under study. No doubt there are some who would prefer the kind of plan Steinberg suggests. But, I have found that students often encounter difficulties in relating various ideas and issues when they are presented under the kinds of discrete units recommended by Steinberg. In any event, I am grateful to Professor Steinberg for his many comments, which will be of considerable use if and when I am asked to revise the book.

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[1]The writings of Thomas Reid, Emerson White, Noah Porter, Karl Lange, Charles De Garmo, and Edward Tichener support my position.

KENNETH A. STRIKE
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BEYOND FREEDOM AND DIGNITY

by B. F. SKINNER
Alfred A. Knopf, New York, 1971

B. F. Skinner's book, *Beyond Freedom and Dignity*, is most seductive. It is seductive because Professor Skinner manages to bask his ideas in the warm glow of the immense prestige of science. The arguments are presented as merely the extension of the methods and explanatory principles which have been so successful in the natural sciences into the study of human behavior. Thus, one has difficulty merely objecting to Skinner. Somehow when one addresses a complaint in his direction, the ghosts of Galileo, Copernicus, Newton, and Einstein seem to frown at you over his shoulder. To disagree with Skinner is not

merely to err, but to confess oneself the victim of a prescientific world view. What could possibly be more damning? The idea of free, autonomous man is exhibited as the appendix in the body of the scientific world view. In the twentieth century the appendix has ruptured with the result that man is denied the salvation available in a science of behavior. Mr. Skinner is a great physician.

Thus, in *Beyond Freedom and Dignity* the reader is presented with two choices. He can opt for the unscientific philosophy of autonomous man and, thus, continue to deny man the benefits of a science of behavior; or he can adopt the scientific view, thereby recognizing that human problems like all others can be solved technologically. Happiness (positive reinforcement), Skinner feels, can be engineered; but the philosophy of autonomous man prevents us from doing so.

Yet, it is not quite self-evident that these are the choices. Perhaps one need opt for neither Skinner's brand of behavioral engineering nor the outer darkness of a prescientific world view. It may be that there are other options. In fact I am inclined to think that there are. Thus, in what follows I shall try to argue for a middle position, one which preserves something of autonomous man while also allowing us some of the benefits (all of the genuine benefits) of a science of behavior.

Perhaps our first task should be to get clear about what the options are. I want to suggest that, concerning autonomous man, three distinct positions can be identified. Since these positions concern the relation of autonomy to science, we must first say something about the nature of scientific explanation.

I shall stipulate only a single defining property of what I shall call scientific explanation. A scientific explanation must involve some law which asserts a general connection between two or more events, that is, it must assert that certain regularities exist in events. This definition of a scientific explanation is, of course, both simplistic and arbitrary. I have taken the concept of "law" as central because it is often the claim that behavior is "law-governed," which is supposed to be incompatible with human freedom. Its advantage is that it will permit the construction of a coherent typology of views about autonomy. It should also be noted that this model of explanation is not new. It was held in rudimentary form by some pre-Socratic philosophers who were criticized for their opinions by Aristotle. [1]

Given this definition of scientific explanation, [2] three different views on autonomy can be distinguished.

1. It may be held that men are free and that, insofar as they are free, their behavior cannot be explained scientifically. Here one may hold that free behavior is inexplicable *or* that it is explained in some nonscientific fashion. One version or another of this kind of view has been held by philosophers such as Aristotle, Descartes, and Kant, and in more recent years by such notable philosophers as Richard Taylor and A. I. Melden, among others. [3] This view seems to exhibit the basic properties of the position to which Skinner objects. It is antiscientific in regard to the explanation of behavior.

2. It may be held that human behavior can be explained scientifically and that, nevertheless, men are free. A version of this view could plausibly be ascribed to some Stoic philosophers. The modern version of the view may be found in David Hume and has been defended more recently by Dewey and Schlick, [4] among others.

3. It may be held that human behavior can be explained scientifically and that, therefore, men are not free. This is, of course, Skinner's view.

In *Beyond Freedom and Dignity*, a good deal of effort is spent in refutation of views of type 1 together with their supporting doctrines. Let us look at some of Skinner's claims. We are told:

(a) that to use mental terms such as "intention," "purpose," and "aim" is to invoke the explanatory aid of a person within the person, an indwelling agent which is beyond the ken of empirical science (p. 14);

(b) that to say that man is free or autonomous is to say that the acts of this indwelling agent need no explanation (p. 19);

(c) that the result of (a) and (b) is that the study of behavior and the conditions upon which behavior depends is ignored (p.12);

(d) that we can only hold men responsible for what they do if we hold they are free in the above sense (p. 44);

(e) that "libertarians" have branded all (or at least most) control as wrong (p. 41);

(f) that the only reason "libertarians" have been willing to tolerate persuasion is that persuasion is reasonably ineffective (pp. 91-97). (One wonders why Skinner bothers to write books.)

Claims (a), (b), and (d) appear to be regarded by Skinner as the central claims of the philosophy of autonomous man. Claims

(c) and (e) are the consequences of the philosophy which Skinner finds problematic from the perspective of his interest in social engineering. The philosophy of autonomous man is held to be objectionable by Skinner because it requires either that human behavior cannot or ought not be controlled. I have included (f) in this list of central doctrines because, while Skinner seems not to attach much import to it, I consider it crucial. I shall say more on this later.

Let us look at his arguments for some of these claims. Initially, it is to Skinner's credit that he does not identify mentalism with dualism (pp. 11, 12). The question does not concern the stuff out of which minds are made. Rather, the issue seems to be largely a matter of determining proper vocabulary for psychological explanation. Skinner wants to argue that mental terms are not acceptable in a scientific analysis of behavior. He suggests several reasons for this conclusion.

First, the use of mental terms in the explanation of human behavior is held to be anthropomorphic (pp. 7, 8). The physical sciences, of course, have learned that we cannot explain the behavior of objects by talking as though they had feelings or purposes: "Careless reference to purposes are still to be found in both physics and biology, but good practice has no place for them; yet almost everyone attributes human behavior to intentions, purposes, aims, and goals" (p. 8). Clearly this is the case, but why it is supposed to be objectionable is less than clear. It is not obvious that, because anthropomorphic terms are inappropriate in the study of physical things, they are therefore inappropriate in the study of *anthropos*. One searches *Beyond Freedom and Dignity* in vain, however, for an argument to show why the vocabulary decisions of physics are binding in the study of man.

