

Behavioral Management of Autism Across Settings

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Behavioral Perspective Children with Autism

- Typically these children present with significant behavioral issues
- We view autism not as a “disease” but as a cluster of behavioral deficits and behavioral excesses
- We can utilize the principles of learning to address these excesses and deficits
- Also allows for the treatment to be individualized since each child will have a different behavioral pattern of excesses and deficits

Behavioral Perspective

- Much of our behavior is determined by our environment
- The environment works on behavior in a lawful manner
- By understanding these laws, we can use them to affect behavior
- Our goal is to systematically apply these laws to change behavior

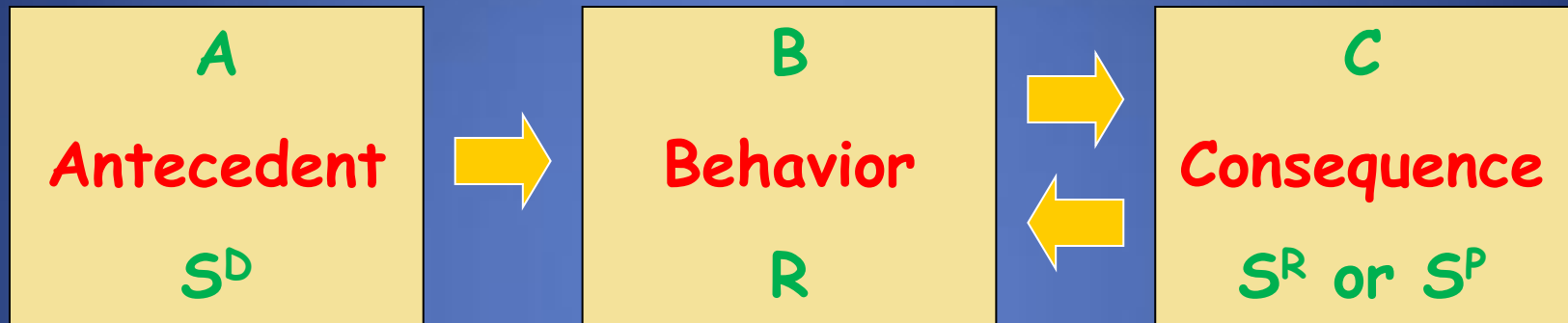
Applied Behavior Analysis

- We have a science that helps us determine these laws and how to use them to change behavior - applied behavior analysis (ABA)
- The use of behavioral principles to produce *socially significant* improvements in an individual
- A research methodology, not a treatment
- Interventions developed via ABA have been effective in teaching people with and without autism

Operant Behavior

- Operant behaviors are learned and maintained through constant interaction with the environment
- Every behavior serves a function
 - It follows a certain antecedent
 - It results in a certain consequence
- No behavior is random

