The A-B-Cs of Behavior: May the Environment Be With You

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The A-B-C’s of Behavior
May the Environment Be With You!

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Behavior Specialist
Houston County Board of Education
What will we cover today?

• What exactly is the Environment?

• What is the difference between a setting event (slow trigger) and an immediate antecedent (fast trigger)?

• Why is it important to operationally define a behavior?

• How do you operationally define a target behavior that is observable and measurable?

• What are the environmental variables that influence and maintain behavior?

• How do motivating operations influence reinforcer effectiveness?
Let’s consider Michael, he is skillful at answering customer questions. He frequently erupts into loud name-calling and tantrums, unfortunately, these behaviors are not acceptable in his workplace and have caused him to be excluded by his peers and have even put him at risk of losing his job.
Just what is the ENVIRONMENT?

- Cooper, Heron, and Heward (2007) refer to the ENVIRONMENT as “a complex, dynamic universe of events that differs from instance to instance.”
- Johnston and Pennypacker (1993) include both the external surroundings and the internal events occurring inside the “behaier.”
- In a nutshell, the environment is EVERYTHING (the PEOPLE, PLACES, and THINGS) that surround us.
The 3-Term Contingency

Antecedent
Occurs before
Conditions that influence or evoke the behavior

Behavior
Observable
Measurable

Consequences
Contingent on the problem behavior
Naturally occurring or contrived
Now… the thing that brings us together today…

BEHAVIOR!
Understanding Behavior

Those unfamiliar with the science of behavior often offer explanations of behavior that are not helpful for finding a solution.

These explanations are often referred to as “circular reasoning.”

- “He won’t sit because he has ADHD.”
- “How do you know he has ADHD?”
- “I know because he won’t sit!”

- “She refuses to follow directions because she is ODD!”
- “How do you know she has ODD?”
- “I know because she won’t follow directions!!”
Circular Reasoning
## Lay vs. Behavioral Descriptions of Behavior

<table>
<thead>
<tr>
<th>Lay Description</th>
<th>What Is Observed</th>
<th>Potential Problem</th>
</tr>
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<tbody>
<tr>
<td>Lazy</td>
<td>Child does not complete a task</td>
<td>Work may be too difficult</td>
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<td>Performance may not be consistently reinforced</td>
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<td>Violent</td>
<td>Child hits others</td>
<td>Child is reinforced by suspension</td>
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<td>Child is reinforced by accolades from peers for being tough</td>
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<tr>
<td>Oppositional</td>
<td>Child protests when directions are delivered</td>
<td>Tasks are difficult</td>
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<td>Directions are not understood</td>
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<td>Child has learned that protest results in temporary escape</td>
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</table>
Case Study: Tom

During a meeting to address Tom's recent behavior problems, Tom's teacher, Mr. Witten, reported that Tom had recently become increasingly noncompliant and that his behavior often escalated to major tantrums. The principal, Mr. Falls, commented that he needed more information and asked Mr. Witten to talk through an incident of "noncompliance" and "tantrumming." Mr. Witten explained that when he asked Tom to put away his classwork and get ready for the next class, he just kept working. He would then walk over to Tom's desk and repeat the request. In response, Tom would clear everything off of his desk with one sweep of his arm, stand up, kick his chair over, and then start yelling. Mr. Falls said, "That's a clear description of what's happening, and I think we can talk about why those behaviors might be occurring and come up with some possible solutions now."
Examples of Very Specific Operational Definitions of Behavior

• Propel an object with force through the air by movement of hand/arm

• Using an open or closed hand to strike or attempt to strike the body part and/or clothing of another person/self

• Projecting matter from mouth (1 inch from body)

• Forcefully gripping skin between finger(s) and/or thumb (including with enough force to leave a visible mark)

• Collapsing body from a standing or seated position to lying on the ground in an uncontrolled manner that is not within context of the ongoing activity
## Operational Definition of the Problem Behavior

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Elopement (Piazza et al., 1997)</td>
<td>“Any part of the participant’s body passing through the doorway and moving or attempting to move 3 m (or more) away from the therapist (p.65)”</td>
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<tr>
<td>Hand mouthing (Roscoe, Iwata, &amp; Zhou, 2013)</td>
<td>“Placement of the hand past the plane of the lips or repetitive contact between the hand and mouth or tongue (p.183)”</td>
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<tr>
<td>Aggression (Wacker et al., 2013)</td>
<td>“Hitting, throwing items at people, kicking, &amp; pushing (p.35)”</td>
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<tr>
<td>Property destruction (Greer et al., 2013)</td>
<td>“Throwing, banging, or ripping objects (p.290)”</td>
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<tr>
<td>Headhitting (Vollmer, Marcus, &amp; Ringdhal, 1995)</td>
<td>“Forceful contact against the head or face by the hand or fist (p.18)”</td>
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</table>
Antecedent Events

**Discriminative Stimulus (SD)** – A signal that reinforcement is available.

- Ever wonder why people act differently in the presence of different people or in different settings? Here’s your answer!

**Motivating Operation (MO)** – Two types

- **Establishing Operation (EO)** – Increases the value of a reinforcer.
- **Abolishing Operation (AO)** – Decreases the value of a reinforcer.