Second, the use of a mentalistic vocabulary is said to assume the existence of an inner man, a person inside who explains but who needs no explanation. Now it is doubtful that this objection is to be taken literally. It is unlikely that anyone has ever held that human behavior is to be explained by means of another smaller person inside the observable person. What Skinner likely objects to is the temptation presented to advocates of autonomous man to reify entities named by labels such as "self," "soul," or "mind." However, it should be noted that such a reification is not obviously required by mentalistic discourse; nor have all advocates of autonomous man held such a view. Perhaps the following

remarks by Richard Taylor, an advocate of autonomous man if there ever was one, will suffice here:

> Now this conception of agents as causes has given rise to the more dreadful and bizarre conceptions in the minds of some thinkers, leading them to speak of 'the self' or sometimes even 'the substantial self,' which is forthwith thought of as something non-observable, perhaps ghostly or at least non-material or 'mental' in its nature, something that is intimately associated with the animal body of a man but nonetheless somehow distinct from it, and which nevertheless acts upon that body to produce those changes and motions which are deemed his acts. There have even been learned and extensive philosophical discussions of 'the self' or 'the mind' and its nature and powers, wherein it is implied that this being, the 'self,' is terribly important, yielding to explanation all sorts of things that are otherwise wrapped in the darkest mystery. Some suspicion of all this should be aroused by the fact that no such thing is ever mentioned outside philosophical literature.
>
> Nothing of this sort is implied in anything that I have said. In saying that my acts are caused by myself, I mean *only* that I cause them or make them occur, and this is in fact inconsistent with saying that something else, to be referred to as my *self*, is the real cause of them. [5]

It should be noted that Taylor's view is typical of those in the Aristotelian tradition about freedom, that this tradition has numerous modern adherents, and that the view has a vintage of well over two millennia. Thus, it seems a notable exception to Skinner's caricature, and one is a little hard pressed to understand why it should have been ignored.

The most serious objection that Skinner brings against the use of mentalistic vocabulary in psychology is that it obscures the import of environmental variables in controlling behavior. Two versions of this objection may be identified, which I shall call the soft and the hard versions.

According to the soft version of the argument, the problem with the mind is that it "steals the show" (p. 12). Attention is, thus, diverted from the study of behavior and the environmental variables on which it depends. Now Skinner does not make it clear in *Beyond Freedom and Dignity* whether he feels that this is merely an effect that mentalism may have on the unwary intellect or whether he believes this defect to be a logical consequence of the position. If he holds the former, his argument may be discounted. If we are to reject a position because some people are

mistakenly influenced by it to acts or opinions which are not warranted by the view, we will end up rejecting almost every position, not the least of which will be Skinner's.

Very likely, however, Skinner will want to hold that the defect of "stealing the show" is inherent in the logic of mentalistic psychologies. He has been fond of calling mental states explanatory fictions. [6] Mental states are invented as *substitutes* for genuine environmental explanations. This view of the role of mental states is usually supplemented by an account of their general lack of empirical content and empirical creditability. [7]

Here we can only note, first, that it by no means follows that, because mental states are involved in the explanation of some act, environmental variables are not. Of course, it is the case that, at present, environmental variables can be manipulated while mental variables cannot (at least not directly). It may also be the case, however, that terms referring to mental states are necessary in order to systematically and economically formulate the relations between the environment and behavior. Second, it is simply not the case that mental state terms cannot meet the demands of a reasonable empirical theory of concept formation. Mental states may be treated as dispositions, intervening variables or hypothetical constructs. All of these (by no means incompatible) views assign appropriate empirical content to mentalist vocabulary. [8] Given these (rather well-known and widely accepted) facts, Skinner's objections against mentalistic vocabulary in psychology are not convincing.

What I have termed the hard position against mentalism is achieved by adding to the objection that "the mind steals the show" the additional premise that the action of the mind is uncaused. In Skinner's words:

> Unable to understand how or why the person we see behaves as he does, we attribute his behavior to a person we cannot see, whose behavior we cannot explain but about whom we are not inclined to ask questions. We probably adopt this strategy not so much because of any lack of interest or power but because of a longstanding conviction that for much of human behavior there *are* no relevant antecedents. The function of the inner man is to provide an explanation which will not be explained in turn. Explanation stops with him. He is not a mediator between past history and current behavior, he is a *center* from which behavior emanates. He initiates, originates, and creates, and in doing so he remains, as he was for the Greeks, divine. We say that he is

autonomous—and, so far as a science of behavior is concerned, that means miraculous. [P. 14]

Here we have gotten to the crux of the problem. The philosophy of autonomous man seems to require that a sufficient explanation of human behavior is not to be found in a study of environmental variables because there *is* no sufficient explanation of an autonomous act. If an action is autonomous, then it is not caused. But such a view sets severe restrictions on the extent to which a science of behavior is possible. A scientific explanation of an action requires that the act be subsumable under some covering law; however, if the act is autonomous, then no such covering law exists. Thus, there is a fundamental and irreconcilable conflict between the philosophy of autonomous man and a science of behavior.

Concerning this argument, let us first note that Skinner constructs the doctrine of autonomous man as a conjunction of two logically distinct claims. The first is the claim that mental terms are appropriate in explaining human behavior. The second is the claim that it is a necessary condition of a free act that it not be completely explicable by means of some set of covering laws. So far as I can see, neither of these views entails the other.

It is important to keep clear that these claims are distinct, since there are some notable cases of psychological theories which subscribe to the former, but not the latter. Skinner, for example, notes that autonomous man is still with us in political science, sociology, education and most of the other sciences of man. What he likely means is that explanatory theories in these disciplines often make use of mental terms. It is most unfair to dismiss such positions on grounds that they are committed to an antideterministic view or that they ignore the environmental variables which affect behavior. Neither is the case. It is worth mentioning that some recent work in psychology and linguistics which seems to be most fruitful has been both highly mentalistic and deterministic. Chomsky's work in linguistics and Piaget's work in child development are paradigm cases. Further, so far as I can tell, neither Piaget nor Chomsky is led by his "mentalism" to deny that the environment affects behavior. Rather, the mind explains why the environment produces the sort of effects that it does. It should not even need to be mentioned that this is also true of the work of such notable scholars as Marx and Freud. When we consider that Skinner would quite likely rule out the work of

Chomsky, Piaget, Marx and Freud on basically philosophical rather than experimental grounds (!), there is reason to ask whose views are those which seem to be retarding the growth of a science of behavior. [9]

It is also worth noting that, while many advocates of autonomous man would hold that to the extent that an act is free it cannot be given a scientific explanation, they would not infer that free acts are inexplicable. Rather, they would urge that free acts are to be explained in other ways. Most notably, philosophers in the Aristotelian tradition have given considerable attention to the concept of agent causality, while some Wittgensteinians have developed, from the fact that human beings follow rules, an elaborate theory of explanation. [10]

