Chapter 10 Behaviorism: The Beginnings
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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, penchants, tendencies, abilities, vocations and race of his ancestors.”

John B. Watson

■ 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

John B. Watson

■ 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

John B. Watson
■ 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
    - *Response*: anything the animal does
  - Linked stimulus-response association to conditioning like Pavlov did

John B. Watson

- 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

John B. Watson

- 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)
    - Not restrictive = a number of research methods easily met its standards
    - Verbal reports were not outlawed by behaviorism, but viewed in a different light
    - Had to be verified

John B. Watson

- Watson’s Theory
  - In place of a highly integrated theory, Watson offered some specific hypotheses and supportive evidence
  - Conditioned Emotional Responses
    - Critical of James’ notions that experience of bodily changes is emotion
    - Argued that conscious experience was not an essential component of emotion
    - 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

John B. Watson

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

**John B. Watson**

**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

**John B. Watson**

**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 an 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
    - Could not get another academic job

**John B. Watson**

- But that’s OK; Watson went into business and made a killing by consulting
  - J Walter Thompson advertising agency
    - But his heart was not in it
  - 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)

**John B. Watson**

- 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 Behaviorist 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
- Holt believed in the influence of environment over instinct
- However, he 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
    - Two principles
      - 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 to another in terms of its contribution to learning

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
- Findings suggested that the brain plays a more active role in learning than what Watson would have accepted

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

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