issue is the relationship of the isolated little community with "government" of the larger state or nation in which it rests:

"As we use the term these days, government means power - mainly the power to compel obedience," Frazier went on. "The techniques of government are what you would expect - they use force or the threat of force." (23)

"Governments must always be right - they can't experiment because they can't admit doubt or question." (24)

"How sincere are these liberals, anyway?" Frazier went on. "Why don't they build a world to their liking without trying to seize power? It simply isn't true that all governments persecute everyone who succeeds in being happy! On the contrary, any group of men of good will can work out a satisfactory life within the existing political structures of half a dozen modern governments." (25)

One cannot beg the question, "what is the origin of governments or the state?" Governments do not exist as some kind of metaphysical requirement for mankind to live in social groupings; "governments" consist of laws and applications of these laws - i.e., providing consequences (usually aversive) for the behavior of individuals in the group. Thus far, the state seems neutral and this is as far as Skinner seems to go. What Marx has shown is that the centralized power to coerce called the "state" arises not out of a vacuum, but out of the antagonistic interactions between a minority who own land, wealth and structures (the means of production) and a majority who has none of these, and who must work for the minority in order to be able to live, at all. Thus, Marx's analysis of the state or government states that the occasion for its development, in the first place, is a class distinction between the rich and the poor. If the poor can live only by working for the rich, they will do so, but it will be an aversive situation, because the rich will expect to get the greatest amount of labor for the lowest possible wage. The working class may countercontrol by organizing and striking for higher wages, by picketing, or, possibly by seizing the means of production - it is precisely this form of worker countercontrol that is, in turn, countercontrolled by the rich though the formation of the state. The property class will simply hire workers at a slightly higher wage, arm them and call them "police" and "national guards." A few more workers are hired at more lofty wage-scales and are called "politicians" and "bureaucrats." And there, loosely, according to Marx, you have government. It is obvious which of the class' best interests are served by governmental function. This, of course is a simplistic rendition of Marx's position; but, it is offered because I have heard it claimed that such talk does not apply to government in the United States, because of our traditions of human dignity, freedom and basic rights. Skinner treats that issue in Beyond Freedom and Dignity, which we will turn to at a later point, but that is a behavioral treatment - we need to continue here with an economic analysis.

Certainly, our form of government was established as a form of popular countercontrol of the class exploitation, but it contained a flaw, capitalism, which makes Marx's analysis of government as an instrument of class exploitation fit us today. The U.S. placed emphasis upon a system of free enterprise, which does nothing but place individuals in competition with one another for the available wealth or reinforcement available within an economic system. This will tend to shape up a large variety of aggressive behaviors called "good business practices." If there is one process that is the most general within a capitalistic system of economic exchange, it is that reservoirs of capital tend to accumulate and grow by absorbing smaller reservoirs - this translates into bigger businesses grow by buying out smaller ones. The result is a tendency toward fewer "owners" and more "workers," since, for example, a small baker who cannot compete with a larger bakery will sell his business to the large bakery, but now he must work for the large bakery as a salaried employee. Inheritance tax laws were originally intended to off-set this tendency for capital to accumulate; however, with the process of "incorporation," the resulting "immoral persons," or "corporations" circumvented the inheritance laws. This accumulation of long-standing reservoirs of capital was further aided by the legalization of "trusts" and "foundations." Supposedly, the establishment of trusts and foundations cancelled "ownership" of large resources of capital, but this is a red herring, because it is not "ownership" of capital per se that is critical - it is the control over its use that is critical. And, trusteeships and foundations simply leave control of capital with the original owners. It is often pointed out that our welfare systems and such revisionistic programs as unemployment compensation are provided on the behalf of the working class by government. Again, this is a red herring, for it is just less expensive for the property class to provide such benefits than to provide full-employment. And, the threat of unemployment works to soften employed workers' demands for better wages. Now, Skinner is not insensitive to such issues, for he does state:

... people differ in their ability to acquire property and hence in the quantities they possess, and since possession usually makes acquisition easier, differences have become very great." (26)

But, he does not allow this to cause him to be suspicious of government, beyond its typical uses of aversive control. But, one must ask who is really controlling whom and in whose best interests? At this point, Marx's notion of the state is relevant. In Walden Two, just following the three statements quoted earlier, Frazier is talking about the near self-sufficiency of his community, and Castle wonders how this sets with the rest of the society. Frazier's response is that it was somewhat of a public relations problem, but that problem is left to a "Manager of Public Relations," who will see to it that only the best propaganda is given to the wider society about Walden Two. The telling statement by Frazier is "All we ask is to be left alone." (27) Castle responds by asking if they will, in fact, be left alone? However, the discussion that follows misses an important number of points.

First, the interests of the major national and multinational corporations are only served when they maximize profit taking. This means that they support mass consumption, disposable products and the exploitation of natural resources. If social experiments like Walden Two proved to be too successful, that success would threaten these values (would threaten profits), and such experiments would be subjected to the full wrath of the capitalistic interests. Given such a situation, it is not a bad bet that governmental regulation would quickly be brought to bear at an intensity that would squash the Walden Two's and Three's. It would be the Paris Commune revisited. Skinner places too much trust in the government's "leaving them alone."

Second, Skinner - correctly so - stresses the replacement of control by aversive methods with control by positive reinforcement (a point that Marx was incapable of
recognizing, because of his time in history). But, it is not enough to just champion systems of control by positive reinforcement. Certain economic factors must be taken into account in such an analysis. In any economic system, be it national or global, there is a finite amount of “surplus value” of labor or of reinforcers. Governments and propertied class members have been shaped into the use of aversive control techniques because such methods are relatively inexpensive to maintain. To control by positive reinforcement is going to ultimately cut into the profit margin - social reinforcement, as conditioned reinforcement, can only take a controller so far. Eventually, conditioned reinforcers will have to be backed up with primary reinforcers, which subtracts from profits. Therefore, control by positive reinforcement will quickly prove to be unconscionable to the propertied class and to the governments they control. It just costs too much from their value system’s point of view, and movements to establish control by positive reinforcement as replacements for systems of aversive control will, again, be squashed.

