

- 1  Behaviorism Comes to Dominate American Psychology
- 2  Behaviorism “in the wind”: Max Meyer
  - b. Germany, 1873; died in U.S., 1967
  - University of Missouri
  - *The Fundamental Laws of Human Behavior*, 1911
    - Emphasized that psychology should study the behavior of animals and of people other than the observer (as in Introspection and Structuralism).
- 3  J. B. Watson (1878-1958)
- 4  John Broadus Watson - Biographical, I
  - Born rural Greenville, S.C., 1878
  - Father abusive & irresponsible; abandoned family
  - Watson a self-described “juvenile delinquent” but entered college (Furman Univ.) at age 16. M.A. (theology) 1900.
  - Studied at Univ. Chicago, with Dewey (briefly), Angell, and Loeb
  - Ph.D. (rat behavior and myelinization) 1903. Becomes instructor there.
- 5  Watson - Biographical, II
  - James Mark Baldwin brought him to Johns Hopkins in 1908 as Full Prof., then Head
  - APA President, 1915 (citation, 1957)
  - Army service during WW I
  - Affair with Rosalie Raynor precipitated divorce and resignation from Hopkins.
- 6  Watson as young man
- 7  Watson & Raynor
- 8  Watson – Biographical, III
  - Advertising career, 1920-1946
  - Popularizer of Psychology & Behaviorism
  - Alcoholism (Raynor’s d. 1935); W. 1958.
- 9  Watson Founds Behaviorism
  - Watson assumes editorship of *Psychological Review* while at Hopkins
  - “Psychology as the Behaviorist Views It” *Psychological Review*, 1913
  - The most important article defining Radical Behaviorism.
- 10  Watson’s Books on Behaviorism
  - *Behavior: An Introduction to Comparative Psychology*, 1914
  - *Psychology from the Standpoint of a Behaviorist*, 1919
  - “Conditioned emotional reactions” (with R. Raynor), *Journal of Experimental Psychology*, 1920
  - *Behaviorism*, 1924
  - *Psychological Care of the Infant and Child*, 1928.

- 11  **Watson - Criticisms of Introspectionism**
  - Divisions of consciousness are arbitrary
  - Psychology is too human centered
  - Introspection is unreliable and esoteric
  - Older psychologies are dualistic.
- 12  **Watson - Elements of Behaviorism**
  - Emphasis on systematic observation of others
  - Employment of instrumentation
  - Psychological testing, regarded as a behavioral sample
  - Reliance on verbal report, but only of events which could be externally verified
  - View of Subject (participant) as a machine.
- 13  **Watson - Miscellaneous Concepts**
  - Basic analysis of behavior using an S-R model based on conditioned reflexes
  - Discounting of instinct (by 1925)
  - Thought is subvocal speech.
- 14  **Watson views Emotions**
  - Somatic responses to specific stimuli
  - Criticism of James-Lange Theory
  - Infants have 3 emotions (fear; rage; love)
  - Conditioned Emotional Reaction (CER).
- 15  **The “Little Albert” Study**
  - Rat (CS) paired with Noise (UCS) to produce CR of crying
  - Albert withdrawn from research by parents
  - Watson advocated raising children without emotion, without religious ethics.
- 16  **Albert, with rat**
- 17  **Watson & Raynor with Little Albert & rat, c. 1920**
- 18  **The “Little Albert” Study (photo of Watson with infant)**
- 19  **Watson - Best-Known Quotation**
  - “Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in, and I’ll guarantee to take any one at random and train him to become any type of specialist I might select--doctor, lawyer, artist, merchant-chief, and, yes, even beggarman and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.” -- *Behaviorism (2nd ed.)*, 1930, p. 104.
- 20  **Watson’s Philosophy at J. Walter Thompson**
  - “...tell him [i.e. the consumer] something that will tie him up with fear, something that will stir up a mild rage, that will call out an affectionate or love response, or

strike at a deep psychological or habit need."

21  **Albert Paul Weiss**

- Biographical
  - b. Germany 1879; came to U.S. as child; died 1931
  - Studied with Meyer at Missouri; Ph.D. 1916
  - Career at Ohio State Univ.
- Radical Behaviorism
  - Eliminate all references to consciousness
  - Complete reductionism (to movement)
  - Complete monism.

22  **Weiss—chief works**

- “Behaviorism and Behavior”--series of 2 articles in *Psychological Review*, 1924
- *Psychological Principles of Automobile Driving*, 1930 (classic human factors study)
- Coined term “biosocial”.

