

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



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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.”



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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

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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

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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

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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

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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

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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

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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)

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■ John B. Watson & Little Albert



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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

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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

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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 procedures¹⁴

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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

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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

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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.

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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
 - 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
 - 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)



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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

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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



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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



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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
- Mary Cover Jones
 - Showed that fears can be removed through conditioning

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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



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■ 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

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■ Watson McDougall Debate

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

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■ Watson's Contributions

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

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