Strategies to Decrease Behaviors: Part I

SPCD 519

Guiding Principles

- Don’t abandon reinforcement
- Least intrusive intervention
- Consider the function of the behavior
- Make data-based decisions

Level I: Reinforcement-based strategies

Level II: Extinction

Level III: Removal of desirable stimulus

Level IV: Presentation of aversive stimulus

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Level 1 Reinforcement-based Strategies

- Differential reinforcement of lower rates of behavior (DRL)
- Differential reinforcement of other behavior (DRO)
- Differential reinforcement of incompatible behavior (DRI)
- Differential reinforcement of alternative behavior (DRA)

Level III Removal of Desirable Stimuli

- Response-cost procedures
- Time-out procedures

Level IV Presentation of Aversive Stimuli

- Unconditioned aversive stimuli
- Conditioned aversive stimuli
- Overcorrection procedures
Reinforcement-based Strategies to decrease behavior

- Differential reinforcement of lower rates of behavior (DRL)
- Differential reinforcement of other behavior (DRO)
- Differential reinforcement of incompatible behavior (DRI)
- Differential reinforcement of alternative behavior (DRA)

Review: Differential Reinforcement

- Reinforcing one form of behavior and not another **OR**
- Reinforcing a behavior under one condition and not another

**Differential Reinforcement of Low Rates of Behavior (DRL)**

- Reinforcement is delivered when the number of responses in a specified period of time is less than, or equal to, a prescribed limit
- Two types of DRL
  1. Full-session DRL:
     - Set a criterion for rate of behavior; student is reinforced if total occurrences are at or below criterion at the end of the total time (e.g., class period).
Differential Reinforcement of Low Rates of Behavior (DRL)

2. Interval DRL
   – Divide entire class period into intervals; give reinforcement if occurrences of target behavior in each interval are at or below preset criterion

DRL Procedures: Guidelines

• Comments:
  • Determining interval size is important
  • Won’t readily change behavior
  • Shouldn’t be used with intense or dangerous behaviors

• Fading the procedure:
  • Extending the interval
  • Lowering the expected criterion

Differential Reinforcement of Other Behaviors (DRO)
(AKA: Omission training/Zero Rates)
Reinforcer is delivered contingent on nonoccurrence of problem behavior for a specified interval

• Two Types of DRO:
  1. Full session (Whole-Interval) DRO
     – Reinforced for nonoccurrence during entire period
  2. Momentary DRO
     – Reinforced for nonoccurrence at end of intervals
DRO Procedures

1. Reset schedules
2. Fixed-interval schedules
3. Increasing-interval schedules
4. Progressive schedules

DRO Procedures: Guidelines

• Comments:
  • Careful observation to set the interval size (interresponse time) is important
  • Restart the interval to avoid behavioral outbursts
  • Don't reinforce other inappropriate behaviors
  • Don't create a behavioral vacuum

• Fading the procedure:
  • Lengthen the interval over time

Differential Reinforcement of Alternative Behaviors/Alt-R (DRA)

• Reinforce an appropriate, functionally equivalent behavior (to increase it) while putting the unwanted behavior on extinction (to decrease its occurrence)
Differential Reinforcement of Incompatible Behavior (DRI)

- A variation of DRA

- Reinforce behavior that is **incompatible** with the problem (target) behavior (cannot occur at the same time as the problem behavior)
  - E.g., handmouthing: reinforce playing with a toy and ignore handmouthing
  - E.g., pencil tapping: reinforce writing answers and ignore pencil tapping

Examples of behaviors that are incompatible/alternative (taken from Webber & Scheuermann, 1991)

- Talking back
- Cursing
- Tardiness
- Hitting

- "OK", "I understand.", "May I ask a question about that??
- "Darn", "Shoot"
- Being in seat when bell rings.
- Using verbal expressions of anger; pounding fist into hand
DRA and DRI Procedures: Guidelines

• Comments:
  • Incompatible behaviors don’t necessarily serve the same function as the problem behavior
  • Alternate behavior should require equivalent or less effort
  • Alternate behavior should receive similar reinforcement

• Options:
  • Inappropriate behavior is ignored, appropriate behavior is reinforced
  • Inappropriate behavior is interrupted and student is redirected to the appropriate behavior

• Fading the procedure:
  • Fade schedule of reinforcement over time
  • Combine with skill instruction in appropriate behaviors

Noncontingent Reinforcement (NCR)

• Provide reinforcement at preselected intervals; reinforcement is not contingent on performance of any particular behavior

• Considerations
  – Creates a positive classroom environment
  – Can have accidental reinforcement of problem behavior
  – Need to carefully think through use of this procedure

