

# Behavioral Approaches to Intervention for Individuals with Developmental Disabilities

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# Disclosures

Drs. John Dandurand, Paul Boyle, and Jocelyn Towler are co-founders of BX Analytics, LLC, a behavioral intervention and prevention research company formed in California. Our disclaimer is that the material we are about to present is based upon research conducted to seek effective tools that assist behavior services in making more accurate data collection for program efficacy evaluations.

# Peak Performance Training Centers, Inc.



# Agenda

- I. Developmental Disabilities
- II. Brief History of Applied Behavioral Analysis
- III. Operant Conditioning Review
- IV. Functional Analysis
- V. Prevention and Intervention
- VI. Behavior Intervention Pitfalls and Behavior Analysis Pitfalls
- VII. Developing Trends
- VIII. Q & A

# Developmental Disabilities

# Developmental Disabilities

## The Developmental Disabilities Assistance and Bill of Rights Act of 2000:

- “IN GENERAL.—The term “developmental disability” means a severe, chronic disability of an individual that—
  - is attributable to a mental or physical impairment or combination of mental and physical impairments;
  - is manifested before the individual attains age 22;
  - is likely to continue indefinitely;
  - results in substantial functional limitations in 3 or more of the following areas of major life activity:
    - Self-care.
    - Receptive and expressive language.
    - Learning.
    - Mobility.
    - Self-direction.
    - Capacity for independent living.
    - Economic self-sufficiency; and
  - reflects the individual’s need for a combination and sequence of special, interdisciplinary, or generic services, individualized supports, or other forms of assistance that are of lifelong or extended duration and are individually planned and coordinated.”

# Developmental Disabilities

## DSM-5's Description of Neurodevelopmental Disorders:

- “The neurodevelopmental disorders are a group of conditions with onset in the developmental period. The disorders typically manifest early in development, often before the child enters grade school, and are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning. The range of developmental deficits varies from very specific limitations of learning or control of executive functions to global impairments of social skills or intelligence. The neurodevelopmental disorders frequently co-occur; for example, individuals with autism spectrum disorder often have intellectual disability (intellectual developmental disorder), and many children with attention-deficit/hyperactivity disorder (ADHD) also have a specific learning disorder.”

# Developmental Disabilities: ID

## DSM-5's Intellectual Disability (ID) Diagnostic Criteria:

- “Intellectual disability (intellectual developmental disorder) is a disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains. The following three criteria must be met:
  - A. Deficits in intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing.
  - B. Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community.
  - C. Onset of intellectual and adaptive deficits during the developmental period.”
- Three Types: (F70) Mild, (F71) Moderate, (F72) Severe



# Developmental Disabilities: ASD

## DSM-5's Autism Spectrum Disorder (ASD) Diagnostic Criteria:

- A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by all of the following, currently or by history (examples are illustrative, not exhaustive; see text):
  1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
  2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
  3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

# Developmental Disabilities: ASD

## DSM-5's Autism Spectrum Disorder (ASD) Diagnostic Criteria:

- B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
  1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
  2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
  3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
  4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

# Developmental Disabilities: ASD

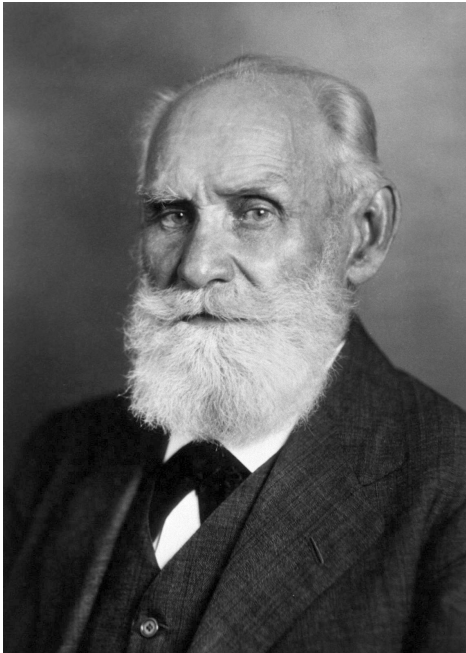
## DSM-5's Autism Spectrum Disorder (ASD) Diagnostic Criteria:

- C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).
- D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
- E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

One F Code: F84.0 Autism Spectrum Disorder

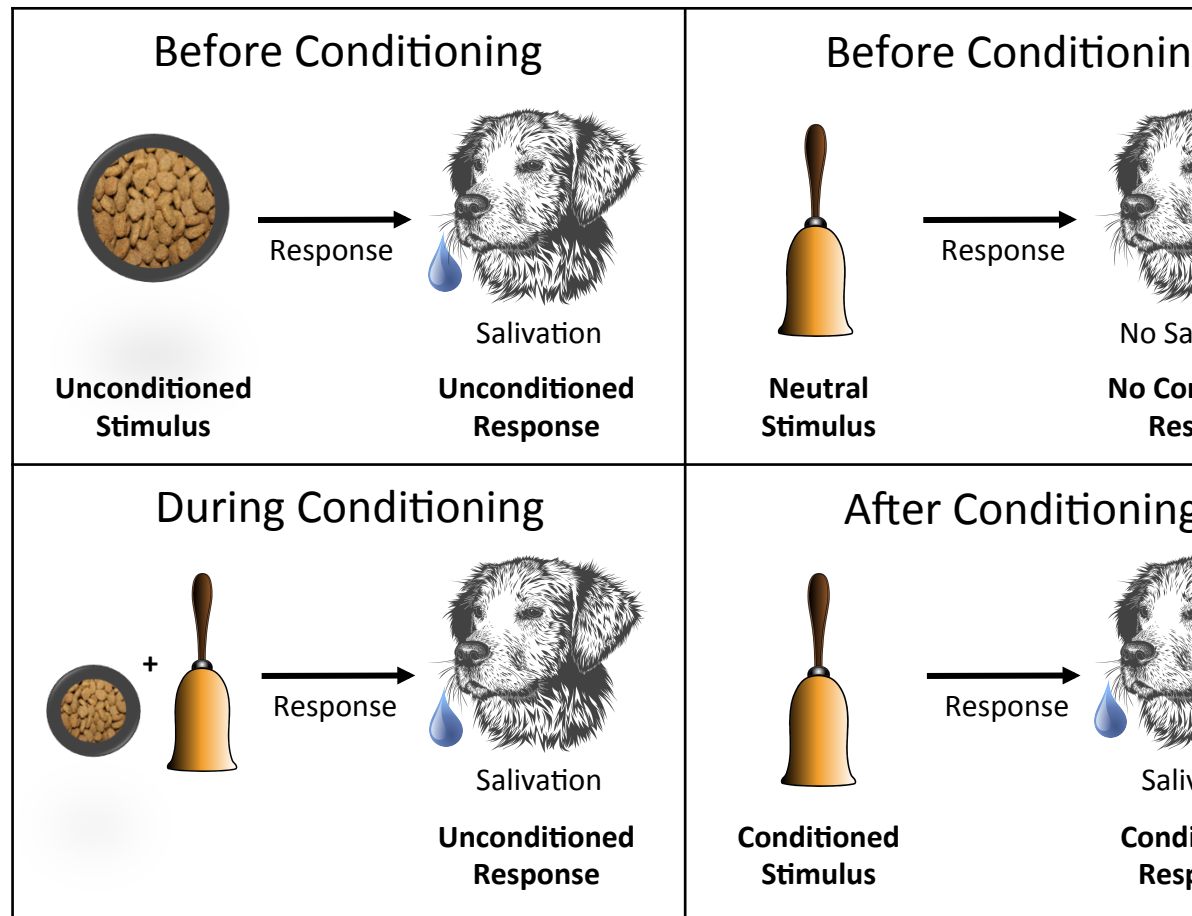
# Brief History of Applied Behavioral Analysis

# Ivan Pavlov



**born:** September 26, 1849, Ryazan, Russia  
**died:** February 27, 1936, Saint Petersburg, Russia  
**education:** Saint Petersburg State University  
**achievement:** Russian physiologist - Nobel Prize Award 1904.

