

# Decreasing Problematic Behavior Through Schedules of Reinforcement

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# Behavior Intervention

It is important to consider that for many individuals with ASD, problem behavior is a result of a lack of knowledge of “**what to do**” to most effectively access reinforcement.

What types of things do we attempt to access in our daily lives?

# Behavior as communication

This presentation will place a heavy emphasis on **reinforcement-based** interventions.

Recognition of behavior as communication and then teaching the “**what to do**”.

# Let's look at the why's of behavior

- Think about behaviors you typically engage in and WHY you engage in them.
  - What do you “get out of” the behavior?
  - Why do you repeat the behavior?
  - What events might result in you not repeating the behavior?

# About Challenging Behavior(s)

- Behaviors...
  - Serve a specific purpose or function for the individual
  - Have communicative intent
  - Are directly related to events in the environment that influence or reinforce such behaviors
  - A single challenging behavior can serve multiple functions

# Principles of ABA

1. Behavior is largely a product of its immediate environment.
2. Behavior is shaped/ maintained by consequences.
3. Behavior is shaped better by positive (reinforcement) than negative (punitive) consequences.
4. Past behavior is the best predictor of future behavior.
5. Whether a behavior has been punished or reinforced is known only by the course of that behavior in the future.

# Consequences can affect behavior in three ways:

- Strengthen—increase the frequency or likelihood that the behavior will occur
- Weaken—decrease the frequency or likelihood that the behavior will occur
- Maintain—do not change the frequency or likelihood that the behavior will occur
- Neutral consequences have no effect on the behavior

# Reinforcement

- Basic and pervasive principle of behavior
- “Positive” and “negative” do not mean “good” and “bad”
- Positive refers to addition of (+) events or stimuli
- Negative refers to removal of (-) events or stimuli
- Both always result in an increase in the future frequency of a behavior (reinforcement)
- Negative reinforcement is not punishment



# Reinforcement Defined

- *Positive Reinforcement*
  - Presentation of a stimulus, behavior occurs more often in the future
- *Negative Reinforcement*
  - Termination of certain stimuli, future probability of a behavior is increased

# Reinforcement vs. Bribery

- Reinforcement:
  - Something good is given AFTER an appropriate behavior occurs
  - Reinforces a desired behavior
  - Proactive!
    - Child exhibits appropriate behavior → Receives reinforcer
  - Why should we use it? Leads to pattern of desired compliance
- Bribery:
  - Something (good) promised to stop an undesired (bad) behavior
  - Reinforces undesired behavior
  - Reactive!
    - Child is disruptive → Then promised reinforcer if behavior stops
  - Why do we use it? Works immediately!

# Developing Reinforcement

- ANYTHING can be used as a reinforcer
  - Think outside the box (novel and unpredictable)
  - Add on what your child already likes
  - Don't make assumptions about what will/won't be a R+
- Think about what your child naturally chooses
- Avoid satiation by limiting access to reinforcers
- Always pair tangible reinforcement with social reinforcement
- Don't take it personally!

# Reinforcer Ideas and Resources

- Enjoys tactile items→
  - Sticky ball, sticky lizards, feathers, bubbles, playdoh, goo, slime, gloop, Floam, stickers, chalk, finger paints, stress ball, Koosh ball, bean bags, vibrating pen, loofah gloves, bean/rice boxes
- Likes auditory stimulation/sounds→
  - Rainstick, Sellotape, Pennies in a container, Kaleidoscope, party blower, magnetic balls, marbles, echo microphone, noise putty, tambourine
- Loves visual input→
  - Kaleidoscope, Viewfinder, light up spinner globe, balloons, light up pens, sunglasses, spinning top, streamers, flashlights, prisms
- Likes jumping→
  - trampoline, LARGE Pilates ball, big bean bag
- Websites to check out→
  - <http://www.ozmofun.com/>
  - <http://www.especiallymine.com/>
  - <http://www.snazzarootoys.com/>
  - <http://www.discoverytoysinc.com/>

# Examples of Reinforcement

- You are standing outside when it begins to storm. You see a taxi without passengers and you hail the taxi, which stops to pick you up. Once inside the taxi you are no longer cold and wet. Your behavior of hailing a cab is maintained by....