Third, we have to look at science, itself. What is science? Well, it is basically the behavior of people attempting to discover how the world is put together, and how it behaves when we behave in it. The application of the “knowledge” derived from scientific inquiry is called “technology.” So far, no trouble - science teaches and technology applies those teachings for the “general good.” This is a fairy tale. Skinner, in the very beginning of Beyond Freedom and Dignity says the following:

“In trying to solve the terrifying problems that face us in the world today, we naturally turn to the things we do best. We play from strength, and our strength is science and technology . . . But things grow steadily worse and it is disheartening to find that technology itself is increasingly at fault.” (28)

Skinner continues to place the blame for this situation on human behavior, which is a correct move. He then spends the remainder of the text applying the analysis of behavior, stressing reinforcement, to demonstrate how science can correct the problem by altering the behavior of people. However, he does not carry the matter to its core. Certainly people mis-use science and over-use technology to pollute and rape the environment, and people fail to use technologies that are available for the general good. But, who are these “people,” and do we possess the reinforcers to alter their behavior of recklessly applying technology? One finishes the book with a sense of optimism about our ability to change matters. But, those at fault, upon a sober re-thinking of the situation, appear to be the bankers, corporate magnates and land owners - the propertied ones among us. They have through application of funds directed the developments of science and the uses of technology, and caused the abuses Skinner addresses. So, in what manner of speaking can we “reinforce” more appropriate or responsible behavior on their part - by our “good wishes”? No. We are powerless to influence them in any conventional way. We cannot withdraw from the larger society and create our own utopian communities, we haven’t control of any reinforcers except our own cooperation, and we have no legal aversive control over these people that has been effective in the past. So, although Skinner would have it differently, there exists no remedy which is more delicate than that pointed out by Marx. Though Fred Skinner may regard revolution as having little survival value for our culture, it may just be that the only chance our culture has for survival (“for the good of those to follow”) is to be found with Marx.

It appears that we are in somewhat of a corner with respect to what is to be done. We have a science of human behavior and its attendant technology, which can virtually assure us of a just, harmonious and fulfilling society - but we cannot apply it to the extent needed, because we haven’t the “permission” or the resources. We have, too, the justification for and the strategy of a seizure of the opportunity and resources to really re-make our society; but, how can we insure ourselves that we will not fall prey to an equally rotten situation under a totalitarian dictatorship? The only hope seems to be a marriage of Marx and Skinner. We must dispose of the tyrants, certainly; but, the change must be over-seen by individuals capable of applying the science of human behavior to insure a just result. Simply, Radical Behaviorists must become Marxists, and Marxists must become Radical Behaviorists - and together they must act.

In the area of politics, it seems that Marx takes an edge over Fred Skinner. In the arena of philosophy, both Marx and Skinner have exceptional grades - they are absolutely compatible. Both work to excise idealism/mentalism, mechanistic materialism and all of the modern developments of these philosophies - Logical Positivism, Pragmatism and Methodological Behaviorism. In the area of scientific methodology, Skinner stands far above Marx. Skinner has got nearly the last word on psychology and human behavior, which is absolutely necessary for a successful social design, in a post-revolutionary period.

Having given the edge to Marx in political action, it seems that I must return to Fred Skinner’s work. It is extremely important that one should show, not just claim, Skinner’s differences with Logical Positivism/Operationism, especially since we saw before how Boring tended to group Skinner with the Bridgmanian Operationists at Harvard (10.).

**Skinner and Private Events**

It is true that Skinner was trained at Harvard, and was influenced by Bridgman’s position, and one could probably stretch the definition of “Operationism” to include Skinner, but the term would essentially mean nothing more than “Observationist.” Sometimes it serves better to discriminate among various positions than to work at generalizing to similarities. Skinner defines the “operant,” certainly, in operational terms, since it cannot be defined without regard to the contingencies which shape and maintain it - to define behavior only in terms of its topography is regarded as an incomplete structuralism, which can lead into the Formalistic Fallacy.

Now, with that much said, I will cut to the real issue here - the discrimination nearly everyone fails to make regarding where Fred Skinner belongs. Skinner does not allow his operational definition of the operant to panic him into subjective idealism - i.e., he is not driven to “operationally define” the concept “real world”, and wind up with his sense data as primary. One either accepts the world and the data to be real as given - or one does not. The first move is that of Skinner, the second is that of the Logical Positivists. Skinner is not attempting to construct a proof that the world really exists, he is attempting to study the behavior of the people living there; and, as far as modern science is concerned, any other move is speculative nonsense.