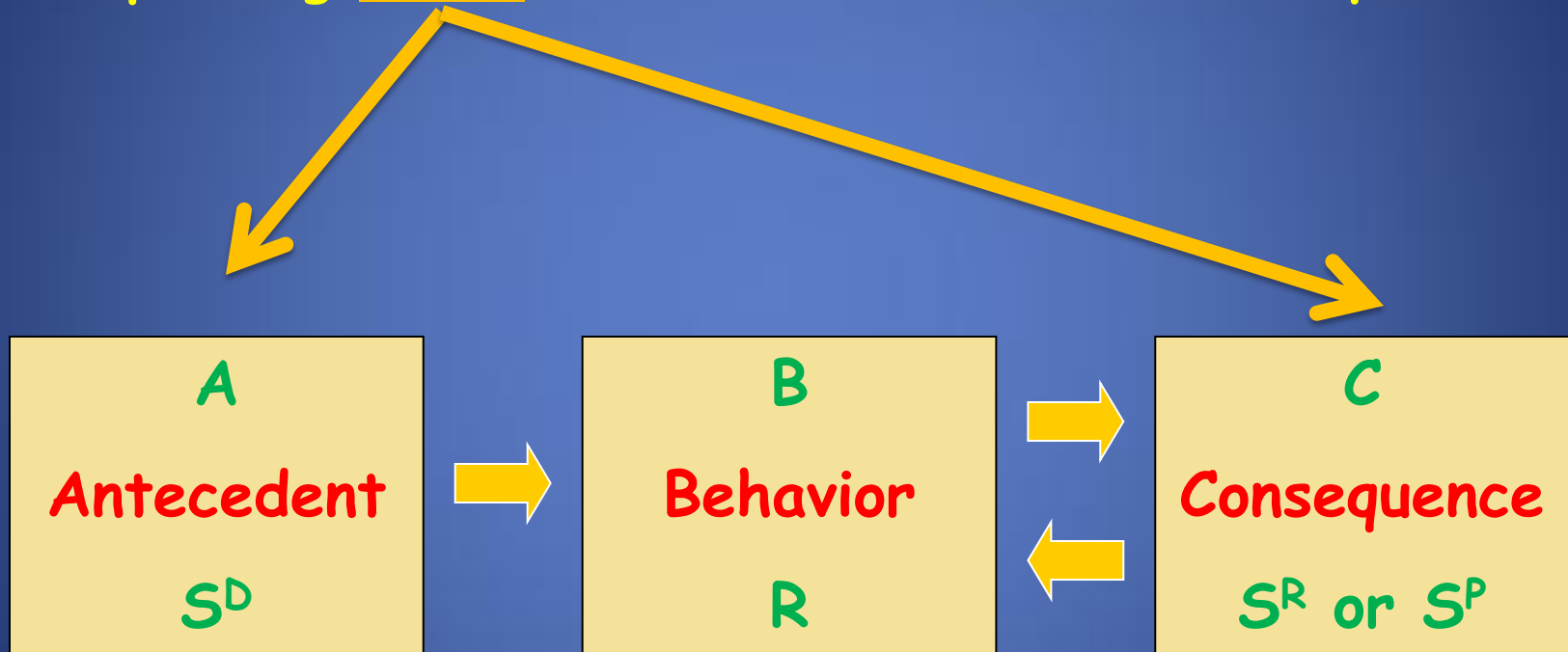
The Operant Paradigm



The three-term contingency
The ABCs of behavior

Antecedent or Consequence?

- We can alter the strength of an operant behavior by manipulating either the antecedent or the consequence



Implementing a Treatment Plan

- **Step #1**

- Define our target behavior
- Decide how to measure target behavior

- **Step #2**

- Determine our consequence (reinforcement, punishment, extinction)
- Determine consequence delivery

- **Step #3**

- Determine antecedent

- Determine antecedent manipulation

Implementing a Treatment Plan

- **Step #4**
 - Determine effect of our treatment plan
 - Using our measure of the target behavior
- **Step #5**
 - Based on our results, determine if changes in treatment plan are needed

Step #1 - Defining and Measuring Behavior

- Operational definition of behavior = a "behavior" is anything a person does that can be observed by another person
- Measurement of behavior
 - Frequency
 - Duration
 - Intensity
- Baseline - Treatment - PostTreatment - Follow-up
- Acquisition - Maintenance - Generalization

Step #2 - Defining Consequence

- The events that follow immediately after the occurrence of the behavior
- Increase, decrease, or maintain behaviors by manipulating the consequences of the behavior
 - Reinforcement
 - Punishment
 - Extinction

Reinforcement (S^r)

A consequence that increases the probability that a behavior it follows will occur again

- Positive Reinforcement (S^r):

- The *presentation* of a *desired* stimulus that increases the future likelihood of a behavior it follows

- Negative Reinforcement (S^r):

- The *removal* or avoidance of an *aversive* stimulus that increases the future likelihood of a behavior it follows

Punishment (SP)

A consequence that decreases the probability that a behavior it follows will occur again

- Positive Punishment:

- The *presentation* of an *aversive* stimulus that decreases the future likelihood of a behavior it follows

