The modern psychological theorist Burrhus Frederic Skinner (1904–1990), known to colleagues and the public as B. F. Skinner, was the originator of operant conditioning, a way of shaping the behavior of white rats and pigeons through “schedules of reinforcement.” The organism (rat or pigeon) was contained in the “operant chamber,” known as the “Skinner Box,” and given the opportunity to press a lever, the operation or operant, which delivered a food pellet. The schedule of food delivery that determined the rate of lever pressing was measured by a “cumulative recorder.” This device marked the frequency of lever pressing and became the basis for the science of behavioral analysis in the 1930s. Skinner believed that positive reinforcement could also shape human behavior and fashion a better way of living.

Skinner spent his boyhood in the small railroad town of Susquehanna, Pennsylvania, about 30 miles south of the New York state line. His father, William, was a lawyer for the Erie Railroad, who had political aspirations that never materialized. His mother, Grace, was a more important parental influence on young Skinner, continually reminding him to be careful of what people would think—hence, making the young man acutely aware of his own behavior and the behavior of others.

While growing up in Susquehanna, Skinner had the freedom to roam the countryside and devise toys such as roller skate scooters, seesaws, sleds, and a cannon that shot potatoes over neighbors’ houses. He excelled in the local small high school, where he was introduced to Darwinian evolution and the theory of natural selection, which he enthusiastically endorsed. Skinner enjoyed reading, especially adventure stories in which the characters invented devices or contraptions that altered their environments—Jules Verne’s *Mysterious Island* and Daniel Defoe’s *Robinson Crusoe* have been reported to be his favorites. He even fashioned his own boyhood Skinner box, a small enclosed space where he could read and dream.

After leaving Susquehanna, Skinner became an undergraduate at Hamilton College in Clinton, New York. Suffering a lonely and miserable freshman year, he was befriended by a chemistry professor whose home was a mecca for intellectuals such as Ezra Pound and Robert Frost. Frost read one of Skinner’s short stories and encouraged him to be a writer. After graduating in 1926, he returned to live with his parents, who had moved to Scranton, Pennsylvania, and tried to write the great American novel. He discovered that he had nothing to say, moved to Greenwich Village for a brief time, gave up writing, and enrolled as a graduate student in psychology at Harvard. Almost immediately, he was drawn to the physiologist and Harvard professor William Crozier, who believed that real science involved controlling experimental variables and avoided all metaphysical assumptions. These concepts became the theoretical basis for Skinner’s behavioral science.

Skinner defended his doctoral dissertation, “The Concept of the Reflex,” in 1931, arguing that the mental reflex was always simply behavior and referring to the synapse as a philosophical concept. The prestigious Harvard Junior Fellowship allowed him to expand his work on behavioral science into his first book, *The Behavior of Organisms*, which was published in 1938. By then, he had married Yvonne Blue...
and had become the father of the first of two girls, Julie and Deborah. In 1936, he accepted his first academic position at the University of Minnesota. While at the University of Minnesota, Skinner became involved in “Project Pigeon,” a project that involved positively reinforcing pigeons to guide missiles or bombs in an effort to help the United States win World War II. After achieving tremendous accuracy, he unsuccessfully tried to convince the National Defense Research Committee that pigeon guidance was more accurate than the gyroscope system that had been developed during World War I. Nonetheless, Project Pigeon augmented Skinner’s conviction that a science of behavior could be of value in human affairs—even if indirectly.

The transfer of reinforcement conditioning into the human social world marked a momentous shift in Skinner’s focus. It eventually brought him into contention with writers (e.g., Robert Wood Krutch and Ayn Rand) and psychologists, who believed that Skinnerian behavioral engineering of humans threatened traditional American beliefs about freedom and individual choice. Yet Skinner shared broad humanist values with these individuals. Whatever their essential disagreements, they all wanted to help people live better lives. They were all altruistic.