## Classical Conditioning



# John B. Watson



**born:** January 9, 1878, Travelers Rest, SC  
**died:** September 25, 1958, New York City, NY  
**education:** Johns Hopkins University, University of Chicago, Furman University

## The Little Albert Experiment

In the 1920's, John Watson used classical conditioning to cause baby Albert to be afraid of white rats by hitting a hammer against a bar every time Albert saw a rat.



Before Conditioning



After Conditioning



This fear "generalized" to other animals and even a Santa beard.

# John Watson

John Watson (1913) expanded upon Pavlov's work in classical conditioning and argued for an objective study of behavior as a natural science, consisting of direct observation of the relationship between the environment and behavioral responses.

He proposed that the stimulus–response (S–R) model of experimental psychology could predict and control human behavior that started the movement in psychological research called behaviorism.

- Watson's study of the relationship between behavior and environment, was a starting point for other researchers to study behavior as a natural science, like biology, physics, and the other natural sciences (Cooper, Heron, & Heward, 2007).

**A stimulus can be described:**

**Topographically** by its physical features.

**Temporally** by when it occurs.

**Functionally** by its effect on behavior.

# BF Skinner

B. F. Skinner's first major work, *The Behavior of Organisms*, 1938, set the groundwork for the development of the "experimental analysis of behavior," now termed "behavior analysis."

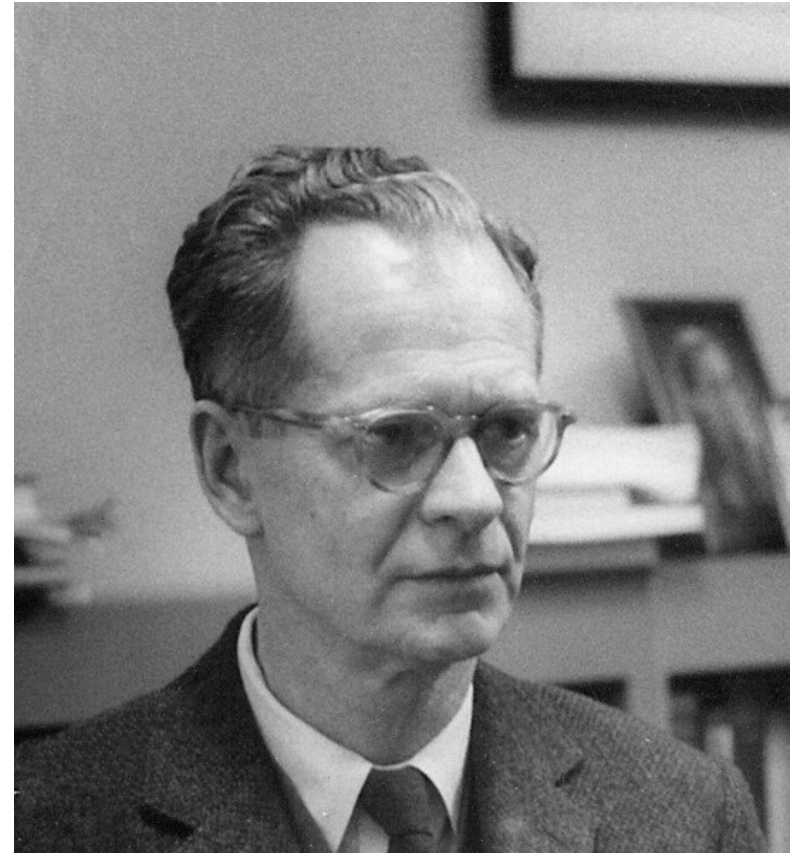
Skinner was interested in giving a scientific account for all behavior.

However, unlike Watson and other psychologists at the time, he believed that the S-R model did not explain most behaviors.

In this book, Skinner classifies behavior as respondent or operant.

Respondent behavior is caused by an observable stimulus

Operant behavior has no observable stimulus



- **Born:** March 20, 1904, Susquehanna Depot, PA
- **Died:** August 18, 1990, Cambridge, MA
- **Education:** Harvard University (1931), Hamilton College (1926)



# B.F. Skinner

While conducting research with lab animals, Skinner noted that environmental events that followed behaviors (*consequences*) had more influence on the future occurrence of those behaviors than did the antecedents.

Skinner proposed a more descriptive, functional analysis of the relationship between independent and dependent variable (Sturmey & Bernstein, 2004), consisting of the A-B-C three-term contingency

- (antecedent–behavior–consequence).

He called these behaviors “operant,” that is, those behaviors are influenced by the consequences of similar behaviors in an organism’s past (Cooper et al., 2007).

# Consequences

## Reinforcement

Reinforcement is the key element in operant conditioning and in most behavior change programs. It is the process by which behavior is strengthened. If a behavior is followed closely in time by a stimulus and this results in an increase in the future frequency of that behavior, then the stimulus is a positive reinforcer. If the removal of an event serves as a reinforcer, this is termed negative reinforcement. There are multiple schedules of reinforcement that affect the future probability of behavior.

## Punishment

Punishment is a process by which a consequence immediately follows a behavior which decreases the future frequency of that behavior. As with reinforcement, a stimulus can be added (positive punishment) or removed (negative punishment). Broadly, there are three types of punishment: presentation of aversive stimuli (e.g., pain), response cost (removal of desirable stimuli as in monetary fines), and restriction of freedom (as in a 'time out'). Punishment in practice can often result in unwanted side effects. Some other potential unwanted effects include resentment over being punished, attempts to escape the punishment, expression of pain and negative emotions associated with it, and recognition by the punished individual between the punishment and the person delivering it.

# Skinner con't

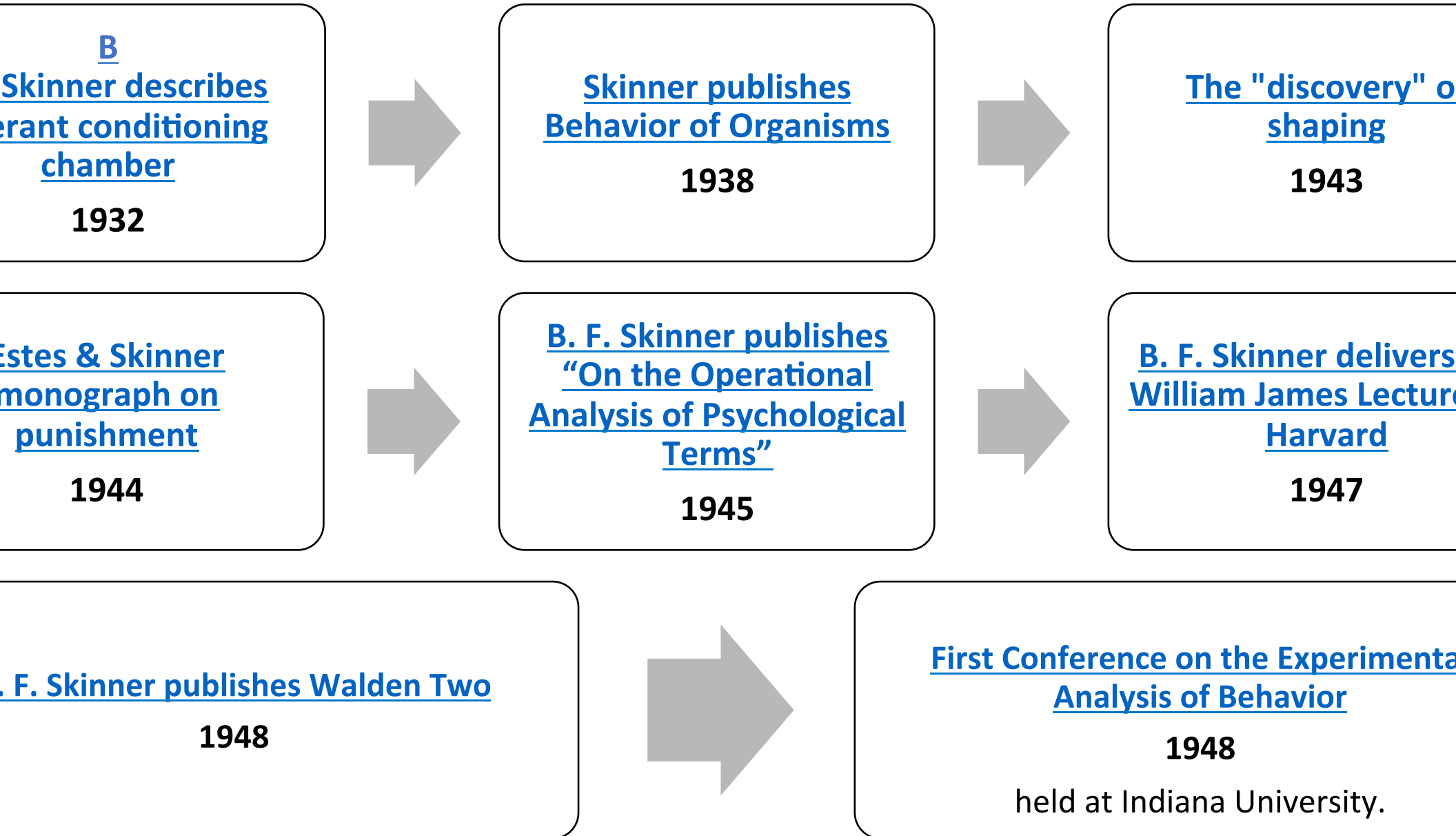
Skinner and others outlined basic principles of behavior, which include reinforcement, prompting, fading, shaping, schedules of reinforcement, et

