



Introduction to ABA

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Behavior Analysis

- ▶ “**Behavior analysis** is a natural science that seeks to understand the **behavior** of individuals. That is, **behavior** analysts study how biological, pharmacological, and experiential factors influence the **behavior** of humans” (ABAI – Association for Behavior Analysis International)

Behavior Analysis: An Overview

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What is Behavior Analysis?

- ▶ **Behavior analysis** is the science of behavior, with a history extending back to the early 20th century. Its underlying philosophy is behaviorism, which is based upon the premise that attempting to improve the human condition through behavior change (e.g., education, behavioral health treatment) will be most effective if behavior itself is the primary focus, rather than less tangible concepts such as the mind and willpower.
- ▶ To date, basic behavior-analytic scientists have conducted thousands of studies to identify the laws of behavior; that is, the predictable ways in which behavior is learned and how it changes over time. The underlying theme of much of this work has been that behavior is a product of its circumstances, particularly the events that immediately follow the behavior.
- ▶ Applied behavior analysts have been using this information to develop numerous techniques and treatment approaches for analyzing and changing behavior, and ultimately, to improve lives. Because this approach is largely based on behavior and its consequences, the techniques generally involve teaching individuals more effective ways of behaving and making changes to social consequences of existing behavior.
- ▶ * Used with permission from the Behavior Analysis Certification Board

Applied behavior analysis (ABA)

- ▶ **Applied behavior analysis** (ABA) has been empirically shown to be effective in a wide variety of areas, including parent training, substance abuse treatment, dementia management, brain injury rehabilitation, occupational safety intervention, among others.
- ▶ However, because ABA was first applied to the treatment of individuals with intellectual disabilities and autism, this practice area has the largest evidence base and has received the most recognition.*
- ▶ * Used with permission from the Behavior Analysis Certification Board

What is “Applied Behavior Analysis”?

- ▶ It is an applied science that develops methods of changing behavior
- ▶ Specific and comprehensive use of principles of learning
- ▶ Utilizes operant and respondent conditioning
- ▶ Addresses behavioral needs of widely varying individuals in diverse settings
- ▶ Examples include:
 - ▶ building the skills and achievements of clients in school settings
 - ▶ enhancing the development, abilities, and choices of clients and adults with different kinds of disabilities
 - ▶ augmenting the performance and satisfaction of employees in organizations and businesses

ABA principles

- Applied Behavior Analysis is a science based on the principles of behavior
- Dedicated to producing socially significant improvement in lives of people
- Known through the work of B.F. Skinner
- Behavior is influenced by its consequences:
 - ✓ The delivery of positive consequences (reinforcers) that make behavior more likely to occur
 - ✓ The removal of positive consequences that make behavior less likely to occur

Basic Behavior Principles

- Behavior is largely a product of the environment (read *daily experiences*).
- In the end, behavior responds better to positive consequences.
- It takes time for changes in the environment to change behavior.
- Past behavior is the best predictor of future behavior.
- Consequences can either strengthen or weaken behavior. The only way to know the effects of a consequence is by what happens to the behavior in the future.



CHARACTERISTIC OF BEHAVIOR ANALYSIS

- ▶ Emphasis on analyzing and modifying functional relationships between:
Behavior and the current Environment
- ▶ Emphasis on outcomes
 - ▶ ABA is not a therapy
 - ▶ Person –centered
- ▶ Focus on Compassionate Care
- ▶ The client is at the center of treatment
 - ▶ Client and their caregivers are involved at every step
 - ▶ Ameliorating issues that affect quality of life is the overall objective of care
- ▶ We accentuate the importance of socially valid procedures and outcomes



Myths and Misconceptions regarding Applied Behavior Analysis

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- ABA services are only for people with autism
- Applied Behavior Analysis (ABA) is synonymous with discrete trial training (DTT)
- ABA can only be applied to "behavioral" problems
- ABA is experimental and new
- All BCBAs/BCaBAs ability to provide competent treatment are equal to one another
- Applied Behavior Analysis is only effective for young clients
- ABA (or DTT) is done at a tabletop
- Anyone can “do ABA”
- ABA is harmful/uncomfortable for clients
- 40 hours of ABA are needed for a positive effect