To illustrate how this simple point is overlooked, I should like to quote Professor Brett quoting Skinner:
A typical expression of the view (operationism) is that of Skinner: "Operationism may be defined as the practice of talking about (1) one's observations, (2) the manipulation and calculational procedures involved in making them, (3) the logical and mathematical steps which intervene between earlier and later statements, and (4) nothing else." (30)

The quote is essentially accurately taken from Skinner's 1945 paper "The operational analysis of psychological terms." However, the fourth aspect, "nothing else," is in italics, and Skinner continues: "And, (4) nothing else. So far, the major contribution has come from the fourth provision and, like it, is negative. We have learned how to avoid troublesome references by showing that they are artifacts which may be variously traced to history, philosophy, linguistics, and so on. No very important positive advances have been made in connection with the first three provisions because operationism has no good definition of a definition, operational or otherwise. It has not developed a satisfactory formulation of the effective verbal behavior of the scientist." (31)

It hardly seems that Skinner is aligning himself with operationism in this passage. The "nothing else" could be translated "and without recourse to mentalistic explanatory fictions to handle the behavior of others or falling into a subjective idealistic confusion with respect to one's own discriminations and verbal behavior". The issue for Skinner is to forbid any form of mentalism - be it a form of slipping old mentalistic (or intervening, pseudo-physiological) variables into one's talk about behavior, or be it a form of mentalism in which the scientist gaags on his own private world and then claims to have access only to that world. It was clear in 1945 that Skinner was opposed to three distinct kinds of scientific blunders, which psychology had managed to commit since 1900.

First, he is against the positivistic tendency to labor under the philosophical tradition of idealism, making the tacit assumption that one's private or subjective realm is most directly, therefore, more primarily accessible to people than is the world they inhabit. Skinner will not stand for the move of regarding "sense data" as copies of the outside world, which we respond to, file away, retrieve and compare to new "sense data." The so-called "sense data" of the positivists are nothing more or less than our discriminative interaction with the physical world. I cannot stress enough the importance of this point-it may appear to be mundanely simple, but virtually all critics of Skinner overlook the revolutionary position on this matter. Skinner's position force us to drop the traditional distinction between "sensation" and "perception" psychologists have been so comfortable with for so long. Such terms are not helpful to an analysis of behavior - an organism does not first "sense" or "perceive" a stimulus and then respond to the sense or the perception. An organism simply responds to a state of affairs in the physical world which we have come to label a "stimulus." The use of "sense" or "perceive" in this fashion tells us nothing about the behavior of an organism - all it does is provide us with a sample of verbal behavior from a person whose reinforcement history has shaped him to utter those two words at certain times and places. Skinner denies any meaning whatsoever to the notion "subjective experience" as it is invoked by positivists, which we shall see in a moment.

Secondly, Skinner refuses to allow for the Watson-Hull brand of methodological behaviorism, in which pseudo-physiological intervening variables are introduced to force all behavior to fit into the reflexive or mechanistic mode. In such systems, the "conceptual nervous system" generated is a thinly-veiled substitution for "mind". It matters little, for instance, whether you "explain" behavior with the fictional concept "conditioned inhibition" or that of "ego defense through repression". To avoid such a criticism, a methodological behaviorist may see his inventions as theoretical postulations of real, but as yet uncovered, physiological processes. Skinner objects to this move because, in a sense, psychologists, whose business it is to lay out the physiological story, take psychologists too seriously:

"Rather than attack mentalistic concepts by examining the behavior which is said to be explained by them, the physiologist is likely to retain the concepts and search for their physical bases... The unhappy result is that the physiologists usually look into the black box for the wrong things." (32)

But, beyond that, even if a physiologist could trace all the activity from the onset of a sound (an $S_D$) to the completion of a lever press (an $R$), and present us with a physiological wiring diagram of what was found, it would not adequately account for that response having followed that particular sound. A simple "is followed by" would replace all of the work of the physiologist in functionally accounting for the occurrence of the lever press. If any $S$ "is followed by" any $R$, in a consistent fashion, by simply stating the fact, we have assumed a physiological connection. To assume that all behavioral phenomena can be accounted for by a mechanistic physiology is a reductionism that does not square with an operant analysis. And, where this is true for the rat, it is especially true for the behavior of human beings, most of whose behavior is shaped and maintained by social variables involved in interlocking contingencies. Said another way, with respect to operant behavior, most of the important variables cannot be taken into account by physiology.

Thirdly, Skinner denies mentalism in the form of a Cartesian or Freudian dualism, so a simple redefinition of such terminology in "behavioral operations", may be an interesting exercise, but it cannot take the place of a rigorous and direct functional analysis. Such an exercise may yield evidence that a functional analysis can replace a psychoanalysis, but a complete scientific research program is an on-going requirement.

In the face of Skinner's absolute rejection of all forms of mentalism and idealism, many then conclude that Skinner studies only an "empty" organism - that "private events" are beyond the scope of a functional analysis of behavior. And, since both methodological behaviorists and the Logical Positivists place mental events beyond the scope of a "scientific" analysis, many make the error of assuming Skinner's position is similar. Skinner speaks to this point:

"The distinction between public and private is by no means that between physical and mental. That is why methodological behaviorism (which adopts the first) is very different from radical behaviorism (which lops off the latter term in the second). The result is that while the radical behaviorist may in some cases consider private events... the methodological operationist has maneuvered himself into a position where he cannot. 'Science does not consider private data,' says Boring.' (33)

One has got to realize that this was written well before Skinner's thorough and remarkable treatment of verbal behavior, in which the private realm is directly confronted. In 1953, Skinner's position has not been modified:
"When we say that behavior is a function of the environment, the term ‘environment’ presumably means any event in the universe capable of affecting the organism. But part of the universe is enclosed within the organism’s own skin ... With respect to each individual, in other words, a small part of the universe is private.

