Behaviorism

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Behaviorism or Behaviourism, also called the learning perspective, is a philosophy of psychology based on the proposition that all things which organisms do — including acting, thinking and feeling — can and should be regarded as behaviors.\(^1\) The school of psychology maintains that behaviors as such can be described scientifically without recourse either to internal physiological events or to hypothetical constructs such as the mind.\(^2\) Behaviorism comprises the position that all theories should have observational correlates but that there are no philosophical differences between publicly observable processes (such as actions) and privately observable processes (such as thinking and feeling).\(^3\)

From early psychology in the 19th century, the behaviorist school of thought ran concurrently and shared commonalities with the psychoanalytic and Gestalt movements in psychology into the 20th century; but also differed from the mental philosophy of the Gestalt psychologists in critical ways. Its main influences were Ivan Pavlov, who investigated classical conditioning, Edward Lee Thorndike, John B. Watson who rejected introspective methods and sought to restrict psychology to experimental methods, and B.F. Skinner who conducted research on operant conditioning.\(^3\)

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### Versions

There is no classification generally agreed upon, but some titles given to the various branches of behaviorism include:

- **Classical**: The behaviorism of Watson; the objective study of behavior; no mental life, no internal states; thought is covert speech.
- **Methodological**: The objective study of third-person behavior; the data of psychology must be inter-subjectively verifiable; no theoretical prescriptions. It has been absorbed into general experimental and cognitive psychology.
Radical: Skinner's behaviorism; is considered radical since it expands behavioral principles to processes within the organism; in contrast to methodological behaviorism; not mechanistic or reductionist; hypothetical (mentalistic) internal states are not considered causes of behavior, phenomena must be observable at least to the individual experiencing them. Willard Van Orman Quine used many of radical behaviorism's ideas in his study of knowing and language.


Teleological: Post-Skinnerian, purposive, close to microeconomics.

Theoretical: Post-Skinnerian, accepts observable internal states ("within the skin" once meant "unobservable", but with modern technology we are not so constrained); dynamic, but eclectic in choice of theoretical structures, emphasizes parsimony.

Biological: Post-Skinnerian, centered on perceptual and motor modules of behavior, theory of behavior systems.

Inter behaviorism: Founded by J. R. Kantor before Skinner's writings and currently worked by L. Hayes; E. Ribes; and S. Bijou. centered in the inter behavior of organisms, field theory of behavior; emphasis on human behavior.

Two popular subtypes are Neo: Hullian and post-Hullian, theoretical, group data, not dynamic, physiological, and Purposive: Tolman's behavioristic anticipation of cognitive psychology.

**B.F. Skinner and radical behaviorism**

Skinner, who carried out experimental work mainly in comparative psychology from the 1930s to the 1950s, but remained behaviorism's best known theorist and exponent virtually until his death in 1990, developed a distinct kind of behaviorist philosophy, which came to be called radical behaviorism. He is credited with having founded a new version of psychological science, which has come to be called behavior analysis or the experimental analysis of behavior after variations on the subtitle to his 1938 work The Behavior of Organisms: An Experimental Analysis Of Behavior.

**Definition**

B.F. Skinner was influential in defining radical behaviorism, a philosophy codifying the basis of his school of research (named the Experimental Analysis of Behavior, or EAB.) While EAB differs from other approaches to behavioral research on numerous methodological and theoretical points, radical behaviorism departs from methodological behaviorism most notably in accepting treatment of feelings, states of mind and introspection as existent and scientifically treatable. This is done by identifying them as something non-dualistic, and here Skinner takes a divide-and-conquer approach, with some instances being identified with bodily conditions or behavior, and others getting a more extended 'analysis' in terms of behavior. However, radical behaviorism stops short of identifying feelings as causes of behavior.[1] Among other points of difference were a rejection of the reflex as a model of all behavior and a defense of a science of behavior complementary to but independent of physiology. Radical behaviorism has considerable overlap with other western philosophical positions such as American pragmatism.[4]