These principles comprise the pure science of behavior analysis. It's important to understand that this is the pure science, NOT the applied science.

When the principles of the pure science of behavior analysis are used to teach (or when used in any applied setting), this practice is called "Applied Behavior Analysis" (or, earlier, behavior modification).

This means that the principles used to describe how behavior is lawful, observable and measurable, and has an impact on the environment have been adapted into teaching methods based on those principles.

# Timeline (Skinner)



# Applying Behavioral Principles to Humans

Research during the 1950s and 1960s utilized the methods of the experimental analysis of behavior to examine whether the principles of behavior derived from experimentation with nonhumans could be replicated with human subjects (Cooper et al., 2007).

Sidney Bijou's early work (e.g., Bijou, 1955, 1957, 1958) was fundamental in extending the methods and findings of animal research so that the behavior of humans could be experimentally analyzed.

He proposed descriptions of methodologies for "a systematic approach to an experimental analysis of child behavior" (Bijou, 1957, p. 250).

He described specific instrumentation, how data was to be recorded, and how to maximize control over independent variables enabling researchers to study behavior "by relating the direct effect of one variable upon another" (Bijou, 1957, p. 243).

- These publications were seminal in establishing a methodology through which the functional relationships of human behavior could be analyzed in a well-controlled environment.

# Applying Behavior Principles in a Clinical Setting

One of the first studies to apply operant principles to human behavior was conducted by Fuller (1949), who used positive reinforcement (sugar solution) to teach an 18-year-old man with profound intellectual disabilities to raise his hand.

- Prior to this, it was widely assumed that individuals with severe intellectual disabilities were not capable of learning.

Indeed, Fuller wrote that in regard to the specific participant, doctors “thought it was impossible for him to learn anything,” but the results of this study demonstrated that “if time permitted, other responses could be conditioned and discriminations learned” (Fuller, 1949, p. 590).

In 1953, Lindsley, Skinner, and Solomon (1953) applied the principles of operant conditioning to inpatients at a psychiatric state hospital, further establishing the basic concept that the behavior of all individuals is subject to behavioral principles of learning and motivation.

# var Lovaas & Robert Koegel

Applied Behavior Analysis (ABA) Therapy was first developed in the 1970s at UCLA.

The original approach developed was a technique or sub-set of ABA Therapy called Discrete Trial Training (DTT)

When behavior is rewarded, it is more likely to be repeated.

Its approach has expanded to include several different types of ABA Therapy or techniques to aid application, including:

- Pivotal Response Training (PRT), Behavior Modification, Picture Exchange Communication System (PECS), Functional Analysis, Differential Reinforcement, Behavior Mapping, Sensory Strategies, and Advanced Play Skills.

Research demonstrated increased improvement in children's IQ scores and an increase in functional learning, in children who received 40 hours per week of ABA Therapy.

# Measuring behavior

When measuring behavior, there are both dimensions of behavior and quantifiable measures of behavior. In applied behavior analysis, the quantifiable measures are a derivative of the dimensions.

**Repeatability**- Response classes occur repeatedly throughout time—i.e., how many times the behavior occurs.

- **Count** is the number of occurrences in behavior.
- **Rate/frequency** is the number of instances of behavior per unit of time.
- **Celeration** is the measure of how the rate changes over time.

**Temporal extent**- This dimension indicates that each instance of behavior occupies some amount of time—i.e., how long the behavior occurs.

- **Duration** is the amount of time in which the behavior occurs.
- **Temporal locus** Each instance of behavior occurs at a specific point in time—i.e., when the behavior occurs.
- **Response latency** is the measure of elapsed time between the onset of a stimulus and the initiation of the response.
- **Interresponse time** is the amount of time that occurs between two consecutive instances of a response class.

**Derivative measures**- Derivative measures are unrelated to specific dimensions:

- **Percentage** is the ratio formed by combining the same dimensional quantities.
- **Trials-to-criterion** are the number of response opportunities needed to achieve a predetermined level of performance.



# Seven characteristics of ABA

Baer, Wolf, and Risley's 1968 article is still used as the standard description of ABA. It lists the following seven characteristics of ABA:

**Applied:** ABA focuses on the social significance of the behavior studied. For example, a non-applied researcher may study eating behavior because this research helps to clarify metabolic processes, whereas the applied researcher may study eating behavior in individuals who eat too little or too much, trying to change such behavior so that it is more acceptable to the persons involved, to others, and to society as a whole.

**Behavioral:** ABA is pragmatic; it asks how it is possible to get an individual to do something effectively. To answer this question, the behavior itself must be objectively measured. A behavior scientist cannot resort to the measurement of non-behavioral substitute, such as a verbal description.

**Analytic:** Behavior analysis is successful when the analyst understands and can manipulate the events that control the behavior. This is relatively easy to do in the lab, where a researcher is able to arrange the relevant events, but it is not always easy, or ethical, in an applied situation. Baer et al. outline two methods that may be used in applied settings to demonstrate control while maintaining ethical standards. These are the reversal design and the multiple baseline design. In the reversal design, the experimenter first measures the behavior of choice, introduces an intervention, and then measures the behavior again. Then, the intervention is removed, or reduced, and the behavior is measured yet again. The intervention is effective to the extent that the behavior changes and then changes back in response to these manipulations. The multiple baseline method may be used for behaviors that seem irreversible. Here, several behaviors are measured and then the intervention is applied to each in turn. The effectiveness of the intervention is revealed by changes in just the behavior to which the intervention is being applied.

# Seven characteristics of ABA

- Technological:** The description of analytic research must be clear and detailed, so that any competent researcher can repeat it accurately. Cooper et al. describe a good way to check this: Have a person trained in applied behavior analysis read the description and then act out the procedure in detail. If the person makes any mistakes or has to ask any questions then the description needs improvement.
- Conceptually Systematic:** Behavior analysis should not simply produce a list of effective interventions. Rather, to the extent possible, these methods should be grounded in behavioral principles. This is aided by the use of theoretically meaningful terms, such as "secondary reinforcement" or "errorless discrimination" where appropriate.
- Effective:** Though analytic methods should be theoretically grounded, they must be effective. If an intervention does not produce a large enough effect for practical use, then the analysis has failed.
- General:** Behavior analysts should aim for interventions that are generally applicable; the methods should work in different environments, apply to more than one specific behavior, and have long-lasting effects.