Let us summarize the argument to this point. I have tried to suggest that in Skinner's view the doctrine of autonomous man rests on two pivotal doctrines, mentalism and antideterminism, and that Skinner's central objection to these views is that they detract from the study of the environmental variables of which behavior is a function. I have argued that his objections to mentalism are unconvincing and that it is unfortunate that the doctrines of mentalism and antideterminism are not kept sufficiently distinct, and I have suggested some reasons for thinking that the doctrine of autonomous man which Skinner attacks is a bit of a straw man. (It is unfortunate that Skinner did not see fit to attack the views *and arguments* of an actual and serious advocate of autonomy. I am of the opinion that such an endeavor would have added considerably to the quality of argumentation in *Beyond Freedom and Dignity*.) It must be kept in mind, however, that Skinner has correctly identified the central issue. Determinism is an assumption required for the possibility of scientific explanation. Many people have denied determinism in the name of autonomy. Again, it is unfortunate that Skinner treats the fact that such an analysis of autonomy is incompatible with the possibility of a science of behavior as virtually tantamount to its refutation. It is not. However, the conflict is clearly there.

At this point I should like to be permitted a digression in order to locate more precisely the point at which the doctrine of autonomous man conflicts with "the science of behavior." To do this it is necessary to note a distinction between a use of the word "behaviorism" which refers to a philosophy of psychology and a use of the word "behaviorism" which refers to psychological theories.

Behaviorist philosophies of psychology usually consist of one variety or another of the following two doctrines.

1. Behavior can be explained by laws.
2. Only terms which have intersubjectively observable referents or which can be defined by means of such terms are permissible in a "scientific" language. [11]

This philosophy of psychology is to be kept distinct from Skinner's empirical theory, which he typically calls operant conditioning. This latter doctrine holds in Skinner's words that "The environment not only prods or lashes, it *selects*. Its role is similar to that in natural selection. . . . Behavior is shaped and maintained by its consequences" (p. 18).

This distinction calls for several comments. First, the basic point of conflict between Skinner's views and the doctrine of autonomous man concerns Skinner's *philosophy* of psychology, not the theory of operant conditioning. Indeed, a little reflection on the subject will reveal that Skinner formulates the doctrine of autonomous man so as to amount to a denial of philosophical behaviorism. The claim that the mind acts without being acted upon is incompatible with the claim that autonomous behavior can be accounted for by scientific laws. Mental terms are rejected in psychology because (Skinner mistakenly believes) they cannot meet the requirements of empirical significance. Thus, what is at stake is the adequacy of a philosophy of science. Skinner would, undoubtedly, feel that philosophical behaviorism is merely the extension of good empiricism (so successful in the natural sciences) into the domain of human behavior. In that I think he is correct. Operant conditioning is at issue only insofar as it is an instance of an empirical theory which conforms to the specifications of the behaviorist philosophy of psychology. Three things follow.

First, operant conditioning cannot be defended solely by means of arguments for philosophical behaviorism. Surely, Skinner would agree. But a most notable shortcoming of *Beyond Freedom and Dignity* is Skinner's general failure to keep philosophical behaviorism and operant conditioning distinct. One finds in *Beyond Freedom and Dignity* the phrase "*the* scientific analysis" of behavior, which is used rather indiscriminately by Skinner to refer to aspects of both philosophical behaviorism and operant conditioning. It is hard to escape the implications that, if one objects to Skinner's psychology, it must be because he is a

victim of a prescientific world view and that somehow it is not possible to find operant conditioning problematic on empirical grounds. This is a priori science at its very worst. Surely Skinner, by his own assertion an empiricist's empiricist, would be the first to disavow the idea. But then one can only marvel at the apparent suggestion that we are virtually faced with a choice between operant conditioning and a prescientific world view. That is manifestly false.

Second, it is a mistake to think that Skinner must defend operant conditioning in order to defend his several theses about control. What Skinner must defend is basically the claim that some variety of determinism is true *and* that, if determinism is true, what he claims about the nature and desirability of control actually follows from it. The difficulties raised for human freedom by the thesis that human behavior is explicable by laws were quite clearly recognized by pre-Socratic philosophers. The advent of modern behaviorist psychologies has altered the conceptual structure of these issues very little. Skinner will, of course, have to defend operant conditioning to make good his rather extravagant claims about the *existence* of a suitable technology of behavior, but one can object to freedom and defend the possibility of a technology of behavior with much less.

Third, the defense of this philosophy of psychology (which as argued above is what is actually at issue in *Beyond Freedom and Dignity*) must be made on grounds which are relatively independent of the truth or falsity of operant conditioning. First, philosophical behaviorism specifies the rationale for and the logic of the various empirical theories of psychology which are called behaviorist. Since the adequacy of a logic of explanation is presupposed by any claim to the adequacy of a particular explanatory theory which meets its specifications, the justification of such a logic must be, at least in part, independent of the confirmation of particular explanatory theories. Second, even if one holds that, in regard to a philosophy of explanation, the proof of the pudding is in the eating, i.e., the ability of a logic to produce, generate, or conform to successful theories is part of the confirmation of a logic, it is quite clear (despite Skinner's likely protestations) that operant conditioning has not achieved sufficient success so as to help to certify philosophical behaviorism. Indeed, if one has eyes to see, it is fairly clear that Skinner's confidence in the future triumph of operant conditioning stems from his convictions about what science *must* be like. That is,

Skinner's approach strongly suggests that it is his confidence in philosophical behaviorism which is at the root of his apparent knowledge of what science must discover rather than his confidence in operant conditioning which lends plausibility to philosophical behaviorism. Skinner's approach in *Beyond Freedom and Dignity* accords reasonably well with this view of the dependency relation between philosophical behaviorism and operant conditioning. Typically, philosophical behaviorism is defended on methodological grounds, while operant conditioning is exhibited as the theory which fits the methodological specifications.

What is most interesting about Skinner's arguments against autonomy, however, is that they all seem marshalled against a view of autonomy of type 1 and that he seems to assume that the refutation of such a view is sufficient to establish his view (of type 3). Thus, one of the historical alternatives concerning freedom is simply ignored. Skinner nowhere attends to facts such as:

(a) that many philosophers and psychologists, including psychologists who call themselves behaviorists, have argued that mental terms can be treated by psychologists as hypothetical constructs or intervening variables with appropriate logical ties to both independent (environmental) and dependent (behavioral) variables. Mental terms may be understood as playing a logical role in psychology which is analogous to the role played by terms like "electron" in physics. Indeed, many of Skinner's arguments against mentalistic terms in psychology appear to be incompatible with the use of theoretical discourse of any sort. [12]

(b) that the empirical scope and power of a psychological theory may depend on its use of such terms. Again the work of Piaget and Chomsky illustrates this point.