- Negative Punishment:

- The *removal* of a *desired* stimulus that decreases the future likelihood of a behavior it follows

***There nothing about our use of the word "punishment" that requires pain. Anything the person does not like can be used as an aversive stimulus.*

Identifying the Reinforcer

- The reinforcing, punishing, or neutral properties of a stimulus are determined by its influence on behavior
 - Functional definition of reinforcement
 - Reinforcing properties of a stimulus will vary across environmental situations

<u>Assess Preference</u>	
parental report	behavioral indicators
observation	effect on behavior

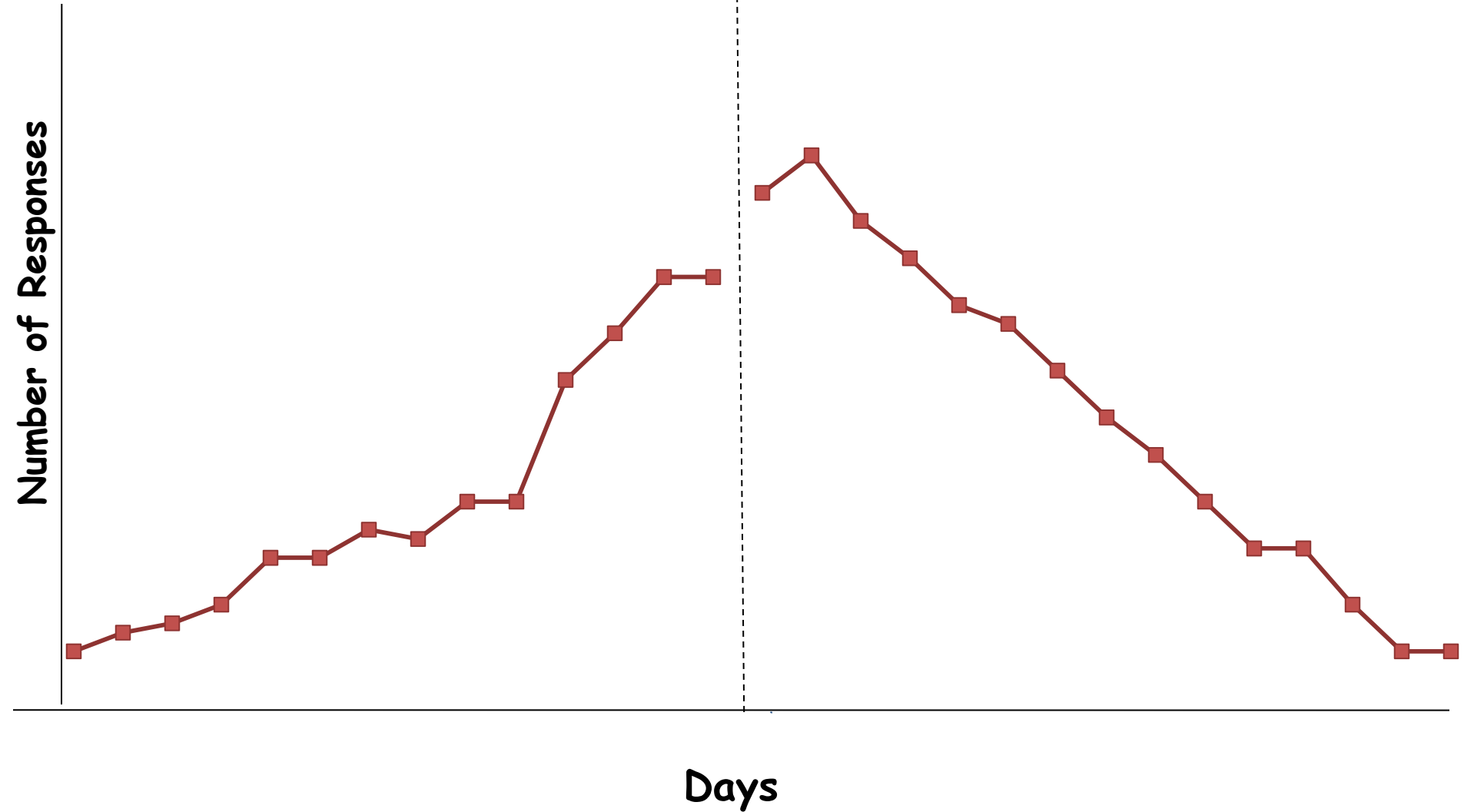
Contingent Upon Behavior...