Myths and Misconceptions regarding Applied Behavior Analysis (cont'd)

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- If a client does not receive intensive ABA by five years of age, the “window of opportunity” for learning will close.
- ABA produces robotic behavior
- ABA only uses edible (food) for reinforcers and treat people “like animals”
- ABA only works for "intellectually delayed" individuals. ABA cannot work with individuals who know what you are doing.
- ABA is antiquated (something from the 70's)
- ABA uses bribes consisting of food and toys to manipulate children's behavior.

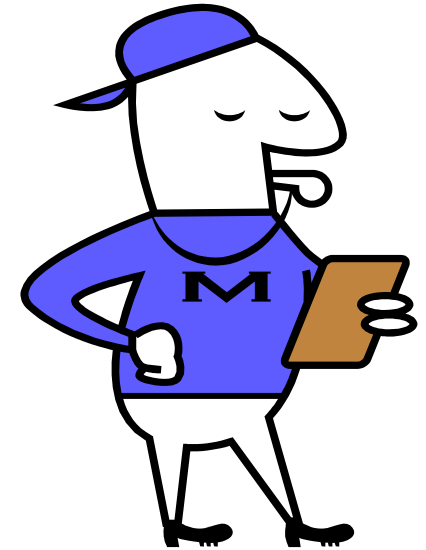
Behavior Analysts Do What?

- Assessments and interventions for complex and dangerous behaviors
- Technical assistance for providers, schools and others
- Behavioral intervention training and on-site support for caregivers/parents/staff
- Functional Behavioral Assessments (FBA)
- Behavior Intervention Plan (BIP)



Behavior Analysts Help How?

- Demonstrate and teach “tools” (behavioral techniques and strategies)
- Provide professional practice for these “tools”, i.e. support other professionals
- Troubleshoot, coach, and provide on-site support



Because
sometimes you
just need to see
a picture of a
puppy...

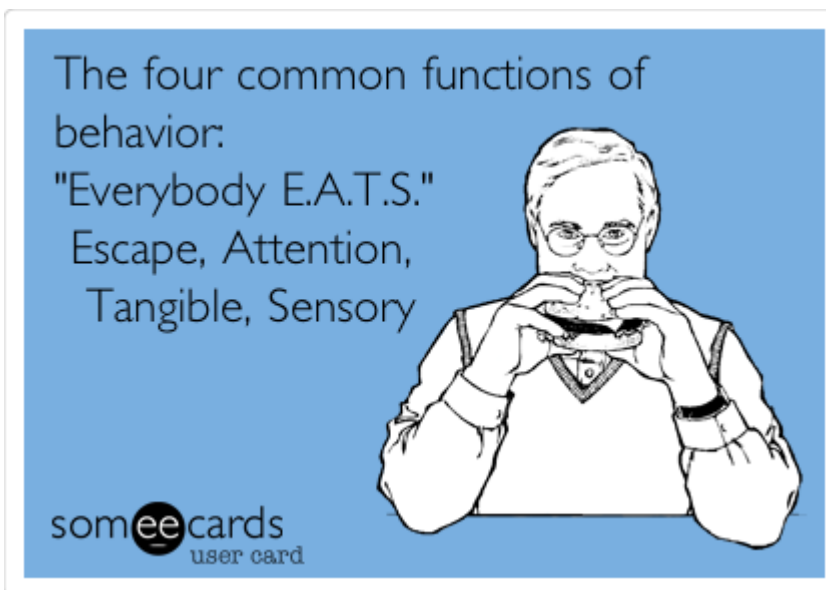


What is Behavior?

- Anything A Person Actively Says or Does
- Can Be Observed And Measured
- Involves movement
- Results in changes in the environment, at least temporarily

Why do behaviors occur?

