Reviewing Antecedents
to Behaviorism

Dogs     and     Cats
Pavlov     and     Thorndike
Association   and   Consequence (Satisfaction)

Basic Methods for Learning Theories

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Psyc 405: History & Systems

Chap 10: Founding of Behaviorism

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Reminder:
Key ideas serve as base for Behaviorism……..

- Positivism
- Mechanism
- Pragmatism
- Parsimony

I. John B. Watson

- PhD at U. of Chicago (1905, Angell & Dewey)
- Taught at Chicago - functionalism
- Jacques Loeb: "Behavior" of ants (Chicago)
- Professor at Johns Hopkins (1908)
- Chair & *Psych Review* Editor (after Baldwin scandal)
- "Psychology as the Behaviorist Views it" (1913, *Psych Review* , see textbook)
- "Behavior: An Intro to Comparative Psych" 1914
- Move to Business: advertizing, child care, etc.

End of pt. 1

II. Watson's Behaviorism: Methods and Concepts

Positivism: Restrict Psych to the observable
- Observation
- Condition Reflex
- Testing Methods
- Verbal reports

Met with enthusiasm, but also critics (what, no consciousness?)

In the 1920's, Behaviorism started to dominate Psychology, remained a force for decades

*Basic Instincts, used to condition behaviors
(Example: Watson & Raynor – Little Albert)

Theory was very popular in U.S., many applications (almost cult-like, p. 228)

Watson benefitted from both academic & business careers – environment shapes

Emotion and Thoughts were difficult concepts to fit within the theory – implicit behaviors

End of pt. 2

III. Critics of Watson's Approach

**Karl Lashley** – expected his brain research to support mechanistic view of Behaviorism

Lashley's findings suggested that Brain activity reflects much more that simple reflexes

**William McDougall** – Famous debate with Watson in 1924. Advocate of free will, consciousness, and instincts.

Helped loosen Beahviorism, but did not stop it

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Summary of Watson's Behaviorism

Watson was a forceful promoter and very persuasive.

Made Psychology more objective and even more applied

End of pt. 3

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Psyc 405: History & Systems

Chap 11: Development of Behaviorism

("Neobehaviorism" and

Social-Cognitive Behaviorism)

Like all theories, Behaviorism evolved and new approaches to Learning Theories emerged.

I. Operationism

Concepts are defined by the operations used to measure them – "operational definition"

Put the focus on the objective (observed), not on any internal state/characteristic

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II. Edward Chance Tolman

Education in Structuralism and Gestalt – was critical of introspection

Forty-Year career, mostly at Cal-Berkeley

*Purposive Behavior in Animals and Men* (1932)
His learning theory went beyond S-R

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Tolman introduced "intervening variable" as an internal concept that "explains" behavior. However, these must be connected to the IV and DV (usually an internal drive, e.g., hunger)

Some called his approach S-O-R, (others S-S organisms connect stimuli w/o R)

His Latent Learning Theory included cognitive maps.

Some attribute his approach to use of Gestalt concepts

III. Clark Hull

PhD at Wisconsin, also worked at Yale

*Principles of Behavior* (1943) and

*A Behavior System* (1952)

A mechanistic, deterministic approach based on the **Hypothetico-Deductive Method**

Learning results from Drive Reduction – reinforcement comes from need satisfaction

Habit strength was important – learning persistence.

Mathematical approach, e.g.,
 Response Strength =
        Habit X Drive X Incentive Size X Inhibition

Hull – Tolman Debates

End of pt. 4

IV. B. F. Skinner

PhD at Harvard, worked at U of M, Indiana, Harvard

*Behavior of Organisms* (1938) and

*Science and Human Behavior* (1953)

Radical Behaviorism – Behavior is a function of reinforcement history/environment

Empirical observation, no theory.  N=1 Method

**Operant Conditioning** – Organism operates on
environment (rather than responding to
researcher's contrived environment)

Law of Acquisition
Interval vs. Ratio (vs continuous) Reinf. Schedule
Successive Approximation
Descriptive Approach

**Applications and Inventions** –

Behavior Modification (token economies, etc.)

Operant Conditioning Chamber (Skinner Box)
Air Crib
Teaching Machines (similar to web apps of today)
Pigeon-Guided Missiles

**Critics**: No Theory; Limits to reinforcements;
instinctive drift

End of pt. 5

V.  Albert Bandura

PhD. At Iowa (1952), Professor at Stanford (still!)

Trained as behaviorist, but has "shaped" field
    into "Social-Cognitive-Behaviorism"

(Classic Article: Bandura, Ross, & Ross)

**Vicarious Reinforcement (social)

**Self-Efficacy (cognitive)

Beliefs about link between action-consequence

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Behavior Modification – also uses mass media to
    modify behaviors through use of models

End of pt. 6

Lots of changes to Behaviorism, but it is still
    around – Large, continuing impact