"I've had only one idea in my life—a true idée fixe. To put it as bluntly as possible—the idea of having my own way. 'Control' expresses it. The control of human behavior. In my early experimental days it was a frenzied, selfish desire to dominate. I remember the rage I used to feel when a prediction went awry. I could have shouted at the subjects of my experiments, 'Behave, damn you! Behave as you ought!' "

—B.F. Skinner's Walden Two. 1948

THE speaker is T.E. Frazier, a character in Walden Two and the fictional founder of the Utopian community described in that novel. He is also an alter ego of the author, Burrhus Frederic Skinner, who is both a psychology professor and an institution at Harvard. Skinner is the most influential of living American psychologists, and the most controversial contemporary figure in the science of human behavior, adored as a messiah and abhorred as a menace. As leader of the "behavioristic" psychologists, who liken man to a machine, Skinner is vigorously opposed both by humanists and by Freudian psychoanalysts. Next week that opposition is bound to flare anew with the publication of Skinner's latest book, Beyond Freedom and Dignity (Knopf; $6.95). Its message is one that is familiar to followers of Skinner, but startling to the uninitiated: we can no longer afford freedom, and so it must be replaced with control over man, his conduct and his culture. This thesis, proposed not by a writer of science fiction but by a man of science, raises the specter of a 1984 Orwellian society that might really come to pass. It accounts, also, for the alarm and anger that Skinner's current popularity arouses in his opponents.

Like the Utopians who preceded him, Skinner hopes for a society in which men of good will can work, love and live in security and in harmony. For mankind he wants enough to eat, a clean environment, and safety from nuclear cataclysm. He longs for a worldwide culture based on the principles of his famous didactic novel, Walden Two. Those principles include: communal ownership of land and buildings, egalitarian relationships between men and women, devotion to art, music and literature, liberal rewards
for constructive behavior, freedom from jealousy, gossip, and—astonishingly—from the ideal of freedom. Beyond Freedom and Dignity, in fact, is really a nonfiction version of Walden Two.

Disastrous Results

Skinner acknowledges that the concept of freedom played a vital role in man's successful efforts to overthrow the tyrants who oppressed him, bolstering his courage and spurring him to nearly superhuman effort. But the same ideal, Skinner maintains, now threatens 20th century man's continued existence. "My book," says Skinner, "is an effort to demonstrate how things go bad when you make a fetish out of individual freedom and dignity. If you insist that individual rights are the summum bonum, then the whole structure of society falls down." In fact, Skinner believes that Western culture may die and be replaced, perhaps, with the more disciplined culture of the Soviet Union or of China. If that happens, Western man will have lost the only form of immortality he can hope for—the survival of his way of life.

Skinner's reasoning is that freedom and free will are no more than illusions; like it or not, man is already controlled by external influences. Some are haphazard; some are arranged by careless or evil men whose goals are selfish instead of humanitarian. The problem, then, is to design a culture that can, theoretically, survive; to decide how men must behave to ensure its survival in reality; and to plan environmental influences that will guarantee the desired behavior. Thus, in the Skinnerian world, man will refrain from polluting, from overpopulating, from rioting, and from making war, not because he knows that the results will be disastrous, but because he has been conditioned to want what serves group interests.

Is such a world really possible? Skinner believes that it is; he is certain that human behavior can be predicted and shaped exactly as if it were a chemical reaction. The way to do it, he thinks, is through "behavioral technology," a developing science of control that aims to change the environment rather than people, that seeks to alter actions rather than feelings, and that shifts the customary psychological emphasis on the world inside men to the world outside them. Central to Skinner's approach is a method of conditioning that has been used with uniform success on laboratory animals: giving rewards to mold the subject to the experimenter's will. According to Skinner and his followers, the same technique can be made to work equally well with human beings.

Underlying the method is the Skinnerian conviction that behavior is determined not from within but from without. "Unable to understand how or why the person we see behaves as he does, we attribute his behavior to a person inside," Skinner explains. Mistakenly, we believe that man "initiates, originates and creates, and in doing so he remains, as he was for the Greeks, divine. We say that he is autonomous." But Skinner insists that autonomy is a myth, and that belief in an "inner man" is a superstition that originated, like belief in God, in man's inability to understand his world. With the rise of behavioral science, understanding has grown, and man no longer needs such fictions as "something going on inside
the individual, states of mind, feelings, purposes, expectancies and all of that." The fact is, Skinner insists, that actions are determined by the environment; behavior "is shaped and maintained by its consequences."