**Setting Events** – This refers to events that occur before, but not immediately, the behavior of interest. This could include the internal events mentioned earlier.
<table>
<thead>
<tr>
<th>Reinforcing Stimulus</th>
<th>Establishing Operation</th>
<th>Abolishing Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skittles</td>
<td>Missed snack</td>
<td>Large lunch</td>
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<tr>
<td>Access to Computer Games</td>
<td>Students does not have access to game for 2 hours prior to instruction</td>
<td>Students has computer immediately prior to instruction</td>
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<tr>
<td>Access to Teacher Attention</td>
<td>Independent work</td>
<td>One to one instruction</td>
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<tr>
<td>Escape from noisy environment</td>
<td>Loud classroom activity</td>
<td>Class is working quietly</td>
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</tbody>
</table>
Consequences

• What do YOU think of when you hear the word CONSEQUENCES?
• How does it differ from the way it applies to the 3-term Contingency?
• That’s why I prefer the term CONSEQUENT EVENT.
### Applied Examples of Potential Three-Term Contingencies

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
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<tbody>
<tr>
<td>Joey works alone for 15 minutes</td>
<td>Joey bangs his forehead against his desk</td>
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<tr>
<td>Ronald is asked to sit down during reading group</td>
<td>Ronald urinates on himself (through his clothing) during reading group</td>
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<tr>
<td>Juan pulls “work time” card from schedule</td>
<td>Juan spits in the face of the paraprofessional</td>
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</tbody>
</table>
REINFORCERS
Consequent events that increase the probability that the behavior they follow will happen again.

Positive
An event, object, or condition is ADDED!
Candy, attention, computer time

Negative
An event, object, or condition is REMOVED!
Aspirin for a headache, Leaving a crowded room.

PUNISHERS
Consequent events that decrease the probability that the behavior they follow will happen again.

Positive
An event, object, or condition is ADDED!
Spanking

Negative
An event, object, or condition is REMOVED!
Time out
A little something about the importance of preference assessments…

EVERYBODY LOVES RAYMOND
Functions of Problem Behavior

• Socially mediated positive reinforcement – Access to tangibles or attention from peers/adults

• Socially mediated negative reinforcement – Escape from aversive/non-preferred activities

• Automatic reinforcement in the form of sensory feedback (stereotypical behaviors)
# Applied Examples of Reinforcing Consequences

<table>
<thead>
<tr>
<th>What Happened</th>
<th>Potential Consequences</th>
<th>Type of Reinforcer</th>
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</thead>
<tbody>
<tr>
<td>When asked to check her schedule, Cassie runs out of the room.</td>
<td>Staff runs after her</td>
<td>Attention</td>
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<td>The next activity is delayed</td>
<td>Escape</td>
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<td>She runs down the hall</td>
<td>Automatic sensory feedback</td>
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<td>When asked to leave a preferred activity, Abe grabs the arm of a staff member and bites his arm.</td>
<td>Multiple staff members grab Abe</td>
<td>Attention</td>
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<td>The staff person lets Abe return to the activity</td>
<td>Access to tangible</td>
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<td>The staff person lets Abe return to the activity</td>
<td>Escape from upcoming activity</td>
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<td>After finishing lunch, Gene strips off his clothes.</td>
<td>His peers laugh</td>
<td>Peer attention</td>
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<td>A paraprofessional sweeps him off to the classroom</td>
<td>Adult attention</td>
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<td>A paraprofessional sweeps him off to the classroom</td>
<td>Access to preferred item in the classroom</td>
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</tbody>
</table>
Screening

- Make sure there isn’t a physical issue contributing to the problem behavior.
- Make sure that there’s an actual need for an FBA and that there’s not a simple explanation.
Now let’s look at the story in light of the A-B-C’s...

Michael’s Story

Let’s consider Michael, an adolescent with autism spectrum disorder (ASD) starting his first job at a customer call center. He is skillful at answering customer questions but is not sure about how to navigate important relationships with his coworkers. In response to the playful teasing between his colleagues in the break room, for example, he frequently erupts into loud name-calling and tantrums, which typically causes his colleagues to leave and thereby results in immediate removal of the challenging social context. Michael has learned, therefore, that it is easier to disrupt social contexts than to face them without the necessary skills. Unfortunately, these behaviors are not acceptable in his workplace and have caused him to be excluded by his peers and have even put him at risk of losing his job.
DATA Collection and Direct Observation

- Momentary Time Sampling
- Duration
- Frequency
- A-B-C recording
Momentary Time Sampling Form

Student's Name: ______________  Teacher: ______________
Subject/Period: ______________  Date(s): ______________

Behavior Definition (in specific, observable, measurable terms):

Total Observation Time: ______________  Length of each interval: ______________

Date: ______________  Interval #: 1 2 3 4 5 6 7 8 9 10  Total times
Q or X

Date: ______________  Interval #: 1 2 3 4 5 6 7 8 9 10  Total times
Q or X

Date: ______________  Interval #: 1 2 3 4 5 6 7 8 9 10  Total times
Q or X

Date: ______________  Interval #: 1 2 3 4 5 6 7 8 9 10  Total times
Q or X

### FREQUENCY CHART

**STUDENT:**

**TARGET BEHAVIOR:**

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<tr>
<td>Time Begin-End</td>
<td>Target Behaviors</td>
<td>Place Where it occurred</td>
<td>Context/Activity</td>
<td>Antecedent Exactly what happened right before the behavior</td>
<td>Consequence What happened right after the behavior</td>
<td>Student Reaction</td>
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You will know you’re on your way to understanding behavior when...
References


References


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