

# Introduction & Applications of Applied Behavior Analysis: Understanding Behavior

---

Nicole Iannarone, MA, L-BCBA

[nicole@cornerstoneaba.com](mailto:nicole@cornerstoneaba.com)

516-993-7844



# Applied Behavior Analysis

- Evidence based practice
- Gold standard in treatment of children with Autism
- 1938 - BF Skinner publishes “The Behavior of Organisms: Science based on selection by consequences as the mechanism through which behavior changes”
- Skinners Box- Hungry rat & Lever
- Pavlov's Dog – Classical Conditioning
  - Stimulus (sound)- Food- Salivation
  - Stimulus (sound)- Salivation (no food)

# The ABC's of Behavior

- **What is behavior?**
- **Antecedent** - Environmental condition existing or occurring just prior to the behavior of interest
- **Behavior** - Behavior/ activity of a living organism occurs immediately following the antecedent condition
- **Consequence** - A stimulus change that immediately follows the behavior of interest

# Functions of Behavior

- **Access** - Individual engages in problem behavior to access a preferred item / activity (tangible)
- **Attention** - Individual engages in challenging behavior to access preferred individual(s)
- **Escape / Avoidance** - Engages in challenging behavior to escape something aversive (removal of something aversive)
- **Sensory** - Engages in challenging behavior to access preferred stimulation

# Access

- Children learn that if they engage in inappropriate or maladaptive behavior they will access something, someone, or some place.
- Examples:

Mom takes Joseph to the store. Before they go in, she tells him they are just getting 1 thing and leaving and that he is not getting anything. They go into the store, while walking down the aisle Joseph sees his favorite cookies. He asks mom to buy them, she says no. Joseph continues to ask and his request become louder by the minute. Mom tries to negotiate with him but eventually grabs the cookies, gets what she needs and leaves.

Carlos hits himself in the head. Every time he does this, his mother asks says, "What's wrong? What do you want?" and offers him a variety of different things (preferred edibles items, etc). Carlos always chooses something by pointing and the self injury stops for several minutes at a time.

# Attention

- Children learn that if they engage in an inappropriate or maladaptive behavior they will gain attention.
- Examples:
  - Rosie pushes her little brother, when he cries Dad comes in to intervene. When they play nicely, they are often left alone. Rosie continues to push her brother when Dad leaves the room.

Mario hits his mother every time she is on the phone. His mother stops her conversation to yell at him and will sometimes even get off the phone to reprimand him. Mario does not hit his mother when she is yelling at him.

# Escape

- Children learn that they can avoid or escape situations, objects, and/ or people they do not like by engaging in maladaptive/ inappropriate behavior.

- Examples:

After 5 minutes in Church Walter begins to yell out random words during the sermon. His parents quickly remove him and bring him outside. The next week, after 2 minutes Walter yells in Church and is brought outside.

Around the same time every day Sara complains of a stomach ache and puts her head down. The teacher sends her to the nurse. The nurse has Sara lay down. When the bell rings, Sara sits up and says "I'm better" Sara does not attend math for three weeks.

During homework, Carmine hits his hand on the table. Every time he hits the table, Dad gives him a short break from his work. Carmine does not hit the desk on his break.

# Sensory

Children learn to engage in behavior that is self pleasing. This behavior is not reinforced or maintained by anything in the environment.

## Examples

- Maria will rock in her seat for hours on end. This behavior occurs regardless of what is going on around her.
- Shawn will hum to himself consistently throughout the day.



# Misconceptions & Myths about Behavior

- It comes out of nowhere
- Cannot control
- Only happens in school
- Caused by bad parenting / neglect
- Children who act out are bad kids
- Medication is preferred treatment option
- Disruptive behavior is result of trauma
- Punishment is best way to treat problem behavior
- No way to treat

# Facts about Behavior

- Communication
- Maintained by consequences in environment
- Functions- gets kids what they want / need
- Observable
- Measurable
- PREDICTABLE over time
- Can be modified
- Everybody does it

# Problem Solving

Write down one or more situations you have had difficulty with in the past.