Avoiding Punishment

To Skinner, this means that there is nothing wrong, emotionally or morally, with people who behave badly. For example, youths who drop out of school or refuse to get jobs behave as they do not because they are neurotic or because they feel alienated, but "because of defective social environments in homes, schools, factories and elsewhere." As Skinner sees it, environments are defective when they fail to make desirable behavior pay off and when they resort to punishment as a means of stopping undesirable behavior.

In short, it is punishment or reward that determines whether a particular kind of behavior becomes habitual. But Skinner believes that punishment is generally an ineffective means of control. "A person who has been punished," he writes in his new book, "is not less inclined to behave in a given way; at best, he learns how to avoid punishment. Our task is not to encourage moral struggle or to build or demonstrate inner virtues. It is to make life less punishing, and in doing so to release for more reinforcing activities the time and energy consumed in the avoidance of punishment." The way to release that time and energy is "to build a world in which people are naturally good," in which they are rewarded for wanting what is good for their culture. But arranging effective rewards, complicated enough in the laboratory, is even more complex in the real world. Why not solve society's problems by using the much simpler physical and biological technologies we already have? Because, Skinner says, that will not work. "Better contraceptives will control population only if people use them. A nuclear holocaust can be prevented only if the conditions under which nations make war can be changed. The environment will continue to deteriorate until pollution practices are abandoned. We need to make vast changes in human behavior."

Soap Mouthwash

A matter that might interest President Nixon is Skinner's belief that new ways must be found to persuade people that work is worthwhile. "Behavior used to be reinforced by great deprivation; if people weren't hungry, they wouldn't work. Now we are committed to feeding people whether they work or not. Nor is money as great a reinforcer as it once was. People no longer work for punitive reasons, yet our culture offers no new satisfactions." Moreover, "we can't control inflation if everything we might do is a threat to somebody's freedom. Yet in the long run, we are all going to suffer much more than if we were slightly restricted."

Skinner came rather slowly to his conviction that such changes can be made; his early interests, in fact,
were far from psychology. Born in Susquehanna, Pa., in 1904, he was the elder son of Grace Burrhus, an amateur musician who sang at weddings and funerals, and William Skinner, a lawyer who was "a sucker for book salesmen." In his "Sketch for an Autobiography," Skinner describes his early life as "warm and stable." He lived in the same house until he went to college. He was never physically punished by his father and only once by his mother—when she washed out his mouth with soap for using a "bad word." Nevertheless, young Skinner was "taught to fear God, the police and what people will think," and his Grandmother Skinner "made sure that I understood the concept of hell by showing me the glowing bed of coals in the parlor stove." To deter him from a life of crime, Skinner's father conducted him through the county jail and on a summer vacation took him to a lecture with colored slides that depicted life in Sing Sing.

From his childhood years. Skinner was mechanically inclined. He built roller-skate scooters, steerable wagons, rafts, water pistols from lengths of bamboo, and "from a discarded water boiler a steam cannon with which I could shoot plugs of potato and carrot over the houses of our neighbors." He also devised a flotation system to separate green from ripe elderberries, which he used to sell from door to door. Although his attempts to build a glider and a perpetual motion machine ended in failure, his innovative tinkering was to pay off handsomely in the laboratory in later years.

In high school, Skinner earned money by lettering advertising show cards, played in a jazz band, and with three other boys organized an orchestra that performed two nights a week in a local movie theater. A good student, he demonstrated a flair for writing, and when he got to Hamilton College (Clinton, N.Y.) in 1922, decided to major in English.

In college, by his own admission, young Fred never fitted into student life, but became a rebel whose lack of self-understanding now amazes him. He wrote an editorial attacking Phi Beta Kappa, helped cover the walls at Class Day exercises with "bitter caricatures of the faculty," and made such a shambles of commencement ceremonies that he was warned by the college president that he would not get his degree unless he quieted down.

But at the same time he had what classmates recall as a brilliant mind, and he made full use of it. For one thing, he wrote short stories, and in his senior year sent three of them to Robert Frost, who praised them warmly.

