

## Functional Assessment of Behavior

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## Key Terms and Definitions

- Applied Behavior Analysis
  - Behavior
  - Consequences
    - Punishment
    - Reinforcement
  - Antecedents
    - Immediate Antecedents (AKA: Discriminative Stimulus)
    - Establishing Operations:
  - Functional Assessment
  - Behavior Intervention Plan

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## Applied Behavior Analysis

“Applied behavior analysis . . . involves studying behavior with significance to participants in naturalistic settings (e.g., school, playground, community)” (Gresham et al., 2001, p. 157).

It uses the methods of **Functional Assessment** “to identify antecedent and consequent events and to use this information in designing interventions to change socially significant behavior” (Gresham et al., 2001, p. 157).

Behavior analysis is more concerned with the function of the behavior than the behavior itself.

In other words, the “**why**” is more important than the “**what**.”

Gresham, F. M., Watson, T. S., & Skinner, C. H. (2001). Functional behavior assessment: Principles, procedures, and future directions. *School Psychology Review, 30*, 156-172.

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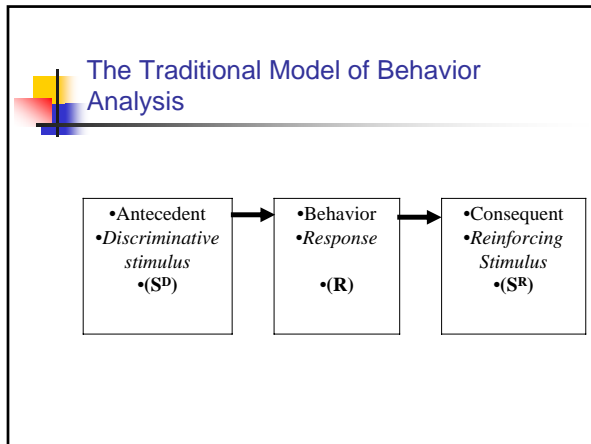
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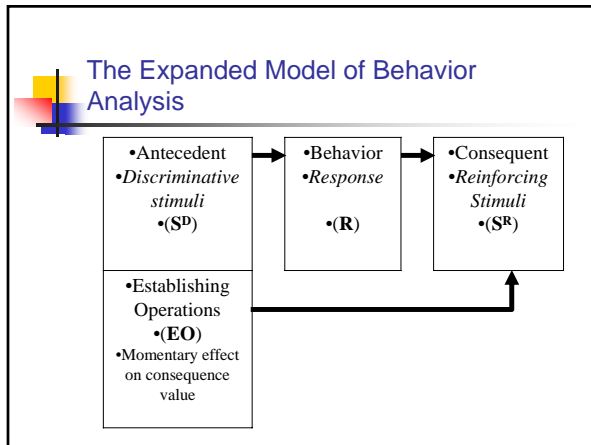
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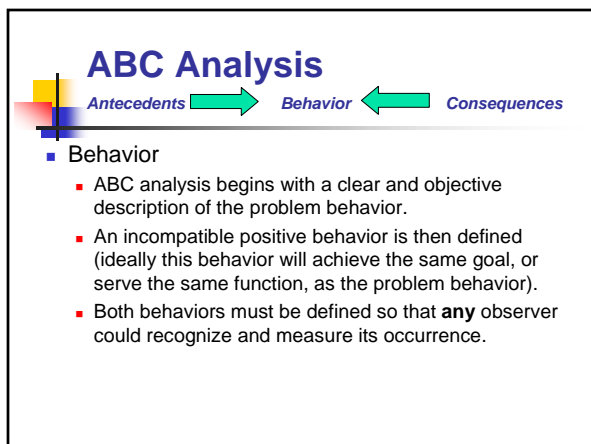
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### ABC Analysis

Antecedents → Behavior ← Consequences

- Consequences
  - Behavior (R) does, or does not, occur as a function of its consequences (S<sup>R</sup>) (R → S or operant conditioning).
  - The function that a behavior serves may be either **positive** (obtaining desired stimuli) or **negative** (escape/avoid undesired stimuli) reinforcement.

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### ABC Analysis

Antecedents → Behavior ← Consequences

- Antecedents
  - Establishing operations and immediate antecedents (also known as “discriminative stimuli”) are different types of antecedents to behavior/consequent contingencies.
  - An antecedent is potentially any stimulus that precedes a given behavior.

