**PS360: Applied Behavior Analysis I**

**Discussion Board Lecture: Unit 7**

**Introduction to Unit 7: Stimulus Control**

Welcome, students! This lecture will focus on a major concept in applied behavior analysis (ABA), i.e., stimulus control. We will cover the following topics:

* Stimulus discrimination
* Discriminative stimulus (Sᴰ)
* Stimulus Delta
* Incidental (naturalistic) teaching

Let’s jump in!

What is it that causes a response to occur more frequently in the presence of one stimulus than another? In Unit 7, you will learn about stimulus control and how a stimulus gains power to trigger a response.

* Stimulus control (stimulus discrimination), when a response occurs more in the presence of one stimulus than in the presence of another, is acquired when a response is only reinforced in the presence of a specific stimulus. This stimulus is called the “**discriminative stimulus**” (**Sᴰ**).
* A stimulus in whose presence the response is not reinforced is called the “**stimulus delta**” .

**A behavior that has been reinforced consistently in the presence of one stimulus – and not in the presence of another stimulus, will reliably occur in the presence of the stimulus in which reinforcement is likely.**

Dawn always goes to her dad when she needs money. Why? Her dad is the discriminative stimulus (Sᴰ) for her request for money to be reinforced. He always gives her money when she asks. Her mom, however, is more budget-conscious. Each time Dawn asked her mom for money in the past, her mom would tell her that she didn’t have it. Her mom became a stimulus delta for Dawn’s request being denied, i.e., not being reinforced.

Just as stimulus control can be conditioned through reinforcement, so too can stimulus control be conditioned through punishment. A response in the presence of a specific stimulus that results in punishment will suppress that response in the presence of that specific stimulus in the future (Malott & Shane, 2016). Perhaps an example is called for.

* Let’s picture a highway patrolman on the hill just ahead. Johnny is exceeding the speed limit by 15 miles per hour (mph). Suddenly, Johnny hears the siren. It’s all over; Johnny is punished for speeding in the presence of the highway patrolman. The highway patrolman is the discriminative stimulus (Sᴰ); Johnny’s speeding is the response; and the ticket is the punisher. Johnny will not speed in the future in the presence of a highway patrolman.

**Let’s look at this example in another way.**

* Johnny is driving down a deserted country road. There are no highway patrolmen around. Johnny exceeds the 30 mph speed limit, but he doesn’t get a ticket. Hmmm . . . It appears that discrimination training may be taking place. Johnny has learned that he gets a ticket if he speeds in the presence of highway patrolmen, but he doesn’t get a ticket when there are no highway patrolmen around.
* The discriminative stimulus for not speeding is highway patrolmen; the stimulus delta for speeding is the deserted country road (no highway patrolmen).

Conditioning stimulus control occurs throughout our daily routines. Our responses are reinforced or punished given the contingencies. Sometimes, this leads to the maintenance of desirable behaviors and sometimes it maintains undesirable behavior. The same is true of punishment contingencies.

**Understanding stimulus control can allow behavior analysts to take advantage of natural opportunities to reinforce desired behaviors and reduce undesirable behaviors.**

Incidental teaching, also called “naturalistic teaching,” is taking advantage of the client’s interests, activities, etc., in his everyday environment. Basically, we plan for opportunities to differentially reinforce desired behaviors. This can involve planned use of behavioral contingencies and discrimination training (Malott & Shane, 2016).

**Let’ take a look at an example . . . .**

Let’s say you are working with a young child who has language, but uses pointing and vocalizations to obtain what she wants. Your job is to get her to use ***mands*** – requests for desired items, activities, and privileges.

An incidental teaching program might involve putting all of her favorite toys on shelves above her reach. You bring her into the room and play with her with less preferred items on the floor. She sees her favorite stuffed Panda bear on the shelf. She gets up and walks over to the shelf where the bear was placed, points, and says, “uh, uh, uh.” You stay on the floor playing with the toys. She grabs your arm and pulls you over to the shelf and repeats the same behavior. You take the bear down from the shelf and hold it just above her reach. You say, “bear,” and wait. She repeats the same behaviors once again. Calmly, you say, “bear.” Finally, she says, “bear.” You give her the desired bear. This is how we can contrive a situation in which naturalistic teaching can take place.

In our incidental teaching example, we utilized a handy tool in behavior analysis, i.e., the prompt. The behavior analyst could have just held the bear up and waited for the child to say, “bear.” Instead, a prompt was given. The behavior analyst held the bear just out of reach and said, “bear,” prompting the child to repeat the word.

**Prompts are just supplemental stimuli that increase the probability of correct responses (In our example, the prompt is a stimulus prompt).**

Thank you for viewing your Unit 7 Lecture!

**References**

Malott, R. W., & Shane, J. T. (2016). *Principles of behavior* (7th ed.). New

York, NY: Routledge.