That encouragement convinced Fred Skinner that he should become a writer. The decision, he says, was "disastrous." Recalling those "dark years," living first at home with his family and then in New York's Greenwich Village, he admits that he frittered away his time, read aimlessly, wrote very little—"and thought about seeing a psychiatrist." In his own words, he "failed as a writer" because he "had nothing important to say."
But that failure allowed Skinner to swing his attention back to one of the pet interests of his youth: animal behavior. As a boy, he had had toads and chipmunks. He also had a vivid memory of watching a troupe of trained pigeons at a county fair play at putting out a fire. Besides, he had read and been excited by some Bertrand Russell articles in the old Dial magazine about Johns Hopkins Psychologist John B. Watson, father of behaviorism. It was with Watson, in 1913, that psychology really emerged from its origins in philosophy to become a full-fledged scientific discipline.

Early Christian thinkers pondering the mystery of man believed that it was the "soul" that set human beings apart from animals. To them, the essence of man was his God-given spirit, immaterial, impalpable, otherworldly, something quite outside the natural world. But with the decline of religion and the rise of materialism, 17th and 18th century philosophers like Thomas Hobbes and Julien de La Mettrie increasingly viewed the soul as an aspect of the body, man as an animal, both men and animals as machines.

It was this kind of thinking that influenced Watson. Drawing, too, on the work of Pavlov, he repudiated the subjective concepts of mind and emotion and described human behavior as a succession of physical reflex responses to stimuli coming from the environment. It was the environment alone, he felt, that determined what a man is: "Give me a dozen healthy infants," he wrote in 1925, "and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, even beggarman and thief, regardless of his talents, penchants, tendencies, abilities." The goal of this Watsonian behaviorism was the prediction and control of behavior—which suited Skinner to perfection.

Bach Fugues

And so, in 1928, Skinner entered Harvard with a new goal: a doctorate in psychology. His regime was spartan: "I saw no movies or plays, had scarcely any dates, and read nothing but psychology and physiology. The second year I bought a piano; but there was discipline even so: I played Bach fugues or nothing."

In these years—and subsequently—Skinner disciplined not just himself but also rats. The rats, and later pigeons, became the center of laboratory experiments in which he controlled behavior by setting up "contingencies of reinforcement"—circumstances under which a particular bit of desired behavior is "reinforced" or rewarded to make sure it will be repeated. The behavior Skinner demanded of his pigeons was bizarre—for pigeons. He made them walk figure eights, for example, by reinforcing them with food at crucial moments. The process as explained by Skinner: "I watch a hungry pigeon carefully. When he makes a slight clockwise turn, he's instantly rewarded for it. After he eats, he immediately tries it again. Then I wait for more of a turn and reinforce again. Within two or three minutes, I can get any pigeon to make a full circle. Next I reinforce only when he moves in the other direction. Then I wait until he does both, and reinforce him again and again until it becomes a kind of drill. Within ten to 15 minutes, the
pigeon will be doing a perfect figure eight."

By a similar process, Skinner has taught pigeons to dance with each other, and even to play Ping Pong. During World War II, he conceived the idea of using pigeons in guided-missile control; three birds were conditioned to peck continuously for four or five minutes at the image of a target on a screen. Then they were placed in harness in the nose of a missile, facing a screen on which the target would appear when the missile was in flight. By pecking at the image moving on the screen, the pigeons would send corrective signals that moved the missile's fins and kept it on target. The missile, called the Pelican, was never used in warfare; the pigeon-aided equipment was so complex and bulky that the missile could carry little high explosive. Furthermore, Skinner mourns, "our problem was no one would take us seriously."

All of these conditioning feats were accomplished with the now-famous Skinner box. It is a soundproof enclosure with a food dispenser that a rat can operate by pressing a lever, and a pigeon by pecking a key. The dispenser does not work unless the animal has first performed according to a specially designed "schedule of reinforcement."

Explains Skinner: "One of the most powerful schedules, the variable-ratio schedule, is characteristic of all gambling systems. The gambler cannot be sure the next play will win, but a certain mean ratio of plays to wins is maintained. This is the way a dishonest gambler hooks his victim. At first the victim is permitted to win fairly often. Eventually he continues to play when he is not winning at all. With this technique, it is possible to create a pathological gambler out of a simple bird like a pigeon."