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### Immediate Antecedents

Immediate antecedents [or discriminative stimuli; (S<sup>D</sup>)] have a historical relationship with response (R)/reinforcement (S<sup>R</sup>) contingencies. They signal that if a given behavior or response (R) is displayed, a given reinforcing (S<sup>R</sup>) consequence is likely to follow (that the potential for reinforcement is present). In other words, the individual has learned that a correlation exists between certain stimuli [or immediate antecedents (S<sup>D</sup>)], and certain response/reinforcement (R → S<sup>R</sup>) contingencies. As a result the presence of these discriminative stimuli (S<sup>D</sup>) can be used to predict the occurrence of behavior (R).

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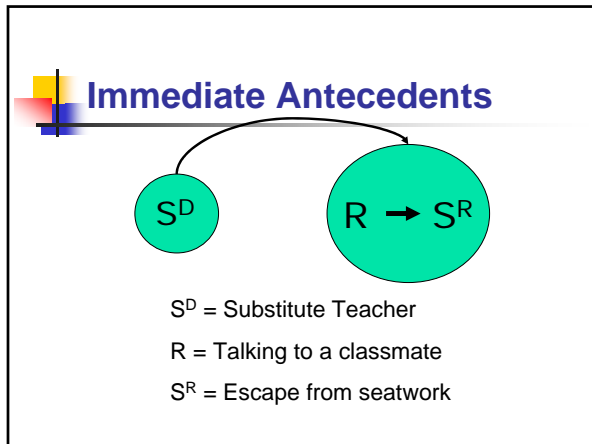
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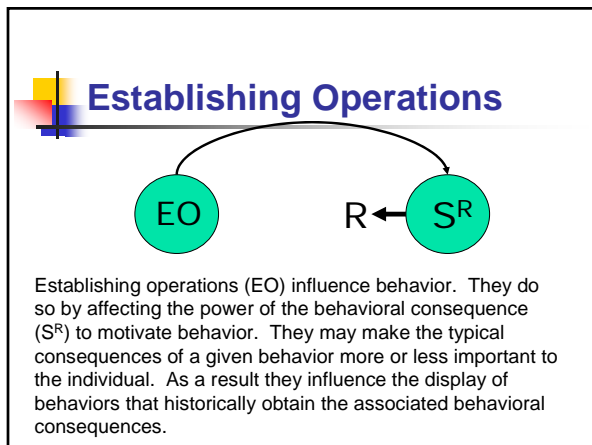
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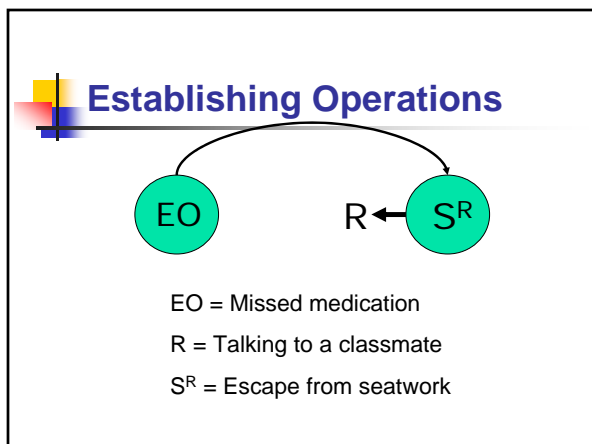
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### ABC Analysis

Antecedents → Behavior ← Consequences

- The antecedent's power to influence, control, or cue behavior is generated by a behavior's consequences.
- Consequences are potentially any stimuli that follow a given behavior.
- To the extent a behavior's consequences are judged reinforcing [i.e., they either obtain desired stimuli (positive reinforcement) or escape/avoid undesired stimuli (negative reinforcement)], the presence of associated antecedents may increase behavior.
- Conversely, to the extent consequences are judged punishing (i.e., result in undesired/unpleasant stimuli), the presence of associated antecedents may decrease behavior.

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### Functions of Behavior

- "The *functions* of behavior are not usually considered inappropriate. Rather, it is the behavior itself that is judged appropriate or in appropriate" (p. 3).
  - Getting high grades and acting-out may serve the same function (i.e., obtaining adult attention), yet the behaviors that lead to good grades are judged to be more appropriate than those that make up acting-out behaviors.