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# Sources of Reinforcement for Problem Behavior

- Positive Reinforcement
  - *Social (attention, access to tangible materials)*
  - *Automatic (sensory stimulation)*
  - Example: Allison receives **hug** after **cleaning up her toys**. David gets a **sticker** for **finishing his homework**.
- Negative Reinforcement
  - *Social (escape from task demands)*
  - *Automatic (pain attenuation)*
- Example: Mom stops **nagging** after child **takes out the trash**. **Headache** goes away after **taking medication**.

# Now that we have discussed reinforcement . . . .

- It is time to discuss just HOW reinforcements can and should be delivered
- In other words, there are other things to consider than just WHAT the reinforcer should be!



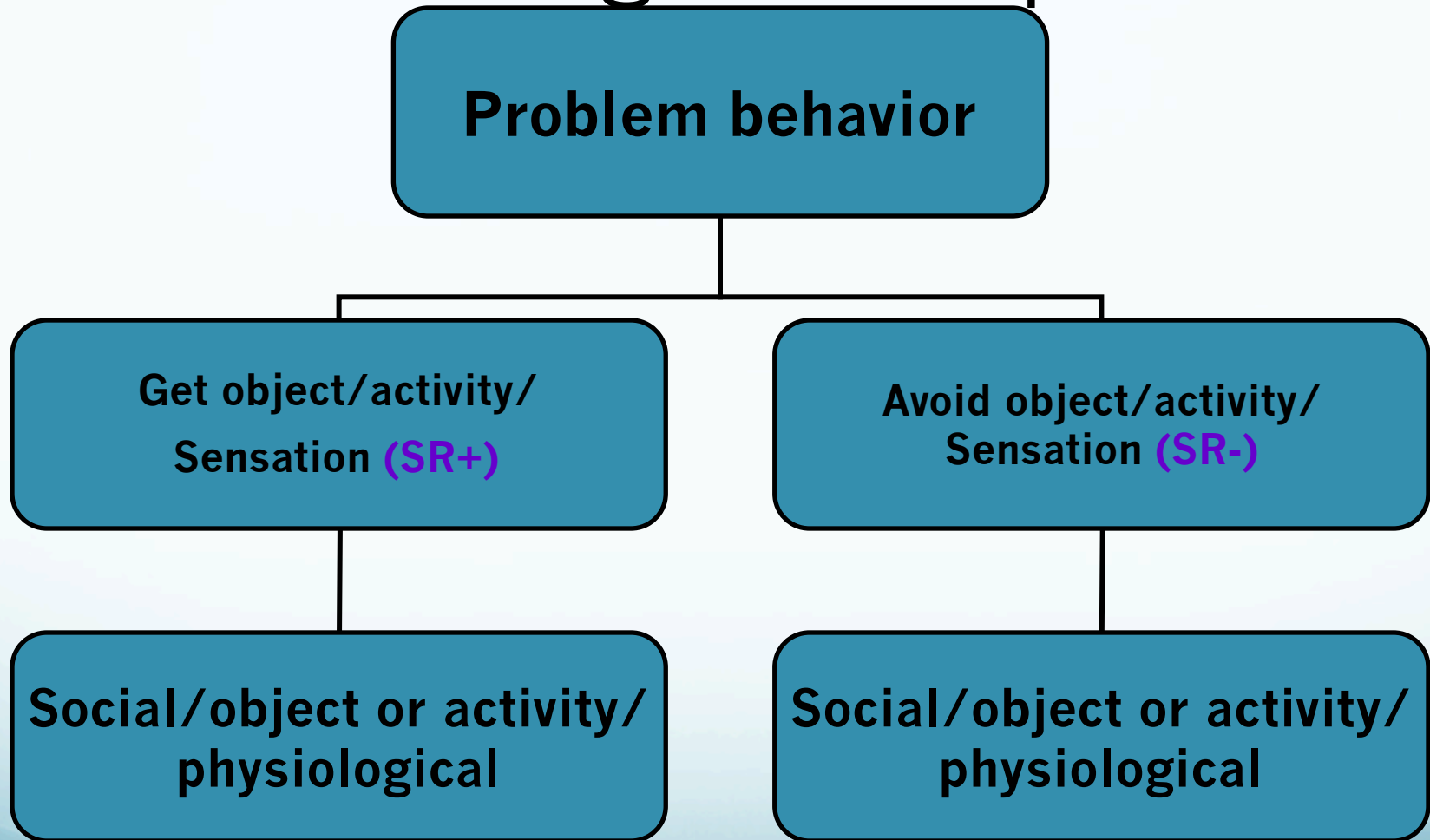
# Think about this!