Venture in Self-Therapy

For a while, that beguiling possibility and others suggested by Skinner left the academic world pretty cold, as did his first book, The Behavior of Organisms, published in 1938. "People didn't reinforce me, but my rats did," Skinner says regretfully, remembering how rewarded he felt every time his command to "Behave, damn you!" was obeyed.

He was rewarded in a different way—his first general public recognition—when in 1945 the Ladies' Home Journal printed a piece about another kind of Skinner box, the so-called air crib (see box, page 51). By the time the Journal article was printed, Skinner had finished writing his second book, though he did not find a publisher for it until 1948. The work was Waiden Two, completed in seven weeks of impassioned creativity. Writing it, says Skinner, was "pretty obviously a venture in self-therapy in which I was struggling to reconcile two aspects of my own behavior, represented by Burris and Frazier." Even today, both characters represent Skinner himself. Burris is a professor with traditional ideas, acquired in childhood, about freedom, dignity and democracy. Frazier is the antidemocratic creator of a controlled society whose views about human behavior correspond to Skinner's laboratory findings.
Visiting Frazier's planned community, Burris is both attracted and repelled—attracted by the seeming contentment of its inhabitants, repelled by their voluntary submission to the maneuverings. however well-intentioned, of its Planners and Managers. In the end, his skepticism overcome, he decides to join the community and with "euphoric abandon" wires his college head: "My dear President Mittelbach, you may take your stupid university . . ."

Pigeons Aren't People

Unlike Burris, the numerous and articulate anti-Skinnerians remain skeptical, if not downright hostile toward him and his followers. Yet they feel that his long, patient campaign against freedom must be studied and understood. Their criticism is directed not at Skinner the scientific technician (the soundness of his laboratory work is seldom questioned) but at Skinner the philosopher and political thinker; his proposal for a controlled society, they say, is both unworkable and evil.

Giving as an example the failure of the North Koreans to brainwash many of their G.I. war prisoners, Stanford Psychologist Albert Bandura asserts that control of human behavior on the scale advocated by Skinner is impossible. Psychologist Ernest Hilgard, also of Stanford, thinks control of mass behavior is theoretically possible but realistically improbable, because there are too many bright people who would never go along.

Skinner himself admits that "pigeons aren't people," but points out that his ideas have already been put to practical use in schools, mental hospitals, penal institutions and business firms. Skinner-inspired teaching machines have begun to produce what amounts to an educational revolution. It was after a visit to his daughter's fourth-grade arithmetic class that he invented the first device for programmed instruction in 1954. Having seen "minds being destroyed," he concluded that youngsters should learn math, spelling and other subjects in the same way that pigeons learn Ping Pong. Accordingly, machines now in use in scores of cities across the country present pupils with a succession of easy learning steps. At each one, a correct answer to a question brings instant reinforcement, not with the grain of corn that rewarded the pigeon, but with a printed statement—supposedly just as satisfying—that the answer is right.

Juvenile Offenders

Some critics, loyal Skinnerians among them, argue that this teaching process bores all but the dullest students, and that there is little solid evidence as to how well programmed instruction sticks. But Skinner insists that his devices teach faster than other methods and free teachers to give personal attention to students who are trying to master complex subjects.

In some mental hospitals, reinforcement therapy inspired by Skinner is helping apathetic or rebellious
patients to behave more like healthy human beings. The staffers of one institution, for instance, were troubled by patients who insisted on trailing into the dining room long after the dinner bell sounded. Attendants tried closing the doors 20 minutes after the bell rang, refusing admittance to those who showed up any later. Gradually, the interval between bell and door closing was shortened to only five minutes, and most patients were arriving promptly. "You shift from one kind of reinforcement—annoying the guards and getting attention—to another, eating when you're hungry," says Skinner. To charges that this kind of conditioning is sadism, he replies that "the patients are going in quickly because they want to." That is strange logic; he seems to ignore the fact that the patients are compelled to "want to" unless they care to go hungry.

