blue) or common relative relationships (example: bigger then, hotter then, higher then, next to).

Relational Frame Theory: A behavioral account of human language and cognition grounded in rule-governed behavior and derived stimulus relations that extends, and at times, challenges concepts of verbal behavior.

> **Relational frame:** A hypothesized unit that permits one to describe the relationships between new entities based on previous experience (Vandenboss, 2015).
>
> **Relational responding:** A response to one stimulus based upon its relation to another stimulus or set of stimuli.

Generalized Operant Class: A class of responses that serve the same function in which the form (topography) of the response varies considerably.

References

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Vandenboss, G.R. (Ed.) (2015). *APA dictionary of psychology* (2nd ed.). American Psychological Association.