# Operant Conditioning

# Operant Conditioning – Overview

Positive = Addition of Stimulus

Negative = Removal of Stimulus

Positive ≠ “Good” & Negative ≠ “Bad”

Reinforcement = Increase Behavior

Punishment = Decrease Behavior

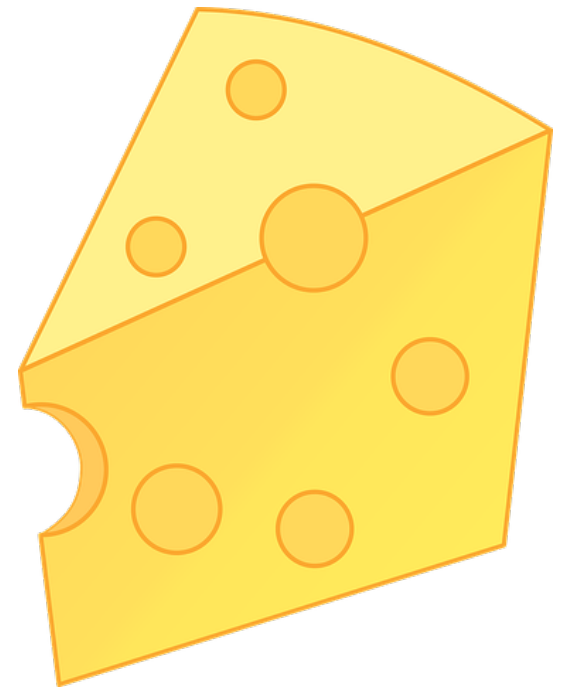
# Operant Conditioning – Reinforcement

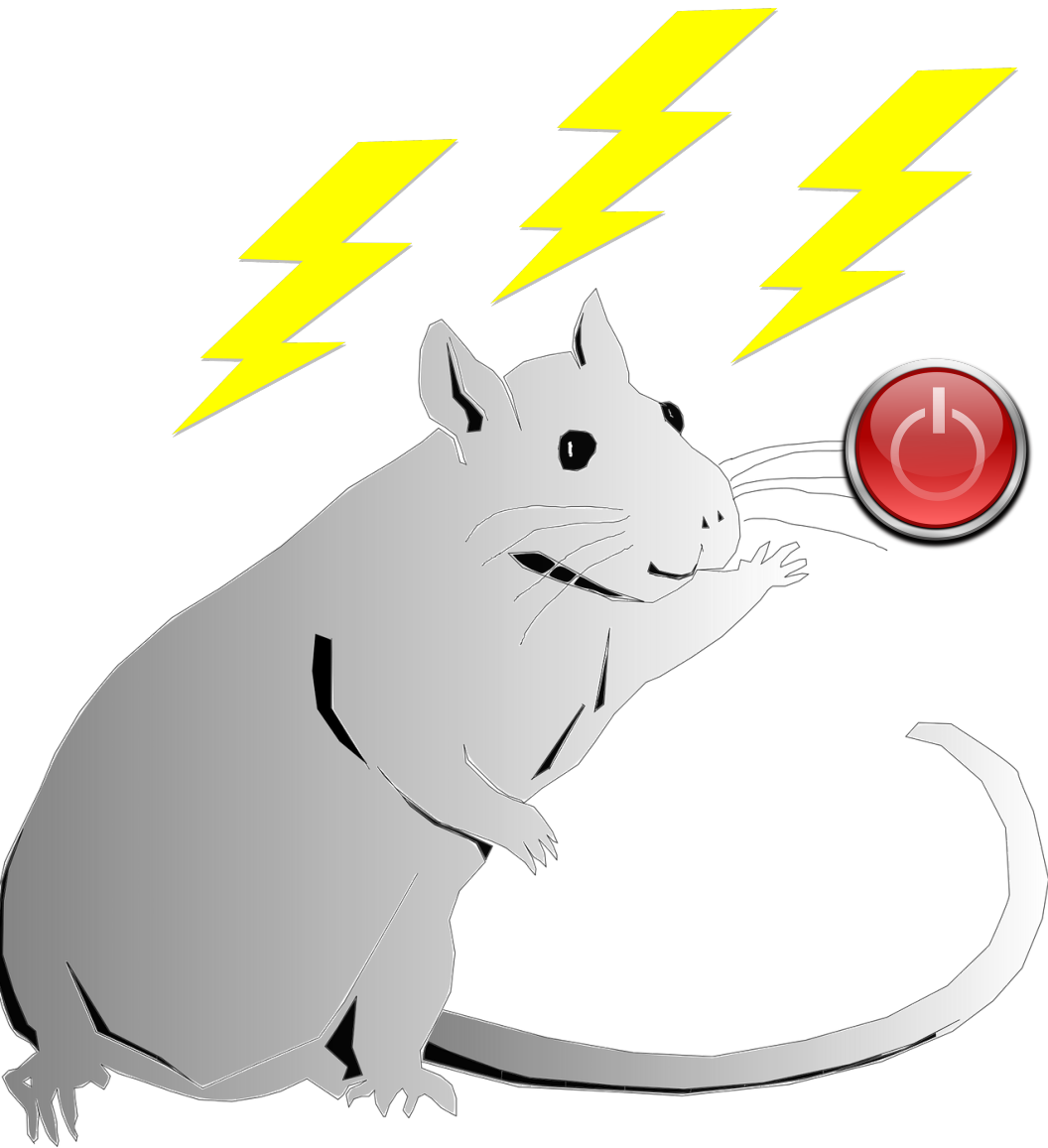
Positive Reinforcement:

Increases the likelihood of response by adding something  
“Add something good”

Negative Reinforcement:

Increases the likelihood of response by removing something  
“Remove something bad”





# Operant Conditioning – Punishment

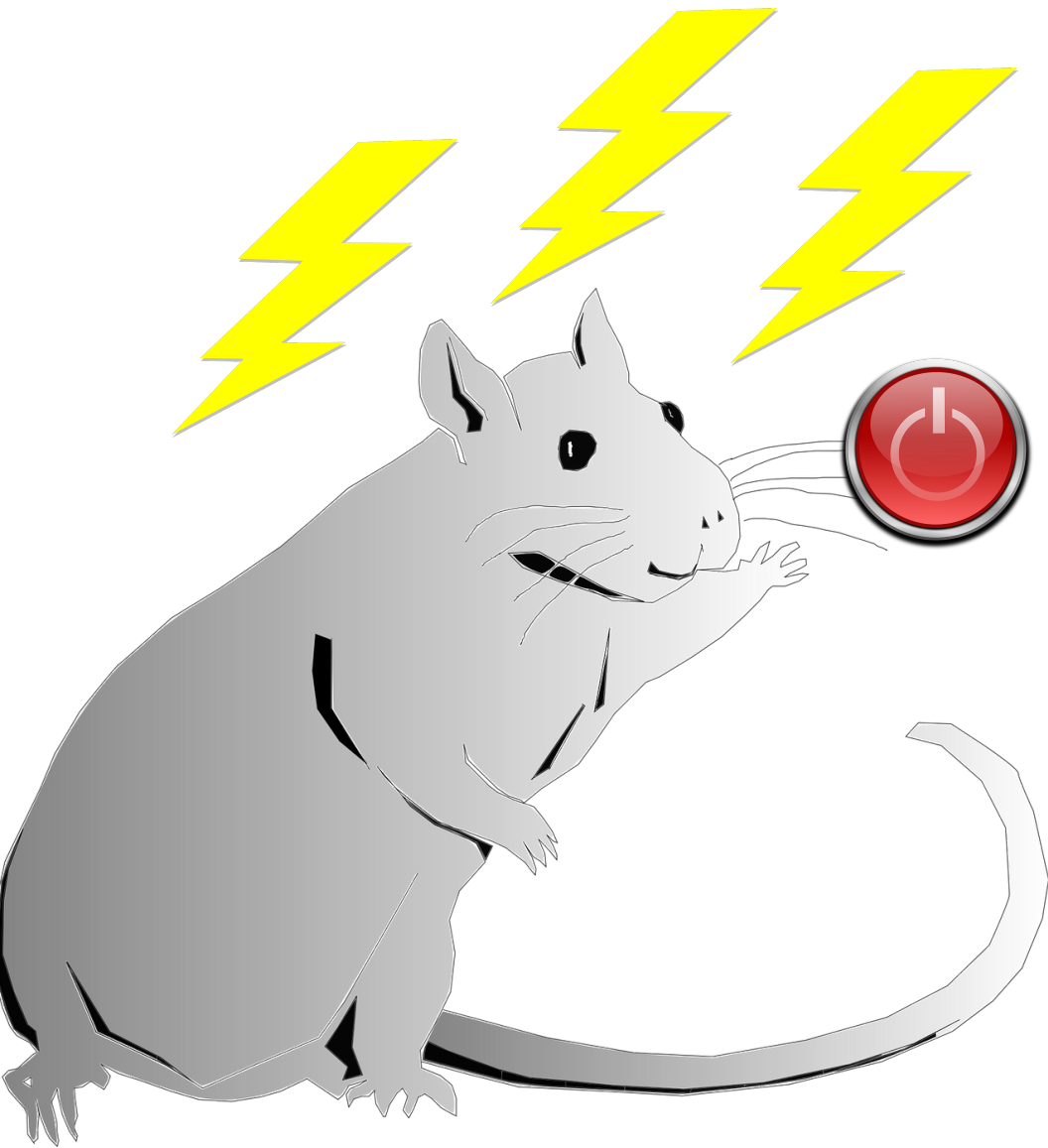
Positive Punishment:

