Three Waves of Behaviorism

- Wave One
  - Rebellion
- Wave Two
- Wave Three
  - Current form of Behavior Therapy

John B. Watson (1878-1958)

“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 ... regardless of his talents, prejudices, tendencies, abilities, vocations and race of his ancestors.”
Ontology of Psychology

- Subject matter of psychology
  - Is behavior
    - the actions of organisms that can be publicly observed
    - completely independent of its relationship with consciousness
  - Human psychology is neither unique or necessarily of primary concern
    - Opened door for comparative psychology

Conception of consciousness

- Early on, Watson did not deny consciousness
  - Methodological behaviorism
    - Watson’s conviction that you cannot examine consciousness because it had not, and could not, yield reliable knowledge of the type found in natural sciences
    - Because of this failure, behavior, which can be objectively observed, should be the focus of examination in psychology

However, he was criticized for this position
- Therefore, Watson’s views shifted to denying the very existence of consciousness
  - Metaphysical behaviorism
    - The position that consciousness does not exist; it is an illusion
    - This increased the number of anti-behaviorists
John B. Watson

Conceptions about behavior

- Behavior is analogous to a reflex
  - Stimulus elicits a response
    - Stimulus: any object in the general environment or any change in the tissues themselves due to the physiological condition of the animal
  - Linked stimulus-response association to conditioning like Pavlov did

Watson's Epistemology

- Watson sought to analyze behavior into its components
- Criterion of Truth
  - Never grappled with "what is truth" question
  - More interested in applying psychology to problems of personal adjustment and social improvement
  - The importance of predicting and controlling behavior came to be emphasized in preference to constructing an integrated theory of psychology

Methodological Assumptions

- Watson’s methodological position is generally considered to be his most important contribution
- Success of his change in ontology of psychology came about due to the logic and clarity of his methodological arguments
- The only requirement that Watson made on psychological research is that it use objective methods of measurement
  - Objectivity = events, in principle, be publicly observable (perceived by more than 1 person)
  - No hypothesis—a number of research hypotheses can be investigated
  - Verbal reports were not outlawed by behaviorism, but viewed in a different light
    - Had to be verified
In place of a highly integrated theory, Watson offered some specific hypotheses and supportive evidence. In conditioned emotional responses, Watson argued that conscious experience was not an essential component of emotion. He believed that emotions could be associated with a neutral stimulus, just as Pavlov had demonstrated that salivation could be associated with a neutral stimulus.

### Little Albert experiments (w/Rosalie Rayner)

John B. Watson & Little Albert

Concluded infants have 3 innate emotional responses: fear, rage, and love. Each emotional response is evoked by distinctive stimuli:

- **Fear:** sudden noise/loss of support
- **Rage:** physical restraint
- **Love:** stroking & manipulating erogenous zones

Watson was faulted for this conclusion as there was only 1 conditioning study of emotions done. However, this is a landmark study.

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Has influenced subsequent research.
John B. Watson

Instincts
- Originally, Watson proposed 11 instincts that are associated with behaviors
  - Began as an interactionist
  - However, by 1925, Watson changed his mind; argued that instincts are socially conditioned responses
  - Extreme environmentalist – the environment is the cause of all behavior
  - Went further: refused to admit to his system any inherited capacities, temperaments, or talents of any kind

Habits
- Built of stimulus-response pairs
  - Stimulus-response pairs can be innate or acquired
  - Could be single-unit connections or could be a chain of such connections
  - Habit
    - A complex system of reflexes which functions in a serial order
  - Can be explicit or implicit
    - Explicit = clearly observable
    - Implicit = hidden from direct observation but nonetheless made observable by technical procedures

Principle of habits
- Principle of recency
  - The last response made in a situation is the most likely to occur on the next occasion
- Principle of frequency
  - The act which has been most frequently associated with the object is the one most likely to be performed
- Principle of context
  - The behavior that is exhibited is likely to be the one most closely associated with the situation as a whole
John B. Watson

