The Book: *Verbal Behavior*

- Is an analysis of language from a behavior analytic viewpoint
  - It contains no original research
- Does not address “how to teach”
  - It does not provide an “approach” to communication training
- Is a powerful analytic tool for everyone

A Little History...

- Pavlov focused on reflexes/respondents and classical conditioning
- Skinner defined *operants*: behaviors defined by their effect upon the environment
- The unit of analysis is A-B-C: Antecedents – Behavior – Consequence
- Change the A or the C and you have a new behavior

Verbal Behavior

- We cannot define communication by unobservable factors like ‘messages’ or ‘meaning’
- Skinner defines *verbal behavior* as: “…behavior reinforced through the mediation of other people…” (p.2)
- Refined on page 225: “…the ‘listener’ must be responding in ways which have been conditioned *precisely in order to reinforce the behavior of the speaker* [by the verbal community]…”
The Verbal Episode

- Not all responses to the environment involve verbal operants
- The ‘speaker’ engages in verbal behavior
  - Modality is not the key
- The ‘listener’ responds to verbal behavior

Is Modality the Key?

“In defining verbal behavior as behavior reinforced through the mediation of other persons, we do not, and cannot, specify any one form, mode, or medium. Any movement capable of affecting another organism may be verbal.” (p. 14)

Antecedent Conditions

1. State of deprivation or aversive stimulation
2. Some aspect of the environment
3. Other verbal behavior
4. Own verbal behavior
Consequence Conditions

1. Related to the Motivating Operations
   - Related to the state of deprivation
   - Aversive stimulation
2. Educational (social)

The Mand

Defined as a verbal operant “in which the response is reinforced by a characteristic consequence and is therefore under the functional control of relevant conditions of deprivation or aversive stimulation.” (p.35-36)

- Mand is derived from command, demand
- A request

Pure Mand

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Deprivation/Motivating Operation (MO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>Pure Mand</td>
</tr>
<tr>
<td>Consequence</td>
<td>Specified by Mand (concrete or social)</td>
</tr>
</tbody>
</table>

Examples
- Deprived of a ball: says, "I want a ball!" gets a ball
- Being teased, says, “Go away!” other person goes away
The Tact

A tact is evoked by "a particular object or event or property of an object or event (p. 82)."

- Tact is derived from contact
- Commenting/Labeling/Naming

Pure Tact

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulating aspect of the environment (&quot;stimulating circumstances&quot;)</td>
<td>Pure Tact</td>
<td>Educational/Social</td>
</tr>
</tbody>
</table>

Examples

- Sees a ball- says, "Ball!"- hears, "That's right!"
- Hears it's raining- says, "It's raining!"- hears, "Yes it is!"
Antecedent | Consequence | Operant
---|---|---
× MO | Direct | Tact
× Environment | × Social/Educational |
× Other’s VB |  |
× Own VB |  |

The Intraverbal

“...responses under the control of audible or written verbal stimuli supplied by another person or the speaker himself...” (p.55) showing “no point-to-point correspondence with the verbal stimuli that evoke them...” (p.71) and reinforced by a “generalized conditioned reinforcer...” (p.53)

- Answering questions, fill-in-the-blank

Pure Intraverbal

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Verbal behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>Pure Intraverbal</td>
</tr>
<tr>
<td>Consequence</td>
<td>Educational/Social</td>
</tr>
</tbody>
</table>

Examples
- Hears, “1, 2, 3...” says, “4”.
- Hears, “Yes! You’re right!”
- Hears, “What’s the capital of California, says, “Sacramento,”
- Hears, “Thanks!”
The Echoic

“...verbal behavior...under the control of verbal stimuli [in which] the response generates a sound-pattern similar to that of the stimulus...” (p.55) resulting in a generalized conditioned reinforcer.