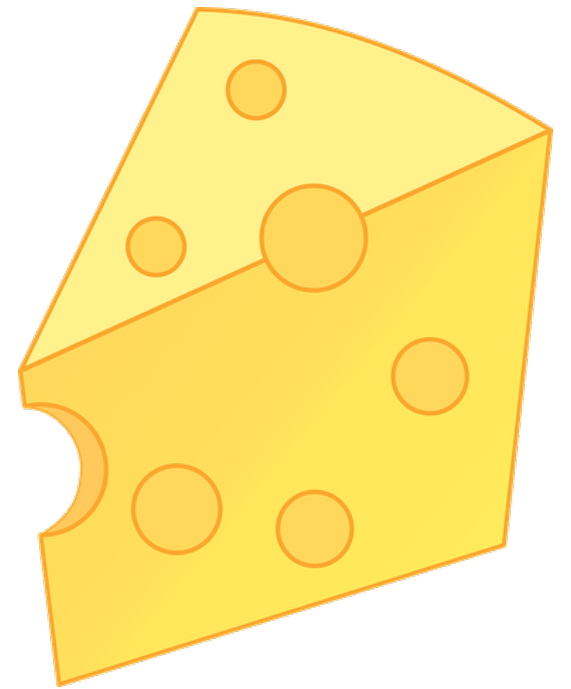
Decreases the likelihood of response by adding something  
“Add something bad”

Negative Punishment:

Decreases the likelihood of response by removing something  
“Remove something good”





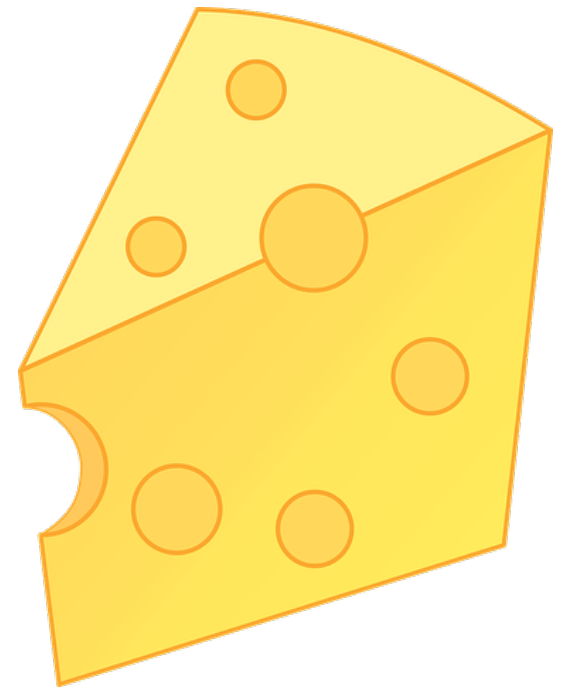


# Operant Conditioning – Extinction

Extinction:

Stop reinforcing a response, resulting in a decreased likelihood of the response

“Stop rewarding something”













# Operant Conditioning

## Reinforcement

Increase Behavior

### Positive

Add appetative stimulus  
following correct behavior  
*Giving a treat when the dog sits*

### Negative

**Escape**  
Remove noxious stimuli  
following correct behavior  
*Turning off an alarm clock by pressing  
the snooze button.*

**Active Avoidance**  
Behavior avoids noxious  
stimulus  
*Studying to avoid getting a bad grade*

## Punishment

Decrease Behavior

### Positive

Add noxious stimuli  
following behavior  
*Spanking a child for cursing*

### Negative

Remove appetative stimulus  
following behavior  
*Telling the child to go to his room for cursing*

# Functional Analysis

# Methods of Assessment

Interviews

Direct Observation

Also, other information may be obtained through:

- Review of Records
- Review of Audio and/or Visual Recordings



# Selecting A Behavior for Intervention

Impairment

Illegal or Rule-Breaking

Concern of Individual Themselves or Significant Others

That May Prevent Problems from Developing



# Possible Behaviors for Intervention

Purchasing Candy

Talking Loudly On The Bus

Yelling at the Store Clerk

Hitting Other People

Sleeping At School

# Steps to a Functional Assessment/Analysis

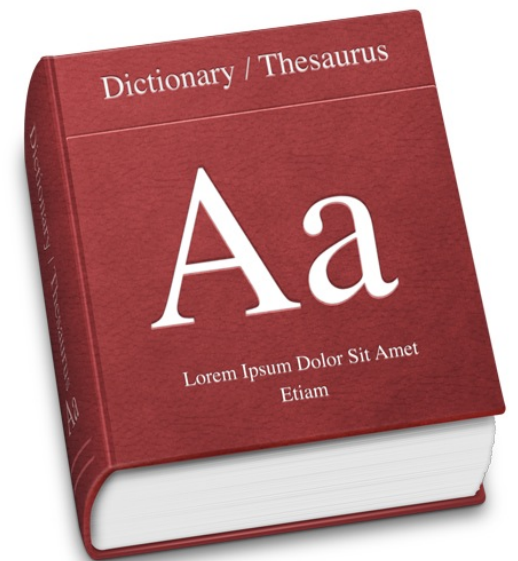
- Step 1. Identify and Define “Problem” Behavior
- Step 2. Identify Antecedents
- Step 3. Identify Consequences Which Follow The “Problem” Behavior
- Step 4. Consider Health/Medical/Personal Variables
- Step 5. Generate Hypotheses
- Step 6. Consider Hypotheses Which May Be Correct Based on Available Info
- Step 7. Test Hypotheses (Cause “Problem” Behavior)
- Step 8. Develop and Implement Treatment Plan
- Step 9. Redo Assessment If Intervention is Not Successful

# Step 1. Identify and Define “Problem” Behavior

First, we generate an “operational definition” – a definition of the behavior that is intended to be clear to all observers.

According to Hawkins & Dobes (1975), this definition should be:

- Objective
- Clear
- Complete



# Step 1. Problem Behavior

Bob will strike another person with his hand.

This excludes high fives and hugs.



## Step 2. Identify Antecedents

Next we identified events, environmental factors, or conditions which precede the behavior as defined by the operational definition.

Generally, There are Two Types of Antecedents:

- Setting Events
- Prompts



## Step 2. Antecedents

his behavior appears to occur:

After staff says "Stop"

After Jacob is told "No" when he asks for something

After a staff member raises his or her voice

# Step 3. Identify Consequences Which Follow The “Problem” Behavior

Next, we identify how a behavior is maintained (reinforced).