- ▶ Functions of behavior
 - ▶ If you want to manage behavior, you need to know *why* it is happening
- ▶ 4 most common functions of behavior are:
 - ▶ Attention
 - ▶ Demand/Escape
 - ▶ Access to tangibles
 - ▶ Automatic (Sensory) Reinforcement



It's all fun and
games until
someone figures
out the function
of your behavior.

som**ee**cards
user card



ABC's!

- ▶ Antecedent: What comes before the behavior
 - ▶ Examples?
- ▶ Behavior: Anything a person says or does
 - ▶ Examples?
- ▶ Consequence: What immediately follows behavior
 - ▶ Examples?

Directs

Antecedent

Behavior

Motivates

Consequence

ABC Examples

Antecedent

Hungry

Late for work

See cookie

See toy

Mother leaves

Mother leaves

Behavior

Cry

Speed

Say "cookie"

Hit sibling

Cry/tantrum

Cry/tantrum

Consequence

Get bottle

Get ticket

Get cookie

Get toy

Mother returns

Mother gone



Don't Confuse Correlation with Causation

Correlation:

A correlation between variables, however, does not mean that the change in one variable is the cause of the change in the values of the other variable. Correlation is when two variables appear to **change in sync**. For example, one might decrease as the other increases or vice versa.

Causation:

Causation indicates that one event is the **result of** the occurrence of the other event; i.e. there is a **causal** relationship between the two events.

Causation means one variable **directly influences** another

➤ For instance, one variable increases **because** the other decreases.



3 Term Contingency For Behaviors

- Motivation
 - ▶ Why is this behavior happening?
- Availability
 - ▶ What is the signal the behavior will be reinforced?
- Reinforcement
 - ▶ Will it be reinforced so it is more likely to occur in the future?



ABC Scenarios

What about Consequences?

- Consequences will either mean that behavior occurs again, or will not occur again
- Consequences are the events that follow immediately after the target behavior and are contingent on the behavior (occur if only if the behavior occurs)
- 2 major kinds of consequences
 - Reinforcers: which *increase* behavior they follow
 - Punishers: which *decrease* behavior they follow
- The label, reinforcer or punisher, is given on the basis of how the behavior of the particular subject reacts to the event.
- A person can guess if a thing/event is likely to function as a reinforcer (e.g., candy) or as a punisher (e.g., a reprimand/spanking). However, the proof is in the behavior.

Reinforcement

- ▶ Reinforcement is **anything** that increases a behavior
- ▶ Can look different to different people:
 - ▶ Gets “good things” (e.g., praise, toys, food)
 - ▶ Gets rid of “bad things” (e.g. demands, bedtime, shoes)
 - ▶ Reprimands and negative attention can also be reinforcers
- ▶ Reinforcement increases good and bad behavior
- ▶ Understanding how reinforcement works is essential to solving behavior problems

Understanding the Causes of Problem Behaviors

MANY PROBLEM BEHAVIORS ARE CAUSED BY INADVERTENT REINFORCEMENT...

- May get attention, reaction, reprimands
- May get access to reinforcers
- Allows one to avoid undesirable activities
- Allows one to escape undesirable activities
- Negative behavior may be fun for the person (Stim, destruction, climbing)
- No alternative skills to achieve the same reinforcer (language)

The Power of Intermittent Reinforcement



VS



Same Behavior (putting coins in slots), different results... WHY?

How do we change it?

► Function based interventions

Three essential parts to any intervention

1. Prevention (antecedent intervention)
2. Identify, teach and reinforce (positive) replacement behaviors
3. Change the consequence after the problem behavior (reduce)

1. Preventative strategies

- ▶ **Staying close**
 - Create a safe, positive environment and establish yourself as a source of caring, empathy and positive consequences
- ▶ **Scanning and tracking**
 - Understand your environment
- ▶ **Know the triggers**
- ▶ **Know the precursors**
- ▶ **Premack Principle (Grandma's rule)**
 - Preferred behaviors can be used as rewards, or reinforcements, for less preferred behaviors.
- ▶ **First/then**
- ▶ **Selective attention**
 - Ignore “junk” behavior – any age typical behavior that may be annoying but not harmful.