- If you were going to reinforce your puppy for going to the bathroom outside, how would you do it?
  - Would you give him a Liv-a-Snap every time? Some of the time?
  - Would you keep doing it the same way or would you change your method as you go along?

# What is a schedule of reinforcement?

- A schedule of reinforcement is the response requirement that must be met in order to obtain reinforcement.
- In other words, it is what you have to do to get the goodies!

# Maintaining Consequences



# Defining Antecedents & Consequences

- Antecedent events –
  - What happens immediately before the behavior
- Consequent Events –
  - What happens immediately following the behavior
  - May be programmed or naturally occurring (does not imply punishment)

# Sample Problematic Antecedents

- Materials too complex / difficult
- Curriculum lacking in appropriate adaptations
- Student has lack of functional vocabulary to communicate
- Meaningless repetition beyond criterion (under stimulation)
- Nonfunctional activity
- Pacing too slow / too fast
- Physical environment: For example, number of students, noise
- Rate of physical prompting or verbalizations

# Probable Functions of Specific Behavior Disorders

<u>Behavior Disorder</u>		<u>Positive Reinforcement</u>		<u>Negative Reinforcement</u>	
		<u>Social</u>	<u>Automatic</u>	<u>Social</u>	<u>Automatic</u>
Aggression	+	Ø	+	Ø	
Tantrums	+	Ø	+	Ø	
Noncompliance	+	Ø	+	Ø	
Property Destruction	+	?	+	Ø	
"Stereotypies"	?	+	?	?	
SIB	+	+	+	+	

# Differential Reinforcement (DR)

One of the most powerful tools in a teacher's intervention repertoire. It stands at the foundation for learning.

# Reinforcement

- Types
- Limited Access
- Amount
- Behavioral Criterion



# Seven Considerations in Using Reinforcement

- Immediacy
- Schedule
- Amount
- Pairing
- Proximity
- Labeling
- Expressiveness

# Schedules of Reinforcement

How often person gets SR+ for a correct response.

- ☐ Continuous – Every correct response gets reinforced.
- ☐ Intermittent – Person's correct responses are reinforced periodically.
- When is continuous schedule best?
  - ☐ When teaching a new skill.
- When is an intermittent schedule best?
  - ☐ When person has reached criterion and teacher wants to reduce reinforce for maintaining response only.
- Example of continuous Reinforcement:
  - ☐ Each correct response is reinforced by teacher when the response is made.

# Schedules of Reinforcement

- *Ratio*- Schedule reinforcement according to the number of behaviors
  - Fixed
  - Variable (average)
- *Interval* – The first behavior occurring after the passage of a certain amount of time
  - Fixed
- Variable (average)

# Differential Reinforcement

Reinforcement is delivered contingent on the occurrence of a behavior other than the problem behavior or the behavior occurring at a reduced rate

&

Withholding reinforcement as much as possible for the problem behavior.

(Cooper, Heron, & Heward, 2007)

# Non-contingent Reinforcement

- What happens when reinforcement occurs randomly, regardless of a person or animal's behavior?
- Weird Stuff!
  - Like what?

# Superstitious Behavior

- Examples include:
  - Rituals of gamblers, baseball players, etc.
  - Elevator-button-pushing behavior
- Non-contingent reinforcement can sometimes be used for GOOD purposes (not just weird or useless behaviors!)

# Non-contingent Reinforcement(NCR)

The idea is that if reinforcement is readily available then the student will not have to engage in problem behavior to access it.

# Good, useful examples

- Giving non-contingent attention to children
  - Some bad behaviors like tantrums are used to try to get attention from caregivers
  - These behaviors can be diminished by giving attention non-contingently

Children need *both* contingent AND non-contingent attention to grow up healthy and happy!



# We can also think about how we use reinforcers.

- We can use a behavior we love (high probability behavior) to reinforce a behavior we don't like to do very much (low probability behavior).
- This is sometimes called “Grandma’s Principle”
- Bobby, you can read those comic books once you have mowed the grass!

# Delivering Reinforcement

## Implementing effectively

**Rule 1:** Cannot tell whether something is a reinforcer until try it and observe effect on the behavior.

**Rule 2:** What is a reinforcer for one person may not be for another. Individualized approach for each child

**Rule 3:** To be effective, a reinforcer must occur during or immediately after the behavior.

# Delivering Reinforcement

## Implementing effectively

**Rule 4:** Limited Access

**Rule 5:** Reinforcement must be contingent if it is to be effective: Grandma Principle: “First this, then that.”

**Rule 6:** When strengthening a new behavior, reinforce frequently.

**Rule 7:** Size of reinforcement is big enough to keep child motivated, but not too big for satiation (i.e. small pieces of edibles, pieces of a game, etc.)