We need not suppose that events which take place within an organism’s skin have special properties for that reason.”(34)

Much of the text of Verbal Behavior, published in 1957, deals with the problem of how private events can come to control verbal behavior. But, let us look at Skinner’s position in 1969:

"It is particularly important that a science of behavior face the problem of privacy ... An adequate science of behavior must consider events taking place within the skin of the organism, not as physiological mediators of behavior, but as part of behavior itself. It can deal with these events without assuming that they have any special nature or must be known in any special way. The skin is not that important as a boundary. Public and private events have the same kinds of physical dimensions.”(35)

In 1971, Skinner is maintaining the same point:

"The problem arises in part from the indisputable fact of privacy: a small part of the universe is enclosed within a human skin. It would be foolish to deny the existence of that private world, but it is also foolish to assert that because it is private it is of a different nature from the world outside. The difference is not in the stuff of which the private world is composed, but in its accessibility.”(36)

I am not offering an exhaustive list of quotes on the matter from all these sources: however, my point is to demonstrate the consistency of Skinner’s position from 1945 to the present. And, in 1974:

"A small part of the universe is contained within the skin of each of us. There is no reason why it should have any special physical status because it lies within this boundary, and eventually we should have a complete account of it from anatomy and physiology. No very good account is now available, however, and it therefore seems all the more important that we should be in touch with it in other ways. We feel it and in some sense observe it, and it would seem foolish to neglect this source of information just because no more than one person can make contact with one inner world. Nevertheless, our behavior in making that contact needs to be examined.”(37)

This is quite a pithy statement. If read closely, it reveals Skinner committing radical behaviorism to the investigation of the role of private events in behavior, discriminating his position from that of Logical Positivism, operationism and methodological behaviorism, and suggesting a tactic by which the role of private events can be analyzed. I want to offer a final quote:

"Self-knowledge is of social origin. It is only when a person’s private world becomes important to others that it is made important to him. It then enters into the control of the behavior called knowing. But self-knowledge has a special value to the individual himself. A person who has been ‘made aware of himself’ by the questions he has been asked is in a better position to predict and control his own behavior.” (38)

What begins to emerge from these statements is what should be the familiar Skinnerian argument concerning how the verbal community shapes up self-tacting of private events in individuals in order to gain access to more precise predictions of individual behavior and to instill a method of social control. This is accomplished by differential reinforcement and punishment of the accuracy of self-tacts, using public accompaniments of private events as the criteria. I will not elaborate on this process, except to state that radical behaviorism should be analyzing the process by which we come to speak of private events - i.e., we should analyze the reinforcing practices of the verbal community in shaping individuals to engage in self-tacting.

What I want to offer here is a quick blurh of Wittgenstein’s treatment of the possibility of a personal or private language about private events in Philosophical Investigations; and, I do so because it offers evidence for the plausibility of the Skinnerian position. But, the discussion is of even greater interest, because it represents a change of “mind” in a philosopher of some weight, who was, as we saw previously, at least somewhat connected with the origins of Logical Positivism - the Vienna Circle.

Suppose I wish to set out to establish my own private language, with respect to my private realm - i.e., without regard to the rest of my verbal community. I begin in the morning to attend to my private realm, hoping to observe a “distinctive” event. I “experience” such an event, and I select a name for it: it will be henceforth called by me a ‘gloph.’ So, I say to myself, ‘I am now engaged in having a ‘gloph,’” and I may even write it down in a private diary - “this morning, at 8:03 A.M., I had my first gloph!” I wait, in anticipation, for another such event. At 10:12, I notice that I am having another private event. Now, is it a ‘gloph,’ or is it some other event, a second kind, which I want to call a “prist?” I need to write in my diary either a ‘gloph’ or a ‘prist,’ but how do I decide what it, in fact, really is? In other words, by what criteria do I select a name or a tact for the event? I haven’t any criteria. I may “choose” to write whatever, for whatever reasons/causes may I be “subject” to. I write “gloph,” but what does that mean, for I embody both the event, “gloph,” “prist,” and whatever “criteria” I may “believe” I use to “decide” upon the selection. Under the “rules of the game in such a language,” I can never be wrong in my toxting - and if I can never be wrong, it makes no sense to claim I am ever right, for there is only what I claim. Well, this is nothing but a flaming form of solipsism, and a “private language” about private events is a meaningless exercise, except to fortify the necessity to include the function of the verbal community in the development and practice of any language.

If one approaches the use of language as Skinner has done and treated it as just very complex operant behavior, the consequences of which are mediated through the behavior of other people, any retreat into positivism, idealism or mentalism seems utterly ludicrous. As Skinner states:

“In the fifty years since a behavioristic philosophy was first stated, facts and principles bearing on the basic issues have steadily accumulated. For one thing, a scientific analysis of behavior has yielded a sort of empirical epistemology. The subject matter of a science of behavior includes the behavior of scientists and other knowers. The techniques available to such a science give an empirical theory of knowledge certain advantages over theories derived from philosophy and logic. The problem of privacy may be approached in a fresh direction by starting with behavior rather than with immediate experience. The strategy is certainly no more arbitrary or circular than the earlier practice, and it has a surprising result. Instead of concluding, that man can know only his subjective experiences - that he is bound forever to his private world
and that the external world is only a construct—a behavioral theory of knowledge suggests that it is the private world which, if not entirely unknowable, is at least not likely to be known well. The relations between organism and environment involved in knowing are of such a sort that the privacy of the world within the skin imposes more serious limitations on personal knowledge than on the accessibility of that world to the scientist." (39)

