**PS360: Applied Behavior Analysis I**

**Discussion Board Lecture: Unit 9**

**Introduction to Unit 9: Schedules of Reinforcement – Generalization - Maintenance**

Welcome, students! The focus of Unit 9 will be schedules of reinforcement and the impact various schedules have on responses. We will cover the following topics in this unit:

* + Definition of ***schedule of reinforcement***
  + Continuous reinforcement
  + Four types of intermittent reinforcement schedules
  + Effects of various types of reinforcement schedules
  + Generalization
  + Maintenance

One of the most powerful principles utilized in behavior modification is the principle of reinforcement. How we set up reinforcement impacts the desired results of our behavior intervention plans (BIPs).

A ***Schedule of Reinforcement*** refers to a contingency that states how reinforcement will occur. In continuous reinforcement, a specific response is reinforced each time it occurs. Intermittent schedules of reinforcement include ratio and interval schedules. Ratio schedules are based upon the number of responses and can be fixed or variable. Interval schedules are time-based and can also be fixed or variable.

**What, exactly, is a *schedule of reinforcement*?**

*A reinforcement schedule is a rule that tells how reinforcement can be gained. This “rule” states the contingencies that must be in place in order to gain the reinforcement.*

* A schedule of reinforcement can be continuous or intermittent (fixed ratio and variable ratio; and fixed interval and variable interval).
* This *rule* establishes the probability that a specific occurrence of a behavior will produce reinforcement.
* Continuous reinforcement is used during the initial stages of learning and for strengthening behavior, while intermittent reinforcement is used to maintain behavior.

The four types of Intermittent Schedules of Reinforcement include:

* Fixed Ratio, which requires that a specified number of responses occur before a response produces reinforcement.
* Variable Ratio, which requires a variable number of responses occur before reinforcement is delivered.
* Fixed Interval, which provides reinforcement for the first response following the elapse of a specific, constant duration of time since the last reinforced response.
* Variable Interval, which is a schedule that provides reinforcement for the first response following the elapse of a variable duration of time since the last reinforced response.

The effects of schedules of reinforcement vary:

* A variable ratio schedule is characterized by a high, steady rate of responding.
* A fixed ratio schedule is characterized by a “break and run” pattern in which there is a “post reinforcement pause” following reinforcement.
* A fixed interval schedule is characterized by a positively accelerated scalloped pattern of response.
* A variable interval schedule is characterized by a steady rate of responding.
  + Both interval schedules produce low rates of responding.

**Once the desired outcome of your behavior intervention plan has been achieved, are you “good to go?” Actually, no. . .**

Behavior analysts want to insure that the changes brought about by their interventions are exhibited in all appropriate situations and settings. This is called, “**generalization**.”

* Setting or stimulus generalization is the extent to which a learner emits the target behavior in a setting or stimulus situation that is different from the instructional setting. This doesn’t happen by accident. We must program for generalization.

**How is “programming for generalization” done?**

Generalized outcomes require planning. Selecting target behaviors that will meet natural contingencies of reinforcement and specifying all desired variations of the target behavior and the settings/situations in which it should (and should not) occur after instruction has ended are two approaches to programming for generalization.

* Naturally existing contingencies include reinforcement (or punishment) that operate independent of the behavior analyst’s efforts. These naturally existing contingencies include those that operate without social mediation and socially mediated contingencies contrived and implemented by other people in the untrained (generalization) setting.

**In other words, this is reinforcement that anyone should contact given the target behavior.**

* Training as many variations of the desired behavior as possible promotes generalization in untrained settings (This is called, “multiple exemplars.”).
  + For example, greetings can include the learner saying, “Hi;” “Good morning,” “How Ya doin’;” etc. The situation should come to trigger the most appropriate form of greeting.

One of the main goals of behavior analysis is that socially significant behaviors that are acquired during applied behavior analysis therapy are maintained over time.

* Maintenance is often obtained by programming for generalization in that the more reinforcement the learner obtains in as many settings and situations as possible, the more likely the behavior will last over time.

Thank you for viewing your Unit 9 Lecture!