(c) that many philosophers have argued that freedom and determinism are compatible.

(d) that whether an act is free may not be a matter of whether it is explained but of how it is explained.

(e) that, if freedom and determinism are compatible, so are responsibility and determinism.

While these claims may not have the status of self-evident truths, they at least suggest the plausibility of the view that autonomous man can coexist with a science of behavior. Since such a view has been widely held in this century and since (in my opinion) it is correct, it is hard to understand why it should be ignored. [13]

Perhaps the seriousness of this omission can be highlighted by developing a line of objection to a central Skinner thesis which points toward the adequacy of a view of type 2.

Skinner's attack on autonomous man is preliminary to what I believe to be the central argument of the book, which may be formulated as follows: the defenders of autonomous man have assumed that there is a choice to be made between controlling a man and not controlling him; that, if he is not controlled, he will be free. In fact, there is no such choice available. Behavior is always a function of previous experience and present stimulus conditions (or, as Skinner would put it, of contingencies of reinforcement). Thus, the only choice concerns whether control will be deliberate or accidental, whether man's behavior will be controlled and, thus, improved or whether we will continue the disastrous policy of leaving the molding of behavior to accidental contingencies (pp. 97-99).

Most of *Beyond Freedom and Dignity* seems to me to be nothing more than an elaborate defense of this argument, and it is this central argument which must be defended if we are to take seriously the sort of behavioral engineering that Skinner recommends. However, there is something to be said against it. Let us start by considering the use of the word "control" in this argument.

I want to claim (1) that Skinner's use of the word does not accord with our usual use of the term and (2) that Skinner's use of the word tends to obscure some distinctions which are crucial to the solution of the problem he raises.

It is clear that Skinner's use of the word "control" derives from and is in accord with the use of the term in scientific or experimental contexts. Let us take two variables X and Y. Very likely all that the claim "X controls Y" would mean, given the use of "control" in *Beyond Freedom and Dignity*, is that there is some true law connecting X as antecedent and Y as consequent which in this particular case explains Y. It is significant here that "controlling" is not basically something that one person does to another. It is something that the environment does to a person, the environment sometimes, but not necessarily, consisting of other human beings. I shall say that Skinner uses the word "control" as synonymous with "have an effect on," letting the above remarks explicate what I mean by "having an effect on."

Now it is questionable at best whether this use of "control" can be exported into questions of ethics without substantial

distortion of the issues involved. That is, it is dubious that "control" means the same thing in a scientific context as it does in discussions of autonomy. Further, to simply assume that the scientific sense of "control" is the contradictory of "autonomous" begs the question of the plausibility of views on autonomy of type 2. It assumes that freedom and determinism are incompatible. Autonomous man is man free of control; but if anything that affects behavior is an instance of control, capriciousness turns out to be a necessary condition of autonomy.

Let us inspect the use of "control" in an ethical context. Consider the following examples:

Case A: Mr. Jones is an employee of an automobile company. This particular automobile company is given to requiring its employees to buy its own cars and has been known to fire employees who buy cars from the competition. Mr. Jones is very afraid of losing his job. Therefore, he buys a new car from his own company every year.

Case B: Mr. Smith has a suitable car. However, lately Mr. Smith has been seeing a TV commercial in which a certain new car is associated with a strong masculine character. Since Mr. Smith has an unconscious need to think of himself in these terms, he buys one of these cars. Smith is not aware of the actual explanation of his action.

Case C: Mr. Black needs a new car. While he is thinking about which car to buy, he discovers a consumer publication which shows him that he can meet his needs most effectively by purchasing a small foreign car. Thus, he buys a small foreign car.

In both Case A and Case B, it would be reasonable to claim (1) that the car buyer was under a form of control and (2) that he was not autonomous. In Case A, Mr. Jones is forced into his car-buying behavior. Coercion is a form of control; and when people behave because they are coerced, they cannot be said to behave autonomously. In Case B, Mr. Smith might be described as having been manipulated into his car-buying behavior. At least in such cases it would likely be true that Mr. Smith would be unaware of why he bought the car. Since Mr. Smith has been gotten to do something without any real understanding of why he was doing it, he may be described as having been manipulated. Manipulation is a form of control and is a form of control which is incompatible with the describing of a person as autonomous.

The last case is the interesting one. Case C describes what seems a paradigm case of autonomous behavior. Mr. Black takes

stock of his needs and does what there are good reasons for doing. Professor Skinner would very likely say that Mr. Black was under the control of (among other things) the consumer publication. It is, of course, true that the publication had an effect on Black's behavior, but the relevant point is that it is odd to describe this effect as a kind of control. Consider, for example, that, if Mr. Black had had a different set of needs or if there had been evidence available which warranted a different course of action, he would probably have done something else. Usually, however, we only describe a person as controlled if he can be gotten to do an action despite his needs or despite the available evidence for or against it. This is true of Smith and Jones, but not of Black. Indeed, we are willing to say of Mr. Black that he could have done something other than what he did in a sense which is true of neither Smith nor Jones, and our saying this is not at all incompatible with the realization that certain environmental influences had an effect on (indeed determined) his behavior. Thus, it seems most odd to equate control with having an effect.

Of course, Mr. Skinner is free to define control as having an effect. However, if the word is used in this way, we shall have to realize that to treat "controlled" and "autonomous" as though they were contradictory terms simply begs the question of autonomy. Indeed, the force of my example in Case C is to suggest that, given Skinner's use of "control," a person can be both controlled and autonomous. What these examples indicate ultimately is that whether or not an action is autonomous is not a matter of *whether* it is caused, but rather is a matter of *how* it is caused. Behavior is autonomous when it has (or could have) among its causes processes of evaluation or reasoning, when the environment functions as evidence. [14] However, Skinner's use of "control" obscures this distinction. Every kind of influence becomes an instance of a single logical type, control. And autonomy appears to disappear because of a vocabulary decision. Needless to say, however, the world does not change because it is misdescribed, although people may not notice things because they misdescribe them.