**Experimental and conceptual innovations**

This essentially philosophical position gained strength from the success of Skinner's early experimental work with rats and pigeons, summarized in his books The Behavior of Organisms[5] and Schedules of Reinforcement.[6] Of particular importance was his concept of the operant response, of which the canonical example was the rat's lever-press. In contrast with the idea of a physiological or reflex response, an operant is a class of structurally distinct but functionally equivalent responses. For example, while a rat might press a lever with its left paw or its right paw or its tail, all of these responses operate on the world in the same way and have a common consequence. Operants are often thought of as species of responses, where the individuals differ but the class coheres in its function--shared consequences with operants and
reproductive success with species. This is a clear distinction between Skinner's theory and S-R theory.

Skinner's empirical work expanded on earlier research on trial-and-error learning by researchers such as Thorndike and Guthrie with both conceptual reformulations – Thorndike's notion of a stimulus-response 'association' or 'connection' was abandoned – and methodological ones – the use of the 'free operant', so called because the animal was now permitted to respond at its own rate rather than in a series of trials determined by the experimenter procedures. With this method, Skinner carried out substantial experimental work on the effects of different schedules and rates of reinforcement on the rates of operant responses made by rats and pigeons. He achieved remarkable success in training animals to perform unexpected responses, and to emit large numbers of responses, and to demonstrate many empirical regularities at the purely behavioral level. This lent some credibility to his conceptual analysis. It is largely his conceptual analysis that made his work much more rigorous than his peers, a point which can be seen clearly in his seminal work Are Theories of Learning Necessary? in which he criticizes what he viewed to be theoretical weaknesses then common in the study of psychology. An important descendant of the experimental analysis of behavior is the Society for Quantitative Analysis of Behavior.[7]

Relation to language

As Skinner turned from experimental work to concentrate on the philosophical underpinnings of a science of behavior, his attention turned to human language with Verbal Behavior[8] and other language-related publications,[9] Verbal Behavior laid out a vocabulary and theory for functional analysis of verbal behavior, and was strongly criticized in a review by Noam Chomsky.[10] Skinner did not respond in detail but claimed that Chomsky failed to understand his ideas,[11] and the disagreements between the two and the theories involved have been further discussed.[12][13]

What was important for a behaviorist's analysis of human behavior was not language acquisition so much as the interaction between language and overt behavior. In an essay republished in his 1969 book Contingencies of Reinforcement,[14] Skinner took the view that humans could construct linguistic stimuli that would then acquire control over their behavior in the same way that external stimuli could. The possibility of such "instructional control" over behavior meant that contingencies of reinforcement would not always produce the same effects on human behavior as they reliably do in other animals. The focus of a radical behaviorist analysis of human behavior therefore shifted to an attempt to understand the interaction between instructional control and contingency control, and also to understand the behavioral processes that determine what instructions are constructed and what control they acquire over behavior.

Molar versus molecular behaviorism

Skinner's view of behavior is most often characterized as a "molecular" view of behavior, that is each behavior can be decomposed into atomistic parts or molecules. This view is inaccurate when one considers his complete description of behavior as delineated in the 1981 article, Selection by Consequences and many other works. Skinner claims that a complete account of behavior has involved an understanding of selection history at three levels: biology (the natural selection or phylogeny of the animal); behavior (the reinforcement history or ontogeny of the behavioral repertoire of the animal); and for some species, culture (the cultural practices of the social group to which the animal belongs). This whole organism, with all those histories, then interacts with its environment. He often described even his own behavior as a product of his phylogenetic history, his reinforcement history (which includes the learning of cultural practices) interacting with the environment at the moment. Molar behaviorists, such as Howard Rachlin argue that behavior can not be understood by focusing on events in the moment. That is, they argue that a behavior can be understood best in terms of the ultimate cause of history and that molecular behaviorist are
committing a fallacy by inventing a fictitious proximal cause for behavior. Molar behaviorists argue that standard molecular constructs such as "associative strength" are such fictitious proximal causes that simply take the place of molar variables such as rate of reinforcement.[15] Thus, a molar behaviorist would define a behavior such as loving someone as exhibiting a pattern of loving behavior over time, there is no known proximal cause of loving behavior, only a history of behaviors (of which the current behavior might be an example of) that can be summarized as love. Moleculer behaviorists use notions from Melioration theory, Negative power function discounting or additive versions of negative power function discounting.[16]