Per Cooper (2014):

- Positive Reinforcement
  - Social Positive Reinforcement (Attention)
  - Tangible Reinforcement (e.g., Food, Activity)
  - Automatic Positive Reinforcement (e.g., thumb sucking)
- Negative Reinforcement
  - Social Negative Reinforcement (Escape)
  - Automatic Negative Reinforcement (e.g., putting lotion on skin, self-injury for pain)

## Step 3. Consequences

After Jacob hits Tina, a staff member, the facility administrator, Nancy, visits Jacob to complete an incident report. She asks him what is wrong and spends 15 minutes with him. Jacob really likes Nancy and enjoys spending time with her.

Nancy is possibly a "positive reinforcer" (Attention)

## Step 3. Consequences

After Jacob hits a staff member, he is asked to go to his bedroom. Jacob likes spending time in his room and he is not asked to complete any more tasks (chores) that evening. Jacob doesn't like chores

Jacob's release from chores is possibly "negative reinforcement" (Escape)

# Step 4. Consider Health/Medical/Personal Variables

## Health/Medical Variables

- E.g., Constipation, Menstrual Cycle, Blood Sugar



## Nutrition

- E.g., Food Allergies, Calories



## Medications

- E.g., Effects, Side Effects



## Personal Variables

- E.g., State of health (e.g., flu, headache, allergies)
- Motivational state (e.g., hungry, thirsty)
- Emotional state (e.g., angry, jealous)
- Temporary bodily states (e.g., fatigue, menstrual cramps)

## Step 4. Other Variables

Bob is diabetic and takes medication to help with his diabetes.

Bob has been sick recently with the flu.

# Step 5. Generate Hypotheses

Hypothesize about what causes (e.g., antecedents, health/medical/person variables) and maintains the problem behavior (i.e., consequences).





# Step 5. Hypothesis Generation

Hypothesis 1 ("Boredom"):

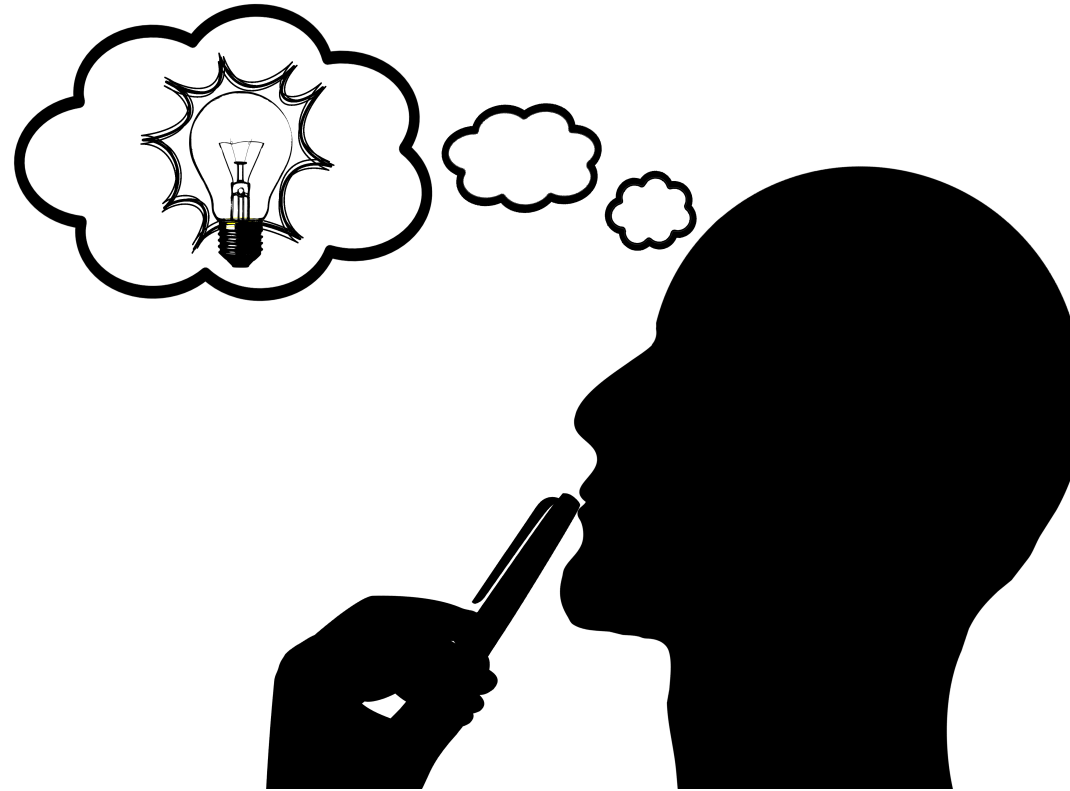
Jacob hits a staff member when he is not engaged in a enjoyable activity. After hitting somebody, he receives attention from Nancy which reinforces the behavior.

Hypothesis 2 ("Escape"):

Jacob hits staff members when he is asked to complete chores. He is then sent to his room and is able to avoid completing chores (negative reinforcement). He has lots of items in his room to keep him occupied (reinforcer)

# Step 6. Consider Hypotheses Which May Be Correct Based on Available Info

Sift through hypotheses generated and identify hypotheses most likely to be correct.



# Step 6. Hypothesis Consideration

## Hypothesis 1 ("Boredom"):

Jacob hits a staff member when he is not engaged in a enjoyable activity. After hitting somebody, he receives attention from Nancy which reinforces the behavior.

## Hypothesis 2 ("Escape"):

Jacob hits staff members when he is asked to complete chores. He is then sent to his room and is able to avoid completing chores (negative reinforcement). He has lots of items in his room to keep him occupied (reinforcer)

# Step 7. Test Hypotheses (Cause “Problem” Behavior)

Here we are going to determine whether our hypothesis is correct by causing the behavior. This is called “analogue testing”.

To do this we systematically vary conditions and observe whether the behavior increases or decreases.

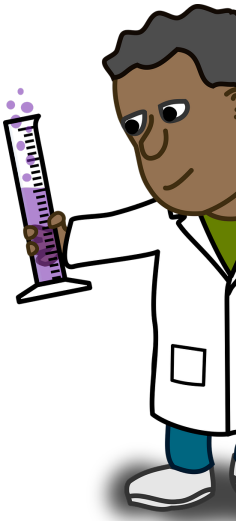
Involves data collection (discussed later)

NOTE: In the cases of self-injury or other behaviors which may result in harm, it is important to prepare for possible consequences (e.g., have medical personnel available).



# Step 7. Test Hypotheses (Cause “Problem” Behavior)

Alternatively, we may move directly to intervention and use our hypothesis to guide intervention. If our hypotheses are correct, the behavior should decrease.



# Step 7. Hypothesis Testing

We let Jacob sit for 15 minutes in a room. This room has several activities. We collect data on whether he hits a staff member sitting in the room with him.

We let Jacob sit for 15 minutes in a room. This room has no activities. We collect data on whether he hits a staff member sitting in the room with him.

We let Jacob sit for 15 minutes in a room. This room has several preferred activities. A staff member starts to make requests. We collect data on whether he hits a staff member sitting in the room with him.