This is a remarkable passage, and should be savored slowly. It renders to shambles 3000 years of idealistic philosophy with one sweep of the epistemology of modern empirical science. When science is finally brought to bear upon the verbal behavior of scientists and philosophers, a great deal of chaff is blown away. And, if the picture presented of the behavioral process of coming to tact private events is combined with the Skinnerian notions of "seeing" objects in the absence of the objects "seen" (sensing stimuli in the absence of the stimuli sensed), of the autotelic function of verbal behavior, and of the speaker and listener in a verbal exchange behaving within the same skin, one begins to construct a complex and rich description of the behaving human being which pales the idealistic notion of the "mind" and leaves it unintelligible. And, if one feels plagued by the nagging concept of "consciousness," relief is obtained by attending to Skinner's analysis of "seeing". Simply put, the word has been traditionally used to tact three distinctly different operators—"looking", "seeing", and "seeing-that-you-are-seeing". The first could be described as behaving appropriately to contingencies, and doing nothing else, such as interrupting on-going operator chains with new behaviors, or engaging in verbal behavior. Mentallyistically, one could describe such behavior as "unconsciously" engaging in ordinary "habitual" behavior. The most striking example of this kind of behavior is driving an auto down a freeway and suddenly realizing that for twenty minutes, you have not "paid the slightest bit of attention" to driving. The discrimination is usually accompanied by a mild startle reaction. "Seeing" can be described as being appropriately to a sudden stimulus change, which can include stimuli presented by the verbal behavior of one's own or another person, which occasions a new operator chain. For example, during a period of time when you are "looking" your way down a freeway, the sudden on-set of brake lights on a car ahead will occasion you to "see" the change, and behave accordingly by slowing. Also, a passenger may disrupt the "looking" by manding "what state is that car from?" You may answer "Florida," but not get "consciously" involved in the interaction. Likewise, a circling owl may be "looking" at the meadow below, but will "see" the movement of a scurrying mouse, and swoop down for the reinforcing consequences. The third kind of behavior, "seeing-that-you-are-seeing/driving/walking", etc., involves a verbal self-tact of one's own body or on-going behavior in response to a mand from another person (or, even from one's self). Such mands may include "Don't you think you are driving a bit fast?" followed by a self-tacting verbal response. When one realizes he has not been attending to his driving for twenty minutes, a self-mand ("Hey, what am I doing?" or "Oh, my God, I...") may occasion a self-tact, like "I haven't been paying attention to what I am doing since leaving Slippery Rock!"

This is the sort of behavior usually referred to as "self-consciousness," and it is mediated completely through verbal contingencies.

The Importance of Skinner to a Post-Transition Society

If one is capable of cutting through to the so-called "bone" or in this post-Nixonomic period the "bottom line" you will see that a science of sociology involves the identification of the methods of control and countercontrol that exist in a society among individuals, among individuals and groups, and among groups. History demonstrates that most control-countercontrol exchanges center upon "power struggles" involving the capacity of each party to hurt or injure the other, thus forcing compliance to the satisfaction of the stronger party, while the weaker whimper, accede, suffer, and "hates"—awaiting "another day". Skinner's work has gotten to the reality of how people control and are controlled, and he has teased out two basic methods: control by reinforcement, and control by punishment. No social design can work, unless this distinction is taken quite seriously in the designing.

Some of the reasons why control by punishment is the prevalent form of social control are that it takes less time and effort on behalf of the controller and it seems to be less costly, in the short run, than control by positive reinforcement. It could be theorized that human beings are "genetically programmed" to aggress, but it is more probable that the reason control by punishment occurs so frequently is that the use of punishment is usually immediately negatively reinforced. If someone is engaging in bothersome behavior, a slap may stop the behavior, and the probability of future slapping increases. Of course, what is not taken into account is that aversive stimulation always shapes up escape and avoidance behaviors, which can be of many topographies—passiveness, isolation, neurotic or psychotic symptoms, drug addiction and even direct counter aggression. If the social order is a class society, those controlled by aversive techniques (the working class), may coordinate counter-control by direct aggression against the controllers, and a revolution occurs.

Any social situation involving aversive control is a highly unstable state of affairs; and, any society employing aversive control is a class society, because aversive control among equals results in less negatively reinforcing compliance and more direct countercontrol. In Beyond Freedom and Dignity, Skinner has discussed how this society disguises its actual nature with the literatures of freedom and dignity. He
demonstrates how these concepts of human freedom and dignity simply function to "morally" or "ethically" justify the use of aversive control and punishment. Though these concepts may be loaded with philosophical and theological "substance," they have no scientific validity. In this society, they function only to support a specific ideology, specifically that while all of us are dignified, some - to their credit - are more dignified and entitled to more wealth. Those who "freely choose" to behave or live in an undignified fashion, since they are free, are fully responsible for that state of affairs; and, if it bothers others or infringes upon their freedom or dignity (wealth), the full retributive power of the state will be brought to bear upon the offenders. If laws are clearly broken, the offender is labeled "criminal" and dealt with by the prisons; if, however, laws are not clearly broken, but the behavior is still bothersome, he is labeled "mentally ill" - or not fully responsible - and is dealt with by the medical profession. So, as the story goes, we are all born equally free and dignified - the Du Ponts and Mellons, the Cleavers and the Mansons - and we are responsible for what we make of ourselves.

The social control practices in effect today are very thinly veiled extensions of the doctrine of social Darwinism espoused by John D. Rockefeller and Andrew Carnegie at the turn of this century, despite the social reform propaganda to the contrary, such as the current talk about "human rights". It is inescapable that Skinner's work has demonstrated that aversive control will produce disastrous behavioral repercussions. Skinner has shown that the only workable form of control is through positive reinforcement. People do not countercontrol when their behavior is shaped and maintained by positive reinforcement - and, in the process they will 'feel' quite free from "control" and will likely state that they are happy. Control by positive reinforcement, however, does not mean simply giving a minimum standard of existence noncontingently via welfare checks or unemployment payments or the lowest possible salaries, and then threatening to take even that away if people express their lack of satisfaction. This is control through the lessening of threat - or control by negative reinforcement.