Source: Center for Effective Collaboration and Practice.

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### Reinforcers:

Consequences that increase the frequency of behavior.

- **Positive Reinforcement**  
*The behavior obtains something (or achieves an outcome) that is **perceived** as rewarding (pleasurable or desirable).*
- **Negative Reinforcement**  
*The behavior escapes/avoids something (or achieves an outcome) that is **perceived** as punishing (aversive or undesirable).*

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**Positive Reinforcers:**  
 Consequences that increase the frequency of behavior.

- Specific Environmental Outcomes
  - Obtains rewarding attention
  - Obtains rewarding tangibles
  - Obtains rewarding activities
- Specific Physiological Outcomes
  - Obtains rewarding arousal levels
  - Obtains rewarding sensory stimulation

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**Negative Reinforcement:**  
 Consequences that increase the frequency of behavior.

- Specific Environmental Outcomes
  - Escapes/Avoids punishing social situations/individuals
  - Escapes/Avoids punishing activities
- Specific Physiological Outcomes
  - Escapes/Avoids punishing sensory stimulation

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Reference: Evans, I. M., & Meyer, L. (1985). *An educative approach to behavior problems*. Baltimore: Brooks.

**Functions of Behavior**  
 Depending upon metacognitive abilities the student may or may not be aware of these functions

- Social Communicative:  
 Related to social interactions, a form of non-verbal communication. Behavior may communicate a variety of messages (e.g., "Leave me alone," "I need a break," "I want that," "Notice me").
- Self-Regulatory  
 Related to the interaction of environment and physical state. Behavior is a way to adjust arousal level (e.g., escape work when tired, obtain stimulation when bored).
- Self-Entertainment or Play  
 Related to social interactions and/or independent situations. Behavior is a way to entertain oneself and/or play with others (e.g., hitting as a way to initiate a play interaction).

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**Punishment:**  
 Consequences that decrease the frequency of behavior.

- Positive Punishment
  - Presentation of an aversive stimuli
    - Verbal reprimand
    - Restitution and over-correction
- Negative Punishment
  - Removal of a pleasant stimuli
    - Time out
    - Response cost

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**ABC Analysis**

Antecedents → Behavior ← Consequences

•Antecedents	•Behavior	•Consequences
• EO [(S <sup>P</sup> ) → R → S <sup>R</sup> ]		

**EO = Establishing Operations**  
 These events provide the motivation for behavior and by virtue of their presence or absence make it more or less likely that a behavior will be displayed.

**S<sup>P</sup> = Immediate Antecedents**  
 These events provide opportunity for behavior and act as signals or cues that a given behavior will bring about rewarding stimuli (reinforcement). They are predictors of behavior.

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**ABC Analysis**

Antecedents → Behavior ← Consequences

•Antecedents	•Behavior	•Consequences
• EO [(S <sup>P</sup> ) → R → S <sup>R</sup> ]		

**R = Behavior**  
 This is the response a student offers that is prompted by Antecedents and supported by Consequences.

**S<sup>R</sup> = Consequences**  
 These are the events that typically follow behavior and are necessarily viewed by the student as contingent upon behavior. By virtue of their presence or absence Consequences make it more or less likely that a behavior will be strengthened (i.e., displayed with more or less frequency).

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**Functional Assessment**

Functional assessment “derives from operant learning theory that is grounded in a philosophy of science known as *functionalism*. Functionalism rejects an understanding of behavior based on topography (form or structure) because behavioral topographies are merely descriptive, and as such, explain nothing about the controlling functions of behavior” (Gresham et al., 2001, p. 157).

Gresham, F. M., Watson, T. S., & Skinner, C. H. (2001). Functional behavior assessment: Principles, procedures, and future directions. *School Psychology Review, 30*, 156-172.

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**Functional Assessment**  
**Same topography, different function**

Juan, a 16 year old who reads at a second grade level, feels embarrassed to be seen with an elementary text and reacts by shoving his reading book to the floor and using inappropriate language to inform the teacher that he does not intend to complete his homework.

Sumi, an eight year old who reads Stephen King novels for recreations, finds her reading assignments boring and, therefore, shoves her book and workbook to the floor when the teacher comments on her lack of progress.