	...present a stimulus that	...remove a stimulus that
...increases the behavior	Positive Reinforcement	Negative Reinforcement
...decreases the behavior	Positive Punishment	Negative Punishment

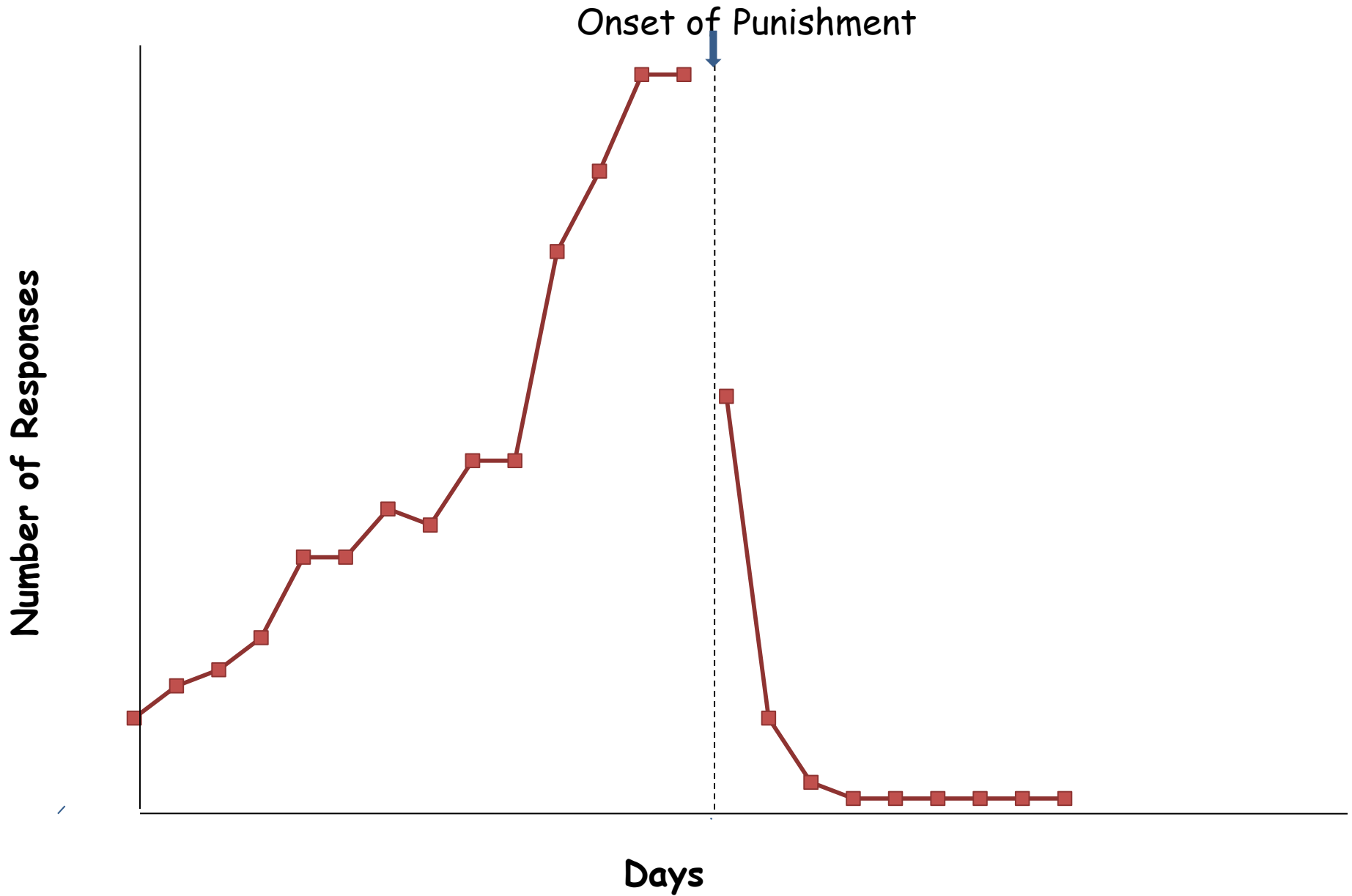
Extinction: The withholding of reinforcement for a previously reinforced behavior - leads to decrease