- Never critically evaluated his principles
- Gave contradictory principles
  - Experimental extinction
  - Occurs, following conditioning, when the conditioned stimulus is presented without the unconditioned stimulus, the conditioned response decreases in intensity until it finally disappears
  - Should not happen according to the principle of recency
- Watson seemed oblivious to the discrepancies
- Watson’s theory of habit formation and strengthening has only historical interest today

John B. Watson

- Peripheral Theory of Thinking
  - Proposed a counter-intuitive theory of thinking that reduced thought to implicit motor behavior
  - Language habits, involving movements of the tongue and throat, were assigned a central role in his theory
  - Used developmental ideas to support his theory
  - Acknowledged that empirical data supporting this theory was limited
  - Suffered not only from lack of empirical support but also from intrinsic ambiguity
  - Peripheral events were emphasized to such a degree that the theory was interpreted to imply that the CNS plays a nonessential role in thinking.

John B. Watson

- The End of Watson
  - In 1919, Watson fell in love with Rosalie Rayner and wrote love letters to her
  - She is half his age
  - Which his wife found and made public with a divorce
  - Fired from Johns Hopkins
  - Some folks say there is another reason for this.
John B. Watson

- But that’s OK; Watson went into business and made a killing by consulting.
  - JWT Advertising Agency
- And he wrote the manual in the 1920’s for child rearing:
  - The Psychological Care of the Infant and Child (1928)
  - Also applied principles to the raising of his own kids.
    - Not too well
      - Mariette Hartley Breaking the Silence (1990)

Rosalie Rayner died in 1935 at the age of 37.

- Received an award from the APA in 1957, which he had his son accept for him as he did not want to be seen being emotional.
- Prior to his death in 1958, he burned all of his manuscripts, letters, and notes, refusing to leave them to history.

Other Behaviorists of the Time

- Not everyone accepted Watson’s behaviorism.
  - Not even everyone who called themselves a behaviorist accepted Watson’s position.
  - Some developed their own behavioral psychologies.
- Edwin B. Holt (1873-1946)
  - Disagreed with Watson’s rejection of consciousness and mental phenomena.
  - Suggested that learning could occur in response to inner motivation.
    - Did not reduce to stimulus-response chains.
Other Behaviorist of the Time

Karl Lashley (1890-1958)
- Student of Watson’s
- Upheld mechanistic tradition of psychology
- Advocate of Watson’s behaviorism
- Research on brain mechanisms in rats challenged one of Watson’s basic points
  - Law of mass action
    - the efficiency of learning is a function of the intact mass of the cortex; the more cortical tissue available, the better the learning
  - The principle of equipotentiality
    - one part of the cortex is essentially equal in another in terms of its contribution to learning

Research on brain mechanisms in rats challenged one of Watson’s basic points.

Other Behaviorist of the Time

- Research was on memory
  - tried to find where the memory engram—a neurological trace of the learning experience—was located
  - Expected his research to lead him to specific sensory and motor centers in the cerebral cortex as well as corresponding connections between sensory and motor systems
  - Finding suggested that the brain plays a more active role in learning than what Watson would have accepted
- Mary Cover Jones
  - showed that fears can be removed through conditioning

Criticism of Behaviorism

William McDougall
- English psychologist
- Instinct theory of behavior
- Social psychologist
- Supported free will, Nordic superiority, psychic research
- Criticized behaviorism
- Hated by millions
Chapter 10 Behaviorism: The Beginnings

Watson McDougall Debate

- February 5, 1924 at the Psychology Club in Washington D.C.
- 1,000 attended
- Arguments published jointly in *The Battle of Behaviorism*
- McDougall won the debate
  - His position:
    - Both behavior and consciousness are important to psychology

Watson McDougall Debate

- Watson won the loyalty of Americans
- McDougall predicted quick demise for behaviorism
  - Boy, was he wrong…

Watson’s Contributions

- Biggest:
  - Methodology of psychology becomes more objective
- Also:
  - Moves field beyond consciousness
References