There is no behavioral way around the issue as Skinner has presented it. To have a just society, you have to design it so that people actually receive the "good life" contingent upon being contributing members of the society. Obviously, this form of design is going to cost a great deal of money and goods - certainly far more than present methods of social control through coercion. As a matter of fact, it is probably a prohibitively expensive form of cultural design for any society that allows vast private accumulations of reinforcers in the form of capital holdings. It may seem naive to claim that the real cause of crime is capitalism, but it is rather more naive to assume that capitalism is not the cause, in large measure. If ten people are stranded on an island, one possessing a large amount of food - the only food on the island - while the others have nothing, it would be no surprise to observe attempts by the have-nots to take food from the one having it, who will call such attempts criminal acts. The person with the food supply will have to quickly come to an agreement with two or three of the others to work to protect him from the others for some portion of the food, and they will call this agreement the "state." Eventually, one or two of those functioning as the "state" may realize that their job of protecting the one with the food might be made easier if they could persuade him to toss out a few bits of food occasionally, because they could then say to the others "see, what we are doing in your behalf, you should not beleaguer us". And they will call the bits of food "welfare handouts" and the fact that the others do not attack them "re-election" "a vote of confidence", or even a "mandate from the people". The people they will call "lazy", or "greedy" and "free and responsible". They will call themselves "dignified," and, they may eventually draw up a list of certain things they will let others do, calling it a "bill or rights".

Suppose, however, the person with the food did not just "possess" a certain amount, but happened to "own" the only acre of land on the island capable of growing food, but it was very fertile and produced far more than he - or even all ten - could ever use. If he then proceeded to build private silos for food storage, and finally followed the scenario above, his behavior would be considered even more unjustified. Yet, this is precisely the state of affairs we have, except that we are offered wages to take part in productive labor - those who find work, that is.

Marx claimed that salaried workers are "alienated" from their work and the products of their labor, and this is undoubtedly one of the reasons why many modern workers find their working conditions so dismal. It is often said that another reason is that many modern jobs involve small repetitive tasks within a huge mass-production line, so the jobs are simply "boring" and "meaningless." This adds very little to Marx's alienation. Skinner, however, does add to Marx's position. Many modern jobs take little training, and even for those that require some degree of experience, large pools of experienced unemployed or underemployed workers are waiting to step into these jobs the instant they are vacant. Thus, the modern worker's job is insecure. He trudges into the office each day and goes through the motions of the work. But, this is not because of the paycheck he receives once or twice each month; it is because he is constantly under the threat of losing his livelihood. In other words, his labor is not positively reinforced, it is an avoidance behavior (which always involves unpleasant emotional correlates) negatively reinforced each day by a reduction of the threat of unemployment. But, even a flawless performance at work will not insure his employment, for he is a guest of the owner's profit margin. A slippage in sales or an increase in the cost of materials or equipment, sudden technological breakthroughs in automation, cut-backs in public funding and corporate mergers, among other events, can maintain the threat of sudden unemployment. What is good for business seldom encompasses the best interests of the workers. The situation for the American worker is not far removed from that of the "have-nots" on the island.

Skinner's program for a productive, harmonious society would require specific changes in the distribution practices on the island. First, distribution of food has to be wrenched from the control of the person who happened to find himself "in possession" of the fertile ground, and his hired hands would have to be put to other endeavors than insuring the distributive balance remained firmly in his favor. This is the point at which Skinner proposes that small communities should become self-sufficient; and, as we saw previously, this would not be tolerated - no land baron will be gently induced to lay down his profit ledger and join his fellows weeding in the garden. This seems again to drag us into the question of revolution and its apparent inevitability, but we shall again duck that issue.
It still stands that Skinner would require some changes in the practices of the island's fertile-land owner. He must yield his "ownership" to the community, in general. All ten inhabitants should meet and decide, in a democratic manner, what kinds of behaviors would tend to increase the quality of life for all community members. The function of the "state" would be to distribute food to all community members contingent upon the kinds of behaviors all had decided were valuable to the community's quality of life. Appropriate distribution of food by the "state" would be one of these valued behaviors, and they would receive and be retained contingently upon their performance - i.e., the "state" would work for the community as a whole, and those in such jobs would be subject to immediate recall if they could not serve all. They would then be allowed to select another function, in which they could serve all. Everyone would receive a basic and comfortable income, with small differences being allotted with respect to amount of time spent engaged in work productive to all and with respect to the level of unpleasantness of that work. The unpleasantness of the work would be determined by the volunteer rate of all community members to engage in such functions. Hence, on the island, a trash collector who grew tired of his work could accept a lesser rate of pay to train in the behavioral sciences and then assume a chair to teach. The instructor, who required more pay, could collect trash at a higher rate of pay as long as he was inclined. The obviously lavish latitude of labor pursuits allowed on the island would be at the expense of a departed propertied class, accumulating wealth beyond its ability to consume. Bank accounts would be replaced by a return of excess to the communal fund; and, personal emergencies would be met by that communal fund. The fossilized waste of personal profit taking and reinforcement accumulation, beyond consumption levels, would be eliminated. Insurance programs against the short-comings of communal design would be replaced by design insuring community support of all. And, the need for coercive enforcement of roles designed to enhance the life-styles of a few would be replaced by distributive practices designed to insure the well-being of all, and to enhance the chances of the survival of the entire community on that little island.

This all sounds a great deal like utopian thinking. But, this is not because it was meant to sound that way; it is because all utopian thinking had the goal of producing the kind of social organization Skinner offers, but had no concept of how to design that organization. Marx had a glimmer of the road - propertied classes and private accumulations of reinforcers to the extent of danger to the community's well-being have to go. But, after the transition to the new order, Marxist regimes have often fallen back into a predictable use of aversive control; and, hope for a new social order shrivels into despair and further counter-control by the people. Skinner alone can offer us a science of human behavior that will work. And, Skinner alone, can after rejecting the value of human dignity because only the very few really have it, re-issue that very value of human dignity to all members of the new social order, in which all, not just the few, are treated with dignity. In Skinner's social order, "freedom" is disregarded in the tired philosophical wrappings of "free will", but it is reaffirmed as new value of freedom from aversive control. What Marx has overlooked in cultural design, Skinner furnishes us precisely; and, faithfully maintained (and he does address that issue), it would certainly be the classless society Marx envisioned - and one not threatened from within by revolutionary movements.