Extinction

Extinction Onset



Punishment



Delivering the Reinforcer

- **Immediacy**
 - Only reinforce appropriate and desired behavior
- **Duration, intensity**
 - Brief and controllable reinforcement
- **Pair reinforcement with social praise**
 - Conditioned reinforcement

Delivering the Reinforcer

- Altering the value of the reinforcer
 - Establishing operations
 - Deprivation/Satiation
- Thinning the reinforcement schedule

If behavior does not increase, that means it has not been reinforced

Step #3 - Defining Antecedent

- The conditions and/or events that happen immediately prior to the occurrence of the behavior
- There is always an antecedent
 - May be complex or difficult to identify
- When teaching new skills, goal is for child to learn new responses under certain antecedent conditions
 - Stimulus control
 - Discriminative stimulus (S^d) - can be natural cue in the environment, question, request, etc.

Antecedent Manipulation

- Useful when cannot determine controlling consequences
- Useful when cannot manipulate or control consequences
- Useful when need immediate change in behavior

Antecedent Manipulation

- Remove antecedent
- Alter antecedent
- Introduce a new antecedent

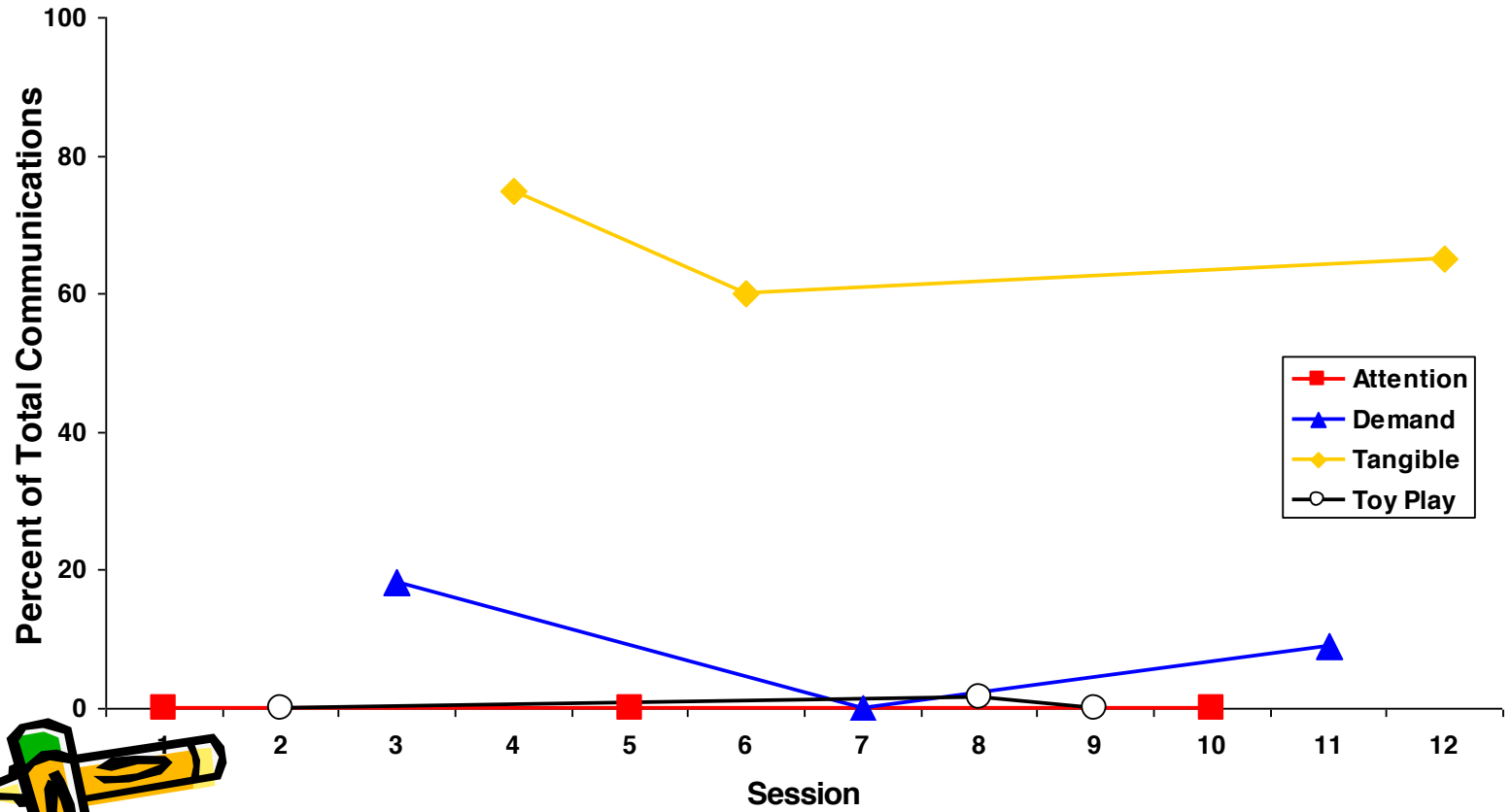
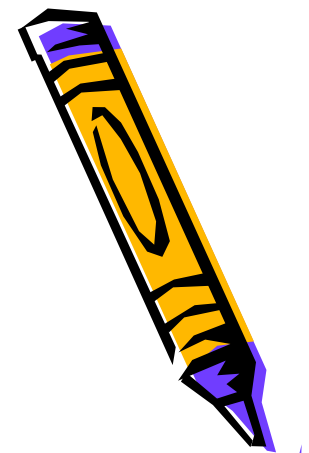
Functional Analysis

- An analysis of the function of a behavior can make the choice of treatment more informed
- Different functions commonly found:
 - Positive reinforcement - behavior leads to positive stimulus
 - E.g., attention, access to preferred activities, food
 - Negative reinforcement - behavior leads to escape/avoidance of aversive situation or stimulus
 - E.g., avoidance of nonpreferred activities, avoidance of people
 - Self-stimulatory (automatic reinforcement) - behavior itself is reinforcing
 - E.g., rocking, flapping, repetitive vocalizing, self-injury