Skinner is not without something to say to those of us who, following the suggestion implicit in the above argument, consider reasoning and the environmental conditions which evoke it as a proper kind of influence. We are told that, e.g., persuasion, is taken to be an acceptable kind of influence only because it is ineffective. One suspects that Skinner is ascribing to us the

following reasoning: all control is wrong. Therefore, the only kinds of ways we can legitimately relate to people are those in which no control is exhibited. To control is to have an effect on. Therefore, persuasion is legitimate because it is ineffective in controlling people. Persuasion is approved, according to Skinner, because it permits the illusion of freedom. "The fundamental mistake made by all those who choose weak methods of control is to assume that the balance of control is left to the individual, when in fact it is left to other conditions" (p. 99).

Two comments are needed here. First, note that on my view it does not follow from the fact that persuasion was successful (that it caused behavior) that it was a kind of control. What the above examples indicate is that a person is behaving autonomously when he responds to his experience of the world and to other persons' verbal behavior as evidence for the truth of his beliefs or the desirability of his wants. He is autonomous when he is rational. To persuade is simply to verbally provide evidence, to try to change behavior by showing that there are good reasons for doing something else. Now human history may suggest some evidence to support the conclusion that persuasion is not apt to be very successful very often—men are not very rational very often; but since persuasion is merely the verbal presentation of evidence, its success is compatible with a person's being rational and, therefore, with his being autonomous.

Second, it is worth mentioning that many philosophers have argued for freedom in the name of reason. The point of objections to phenomena such as press censorship or indoctrination has been to provide opportunity for the operation and development of reason. For example, liberals of such diverse persuasions as John Stuart Mill and John Dewey have held that the primary criterion for the evaluation of a society is that society's capacity to liberate the intellect and that such a liberation presupposes certain constraints on social control. Indeed, I think that, if one is genuinely interested in human autonomy, the central question must be, "Under what social and educational conditions will people develop and employ rational capacities?"

Skinner might respond here that in the previous remarks I have given him much of his recommended program. I have suggested, in effect, that we control certain features of the environment in order to produce certain effects. Surely, I have said this. Along with most thinkers who have been interested in creating autonomous men, I am of the opinion that reason and

autonomy are apt to happen under some conditions and not others. I am also of the opinion that some conditions stifle autonomy and erode a person's rational capacities. The difficulty in Skinner's work is that it does not appear to recognize the difference. All forms of influence seem to be forms of control. We do, of course, find a useful distinction between positive and negative reinforcement. This is a helpful distinction for many issues, but not this one. It does not mirror the distinction between persuasion and manipulation, between influences which retard reason and autonomy and those which enhance them. That is the kind of distinction which is required, and one does not find it in *Beyond Freedom and Dignity*.

This point may perhaps be made more persuasive if we inspect for a moment the effects of Skinner's vocabulary on the distinction between persuading and indoctrinating. When we persuade someone, we attempt to provide evidence which will convince him that a certain belief is true or false. However, when we indoctrinate someone, we attempt to change his beliefs without an appeal to evidence or, even worse, in a way which makes the resulting belief immune to evidence. Now this is a most important distinction for the ethics of education. It is normally considered quite permissible to influence a person's beliefs or behavior by suggesting reasons for believing or doing something. It is thought less acceptable to manipulate or deceive someone. The reasons for this, as I have suggested, have to do with the conceptual link between the concepts of reason and autonomy. They have little to do with relative effectiveness. However, unfortunately, when we attempt to ask questions about persuading and indoctrinating in "behaviorese," we find that the distinction has disappeared. What we find instead is simply two different instances of control. Further, we do not find in the vocabulary repertoire of "behaviorese" any terms which seem very helpful in restoring this distinction. We are thus denied the means of expressing an important set of questions. This fact can only be treated as an indication of the general poverty of "behaviorese" in describing human beings. The result of this conceptual poverty here is that we are denied the means to discuss a set of ethical questions which concern how we may legitimately influence other human beings. The issue has become to control (to have an effect upon) or not to control. Unfortunately this is not the question. There are few questions about legitimate influence which can be effectively formulated in such terms.

Let us return for a moment to what I suggested was the central thesis of the book. Skinner's claim is that the question is not whether men's lives will be controlled, only how. We may respond as follows: it is true that there is no question as to whether what happens to a person will affect him; the only question is as to the quality of these happenings. It is not true, however, that every influence is appropriately described as control. Some influences may influence as evidence; others may influence toward being susceptible to evidence. It is possible that we can create an environment which maximizes the latter sort of happening. It is here that the individual's autonomy lies.

Now the above arguments, besides being objections to Skinner, are arguments for a position of type 2. They suggest that an action may be both free *and* susceptible to scientific explanation. They suggest that whether an action is free depends not on its independence from environmental factors as much as it depends on how environmental factors produce their effects. Skinner not only fails to notice this alternative; his vocabulary seems virtually contrived to obscure it. However, once we recognize that Skinner defines "control" as "having an effect on" we may then regard Skinner's argument that all behavior is under the control of the environment and is therefore not free as an abuse of the language rather than a fact about man. Skinner has eliminated positions of type 2 by linguistic fiat rather than by sound argument. [15]

Thus far I have been considering the use of the word "control" as it occurs in discussions about autonomous man, and I have tried to show that Skinner's argument rather uncritically extends the scientific use of "control" into the issue of human autonomy. I am equally concerned about how Skinner's philosophy of control relates to questions of political or social authority. Here there seems to be some difficulty in knowing exactly what is supposed to follow from Skinner's argument. Let me expand on this point by means of the following anecdote.

Recently I used in one of my classes Skinner's *Walden Two* and J. S. Mill's *On Liberty*. I thought initially that they made an interesting contrast. Skinner, after all, seems to opt for substantial control of behavior, while Mill is the classic defender of personal liberty. I was thus surprised to find several of my students arguing that there was no obvious reason to suppose Skinner and Mill to be in disagreement.

Consider how a reconciliation of *On Liberty* and *Beyond*

Freedom and Dignity might sound. For brevity's sake, let me use Mill's defense of free speech. Mill argues that criticism is a basic ingredient of an environment where truth is likely to be discovered. He concludes that, assuming the value of truth, the suppression of freedom of opinion is undesirable. (Given Mill's argument and its typicality, Skinner's insistence that traditionally the point of arguments for liberty has been to rid ourselves of aversive stimuli [p. 30] looks a bit simple-minded.) Mill might also have concluded (he did occasionally but without emphasis) that an environment wherein criticism is provided is most conducive to intellectual growth and development.