# Delivering Reinforcement

## **Primary/unconditioned reinforcers**

(i.e., biological in nature: food, water, pleasure, etc.)

## **Secondary/Conditioned reinforcers**

(i.e., praise, money, grades, token, etc.)

## **Token economies**

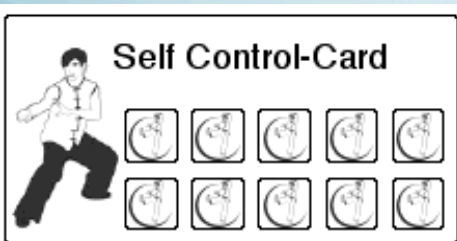
# Token Economies

- Develop an understanding of cause and effect for behavior.
- Measure occurrence of **appropriate** behavior.
- Allow for visual feedback on progress for child.
- Reminds adults to reinforce appropriate behavior.
- Provides motivation for child to see his/her progress.

# Token Economies

## *Using token economies effectively*

- Select durable tokens
- Consider student's interests in token boards
- Deliver tokens immediately
- Use powerful reinforcers



# Goldilocks Rule of Reinforcement

- Reinforcement schedule needs to be “Just Right”.
- Opportunity to earn reinforcement needs to be available 2 times as often as challenging behavior.
- Does not mean will actually earn –reinforcement is contingent.

# In Summary





# Effective Interventions are...

- Multi-element approach
- Collaboratively designed
- Consistent
- Do-Able
- Based on setting the student up for success
- Clear & Concise: “If - then statements
- Based upon a 3:1 ratio of positive to negative comments.

# Parting shots

The success of any behavior change program is hinged on the accurate identification of reinforcers through a functional behavior assessment (FBA) & careful monitoring via continuous data collection and the graphing of that data.

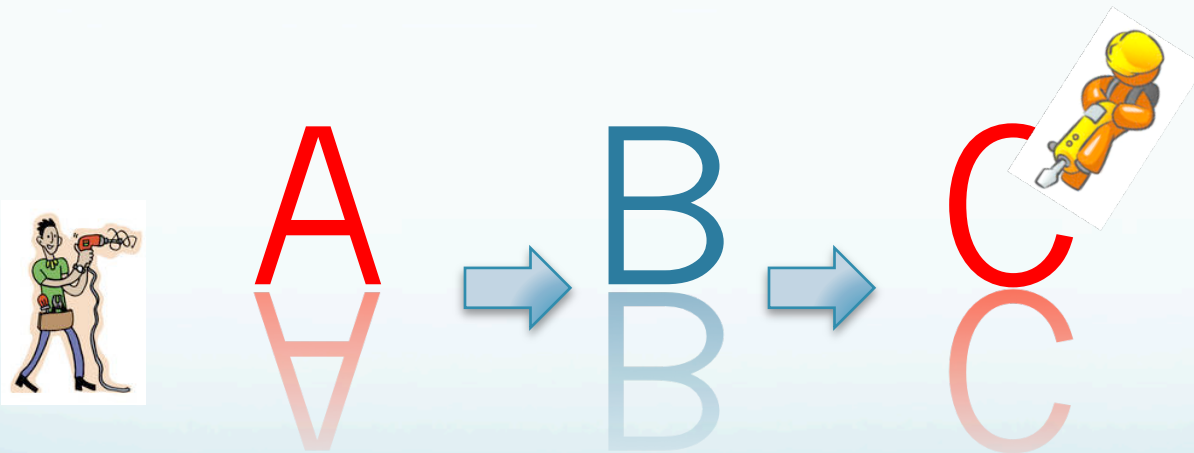
# Parting shots

## How do I select a behavior intervention?

- Consider data from the FBA.
  - Consider team input.
- Consider interventions that teach new skills.
  - Consider the least intrusive intervention for the child and what will make them most successful.
- Consider the difficulty in conducting the intervention.

# A Review

Behavior change involves the manipulation of  
**antecedents, consequences, or both.**



**"People don't shape the world,  
the world shapes them"**

(BF Skinner)

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# Thank you!