- What problem behaviors were observed?
- What things you have tried to address that situation?
- What solutions if any have you had success with?

# 5 Principles of ABA

- Reinforcement
- Punishment
- Extinction
- Motivation
- Stimulus Control

# Reinforcement

- Anything that is added or removed from a situation immediately following a behavior.
- Any response from the environment that **increase** the **FUTURE** likelihood of that behavior being repeated.
- A stimulus or environmental response can be verbal, gestural, audible, edible, etc.

# Reinforcement



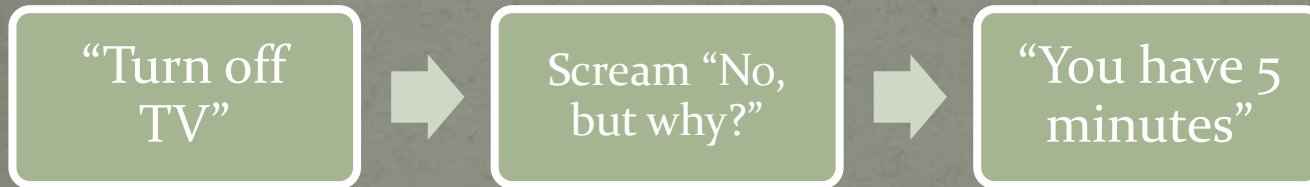
- Go to work- get paid
- Vending machine

# Inadvertent Reinforcement: Creating negative patterns

- Sammy



- Amanda



- Accidentally reinforce (increase) the behavior you are trying to punish (decrease). In this case, running away and yelling.
- The next time he/she is confronted by that same stimulus, the inappropriate behavior is repeated.

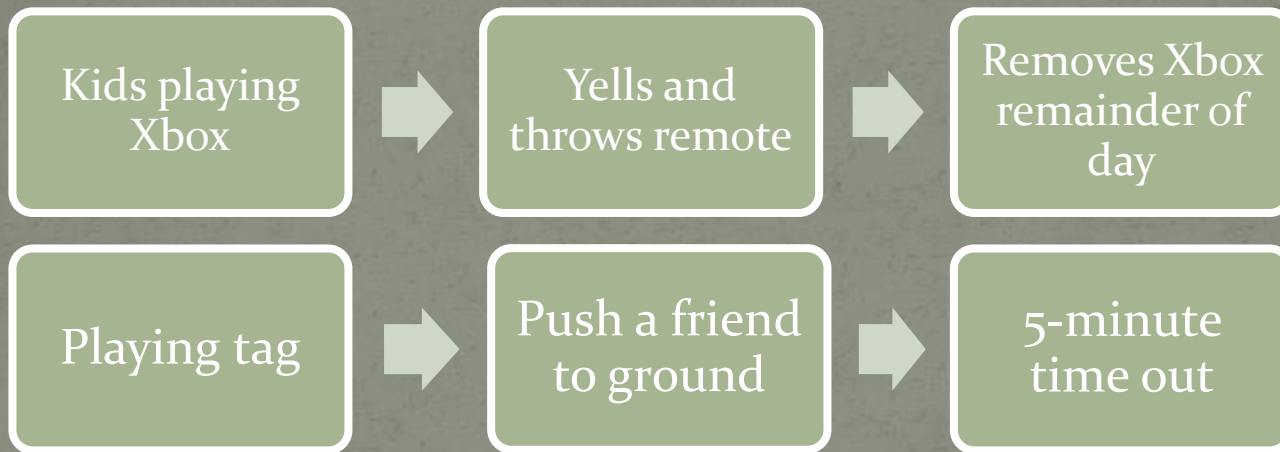
# Punishment

- Anything that is added or removed from a situation immediately following a behavior.
- Any response from the environment that **decreases** the FUTURE likelihood of that behavior occurring again in the future.
- The response from the environment can be verbal, edible, tactile, physical, etc.



# Examples of Punishment

- Time Out: Loss of positive reinforcers when child engages in inappropriate/ maladaptive behavior.



