Behavior Analysis:
What it is and why it matters

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Behavior Analysis

• Natural Science approach to human behavior

  • Knowable, observable universe

  • Naturalistic subject matter
Behavior Analysis

• Pragmatic Truth Criterion
  • What works
  • Prediction and control (influence)
Behavior Analysis
Behavior Analysis

Gambling

Env.

Environment involving dopamine transporters functioning normally.

Dopamine transporters dysfunctioned by cocaine.

Recovering cocaine.

Gambling

Env.
Behavior Analysis

- Pragmatic Truth Criterion (cont.)
  - Does “addiction” exist as a personality trait?
  - Does a repertoire of gambling behavior produce addiction?
  - We see a repertoire as addiction; they are the same thing
Behavior Analysis

• Functional Relations

  • What causes behavior?

    • Functional relations between environment and behavior
Behavior Analysis

What is she doing? (well... she’s gambling)

More usefully, she might be:

• Filling time until her spouse gets back from the restroom so they can see Donny and Marie
• Winning money to take her friends out to lunch
• Relieving the day’s stress
• Chasing the losses from last week’s gambling outings
Behavior Analysis

Examples of typical functions:

- Escape
- Tangible
- Attention
- Automatic

Socially-Mediated
Behavior Analysis

• Functions of Behavior: an example with reinforcement

Reinforcement
  - Positive Reinforcement
  - Negative Reinforcement
    - Escape
    - Avoidance

PROCEDURE
  - Difficult Work Situation
  - Social Isolation
  - Family Situations
  - Financial Hardship
Behavior Analysis

• Implications for a functional account of behavior:
  • Idiographic pursuits
  • Inductive reasoning
  • Systematic replications
Idiographic Pursuits

• Individual behavior change either over time or within a session, rather than averaged data
Idiographic Pursuits

• Dillen & Dixon, 2008

  • Participants played simulated slot machine

  • Guessed how likely it was next spin would win (1-10)

  • No major differences between chance of winning predicted and winning, losing, and near-miss trials
Idiographic Pursuits

• Dillen & Dixon, 2008

• 2 major limitations
  • Confirmatory feedback
  • Run length
Idiographic Pursuits

- Witts, Rzeszutek, & Dahlberg (in press)
  - Videos of different spin outcomes (5 spin sequences)
  - Participants state likelihood of winning over next 5 spins
    - Removes feedback
    - Adds bout of outcomes
Idiographic Pursuits

• Witts, Rzeszutek, & Dahlberg (in press)
Idiographic Pursuits

- An exemplar of idiographic vs. nomothetic data with one hypothetical data set
Idiographic Pursuits

Number of Thoughts about Gambling

Assessment Number
Idiographic Pursuits

Number of Thoughts about Gambling vs. Assessment Number
Idiographic Pursuits

Number of Thoughts about Gambling

Assessment Number

(-2) (-1) (0) 1 2 (3) (4) (5)
Idiographic Pursuits

Number of Thoughts about Gambling

Baseline

Treatment

Assessment Number

(-5) (-4) (-3) (-2) (-1) (0) 1 2 (3) (4) (5) (6) (7)
Idiographic Pursuits

• Several approaches to individual data
Inductive Reasoning

- Inductive reasoning
- Witts & Lyons, 2013
  - Found that action, not winnings, drove players to remain at a table
  - Provides a variable of interest for future research
Systematic Replication

• Dahl & Witts
Summary
What is Behavior Analysis?

• A natural science of psychology

• Concerned with single cases, not averaged data

• Truth = Prediction and Control