In yet another practical example of Skinnerism in operation, a point system for good behavior was set up for juvenile offenders—armed robbers, rapists and murderers—in the Robert F. Kennedy Youth Center in West Virginia. Though no requirements were imposed on the delinquents, they earned points if they voluntarily picked up books, or went to lectures and managed to learn something from them. With the points, they could then buy such rewards as better food, a private room, or time in front of the TV set.

"All their lives," says Skinner, "these boys had been told that they couldn't learn and that they were useless. But under conditions that reinforced them every time they progressed, their morale improved enormously. Moreover, the return rate to the school dropped from 85% to 25% after the method was instituted."

The same kind of positive reinforcement was tried a few years ago by Emery Air Freight of Wilton, Conn. To reduce the breakage that resulted when goods were packed in the wrong boxes for shipping, supervisors began complimenting packers when the correct boxes were chosen. Taking new pride in their work, the employees made virtually no mistakes, breakage ceased, and the company saved $600,000 in a year.

Mothers who practice Skinnerism—knowingly or by instinct—have an easier time with their youngsters when they reward good behavior instead of punishing bad. Explains Skinner: "If a mother goes to her baby only when he yells, she reinforces fussing. But when she goes to him while he's happy and perhaps saying 'Mama' softly, the baby will always speak to her that way."

Uncompromising View

Though such apparent successes persuade Skinnerians that reinforcement is eminently practical, critics find the technique philosophically distasteful and morally wrong.

Many of their objections center around the ancient, crucial argument over free will v. determinism: is man in charge of himself and his destiny, or is he not? Skinner argues that belief in free will comes only
from man's need to be given credit for his "good" behavior and achievements. "Consider a woman who
has a baby. It cost her a lot of pain and trouble to have it. But she didn't design that baby; it was all
settled at the moment of conception what the baby was going to be like. The same thing is true when a
man writes books, invents things, manages a business. He didn't initiate anything. It's all the effect of
past history on him. That's the truth, and we have to get used to it." Theologians, humanists and
conventional psychologists, including Freudians, cannot accept this uncompromising view. "The chief
source of man's dignity," Reinhold Niebuhr wrote, "is man's essential freedom and capacity for self-
determination." Carl Rogers has asserted that "over and above the circumstances which control all of us,
there exists an inner experience of choice which is very important. This is the kind of thing Skinner has
never been willing to recognize."

Skinner's detractors attack the whole concept of behaviorism, which Novelist Arthur Koestler, who has
high amateur standing in psychology and other sciences, maintains is nothing but pseudoscience, "a
monumental triviality that has sent psychology into a modern version of the Dark Ages." In ignoring
consciousness, mind, imagination and purpose, Koestler says, Behaviorist Skinner and his admirers have
abandoned what is most important. Similarly, Historian Peter Gay speaks of "the innate naiveté,
intellectual bankruptcy and half-deliberate cruelty of behaviorism."

The gravest menace from Skinner is his authoritarianism in the view of his critics. They reject the notion
that man can no longer afford freedom and believe in fact that he cannot afford the opposite. Says
Harvard Social Psychologist Herbert C. Kelman: "For those of us who hold the enhancement of man's
freedom of choice as a fundamental value, any manipulation of the behavior of others constitutes a
violation of their essential humanity, regardless of the 'goodness' of the cause that this manipulation is
designed to serve." To Kelman, the "ethical ambiguity" of behavioral manipulation is the same whether
the limitation on choice comes "through punishment or reward or even through so perfect an
arrangement of society that people do not care to choose."

Existential Psychoanalyst Rollo May believes that Skinner is a totalitarian without fully knowing it. "I
have never found any place in Skinner's system for the rebel," he says. "Yet the capacity to rebel is of the
essence in a constructive society." Richard Rubenstein, professor of religion at Florida State University,
wonders what might happen to would-be rebels in a Skinnerian society: "Suppose some future controller
told dissenting groups to 'behave, damn you!' What would prevent the controller from employing his
own final solution?"

Skinner is skeptical about democracy. Observing that society is already using such ineffective means of
behavioral control as persuasion and conventional education, he insists that men of good will must adopt
more effective techniques, using them for "good" purposes to keep despots from using them for "bad"
one. In his planned society, he says, control would be balanced by countercontrol, probably by "making
the controller a member of the group he controls." This would help to ensure that punishment would
never be inflicted, Skinner maintains, adding that it was the use of "aversive control" (punishment) that doomed Hitler: "The Nazi system had its own destruction built right into it. When you control that way, people are out to get you."