Level 1 Reinforcement-based Strategies

<table>
<thead>
<tr>
<th>Level</th>
<th>strategies</th>
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<tbody>
<tr>
<td>DRL</td>
<td>Differential reinforcement of lower rates of behavior</td>
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Level II Extinction (terminating reinforcement)

Level III Removal of Desirable Stimuli

<table>
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<tr>
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<tbody>
<tr>
<td>RC</td>
<td>Response-cost procedures</td>
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<tr>
<td>TO</td>
<td>Time-out procedures</td>
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Level IV Presentation of Aversive Stimuli

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<tbody>
<tr>
<td>UC</td>
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<tr>
<td>CA</td>
<td>Conditioned aversive stimuli</td>
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<tr>
<td>OCP</td>
<td>Overcorrection procedures</td>
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3/12/10
Behavior Reduction Procedures

<table>
<thead>
<tr>
<th>Mildly aversive</th>
<th>Moderately aversive</th>
<th>Highly aversive</th>
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<tbody>
<tr>
<td>Extinction</td>
<td>Overcorrection</td>
<td>Restraint</td>
</tr>
<tr>
<td>Response cost</td>
<td>Time out</td>
<td>Lemon juice</td>
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*Any procedures we find offensive for ourselves should not be considered for people with disabilities.* (p. 75, Jackson & Panyes, 2002)

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**Level II Extinction (terminating reinforcement)**

- Based on a behavioral principle:
  - When a behavior that has been reinforced in the past is no longer being reinforced, the behavior will stop occurring.

- Involves withholding the reinforcer that has been maintaining the target behavior (*not just any reinforcer – must be the reinforcer that is maintaining the behavior*)

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**Level II Extinction (terminating reinforcement)**

- Will see a gradual decrease in the behavior but
  - Likely will see extinction burst; may see aggression
  - Extinction burst can be a positive sign b/c it means you have successfully identified the reinforcer maintaining the problem behavior

- Should not use extinction with dangerous behaviors.
During sensory extinction, table top was carpeted so plate spinning didn’t produce the same auditory stimulus as during baseline. In Phase 2 carpeted table was combined with toys that produced an auditory stimulus (autoharp and music box).

Rincover et al., (1979) JABA, 12, 221-233.

**Level III**

| Removal of Desirable Stimuli | Response Cost & Time Out |

**Response Cost**

These two strategies are also called Negative Punishment in some texts because they:

1. Involve removing a stimulus contingent on the occurrence of the problem behavior and
2. Decrease the future occurrence of the behavior.

- Often combined with a token system or other approaches, such as differential reinforcement.
Example of Response Cost

<table>
<thead>
<tr>
<th>EO</th>
<th>5th</th>
<th>ED</th>
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<tbody>
<tr>
<td>Child has 15 minutes of recess on schedule every morning.</td>
<td>Adult says, “Let’s open our books to page 12. Each of you should read the first paragraph to your buddy.”</td>
<td>Child pokes his buddy</td>
</tr>
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### Response Cost

- Can combine with a group procedure:
  - If any member of the group engages in the problem behavior, the entire group is fined

### Effective Use of Response Cost

- Specifically define the target behaviors that will result in response cost, as well as the fines
- Establish rules for refusals to comply with the response-cost procedure, and explain these
- Greater fines should be associated with more severe forms of problem behavior
  - Be cautious of making fines so great that the individual becomes “bankrupt”
Effective Use of Response Cost

- Fines should be imposed immediately
- Ensure reinforcement reserve (decrease likelihood of “bankruptcy”)
- Be prepared for unplanned or unexpected outcomes
  - Response cost can reinforce rather than punish undesirable behavior
  - Individuals can refuse to give up positive reinforcers

Effective Use of Response Cost

- Avoid overuse
- Keep records to evaluate effectiveness (that is, collect data and use that to make decisions)

Response Cost Considerations

- Increased aggression may occur
  - Ignore emotional outbursts when possible
    - Either don’t use response cost if this is expected, OR
    - Be prepared to ride out the storm
  - Avoidance of the person who administers response cost or the setting may occur
    - These become “conditioned aversive stimuli”
    - Make sure positive reinforcement is available for appropriate behavior to reduce the likelihood of this outcome
Response Cost Considerations

• Collateral reductions of desirable behaviors may occur
  – Response cost may unintentionally suppress other, desirable behaviors, as well as the target problem behaviors
• Response cost calls attention to inappropriate behaviors
• Be prepared for unpredictability

Coming up...

Next Week (3/29)
– Review Chapter 8 in your text; we will continue our discussion of strategies to decrease behaviors
– Read Chapter 10 in your text; we will begin discussing teaching for generalization.

• Research Article Review is due
  – Read the assignment criteria carefully and use these to organize the paper (pp. 12-13 in the syllabus); include the grading checklist
  – Use APA formatting (6th edition); this is a professional paper.