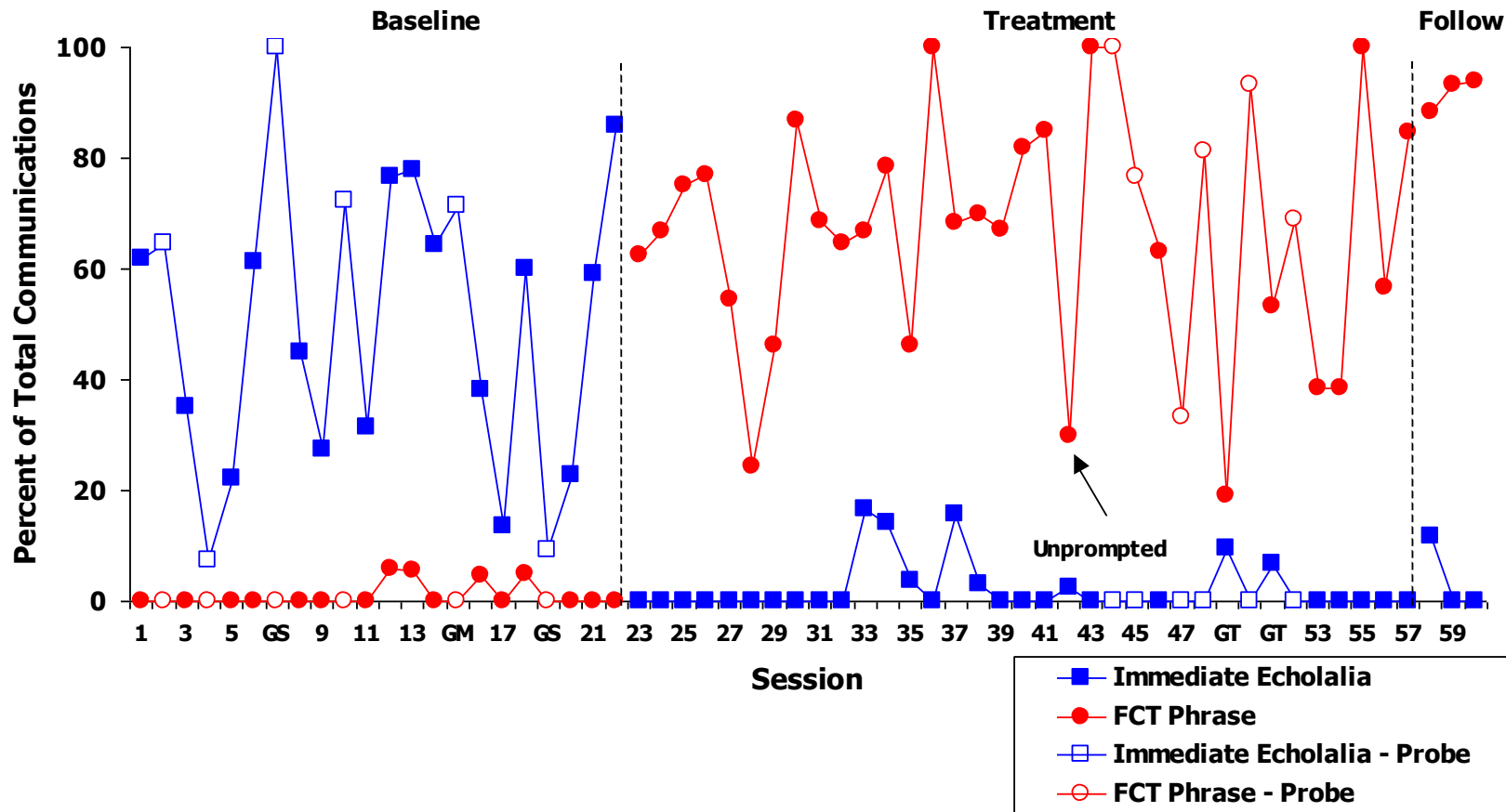
Functional Communication

- Teaching the individual another, more appropriate response that serves the same function.
- New behavior must lead to same consequence and be no more difficult to perform
- Research shows increased performance of the functionally equivalent response is accompanied by reduction in challenging behavior

Sara's Immediate Echolalia in Functional Analysis



Sara's Percent of Total Communications Identified as Echolalia and FCT Phrase (Can I have a turn?)



Step #4 - Determine Effect of Treatment Plan

- Look at data from measure of target behavior and determine if behavior has changed in desired direction

Step #6 - If adequate changes in behavior are not accomplished, revise treatment plan

Conclusions

- Autism is not a “disease” but rather a constellation of behavioral excesses and deficits that we can address via the principles of behavior
- Behavior is not random but rather is controlled by environmental events
- We can systematically look at behavioral antecedents and consequences to make informed guesses as to
 - What is controlling behavior?
 - What changes in the environment are likely to lead to behavior change?
- By measuring behavior we can make judgments as to whether our treatment is effective

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