Now prima facie this seems not to be a very Skinnerian position since it is an argument against a kind of control. But what in Skinner's philosophy of control excludes it? Cannot we imagine Skinner providing the following response? "Why should I reject Mill's argument? After all, Mill is holding that a certain sort of behavior, intelligent thought, [16] is more likely to take place under one sort of environmental condition than another. He is pointing out the environmental conditions which control a certain kind of behavior. Whether he is right about criticism being a condition of intelligent thought is an empirical question, of course. We shall have to conduct some tests, but my philosophy of control does not exclude the account."

Whether Skinner would say any such thing I don't know. Should he, then the claim of *Beyond Freedom and Dignity* concerning the need for control in designing a culture seems to me to be vacuous and misleading. If "control" is a broad enough term to encompass classical liberalism, it is puzzling as to what the uproar is all about. It seems not to decide anything of great import. And, if this should be the case, Skinner's contribution to the philosophy of freedom comes down to a perversion of the language for its discussion and a muddling of the issues involved.

Whether or not Skinner's position on control might turn out to be reconcilable with liberal political philosophy, it is unfortunate that Skinner chooses not to relate his arguments to the liberal tradition. There have been, in Western ideologies, at least two distinguishable lines of thought on the notion of freedom. One tradition, the one to which Skinner objects, argues against control in the name of what might be called psychological freedom. It is assumed that independence of thought and actions is of intrinsic worth and that, therefore, control is at best a necessary evil. A second tradition, best illustrated by J. S. Mill, argues for liberty

on grounds that it is a social good. (It is Mill's claim that liberty can be defended in terms of utility, i.e., the greatest good for the greatest number.) Two features of this second tradition are noteworthy in this context. First, typically liberal arguments have not been marshalled against control per se, but only against certain types of control. Mill, for example, begins his argument with a distinction between self-regarding and other-regarding acts and holds that the latter are perfectly acceptable objects of social control. Second, those forms of control which are objected to are objected to on grounds that they have undesirable consequences. Needless to say (this was the point of my "reconciliation" of Skinner and Mill), such a line of argument is perfectly compatible with determinist assumptions and, thus, will not fall with the demise of autonomous man. Now it has been this second tradition rather than the doctrine of autonomous man which has been the more important determinant of American liberal and democratic institutions. (Try imagining what a defense of the Bill of Rights in terms of the doctrine of autonomous man would look like.) Skinner (if one takes the most obvious interpretation of *Beyond Freedom and Dignity*) seems to find these democratic and liberal institutions bothersome in regard to his program of culture designing. But, if he is of the opinion that the intellectual support of these institutions will succumb to the fall of autonomous man, he is mistaken. Further, if the arguments for such institutions are good ones, Skinner has made a dangerous mistake. In any case, it is most unfortunate that *Beyond Freedom and Dignity* does not direct itself specifically or systematically to this sort of ideological context.

There is a good deal else that might be said about *Beyond Freedom and Dignity*. The general tendency to provide translations into "behaviorese" of facts that people are quite familiar with and pretend that it is science cannot pass without note. [17] Also, the frequently inept description of various positions from the history of Western scholarship requires this brief note of protest. [18]

These, however, are peripheral matters, and I shall not pursue them. I have chosen to emphasize those aspects of *Beyond Freedom and Dignity* which have been discussed above because the central deficiency of *Beyond Freedom and Dignity* seems to me to be that it commits what might be called the fallacy of too few options. In effect, what Skinner has asked us to do is to decide between freedom and control, and he has attempted to present

such a choice as a choice between science and prescientific mythology. In almost every area where questions of autonomy or liberty arise, from education to political philosophy, it is imperative that the questions not be posed in such an either/or form. The question is not whether to opt for freedom or control. The only serious question concerns what areas of human behavior are appropriately controlled and what areas are the legitimate sphere of human liberty; they concern what forms of control are legitimate and what forms of control are not legitimate. Except for the helpful but hardly sufficient discussion on the respective merits of positive and negative reinforcement, Skinner's contribution to the literature seems to have been largely to have stated these questions in misleading and unanswerable form. (In reading *Beyond Freedom and Dignity*, one comes to feel as if he has been asked to decide on the ethics of drugs after having been told that some drugs are more effective than others, but not being permitted to distinguish between aspirin and heroin.)

I have tried to indicate that this conceptual disaster has two roots. First, Skinner has ignored the possibility that autonomy and determinism may be perfectly compatible. This is what enables him to pretend that we must choose between autonomy and science. Second, Skinner has ignored the fact that there are arguments against some kinds of control which can be stated in a form which has nothing to do with the autonomy vs. determinism question. This is what enables him to pretend that individual liberties can be dispensed with by dispensing with autonomous man. Thus, it is simply not the case that we must choose between freedom and science. Skinner has not given us enough options.

We may, at this point, begin to terminate the discussion by noting that Skinner's views on freedom and control can be construed as an instance of a larger issue concerning the relations between the emerging sciences of man, particularly psychology, and more traditional and ordinary ways of conceiving of man. This issue can be stated by means of a distinction developed several years ago by Peter Strawson in his book *Individuals* between descriptive and revisionist metaphysics. In Strawson's words: "Descriptive metaphysics is content to describe the actual structure of our thoughts about the world, revisionist metaphysics is concerned to produce a better structure." [19] The subject matter of descriptive metaphysics concerns basic categories whereby men organize their experience. According to Strawson:

> . . . there is a massive central core of human thinking which has no history—or none recorded in histories of thought; there are categories and concepts which, in their most fundamental character, change not at all. Obviously these are not the specialities of the most refined thinking. They are the commonplaces of the least refined thinking; and are yet the indispensable core of the conceptual equipment of the most sophisticated human beings. It is with these, their interconnexions, and the structure that they form, that a descriptive metaphysics will be primarily concerned. [20]

It is apparent that there are such basic categories, concepts, and explanatory patterns by means of which we organize our thought about human behavior. Illustrative of such concepts would be the notions of purpose, intention, motive, belief, action, agent, and, of course, the distinction between voluntary and involuntary behavior. These concepts are not, of course, explanations. Rather, they are ways to organize and classify behavior and patterns according to which explanations are constructed.

Now contemporary psychology seems to have been somewhat ambivalent about these categories and concepts. Psychologists sometimes seem to be "explaining" these categories to us by pointing to underlying mechanisms, providing reductions of the concepts, or noting that they relate in certain ways to some kinds of laws. Thus, it is not infrequently that one comes across articles claiming to account for purposeful behavior in cybernetic terms or thinking by means of ideas taken from information theory. In other cases one finds psychologists who seem to want to deny that men have purposes or that they think. Norman Malcolm has noted that such an ambiguity can be found in Skinner's writing.

