1. Introduction and Chapter 1

What is Applied Behavior Analysis?

Behaviorism
- General theory about behavior
- The determinants of behavior can be best identified by studying its observable features
- Behavior is determined, in large part, by observable features of the environment
- Internal states?

The Experimental Analysis of Behavior
- The study of basic learning processes involving interactions between observable features of behavior and the environment

Applied Behavior Analysis
- Application of learning principles to problems of social importance (aka Behavior Modification, Behavior Therapy)

The Scientific Revolution in Medicine

An Introduction to the Study of Experimental Medicine, Bernard (1865, Trans. 1927)

Medicine circa early 1800s:
- Assessment: Observe symptoms, interview patient
- Hypothesis generation: Tentative guess about causation
- Treatment: Elimination of presumed cause

Bernard’s model:
- Known: Determinants of normal states of living (physiology)
- *Assessment: Attempts to reproduce disease states via disruptions in normal physiology
- Therapeutics: Identify agents that reverse the course of disease

Extension of the Medical Model to Psychiatric Disorders

- 1900: No science of behavior
- Assessment: Old (pre-Bernard) medical model (observation, patient report, untested hypotheses)
- Example:
  - Observation: Erratic/cyclical activity patterns, patient reports “mood” swings
  - Experimentation: None
  - Conclusion: (a) Freud: Unresolved superego - id conflict, (b) Current cognitive therapists: Bipolar personality
- Problems:
  - What events determine activity patterns?
  - What events determine verbal reports?
  - Freudian schema entirely fictional: Show me the superego
  - How to measure bipolar personality (or manipulate it) independent of verbal report?
Cameron (1944)

- “All current attempts at classification . . . are unsatisfactory; this is true for the neuroses as well as for the psychoses”
- “No causal organisms have been identified; hence, we cannot fall back on them as we can in the specific infectious diseases”
- “It is important . . . to realize that psychiatric classifications are not based upon final and convincing scientific evidence”

Scientific Study of Environment-Behavior Interactions

Basic research on “normal” behavior
- Respondent (Classical) Conditioning
- Operant Conditioning

Transitional Research
- Experimental Neuroses
- Human Operant Conditioning

Treatment of Abnormal Behavior
- Behavior Therapy
- Applied Behavior Analysis

Basic Science of Behavior

Russian Physiologists
- Ivan Sechonov: Spinal reflexes
- Ivan Pavlov: Digestive reflexes
- Vladimir Bechterev: Muscular reflexes
- Contribution: Experimental study of environmental influences on motor reflexes (role of antecedent events)

American Psychologists
- John Watson (JHU): Extended work on reflexes, experimental neuroses, coined term “Behaviorism”
- Edward Thorndike (Columbia): Studied development of adaptive behavior (problem solving) in nonhumans, coined term “instrumental behavior” in reference to behavior that produced useful consequences, proposed “Law of effect”
- B. F. Skinner (Harvard): Distinguished between respondent (reflexive) and operant (instrumental) learning, conducted definitive research on learning processes, extended learning principles as a general theory to account for most human activity
Experimental Neuroses
- Pavlov: Disruption of learned reflexes in dogs (shock)
- Watson & Rayner: “Little Albert” (loud noise in presence of furry object)
- Wolpe: Production and elimination of fearful reactions in cats

Human Operant Conditioning
- Fuller (1949): “Operant conditioning of a vegetative organism”
- Bijou (1955): Operant behavior in young children, mental retardation
- Lindsley (1959): Cooperative behavior in schizophrenics

Behavior Therapy
- Wolpe (1950s-1960s): Reciprocal inhibition, desensitization, implosion techniques to reverse anxiety and fear reactions

Applied Behavior Analysis
- Ayllon & Michael (1959): “The psychiatric nurse as a behavioral engineer” (contingencies applied to psychotic symptoms)
- Lovaas (1965): Operant conditioning with autistic children

Behavior Analysis as a Science and a Profession
- 1958: Journal of the Experimental Analysis of Behavior (JEAB)
- 1968: Journal of Applied Behavior Analysis (JABA)
- 1978: Association for Behavior Analysis (ABA)
- 1998: National Certification in Behavior Analysis

Korn, Korn, & Davis (American Psychologist, 1991)
(Survey of Psychology Department Chairs and History of Psychology Scholars)

“Ten Most Eminent Psychologists”

Psychology Chairs
- All Time
- Contemporary

END