# Step 8. Develop and Implement Treatment Plan

Here, based on our valid hypothesis and the evidence which supports the hypothesis, we will develop ways to address the problematic behavior:

- We can intervene at the :
  - Antecedent level (prevent the antecedents)
  - Address the function of the behavior
  - Change the consequences of the behavior



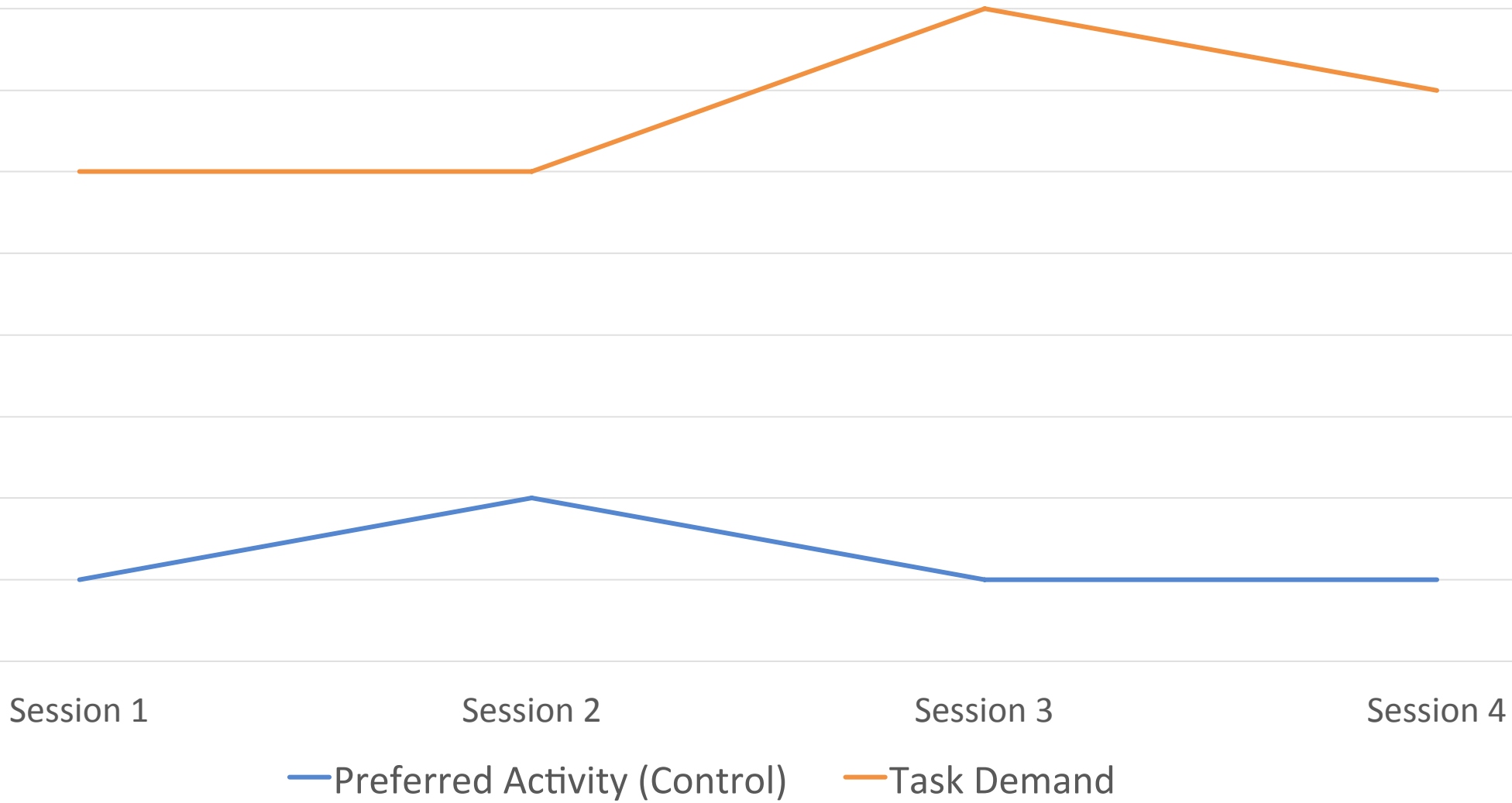
## Step 8. Treatment Planning

Jacob will be offered another preferred activity or item when his request cannot be accommodated.

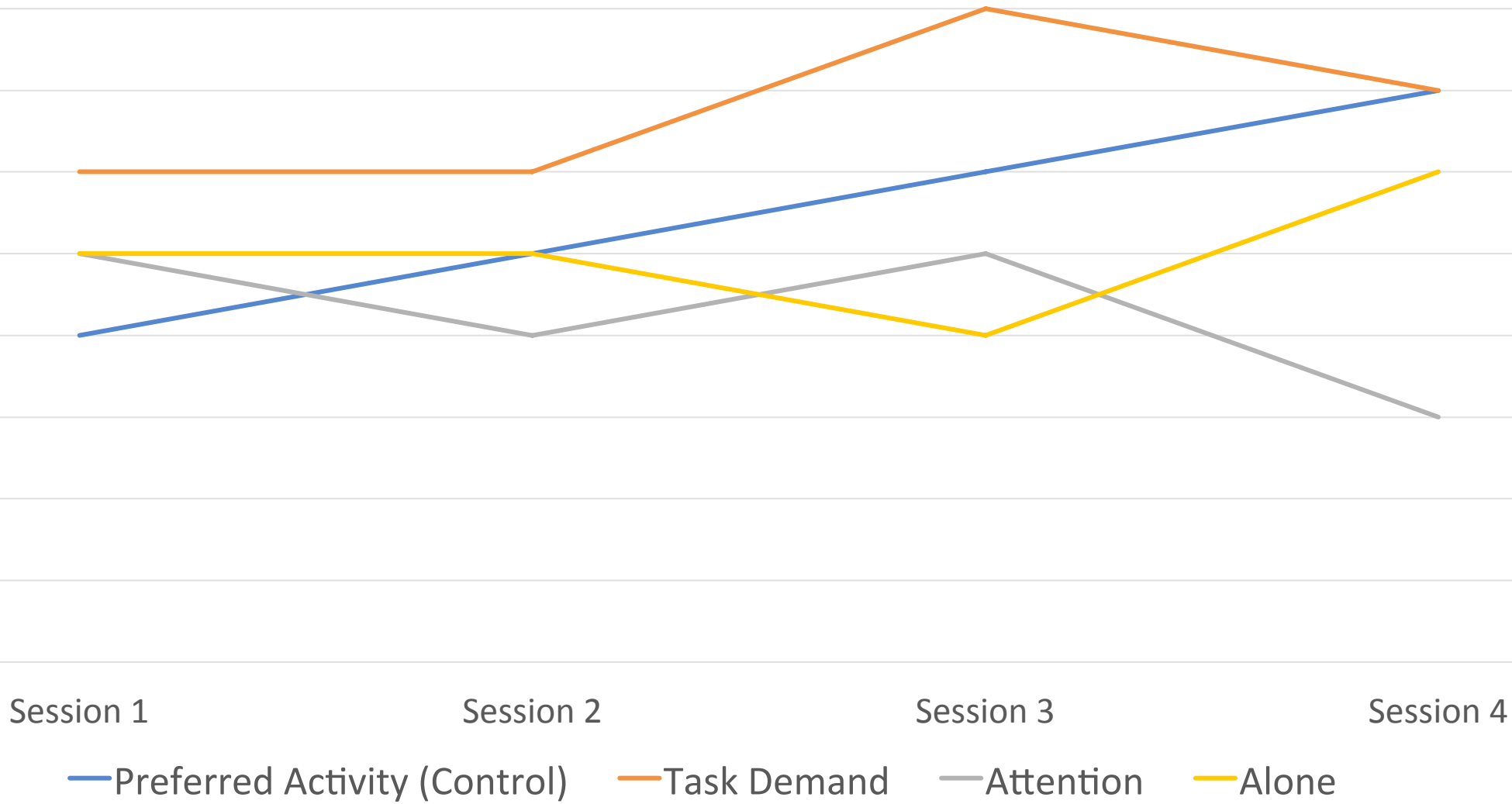
After Jacob engages in a maladaptive behavior, Nancy will not talk to him after two hours (not immediately after behavior)



# Functional Analysis Graph Example



# Functional Analysis Graph Example



# Charting

“Dependent Variable” – What We Are Measuring

Types:

- **Frequency** (Number of Times a Behavior Occurs)
- **Discrete Categorization** (e.g., Correct/Incorrect Response)
- **Interval Recording** (Did a Behavior Occur in a Given Time Period)
- **Amount of Time** (How Long Did The Behavior Occur/Duration of Behavior)
- **Intensity** (How Severe Was the Behavior)
- **Number of People** (e.g., How Many People Responded to Stimulus)
- **Other Measurements** (e.g., Weight)





# Charting

## A-B-C Sheet

Please fill out this sheet as soon as possible after the target behavior has occurred, ensuring that the client is stable and safe first.