2. Teach Replacement Behaviors

- Identify the deficit
- Teach an appropriate alternative behavior
- This behavior should produce the same or better outcomes than the undesirable behavior
- Should also not be more difficult than the undesirable behavior

Important Questions

- 1) Is it a skill deficit issue or a motivation issue
- 2) Is it a skill they know ?
 - ▶ Is it in their repertoire?
 - ▶ Is it at strength in their repertoire?
- 3) Are they able to engage in this behavior?
 - ▶ Does the environment allow for this behavior?
 - ✓ EX; Saying “No”,
- 4) Is it Effective?
 - ▶ Does it change their environment in a more positive way? Does it make their life better?

Meaningful Behavioral change

Before setting behavior change procedures in motion, ask yourself these questions:

- 1) How does this improve the life of the individual being served?
Does it make their life better or ours?
- 2) Will this increase opportunities for the individual to access reinforcement?
How? What types?
- 3) Will there be observable changes in the individual's quality of life?
- 4) How will these, if met, reduce the need for restrictions in their life (e.g. staffing patterns, etc.)?
- 5) How do these objectives provide access to more natural contingences and less artificial, contrived support?
- 6) How does this make the individual more independent?

3. Change the Consequence

- Identify what consequence has led to the behavior increasing
- Identify the functions of behavior
- Change the consequence (punishing consequence = reduction in problem behavior)
- Provide reinforcing consequences for desirable behaviors.
- Try to no longer provide the reinforcing consequence for the undesirable behavior
 - ✓ Watch out for the Behavior Burst!

Effects of Consequences

- ↑ Some consequences can increase future behavior
- ↓ Some consequences can decrease future behavior
- ↔ Some consequences have no affect on behavior

Some consequences increase the chances that a particular behavior will occur again.



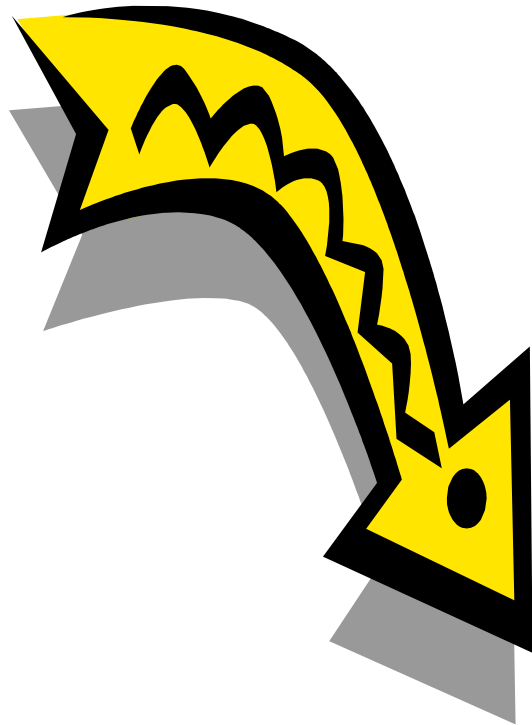
This is
reinforcement.

Examples of consequences that may be reinforcement

- ▶ You put money in a coke machine (behavior), and you get a coke (consequence).
- ▶ You flip a light switch (behavior), and the light comes on (consequence).
- ▶ You tell a joke (behavior) and your friends laugh (consequence).
- ▶ You tell a joke (behavior) and your friends laugh (consequence).
- ▶ A client is crying (behavior) in the grocery store, and the parent buys the client a candy bar (consequence).

Some consequences decrease the chances that a particular behavior will occur again.

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This is
punishment.

Consequences that Decrease chances of future behavior.

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- ▶ (B) Touching a hot stove □ (C) burning your hand
- ▶ (B) Speeding through a red light □ (C) police catch you and give you a ticket

Some consequences have no effect on behavior.