In 1944, Skinner began work on another invention—the “Baby Tender” or “Aircrib”—the first that directly involved humans rather than pigeons. Indeed, the Baby Tender became the infant home for his second daughter, Deborah, for the first 2 years of her life. Skinner had noted that pigeons could be handheld and restrained but still be free to peck keys. He recalled that his first daughter, Julie, had been restrained by diapers and nightgowns and that she slept on a thick mattress zipped into a flannel blanket—a virtual prisoner in her own garb. But the Baby Tender allowed Deborah, clad in only a diaper, to have her own enclosed space with a large window and a stretch canvas bottom that could be removed and cleaned in seconds. The crib was equipped with thermostatically filtered air that prevented her skin from becoming contaminated with urine and sweat. Her mother could remove her from the Baby Tender for play or feeding at any time. Otherwise, she was comfortable and safe in her special crib. He sent an article, “Baby Care Can Be Modernized,” to Ladies Home Journal, which published it as “Baby in a Box” in October 1945. It brought Skinner national attention with two diverging reactions. Some criticized the device for restricting mother and child contact; others saw the crib as a progressive invention freeing both the baby and the mother.

At the end of World War II, Skinner left the University of Minnesota for Indiana University, where he chaired the psychology department from 1946 to 1947. He returned to his alma mater, Harvard, as full professor in 1948, where he remained until his death in 1990. He remained fully involved in intellectual endeavors, publishing seven books and 30 articles. In 1971, his controversial book Beyond Freedom in Dignity appeared and created a firestorm of criticism. Skinner argued that only societies shaped by behavioral engineering could allow humanity to survive in a world increasingly fixated on individual freedom while looming catastrophes such as overpopulation, nuclear war, and ecological destruction grew ever nearer. As in his 1948 novel Walden Two, which created a fictional behaviorally engineered community, this best seller maintained that concepts such as freedom, consciousness, and God were simply entrenched myths that blinded humankind from understanding that only a behavioral science could save the human species. But some psychologists, such as Carl Rogers, who had debated Skinner earlier in 1956, asked if scientists were to control the future of humankind, who would control the scientists? The linguist Noam Chomsky, who reviewed Beyond Freedom and Dignity for the New York Review of Books, insisted that a genuine scientist would not dismiss the experimental study of self-consciousness and mental states.
In September 1971, Skinner appeared on the cover of *Time* with the clearly negative caption “We Can’t Afford Freedom.” He also appeared on a number of television talk shows, such as William Buckley’s *Firing Line*, where he tried, mostly unsuccessfully, to defend his position. He remained unmoved by critics. In 1954, he visited a private school in Cambridge that his daughter Deborah attended. Observing that the teacher gave an assignment and then checked on the students to see how they were proceeding, Skinner noticed that some students finished quickly and were bored, whereas others were struggling to even get started. In an effort to devise a better way of teaching, Skinner developed a simple teaching machine in which a plastic slider covered the correct answer until the student wrote the correct answer and then moved to the next questions. The questions were sequenced with small gradations of difficulty so that most students had little problem with moving ahead in little steps. Getting the correct answer was the reinforcement that elicited movement of the slider to the next question. Although International Business Machines and several other large companies contracted Skinner to build a teaching machine, all rejected this slider model. In 1968, Skinner wrote *The Technology of Teaching*; however, it was not widely read among the general public. Later, Skinner agreed that the computer could do a far better job with programmed instruction than his simple slider machine.

At the end of his life, suffering from leukemia, Skinner believed that human beings had passed the point of no return. Humanity had failed to implement a science that could ensure they had a future. He often noted that many psychologists understood that the brain originated mental life. But he argued that the brain was part of the body, and once you focus on the body, you should be focused on behavior and seek to change it.

**See also** Behavior Therapies: Overview; Behavior Therapy; Cognitive-Behavioral Therapies: Overview; Cognitive-Behavioral Therapy; Ellis, Albert; Rational Emotive Behavior Therapy; Rogers, Carl

**Further Readings**


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