**Behaviorism in philosophy**

Behaviorism is a psychological movement that can be compared with philosophy of mind. The basic premise of radical behaviorism is that the study of behavior should be a natural science, such as chemistry or physics, without any reference to hypothetical inner states of organisms as causes for their behavior. A modern example of such analysis would be Fantino and colleagues work on behavioral approaches to reasoning.[17] Other varieties, such as theoretical behaviorism, permit internal states, but do not require them to be mental or have any relation to subjective experience. Behaviorism takes a functional view of behavior.

There are points of view within analytic philosophy that have called themselves, or have been called by others, behaviorist. In logical behaviorism (as held, e.g., by Rudolf Carnap and Carl Hempel), the meaning of psychological statements are their verification conditions, which consist of performed overt behavior. W. V. Quine made use of a type of behaviorism, influenced by some of Skinner's ideas, in his own work on language. Gilbert Ryle defended a distinct strain of philosophical behaviorism, sketched in his book *The Concept of Mind*. Ryle's central claim was that instances of dualism are often represented 'category mistakes,' and hence that they were really misunderstandings of the use of ordinary language. Daniel Dennett likewise acknowledges himself to be a type of behaviorist.[18]

It is sometimes argued that Ludwig Wittgenstein defended a behaviorist position, but while there are important relations between his thought and behaviorism, the claim that he was a behaviorist is quite controversial (e.g., the *Beetle in a box* argument). Mathematician Alan Turing is also sometimes considered a behaviorist, but he himself did not make this identification.

**List of notable behaviorists**

- Albert Bandura
- Edwin Ray Guthrie
- Richard J. Herrnstein
- Clark L. Hull
- Ivan Pavlov
- B. F. Skinner
- Edward Lee Thorndike
- Edward C. Tolman
- John B. Watson

**See also**

- Animal training
- Applied behavior analysis
- Behavior modification
- Behavioural change theories
- Classical conditioning
- Cognition
- Cognitive revolution
- Dog behaviorist
- Experimental analysis of behavior
- Important publications in behaviorism

Notes


Further reading

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270-277, 290-294.
- Watson, J. B. (1919). *Psychology from the Standpoint of a Behaviorist*
- Watson, J. B. (1924). *Behaviorism*

### External links

- Books and Journal Articles On Behaviorism (http://www.questia.com/library/psychology/other-types-of-psychology/behaviorism.jsp)
- http://www.biozentrum.uni-wuerzburg.de/genetics/behavior/learning/behaviorism.html
- http://www.bfskinner.org
- http://www.behavior.org
- http://www.scienceofbehavior.com
- The Behaviorist Approach on LearnPsychology glossary (http://www.learnpsychology.net/g/29)
- http://psychclassics.yorku.ca/Skinner/Theories
- Stanford Encyclopedia of Philosophy entry (http://plato.stanford.edu/entries/behaviorism/)
- http://www.abainternational.org
- Association for Behavior Analysis (http://www.abainternational.org/)
- behaviorMachine.com (http://www.behaviorMachine.com/) - Behavior Analysis for Everyone
- Theory of Behavioral Anthropology (Documents No. 9 and 10 in English) (http://homepage.uibk.ac.at/~c720126/humanethologie/ws/medicus/block1/inhalt.html)
- California Association for Behavior Analysis (http://www.calaba.org)
- http://adultdevelopment.org/ Society for Research in Adult Development
- http://www.simplypsychology.pwp.blueyonder.co.uk/behaviourism.html Behaviourism Summary

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