For example, each time you sneeze, someone might say, “bless you”.



Types of reinforcing consequences

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1. Social interaction
2. Verbal Praise
3. Appropriate Touch
4. Tangible Items
5. Appropriate privileges
6. Breaks from tasks or work

When to use reinforcing consequences:

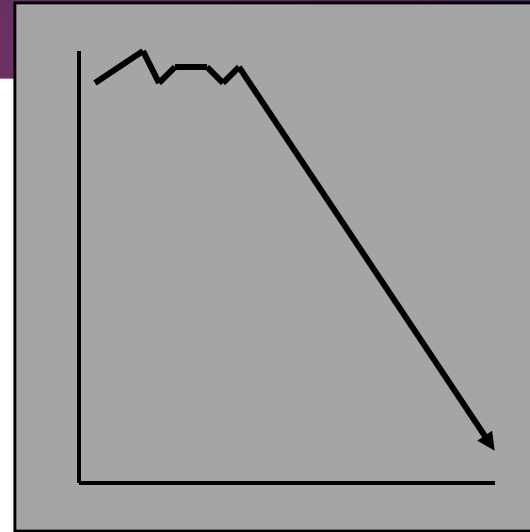
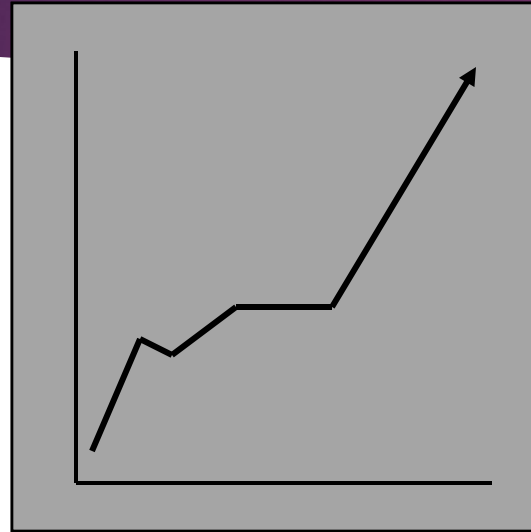
- ⇒ After you see an appropriate behavior happen.
- ⇒ After you see a behavior that you'd like to see more often.

Steps to Using Reinforcing Consequences

1. Tell client what behavior you liked (if this is appropriate).
2. Provide a consequence for that matches the value of the behavior.
3. Provide the consequence within 3 seconds of recognizing the behavior if possible.
4. Use sincere and appropriate facial expressions, tone of voice and body language.
5. Ignore junk behavior.
6. Avoid coercives and punishment.
7. Make sure that the consequence you're using actually is a reinforcing consequence.

BEWARE OF THE BEHAVIOR BURST!

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It may be that just for a little while, things will get worse before they get better. Hang in there they will get better.

To Avoid a Behavior Burst

- Make sure there are lots of positive consequences for appropriate behaviors
- Stay close frequently throughout the day
- Ignore “junk behaviors” during a task or activity keep doing the task or activity with the individual while carefully ignoring junk behavior
- If junk behavior is often happening when the client does a certain task, give frequent, short breaks during the task.

Tips!

- Tips for decreasing unwanted behavior
- Tips for increasing desired behavior

Decreasing the unwanted behavior

- Make sure you really have a reinforcer
- Deliver the reinforcer immediately after good behavior
- Set up lots of opportunities for good/correct behavior (Don't just wait for them)
- Use a variety of reinforcers
- Deliver some reinforcers free (pairing)
- Smile, be sincere, laugh, have fun when appropriate
- Some people will require lots of reinforcers per hour (30-50)
- Engagement usually is reinforcing!
- Lack of reinforcement for positive behavior can increase negative behavior