What the echoic IS NOT:
Repeating sounds/words that may be self-reinforcing but without “a verbal stimulus of corresponding form... immediately preceding it.” (p.58)

Impure and Multiply Controlled Verbal Operants

The three antecedent conditions, in isolation, are associated with what we can call the pure mand, the pure tact (p.151), and the pure intraverbal.

Reinforcers specified by the VB, in isolation, are associated with the pure mand.

When these conditions don’t occur in isolation, we can describe the VB that results from this complex control as impure. (p.151)
Possible Combinations of Control

- Multiple or mixed antecedent control
- Multiple or mixed consequence control

Multiple Control

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of desired item</td>
<td>Mand/Tact</td>
<td>Gets basketball and smile</td>
</tr>
<tr>
<td>Sees ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wants to play</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wants car</td>
<td>Intraverbal/Mand/Tact</td>
<td>Gets car and &quot;Yes!!&quot;</td>
</tr>
<tr>
<td>Hears &quot;What do you want?&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stimulating aspect of environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sees car</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Multiple Control

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>VB of other, Stimulating aspect of environment</td>
<td>Intraverbal/Tact</td>
<td>Educational/Social</td>
</tr>
<tr>
<td>Hears, “What is it?”</td>
<td>“Pencil”</td>
<td>Gets a high-five</td>
</tr>
</tbody>
</table>

### Multiple Control #2

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>VB of other, Aspect of environment, MO, VB of other</td>
<td>Intraverbal/Tact/Mand/Echoic</td>
<td>Educational/Social</td>
</tr>
<tr>
<td>Hears “Tell me what you want?”</td>
<td>“TV”</td>
<td>Gets TV and “Sure!”</td>
</tr>
</tbody>
</table>

### Antecedent-Operant Table

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Consequence</th>
<th>Operant</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO, Environment, Other’s VB, Own VB</td>
<td>Direct, Social/Educational</td>
<td>Echoic Tact To Intraverbal Tact</td>
</tr>
</tbody>
</table>
Using the analysis in the real world

What did Leo do?

- At first he babbled: it is vocal but not necessarily verbal
- When prompted to imitate: he would not
- When asked “Where’s Dad?” he pointed to his daddy: not verbal behavior
- He pointed to his mom and said, “Mom Mom Mom”
- He gestured for his water while looking at his mother: a non-verbal mand
- He said ‘no’: a vocal mand
- He shook his head ‘no’: a non-verbal mand
- He pointed and approximated ‘dog’: a tact
- He approximated repeating ‘sit down’ (“mit down”): this is an echoic-mand

All of this in 2 minutes!

Using VB to Analyze
Language Intervention Protocols

All changes within the PECS protocol involve changing a single verbal operant into another by detracting or adding a single antecedent or consequence.
Traditional protocols

Many traditional speech training protocols achieve the mand only after many months of working on other verbal and non-verbal operants.

The Language of Emotions

- Talking about feelings and emotions involves various tacts of private events
- We only learn to describe a feeling after someone else has told us what we are feeling
- Talking about feelings/ emotions is NOT the same as having them
- Teach the language of emotions while the learner is experiencing the emotion

The Autoclitic

1. The term “autoclitic” is intended to suggest behavior which is based upon or depends upon other verbal behavior (p.315) [of the speaker].
   
   Auto-clitic is derived from ‘self-leaning’

2. An autoclitic affects the listener by indicating either a property of the speaker’s behavior or the circumstances responsible for that property (p. 329).
The Subtle Aspects of Language

- Several types of autoclitics: quantity, quality, the speaker’s experience
- The use and understanding of autoclitics (such as ‘really’) depends upon social reinforcement
- Those with ASD have great difficulty using and responding to autoclitics - as predicted by Skinner!

For Whom is Verbal Behavior helpful?

- Skinner offers a great analytic tool for anyone teaching language skills
- It is NOT a set of teaching strategies
- It CAN help everyone do what they aim to do more effectively
  - Teachers, SLPs, psychologists, behavior analysts, parents, etc.

For more information:
www.pecs.com