- Taking away toys
- Speeding Ticket

# Extinction

- A procedure used to reduce / diminish a problem behavior
- Reinforcement that maintains problem behavior is withheld
- Example:

Every time you are on the phone, Lilly grabs your shirt and yells “mommy I need you”. You decide to ignore this behavior and teach Lilly to say, “excuse me”. You only respond to when she says, “excuse me”. Then you begin to work on waiting.

# Motivation

- Motivation makes something more valuable
- If you are hungry you are motivated to eat
- If you are tired, you \_\_\_\_\_
- If you are bored, you \_\_\_\_\_
- If you are having fun playing a game, you will follow the \_\_\_\_\_
- If you are paying attention, you will raise your hand now!

# Proactive Strategies



- A - Proactive strategies (Before problem behavior occurs)
- B - Behavior (Inappropriate/ problem Behavior)
- C - Consequence (Reactive strategies/Consequent interventions)

# Proactive strategies for classroom management, home and community

- Priming
  - Let kids know what to expect. Household rules, picture schedules, written schedules, individual schedules , timers, etc.
  - In home- routines, visual schedules, chore lists, If-then, sequencing of events, etc.
  - Discuss menu prior, visually supports (where we are going), plan ahead
- Environmental Modifications
  - Seating arrangements, placements of materials, etc.
  - Access to toys, seating at table, locks on doors, windows, etc.
- Functional Communication Training
  - Teaching appropriate language: “I need a break”, “Can I have a minute” etc.
  - Terminate aversives: “I don’t like this”, “When will you come back?”, “It’s too loud”, “I feel nervous”, etc.
- Non-contingent reinforcement
  - Create positive fun and safe environment
  - Provide praise and attention regardless of what is going on in environment
- Pairing
  - Establishing positive relations: Play with your kids, engage with them on their level
  - Family game night, etc.
  - Pair new environment with preferred items (music, iPad, food, etc.)

# Reactive Strategies

- Strategies that are implemented following **problem behavior**
- Implemented to reduce problem behaviors
- Often thought of as punitive

# Reactive strategies for home and community

- Denied access
  - If child engages in inappropriate behavior to access someone or something, do not allow them access. (Tantrum for cookies in store)
- Maintain demand
  - If you give an instruction, follow through (Turn off TV, come to table)
- Error correction
  - If a child makes a mistake correct him/her. Check back for understanding (Hmm, I see you wrote 3 for  $1+1$ ...)
- Response interruption and redirection (RIR)
  - If a child engages in inappropriate behavior, interrupt the behavior and redirect to something more appropriate.
    - Ex: Humming or singing out loud- Ask them a simple question “What’s the name of that song?”
- Prompt hierarchy
- Extinction

# How to get kids to listen!!!

- Gain attention  
Call child by name, establish eye contact.
- Increase proximity  
Before you give any instruction, be within eye-sight and ready to prompt!
- Clear instructions  
“Sit down and put one hand up when you’re ready” like this (model), “Take out a pencil and write your name”.
- Reinforce desired behavior  
Deliver Behavior Specific Praise. “I love how you listened the first time”, “Great job trying your vegetables”, “Awesome work on that math problem”
- Be Consistent  
Say what you mean and mean what you say!



# Toolbox

## Reinforcement systems- Be Proactive

- Use buckets, jars, etc. children can earn puffs or marbles when engaged in desired behavior. When full= earn something valuable examples: 15 minutes free time, game of choice, movie & popcorn night etc.
- Response cost: Removal of something for inappropriate behavior
- RULE: 5:1 It takes 5 positives to make up for every 1 negative! (focus on increasing positive interactions)
- <http://www.ocde.us/PBIS/Documents/Articles/Positive+to+Negative+Ratio.pdf>

# Toolbox continued

- Behavior specific praise
- Offer choices
- Use visuals
- First –then contingencies
- Priming
- Timers
- Structure/ routine/visual schedules
- Self discipline and consistency

# Discussion

- Situations that you have had difficulty with?
- What are some solutions you have had success with?
- How do you think some of these strategies can help you?
- What strategies do you think you will try?
- How will what you learned effect your approach in the future?
- Look at you scenario from earlier, would you change anything?