Source: Center for Effective Collaboration and Practice

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**Functional Assessment**  
**Same topography, different function**

Maurice, a 10 year old who finds multiplication of fractions difficult, becomes frustrated and throws tantrums when asked to complete worksheets requiring him to multiply fractions.

Kerry, as 12 year old who has problems paying attention, is so over-stimulated by what she sees out of the window and hears in the nearby reading group, she slams her text shut and , begins to tantrum, and loudly declares she cannot work.

Source: Center for Effective Collaboration and Practice

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### Behavior Intervention Plan (BIP) Goals

- **BIPs make problem behaviors *irrelevant*.**
  - The motivation and/or opportunity to display the problem behavior is eliminated or minimized.
- **BIPs make problem behaviors *ineffective*.**
  - The problem behavior is not reinforced.
- **BIPs make problems behaviors *inefficient*.**
  - It is much more effortful to obtain behavioral goals via the problem behavior.
  - It is easier to obtain behavioral goals via the replacement behavior.

Source: O'Neill et al. (1997). Functional Assessment and Program Development for Problem Behavior. Pacific Grove, CA: Brooks/Cole.

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### Behavior Interventions: General considerations

- Behavioral interventions respect the student's human dignity and personal privacy. They assure the student's physical freedom, social interaction, and individual choice.
- Before intervening consider the meaningfulness, appropriateness, and accessibility of the learning environment.
- Always begin with the least restrictive behavioral interventions.
  - Remember that each student's perception of what is restrictive is unique. What may be highly restrictive to one student may not be very restrictive to another.
  - Restrictive procedures are different from general classroom procedures, which are used with all students as part of the routine educational program. With a general classroom procedure no student is singled out and treated differently from his or her classmates.

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### Behavior Interventions: General considerations

- The goal should always be to use strategies that enhance the student's life in the least intrusive and most natural way and to plan for the use of less restrictive procedures as soon as possible.
- Positive behavioral interventions must emphasize the development of desirable and adaptive behaviors, rather than elimination or suppression of undesirable behaviors.

Source: San Joaquin County Office of Education

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### Behavior Interventions: General considerations

- Intervention procedures should be implemented to:
  1. Minimize or prevent antecedents to target behaviors.
  2. Minimize or prevent reinforcement of target behaviors.
  3. Allow for reinforcement of replacement behaviors.
  4. Draw student's attention to the target behavior, let them know the behavior is inappropriate and that it will not be reinforced (NOTE: be sure doing so is not reinforcing in and of itself).
  5. Encourage the student not to engage in the target behavior to avoid undesired consequences.
    - All procedures must be implemented in a calm and consistent manner.
    - If time-out is required, use the least restrictive form and ensure that the student is returned to the original activity and reinforced for replacement behavior ASAP.

Source: San Joaquin County Office of Education

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### Behavior Interventions: General considerations

- Intervention procedures should always consider medical issues.
  1. Consider medial conditions as a cause of behavior.
  2. Consider possible harm from interventions.
  3. The following issues will typically require medical consultation:
    - a) Medications are prescribed
    - b) The student has allergies
    - c) The student has seizures
    - d) The student has shunts
    - e) The behavior involves wetting, soiling, vomiting, spitting, biting.
    - f) There is concern regarding communicable disease.

Source: San Joaquin County Office of Education

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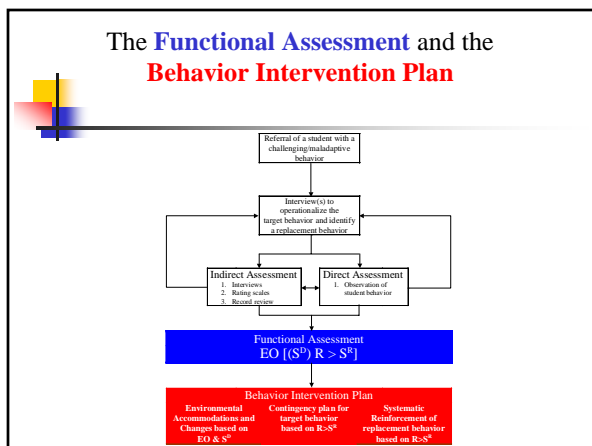
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### Next Week

- Read Ormrod Chapter 6
- From Readings write and turn in 3 discussion questions

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