**Client Name:** John Doe **Date:** July 2014

**Target Behaviors:** Physical Aggression, Self-Injurious Behavior, Pica Behavior

Antecedent(s)	Behavior	Consequence(s)	Date & Staff Initials

## Step 9. Charting

Staff will track the number of times that Jacob hits or attempts to hit staff with his hand each day with a behavior data sheet. Each time Jacob attempts to strike staff will be charted. This behavior does not include attempts to give staff a high five or hugs staff. This behavior will be called "Physical Aggression".

# Step 9. Redo Assessment If Intervention is Not Successful

If we are unsuccessful at changing the behavior, we need to redo or revise our functional analysis as we likely missed something.



# The A-B-C Mnemonic

**Antecedent:** What occurs immediately before a problem behavior

**Behavior:** The behavior itself, described in detail

**Consequences:** What happened after the behavior? How was it reinforced or punished by others or the environment?\*

\*Remember that sometimes behaviors are “automatically” reinforced by the organism as can be the case with self-injurious behavior.



# Prevention & Intervention

# General Prevention & Intervention Strategies:

Altering Antecedent Variables (Prevention)

Altering Consequence Variables (Intervention)

- E.g., Extinction (Stop Reinforcing the Behavior)

Teach Alternate Behaviors (Intervention)

- E.g., Which fulfills same function as “problem” behavior

# Behavior Intervention Pitfalls & Behavior Analysis Pitfalls

# Behavior Charting Pitfalls

Delayed Charting

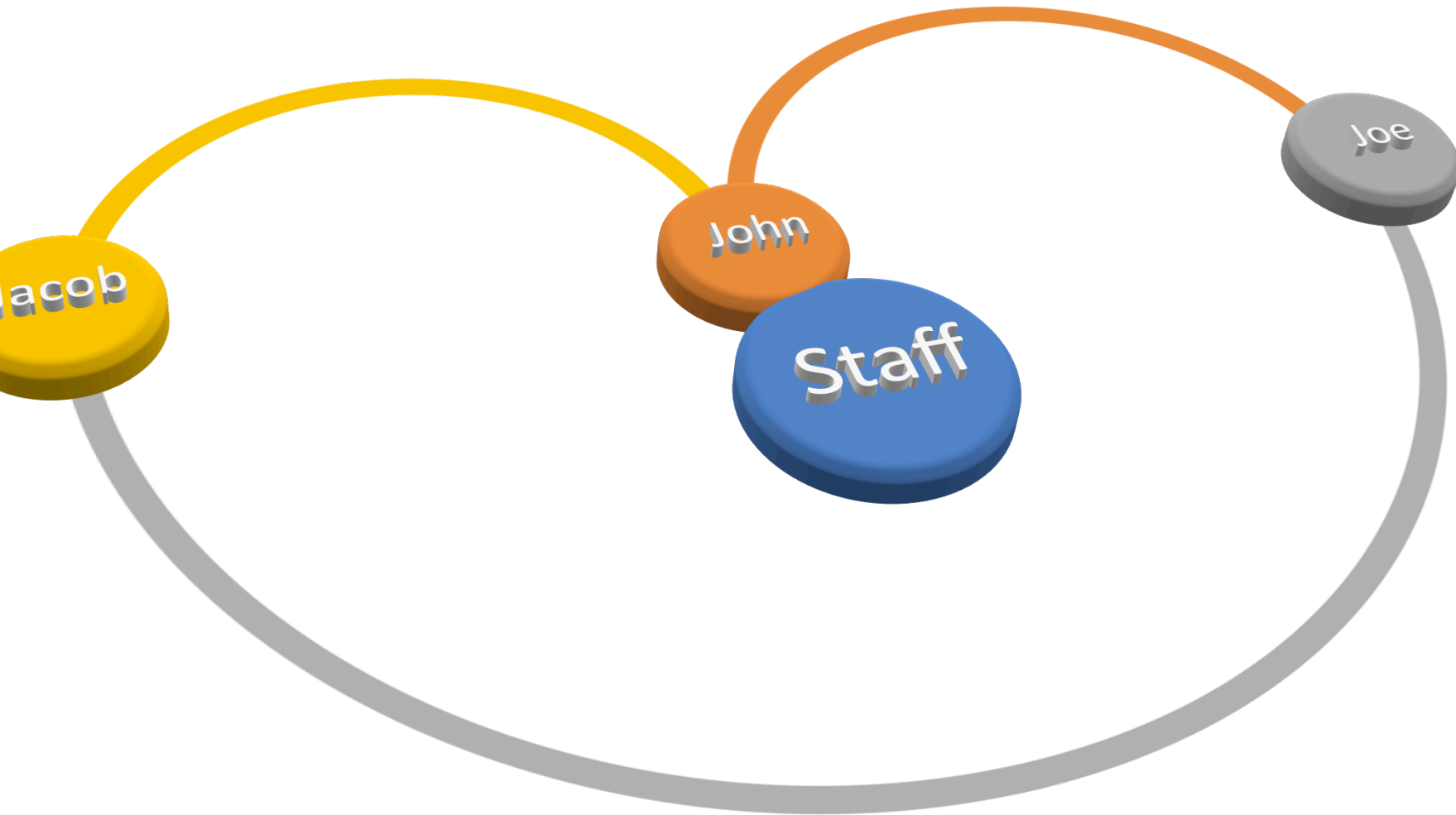
Attentional Demands

Falsified Data

# Typical Day



# Typical Day



# Behavior Intervention Pitfalls

Inconsistent Implementation of Interventions By A Staff Member  
(i.e., Intermittent Reinforcement)

Inconsistent Implementation of Interventions Across Staff Members  
(Prevention/Intervention Did Not Generalize)

Staff Person Variables (e.g., patience, reactivity)

# Developing Trends



# Electronic Charting

Electronic Health Records

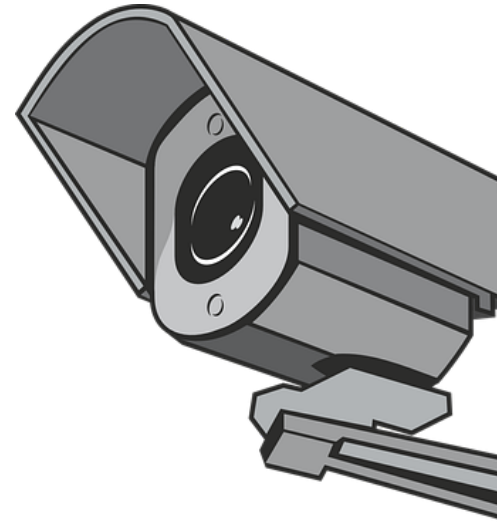
Electronic Charting

- E.g., Therap, TotalABA, Catalyst



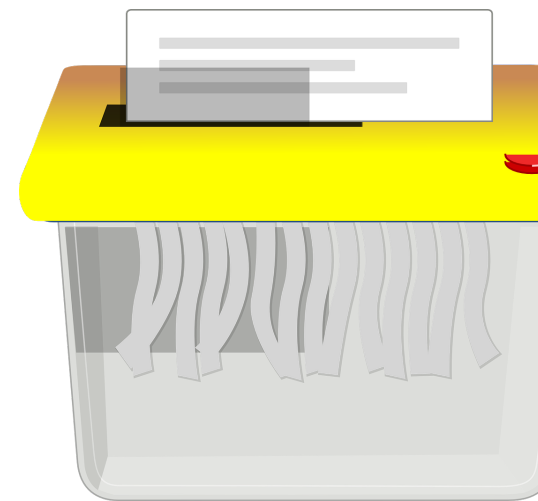
# Quality Assurance

Concurrent Charting  
Video Retrieval



# Privacy Considerations

HIPAA Compliance



Conclusion

# Questions & Answers

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