But, beyond his suggestions for the ultimate social design, there are more central reasons why Skinner's science of behavior is precisely the dialectical materialist psychology that breathes life into the Marxist position. Recall the emphasis placed upon the "paradigmatic" shift or revolution in scientific thought. The shift was one from mechanistic materialism to dialectical materialism, and nowhere is the function of the dialectic clearer than in the new behavioral paradigm of Skinner. Remember that until Skinner, American psychology had been busily attempting to cram all behavior into the mechanistic S-R paradigm, because, as it just happened, the first really scientific work on behavior had been conducted by Pavlov on the action of reflexive conditioning - where the S-R paradigm is quite perfectly applied. However, Watson and the methodological behaviorists and later cognitive psychologists who followed have all completely missed the boat, reviving a kind of mentalism to handle the inadequacies of the S-R paradigm. Skinner agreed with Pavlov on reflexes and how they can be "conditioned" to novel stimuli, seeing them as innate or inherited "pre-writings" in the organism's neurology. And Skinner, following Darwin identified the provenance of reflexive behaviors as the evolutionary history of the survival of the particular species. But, Skinner made that one critical step, which has gotten him labeled a "two-process theorist". He reached back to E.L. Thorndike's "Law of Effect" and then even further back to Brentano's principle of "intentionality", and he offered us the discrimination of operant behavior. Thorndike's principle is quite like the principle of reinforcement, since he claimed that the consequences (good or bad) of actions either "stamped in" or "stamped out" that S-R connection. Later, Guthrie will remove the "good and bad" criteria, and substitute a simple contiguity principle for the strengthening of S-R connections. It was Brentano's "intentionality" that gave a new sense to the "law of Effect", however. Recall that Brentano was attempting to distinguish between "mental acts" and mechanical actions. The latter seemed to fall under Newton's mechanics - they just occurred for obvious reasons in a one-way temporal direction. "Mental acts" seemed special because they didn't occur for such reasons. There seemed to be a "meaning" or a "rationality" to them. Call this a "plan" or a "purpose", but the point is that mental acts were incomplete in-and-of-themselves. Brentano felt that such acts "intended" or "pointed toward" some object, which functioned as a goal for their completion. The Aristotelian similarities are obvious, and Brentano was a card-carrying mentalist - "mental" acts were mental. Their "intended" objects could be other mental acts: I can "think about" or "intend" another thought - or, like the positivists, I can intend my own sense data. But, Skinner, the hard-headed materialist that he is, did not allow the "demon" intentionality or "purpose" to lure him into the skin of the organism. His move was to locate the "purpose" in the environment, where it has always been. "Purpose," as we use the word, is primarily a characteristic of the contingencies of reinforcement in the environment. If behavior is called "purposive" it is because the behavior reflects that characteristic through environmental shaping. Certainly, operant behavior is "purposive," insofar as it operates upon the environment to achieve certain consequences is what gives it survival value. But it is the environment by providing these consequences, which selects the behavior. So, the provenance of
Operant behavior is the exposure of the individual to the contingencies of reinforcement and punishment comprising any individual's past and present world. Reflexive behavior springs from the environmental action of selection over the vast evolutionary history of the survival of the species; whereas operant behavior arises from the ontogenetic history of the individuals successive adaption to its environment. Both origins are the environment, and the causal mechanism in each case is environmental selection.

Environments change quickly in small measure and very slowly in large measure. Operant innovations facilitate adaptation of the individual to short-term, minor changes. Reflexive innovations, passed on through genetic structural integrity, facilitate a continuing adaptation over vast periods of environmental stability of a general nature. Reflexive behavior does not seem to be "purposive," because the conditions of its selection are not usually clear. Operant behavior, on the other hand, does appear to be "purposive," because the environmental conditions for its selection are often clear, which leads one to see some "rationality" in the acts. And, we are so close to our own operant behavior, and have been shaped to "explain" it to the verbal community, that we easily generalize such "explanations" to the behavior of non-verbal creatures. However, our own verbal self-tactcing can be shown to arise out of the selective action of the verbal community, and, so it is inescapable that the "purposiveness" of operant behavior lies, not within, but beyond the skin - in the environmental structure and processes, which mediate the selecting consequences of behavior. (Allow, me to inject a note. A good case can be made for the point of view that the real locus of the "purposiveness" of both operant and reflexive behavior is neither the organism nor the environment, but the relationship or "exchanges" occurring between both. In such a view, the environment is seen to behave with respect to the organism and vice versa. The structural organizations of both the organism and the environment set the boundary conditions for all possible change or interaction. This is probably the best position, and it clearly provides a better reconciliation of motion and form than Plato was able to offer in his Doctrine of the Forms.)