Increasing Desired Behavior

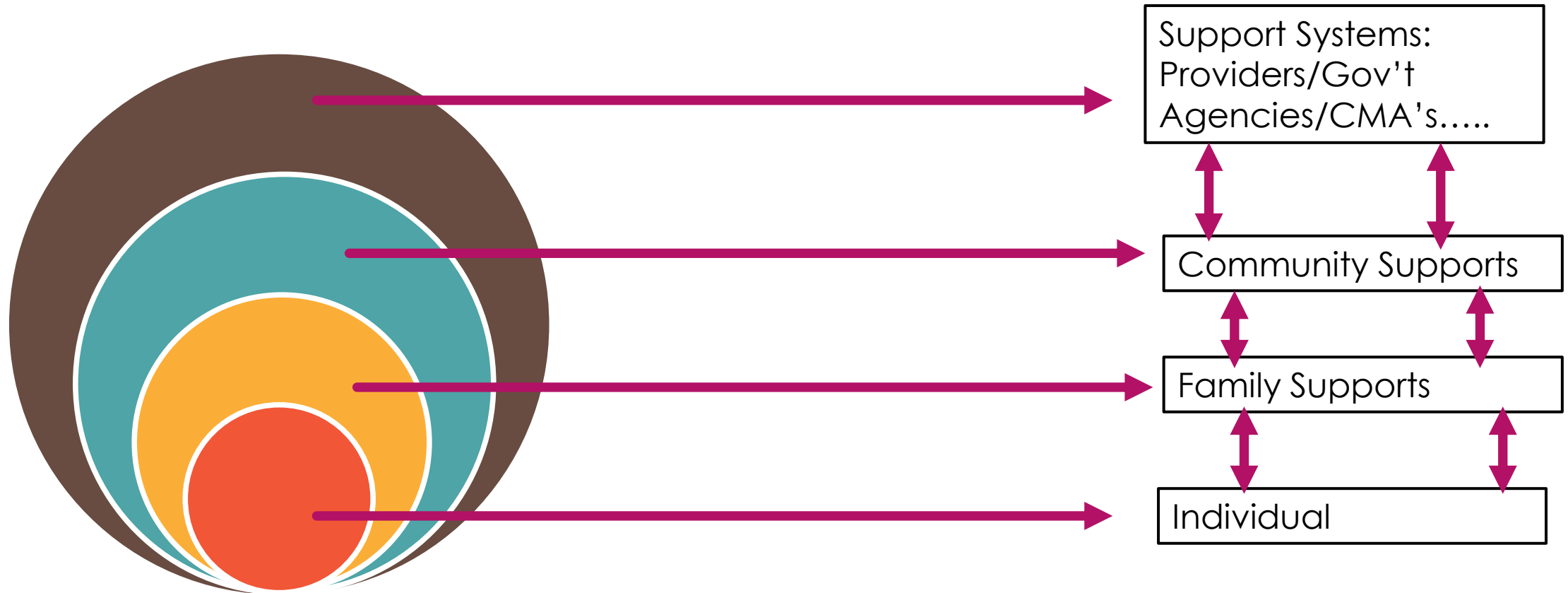
- *Model and teach the behaviors you want to see!*
- Group Contingencies
- Token economies
- Contingency contracts

The Importance of Collaboration

- We are all better when we work together
- The difference between Multidisciplinary and Interdisciplinary supports
- Focus should be on client outcomes and quality of life
 - ✓ Leave your ego at the door!
- Respect our differences



The Behavioral Ecosphere



Ways to Support Each Other

- **Communication**

- **Empathy**

**“Just walk a mile in his moccasins
Before you abuse, criticize and accuse.
If just for one hour, you could find a way
To see through his eyes, instead of your own
muse.”**

Mary T. Lathrap 1895

- **Perspective Taking**

- **Collaboration**

**“Great Spirit,
help me never
TO JUDGE
another until I
have walked in
his moccasins.”**

—American Indian Proverb—

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“The methods of science have been enormously successful wherever they have been tried. Let us then apply them to human affairs.”

B.F. Skinner

Questions



Contact Information

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Thank You!



Unbeknownst to most students of psychology, Pavlov's first experiment was to ring a bell and cause his dog to attack Freud's cat.