23  **Edwin Bissell Holt**

- Biographical
  - b. Winchester, Mass.; B.A. Harvard, 1896, Ph.D. Harvard, 1901; died 1946
  - Munsterberg’s assistant at Harvard; then appointment at Princeton in Social Psychology.

24  **E. B. Holt --Contributions**

- Wanted to study consciousness objectively
- Emphasized purposive nature of behavior
- Asserted existence of “inner motivation” (drives)
- Molar conception of behavior (accused Watson of being too molecular)
- Chief publication: *Animal drive and the learning process: An essay toward radical empiricism*, 1931.

25  **Karl S. Lashley (1890-1958)**

26  **Karl Spencer Lashley - Biographical**

- American; born 1890; died 1958
- B.A. Univ. W. Virginia, 1910; M.A., Univ. Pittsburgh; Ph.D. (Biology & Genetics) Johns Hopkins, 1914 with Watson and Meyer, & biologist H. S. Jennings.
- Postdoc brain damaged humans & animals
- Minnesota and Chicago; then Harvard for 20 years and 13 at Yerkes primate lab
- President of APA in 1929-30.

27  **Lashley – Law of Mass Action**

- Chief book *Brain Mechanisms and Intelligence*, 1929
- Law of mass action
  - Efficiency of learning is function of total amount of cortex
  - Weakened Watson’s simple view of conditioned reflexes as point-to-point connections.

28  **Lashley – Law of Equipotentiality**

- All parts of the cortex contribute equally to learning
  - Lashley-Wade Hypothesis
    - Stimulus generalization requires differential training on several values of a stimulus dimension
  - Miscellaneous research: Instinct, color vision, Lashley Jumping Stand.
- 29  Lashley's "Jumping Stand" (1930)
- 30  Walter B. Cannon (1871-1945)
- 31  Walter B. Cannon
- Biographical
    - born Minnesota, 1871; died 1945. Studied with James at Harvard; M.D., 1900.; Prof. of Physiology at Harvard.
  - Studied hunger, digestion, emotions
  - Chief book *Bodily Changes in Pain, Hunger, Fear, and Rage*, 1915.
- 32  Cannon's Contributions to Psychology
- View of emotion as autonomic arousal
  - Description of effects of epinephrine (adrenalin) on sympathetic nervous system
  - Named "homeostasis" in regulatory systems
  - Discovered "sympathin", an early neurotransmitter
  - Provided physiological substrate for later work of Clark Hull.
- 33  William McDougall (1871-1938)
- 34  William McDougall - Biographical
- b. England, 1871; died U.S., 1938
  - Educated in biology, medicine at Manchester and Cambridge Universities; studied with Muller in Germany
  - Academic posts at Cambridge, London, Oxford
  - Harvard, 1920-27
  - Head at Duke University, 1927-38.
- 35  McDougall - General Concepts, I
- Published 24 books, 165 articles.
    - *Physiological Psychology*, 1905
    - *Outline of Psychology*, 1923
    - *Introduction to Social Psychology*, 1926
  - Emphasized behavior but also systems views; not a Behaviorist.
- 36  McDougall, General Concepts, II
- Stressed goal-seeking, purposive behavior
    - Coined term "hormic" to describe behavior (Greek hormone = urge)
    - Attributed much human social behavior to instinct
    - Strong influence on E. C. Tolman.
- 37  McDougall - General Concepts, III
- Eclectic methodologically

- Lab methods, paper & pencil tests, introspection, free association, dream analysis, comparative studies, field studies
- **Weird (non mainstream) Interests**
  - Set up parapsychology lab at Duke with J. B. Rhine
  - Advocated Lamarckian genetics.

38  **McDougall's Criticisms of Watson**

- Public press criticisms of Behaviorism; then debated Watson at the Psychology Club, Washington, D. C., 1924
  - Audience of 1000
  - McDougall won the debate (published with Watson in *The Battle of Behaviorism*, 1929).

39  **McDougall's criticisms of Radical (Watsonian) Behaviorism:**

- Watson relies on verbal report when he can't do anything else--so he's inconsistent
- Consciousness, introspection are inevitable in psychology
- Fantasy, imagery, hallucinations are inaccessible except through introspection and verbal report
- Aesthetic responses are intrinsically subjective
- Much social behavior is senseless if human behavior is totally predetermined.

40  **End of this topic**