That behavior is "purposive" should not shock the scientist, who has worked his way out of the strictures of mechanistic materialism, and who realizes that Skinner borrows only the functional temporal configurations of Brentano's "intentional mental acts" and not the materialism "as Marx borrowed the logical moves of Plato and Hegel, but not their idealism." But let me offer Skinner on "purpose:"

"Possibly no charge is more often leveled against behaviorism or a science of behavior than that it cannot deal with purpose or intention. A stimulus-response formula has no answer, but operant behavior is the very field of purpose and intention. By its nature it is directed toward the future; a person acts in order that something will happen, and the order is temporal. 'Purpose' was once commonly used as a verb, as we now use 'propose.' 'I propose to go' is similar to 'I intend to go.' If instead we speak of our purpose or intention in going, it is easy to suppose that the nouns refer to things." (40)

Of course, Skinner is here debunking that queer, but common tendency we have of observing an activity, abstracting a characteristic of the activity in the form of an adverbal modifier, then changing the adverb to a noun form, and finally invoking the noun as the name of a thing, an event or a state that is out-of-sight or, at least, inside of the behaving organism, as a "cause" for the originally observed activity. For example, we observe a person engaging in a repetitive behavior that results in no immediately observable reinforcing consequences. The "reason" for this state of affairs is certainly to be found in one of several areas (highly stretched reinforcement scheduling, a long period of deprivation of the primary reinforcer, immediately unnoticed conditioned reinforcers, a history of avoidance conditioning with the removal of the primary aversive stimulus, etc.), but we may call the persistent behavior "stubborn" behavior. "Stubborn" is a trait of the behavior, but we abstract it in noun form - "stubbornness" - and then assert that entity as the cause of the behavior. "He acts thus because of his 'stubbornness.'" "Or, we can take the trait of the behavior and assign it to the whole person, achieving the same result: "He behaves thus because he is a 'stubborn' person." What causes our difficulty here, is the same state of affairs that leads methodological behaviorism from a simple S-R position in Watson to the tedious "S many intervening variables-R" position of Hull and the cognitive psychologists. It is a veiled attempt to save mechanistic materialism from the edges of "Newton's world". Only a dialectical materialism can suffice for such complex phenomena, and only B.F. Skinner has outlined the course for psychological analysis along this line of thinking. That is why Skinner and Marx play on the same team; and, labels and squabbles aside, we must recognize that we can save our illusions, or we can save our world - but, we cannot do both.

Conclusion

My thesis has been that Skinner and Marx belong together with Darwin and Einstein within a recent paradigmatic revolution in scientific thought. This is a revolution which distinguishes itself from all previous forms of mechanistic materialism, Logical Positivism, idealism, dualism and materialism; and, I have chosen to adopt Marx’s term for the new stance in science - dialectical materialism. But, beyond an eschewal of mechanistic and idealistic explanations, these thinkers embody important similarities. First, they are thorough-going materialists, with a new paradigm of "causation" - that of a selection within a smaller system's activity by an encompassing system's adaptation to the action of the smaller system. This selection process occurs through "consequences" the larger provides the action of the smaller. This mode of causation by selection is clearly seen in Darwin and Skinner; it is less clear in the work of Marx and Einstein. Einstein emphasized the relativity of the observed characteristics of material processes occurring at any point in space-time, which hints at, but does not declare, selection as a causal process. Marx speaks about the "dialectic" development of material phenomena, which declares, but does not give clear examples of the causal function of selection by the environment. Darwin declares that a mechanistic interpretation of biological evolution is adequate, but the behavioral "atoms" of evolution - genetically inherited structures that predispose organisms to behave in specific modes - can be interpreted in a mechanistic manner. Only Fred Skinner can cut directly to the vital scientific issues, because only Skinner has brought this new trend of thought to bear upon the very behavior of the beings who produce science. Finally, with Skinner, we obtain a "fine-grained" statement of the meaning of the revolution.
in science. With Skinner we not only interpret the material phenomena around us in the terms of the new dialectical materialism, we now begin to interpret our own interpretations of these phenomena. When the scientist who espouses a form of revolutionary thinking can understand his own thinking in those very ways, the revolution in thought becomes firmly established. With Fred Skinner, the circle now closes. Skinner has much more to tell us about human behavior than does Marx - his observations are more empirical and clear. Marx tells us that revolution is necessary; and, Skinner tells us how it must be designed so that it will work. Marx speaks of the revolution to a classless society, and he assumes that such a move is unavoidable. Skinner tells us why we are moved toward that revolution, as we seem to be genetically programmed to behave to countercontrol aversiveness in our physical and social environments. Since class control over class always assumes aversive channels, Skinner says this about Karl Marx's views:

"The necessary order in the historical determinism of Karl Marx is in the contingencies. Class struggle is a crude way of representing the ways in which men control each other. The rise of the power of merchants and the decline of feudalism and the later appearance of an industrial age (possibly to be followed by socialism or a welfare state) depend largely upon changes in economic contingencies of reinforcement." (40)

Skinner remains consistent in briding against thoughts of any form of violent revolution - but men are forced to countercontrol aversiveness in their environment. He suggests a possible socialism to follow the event of major countercontrol, yet he weakly offers a possibility of a "welfare state" as a meaningful resolution of the problem of aversiveness. But those receiving "welfare 'benefits'" today, or those standing in unemployment lines for their "benefits" do not provide any data supporting the welfare state as a solution. The fact is that any "welfare state" is inherently composed of class distinctions - those who have wealth graciously provide for the "welfare" of those who have little. The property class has, certainly, never volunteered such aid in the past, without being compelled to extend help. And, there is no scientific reason to expect them to behave with any larger measure of altruism in the future without being forced. However, the creation of a fascistic autocracy with the power to compel the wealthy to fund a "welfare state" is certainly not an option.

But the fact still remains, once the transition in social design is begun, little will be accomplished of any lasting value unless the behavioral principles of Skinner's science of human behavior are taken seriously into account. Marx always had great faith in science, but the area of scientific development which (1) adds much evidence to Marx's own theories of social evolution, and which (2) would have insured the establishment of scientifically designed social order (one without aversive control, where total distribution of positive reinforcement is made contingent upon socially constructive behavior), was not developed until the work of B.F. Skinner.

Footnotes