**Acronyms:**

A: Antecedent R: Response

B: Behavior SR+/-: Reinforcement (either positive or negative)

C: Consequence SP+/-: Punishment (either positive or negative)

SD: Discriminative Stimulus EO: Establishing Operation

**The Study of Behavior:**

|  |  |
| --- | --- |
| **Respondent Behavior (Classical Conditioning)**  | **Operant Behavior (Learned Behavior)**  |
| * Pavlov
* Elicited, Reflexive, Involuntary
* A-B analysis
* e.g., Dog salivates to a bell (involuntarily) – salvation occurs because it’s been paired with meat
 | * Skinner
* Evoked, Emitted, Voluntary
* It’s learned and maintained based on consequences
* ABC analysis
* Antecedent and consequent events control operant behavior
* Manipulating observable stimuli may modify operant behavior
* Empirical analysis guides development procedures and shows effectiveness
 |

**Principles of Learning:**

Definition of Learning: A change in behavior that **endures** over time.

Three components govern learning:

**A -  Antecedent (**SD = Discriminative Stimuli**)**

**B -  Behavior (**R= Response**)**

**C - Consequence (**SR+ Reinforcement or SP+ Punishment**)**

**3-Term Contingency:**

Antecedent Behavior Consequence

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SD (Discriminative Stimuli) Response Reinforcement or Punishment

**Antecedent / SD (Discriminative Stimulus):**

* Any occurrence in the environment that happens prior to a response and sets the occasion for a response to occur
* Example: an instruction, an activity, an event, a setting, an object, a person

**Behavior/Response:**

* The behavior the student performs in the presence of a particular stimulus
* The response must be observable and measurable
* Example: sitting quietly, following a direction, engaging in aggression

**Consequence/Reinforcement/Punishment:**

* Anything that follows behavior and alters the probability of future occurrences of that behavior
* The event that happens after the response occurs
* Example: tangible items, social praise, ignoring a response, time out, verbal reprimand

**Group Work:**

*Put the following scenarios into the 3-term contingency:*

1. Suzy ate glue when she was at school. The teacher took it away from her and said, “No”.
2. John cried when he stubbed his toe. His mother came over and gave him a hug.
3. Your alarm went off, you turned it off, rolled over, and went back to sleep.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Antecedent** | **Behavior** | **Consequence** |
|  | Glue at school (maybe being left alone, unstructured) | Suzi ate glue | Teacher took it away and said, “No” |
|  | Stubbed his toe | John cried | Mom gave him a hug |
|  | Alarm went off | Turned off alarm | Got more sleep  |

**Reinforcement:** *Increases* *future* probability of behavior.

**Punishment:** *Decreases future* probability of behavior.

**Remember:**

* Behaviors are reinforced/punished, not people (e.g., “I reinforced him for good sitting” vs. “I reinforced his sitting behavior”)
* It is impossible to increase the likelihood of a person occurring in the future
* It is possible to increase the likelihood of a behavior occurring in the future

**Group Work:**

*Identify whether the behavior increases (reinforcement) or decreases (punishment) in the following scenarios:*

1. Sammy flapped his arms in front of the tv. Every time he did this, his therapist turned off the tv. Sammy never flapped his arms again. Look at the **arm flapping behavior**.
2. George peed in his mom’s favorite plants. Out of furry, his mother yelled at him. He never peed in the plants again. Look at his **urinating behavior**.
3. Jen’s dog was full of burrs he picked up while romping through the field. He cried until she removed them. Since that day, he has cried whenever he has burrs in his coat. Look at the **dog’s crying behavior.**
4. Little Timmy pointed to the donut shop as he and his mother approached. “Mommy, can we get some donuts?” She slammed on the brakes, wheeled the car into the parking lot, and bought a dozen delicious treats. Several days later they were again passing the donut shop. “Mommy, can we get some donuts? Again, the mother complied. Several weeks and twelve dozen donuts later, Timmy was asking for them daily. Look at Timmy’s **requesting behavior**.
5. Lucy’s mother held her hand while the dentist drilled away. Whenever Lucy began to cry, her mother would let go of her hand and leave the room. When she stopped crying, mother would return again and hold her hand. As a result, Lucy cried less at the dentist. Determine the behavior in question before you determine increase/decrease, etc.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Behavior** | **Increase or Decrease?** | **Reinforcement/****Punishment** | **What was the specific reinforcer or punisher?** |
|  | Sammy’s arm flapping | Decreased | Punishment | Turning off the tv |
|  | George’s urinating | Decreased | Punishment | Mom yelling |
|  | Dog’s crying  | Increased | Reinforcement | Removal of burrs  |
|  | Timmy’s requesting  | Increased | Reinforcement  | Mom stopped for donuts |
|  | Lucy’s crying | Decreased | Punishment | Mom let go of her hand and left the room  |

**Types of Stimulus Change:**

Present or Increase Withdraw or Decrease

Effects on future frequency of behavior

|  |  |
| --- | --- |
| Positive Reinforcement | Positive Punishment |
| Positive Punishment | Negative Punishment |

**Group Work:**

*Use this table to develop 3-term scenarios for positive and negative reinforcement and punishment:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Antecedent Stimulus** | **Behavior** | **Consequence** | **Future frequency of behavior in similar conditions** | **Operation** |
|  |  |  |  | Positive Reinforcement |
|  |  |  |  | Negative reinforcement |
|  |  |  |  | Positive punishment |
|  |  |  |  | Negative punishment |

**ESTABLISHING OPERATION:**

* The “fourth” contingency
* Contrive motivation
* Capture motivation

Establishing Operation (EO) Antecedent Behavior Consequence

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 (motivation) (SD) (response) (reinforcement)

* An EO determines what an individual *wants* at any particular moment
* Any change in the environment that alters the effectiveness of reinforcement
* Simultaneously alters the momentary frequency of the behavior that has been followed by that reinforcement – Jack Michael (1982)
* Think of EO’s as the motivational variable
* “What’s in it for me?!!”
* Create motivation before you begin teaching and you will get better performance out of your student

**References**

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