> The question as to whether or not Skinner would accept the inner variables 'pertains to the typical ambiguity of behaviorism.' Watson, for example, seemed, on the one hand, to be denying that consciousness exists, but, on the other, he tried to say what thinking *is*—tiny movements of the speech apparatus. The ambiguity resides in only seeming to deny the existence of thinking, while, in reality, one is giving an analytic reduction for the term. A similar ambiguity runs through Skinner's writing to some extent. 'I still hope and believe that, if it came to the pinch, Skinner would admit that people do get depressed, tired and hungry, annoyed, and so on . . . . The only position for Skinner . . . as a behavioristic philosopher, is to say that his quotation marks mean that this is a term for which he is going to give a reduction. [21]

Psychologists who try to tell us that men do not behave for purposes, do not think, or are not free, can be taken to be engaged in revisionist metaphysics in that they are not only pointing out certain empirical facts about human beings, but are also insisting that we revise our standard and central conceptual scheme for organizing these facts.

It should be noted that a "descriptivist" approach implies only minimal constraints on research or theory construction in the behavioral sciences. It does not require that these "descriptivist" concepts appear in the description of behavioral data or in the theories which account for the data. It requires only that explanatory theories be "translatable" into descriptivist terms or perhaps (to suggest an even weaker criterion) that they not be incompatible with an account of the same phenomena expressed in descriptive terms. It is to be insisted on that to hold that concepts like motive, belief, intention, and voluntary are not suitable for the construction of systematic scientific theory is not equivalent to holding that propositions employing these terms are false.

I should like to argue that there are good reasons for preferring a descriptivist approach. First, descriptivist concepts typically mark features concerning human behavior which are there to be marked. It is simply obvious, for example, that there is a distinction to be drawn between voluntary and involuntary action. It may not be obvious how the distinction is to be drawn or accounted for, but it is not terribly controversial that there is a difference to be noted. The difference is an empirical fact! It is worth mentioning that most psychologists, Skinner included, who deny this distinction typically do so because they disagree with a particular traditional theory which has been held to account for the distinction. Thus, they mistake the phenomenon for an account of it. Consider again my example of the car-buying behavior of Smith, Jones, and Black. Is it not clear that there is an important distinction to be drawn between Black's behavior and the behavior of Smith and Jones? If that is the case, then the real question is not as to whether there is a difference, but rather concerns what the difference is. It may, indeed, be the case (although I doubt it) that this distinction will not be important in constructing a science of behavior. However, to infer from this that making the distinction is mistaken is apt to result in a bland and impoverished vocabulary for discussing human beings in other contexts.

Second, it is important to note that a whole host of issues in

ethics, social philosophy, and education (to name only a few) has been discussed in descriptivist vocabulary. It is not unreasonable to expect that the price tag in conceptual violence to many of these issues, should we begin to take revisionist programs seriously, will be very high.[22] Indeed, *Beyond Freedom and Dignity* is a paradigm case of the price tag of revisionism. If my argument has been correct, the conclusions Skinner draws in *Beyond Freedom and Dignity* are largely a result of the impoverished vocabulary to which his revisionist attitudes restrict him. The issues concerning freedom, determinism, and control simply cannot be made sense of, given the vocabulary that Skinner brings to the issue because that vocabulary is not sufficiently rich to make the requisite distinctions on which a reasonable discussion depends. *Beyond Freedom and Dignity*, on analysis, makes a strong case against revisionist psychology.

It will be hard for the reader not to have noticed that this review has been highly critical of Skinner's arguments and conclusions. Lest it be entirely negative, I would like to note that Skinner and *Beyond Freedom and Dignity* have performed the notable service of focusing public attention on a much neglected set of questions, namely, the conceptual effect of the theories put forth by behavioral scientists on the way various ethical, social, political, and educational problems are conceived. Behavioral scientists all too often exhibit no inclination to think about the broader implications of their work. B. F. Skinner has been a notable exception to this unhappy trend. That seems to me to be a worthy contribution for which Skinner deserves a bit of positive reinforcement.

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[1]Aristotle *Physics* 198b, 199b.

[2]For a more exhaustive account of this model of explanation, see Carl Hempel and Paul Oppenheim, "The Logic of Explanation," *Philosophy of Science* 15 (1948).

[3]See A. I. Melden, *Free Action* (New York: Humanities Press, 1964); and Richard Taylor, *Action and Purpose* (Englewood Cliffs, N. J.: Prentice-Hall, 1966).

[4]See John Dewey, "Philosophies of Freedom," in *Freedom in the Modern World*, ed. Horace M. Kallen (New York: Coward-McCann, 1928); and Moritz Schlick, "When is a Man Responsible?" in *Problems in Ethics*, trans. David Rynin (New York: Prentice-Hall, 1939).

[5]Taylor, *Action and Purpose*, pp. 134, 135.

[6]B. F. Skinner, *Science and Human Behavior* (New York: The Free Press, 1953), pp. 29-31.

[7]See, for example, *Science and Human Behavior*, pp. 3-42; "Behaviorism at Fifty," in *Behaviorism and Phenomenology*, ed. Wann (Chicago: University of Chicago Press, 1964), pp. 79-108; or "Critique of Psychoanalytic Concepts and Theories," in *Minnesota Studies in the Philosophy of Science, Vol. I*, ed. Feigl and Scriven (Minneapolis: University of Minnesota Press, 1964), pp. 77-87.

[8]For example, see Gilbert Ryle, *The Concept of Mind* (New York: Barnes and Noble, 1962), particularly pp. 116-53; Edward C. Tolman, "Operational Behaviorism and Current Trends in Psychology," in *Proceedings of the 25th Anniversary Celebration of the Inauguration of Graduate Studies* (University of Southern California Press, 1936); Kenneth MacCorquodal and Paul E. Meehl, "Hypothetical Constructs and Intervening Variables," *Psychological Review* 55 (1948); J. Fodor and C. Chihara, "Operationism and Ordinary Language," *American Philosophical Quarterly* 2 (1965).

[9]See, for example, N. Chomsky, "A Review of B. F. Skinner's Verbal Behavior," *Language* 35, no. 1 (1959); or Chomsky, "The Case Against B. F. Skinner," *New York Review of Books*, 30 December 1971.

[10]Taylor, *Action and Purpose*, and Melden, *Free Action*, are illustrative.