The ultimate logical dilemma in Skinner's thinking is this: What are the sources of the standards of good and evil in his ideal society? Indeed, who decides even what constitutes pleasure or pain, reward or punishment, when man and his environment can be limitlessly manipulated? Skinner himself believes in Judeo-Christian ethics combined with the scientific tradition. But he fails to answer how it is possible to accept those ethics without also accepting something like the "inner person" with an autonomous conscience.

Skinner has never responded fully to any of his critics, despite their number and stature. Often he has failed to understand them. Sometimes he has even branded them as neurotic or even psychotic. Occasionally he has seemed to imply that he himself is beyond criticism. "When I met him, he was convinced he was a genius," Yvonne Skinner remembers. And in Walden Two, Skinner's alter ego Frazier, assuming the posture of Christ on the cross, says that there is "a curious similarity" between himself and God—adding, however, that "perhaps I must yield to God in point of seniority."

In another Walden Two passage, Skinner sketches a more realistic self-portrait. With some bitterness, his alter ego Frazier addresses Burris: "You think I'm conceited, aggressive, tactless, selfish. You're convinced that I'm completely insensitive to my effect upon others, except when the effect is calculated. You can't see in me any personal warmth. You're sure that I'm one who couldn't possibly be a genuine member of any community . . . Shall we say that as a person I'm a complete failure and have done with it?"

This awareness that he is unfit for communal life may be one reason that Skinner has never tried to start a real Walden Two, never sent a Dear-President-Mittelbach telegram to the president of Harvard. In addition, he likes his own kind of life too well to give it up even for an ideal in which he believes so intensely, and even if he felt otherwise, his wife is opposed to the idea.

Says Yvonne Skinner, a former University of Chicago English major who studied with Thornton Wilder and is herself a gifted writer: "We had tremendous arguments about Walden Two. I wouldn't like it; I just like change and privacy."

Refusing Invitations

Fred and Yvonne Skinner live in an attractive, modern Cambridge house complete with swimming pool, a stereo system, a grand piano, a clavichord and, in the basement study, a small organ. In a sense, Skinner's own life-style is highly controlled and conditioned. His study contains a special clock that
"runs when I'm really thinking. I keep a cumulative record of serious time at my desk. The clock starts when I turn on the desk light, and whenever it passes twelve hours, I plot a point on a curve. I can see what my average rate of writing has been at any period. When other activities take up my time, the slope falls off. That helps me to refuse invitations."

Skinner rises at 5 a.m., writes for three hours, then walks to his Harvard office, sometimes memorizing poetry (Shakespeare or Baudelaire) on the way. There he charts the sales of Walden Two on a graph over his desk; the total should reach the million mark sometime in 1972. In the course of the day, he gives an occasional lecture and records his ideas in notebooks that he has always at hand. "He thinks of himself as an event in the history of man, and he wants to be damned sure the record is straight," a colleague observes.

Skinner nonetheless allows himself some relaxation. He drinks vodka and tonic in the late afternoon, sees an occasional movie, reads Georges Simenon detective novels once in a while, and enjoys the company of friends, his two children and his grandchildren. It sounds fulfilling, but a poignant passage from a personal journal several years ago suggests an underlying sadness: "Sun streams into our living room. My hi-fi is midway through the first act of Tristan and Isolde. A very pleasant environment. A man would be a fool not to enjoy himself in it. In a moment I will work on a manuscript which may help mankind. So my life is not only pleasant, it is earned or deserved. Yet, yet, I am unhappy."

That sort of unhappiness wells from deep personal sources. Yet it is also related to his more universal concerns. Skinner worries about the fact that, as Walden Two's Frazier put it, "our civilization is running away like a frightened horse. As she runs, her speed and her panic increase together. As for your politicians, your professors, your writers—let them wave their arms and shout as wildly as they will."

That may be an accurate description of society's dilemma, but Skinner's solution seems equally frightening. To Theologian Rubenstein, Beyond Freedom and Dignity is an important but "terrifying" book. Skinner's "utopian projection," he says, "is less likely to be a blueprint for the Golden Age than for the theory and practice of hell."

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