[11]These criteria define a relatively weak sense of "behaviorism," one according to which the author of this article is a behaviorist. The different "degrees" of behaviorism can be understood as concerning the interpretation of (2). Skinner appears to hold a rather strong version according to which only those terms which refer to observables or those which can be explicitly and exhaustively defined by such terms are permissible. This seems to me to be much too demanding. Further, Skinner does not in *Beyond Freedom and Dignity* explicitly ascribe to it. I'm inclined to ascribe the view to him because, if he held it, much of what he says about mental discourse would at least appear reasonable, even if mistaken. Without such a view, Skinner's position about mental language is quite unreasonable. However, see his remarks on p. 190.

[12]See Michael Scriven, "A Study of Radical Behaviorism," in *Minnesota Studies in the Philosophy of Science, Vol. I.*

[13]Skinner has occasionally flirted with the view that freedom and determinism are compatible. See, for example, Skinner's *Walden Two* (New York: The Macmillan Co., 1948), pp. 262, 263. However, to my knowledge, he never develops the point or takes it seriously—perhaps because he seems to think that on such a view the only real difference between free and unfree acts is how people *feel.*

[14]For a systematic defense of this view, see Kenneth A. Strike, "Freedom, Autonomy, and Teaching," *Educational Theory* (Fall 1972); and "Thinking on Thinking: Some Logical and Ethical Implications," in *Philosophy of Education 1971: Proceedings of the Twenty-Sixth Annual Meeting of the Philosophy of Education Society*, ed. Robert D. Heslep (Edwardsville, Ill.: *Studies in Philosophy and Education*, 1971).

[15]Interestingly, this misuse of "control" may produce a mistake quite the opposite of Skinner's. I have encountered in the views of some of my students and implicit in the writings of some educational theorists an argument which goes something as follows: all control is undesirable. Any kind of influence on belief or behavior is a kind of control. Therefore, teachers should not influence behavior or belief. To argue in such a fashion, of course (and as Skinner would insist), is to commit pedagogical suicide. But, note that the central premise in this instructional hara-kiri is shared with Skinner. "Control" means to have an effect on. It should be clear that an ethic of autonomy combined with Skinner's definition of control is disastrous to a theory of education. Nevertheless, the above argument does much to illuminate the intellectual roots of much of the chaos that seems to attend at least the beginning of many "free schools" and is suggestive of a structural defect in the writings of people of the orientation of Carl Rogers. If I am right, free schools (holding such assumptions) are not likely places for the creation of autonomous men. It is fascinating, however, to note that the ideology of many free school advocates and that of B. F. Skinner may stem from a common

error, namely, the assumption that to control a person is appropriately defined as affecting his behavior.

[16]We will assume appropriate Skinnerian translation for the mentalistic vocabulary.

[17]The best examples of this in Skinner's writing are to be found in sections III, IV, and V of *Science and Human Behavior*. For example: "As a simple example of economic control an individual is induced to perform labor through reinforcement with money or goods" (p. 387). The point of this passage and the nearly two hundred surrounding pages is to show that Skinnerian psychology can explain human behavior. This demonstration is largely accomplished by devices such as applying the label "reinforcement" to the usual and well-known goals of human behavior. Indeed, by and large, bringing human behavior under the umbrella of operant conditioning is accomplished by translating the usual mentalistic explanations into "behaviorese," whereupon the explanations gain no more explanatory power and lose a good deal of their descriptive capacity (behaviorese having a rather impoverished vocabulary). Needless to say, any resemblance between this sort of verbal charlatanry and science is accidental. If it is on such achievements as these that the rather extravagant claims of *Beyond Freedom and Dignity* about the successes of behaviorist psychology in explaining human behavior rest, we would do better to look elsewhere.

[18]Most notably: "A method of modifying behavior without appearing to exert control is represented by Socrates' metaphor of the midwife: *One person helps another give birth to behavior*" (*Beyond Freedom and Dignity*, p. 84. Italics mine.) Or consider that at one point Skinner claims that "very few figures in the history of the struggle for freedom have shown Rousseau's lack of concern. On the contrary, they have taken the extreme position that *all control is wrong*" (p. 41). Perhaps the author of this article is abysmally ignorant, but he cannot think of a single scholar who has held such a view. Even most anarchists object only to governmental control, *preferring* the control of primary groups.

[19]Peter Strawson, *Individuals* (New York: Doubleday & Co., 1963), p. xiii.

[20]Ibid., p. xiv.

[21]Norman Malcolm, "Behaviorism as a Philosophy," in *Behaviorism and Phenomenology*, ed. Wann (Chicago: University of Chicago Press, 1965), p. 158.

[22]For a discussion of some of the conceptual costs of attempting to discuss educational problems in "behaviorese," see Kenneth A. Strike, "On the Expressive Potential of Behaviorist Language," *American Educational Research Journal* 11, no. 2 (Spring 1974): 103-20.

B. F. SKINNER'S
REPLY TO KENNETH A. STRIKE

It seems to me that Professor Strike has reviewed not *Beyond Freedom and Dignity*, but a book such as I might write under the title of, let us say, *About Behaviorism*—a book which might begin with the sentence: "Behaviorism is not the science of human behavior; it is the philosophy of that science," and then go on to discuss conscious experience, purpose, will, ideas, thinking, reasoning, knowledge, and so on.

Curiously enough, it happens that I have written that book, and it will appear before these remarks are published. But would it be fair to criticize Professor Strike's review? He has had available only such anticipatory bits and pieces as he could find in *Beyond Freedom and Dignity*, *Walden Two*, and other books of mine; and he does not, I am sure, claim any precognitive powers. He has obviously shared my feeling that a discussion of these issues is needed, but the unusual practice of reviewing a book before it appears necessarily exacts a toll.

If my new book clarifies—even if it does not resolve—some of the issues he raises, I shall be interested in what he will then say about the main theme of *Beyond Freedom and Dignity*. By "a scientific analysis of behavior," I always mean the kind of thing published, for example, in the *Journal of the Experimental Analysis of Behavior*. (Incidentally, it is far more than "operant conditioning.") I did not discuss the analysis in detail in *Beyond Freedom and Dignity* but gave my readers references if they were interested in looking further. I did the same thing with respect to technological applications. The book was not about practical problems raised by either science or its technology. Instead, it was devoted to certain longstanding issues—clearly of a philosophical nature but going far beyond the philosophy of a science of behavior—concerning the future of mankind.

That future does, I insist, lie *beyond* freedom and dignity. I accept the goals of those who have struggled for political and religious freedom and dignity, and I believe I have been as much concerned as anyone with creating a world in which a feeling of freedom and a sense of achievement are maximized. But these feelings remain things of the moment, and—if they become ends in themselves—they may undermine the effort to provide for the freedom and dignity of future members of the human species.