T H E U N I V E R S I T Y O F A L B E R T A

FREEWILL VS. DETERMINISM: IMPLICATIONS FOR EDUCATION

by

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ABSTRACT

The controversy between freewill and determinism has far-reaching implications for the future of society, especially education. The determinists, who base their doctrines on the causal model of scientific explanation, claim that human action is caused by hereditary, physiological and environmental conditions. Consequently, according to the hard determinist, a man is not responsible for his actions; the soft determinist holds that he is responsible insofar as he could have acted other than he did, that is, if his desires, motives or circumstances had been different. The educator who accepts the hard determinist's account of human action believes that since all behavior is outside man's control, his behavior must be controlled. He advocates an educational system in which every one is conditioned to want what is good for him. The soft-deterministic educator believes that personal intentions, desires and reasons do influence a man's action. Although they are determined, they are not inevitable; therefore, they can be nurtured by education.

The libertarian bases his doctrines on indeterminacy, claiming that there are some events, or at least some aspects of some events, which are not inevitably determined. Recently the rise of the general system theory has given the libertarian a scientific basis. The theory holds that an organism is a system, a whole which is more than the sum of its parts. Besides obeying causal laws

the organism also obeys organizational and organismic laws which permit that range of freedom in action necessary for responsibility. An action is the complex category of the self, the psyche, the soul, which is manifested in intention, choice and volition. Insofar as an action is within an agent's conscious control, he is responsible for it. The libertarian advocates an educational system that fosters the cognitive functions which are involved in deciding on action. Furthermore, he will encourage training of desires and the will so that they come more and more under the individual's control.

Both determinism and libertarianism, although seemingly based on scientific theories, nevertheless have their roots in metaphysical premises about the nature of man. The determinist considers him a mere machine-like or an animal-like substance which is the sum of discrete parts. The libertarian holds that man is more than the sum of the parts, that he transcends the machine and also his mere animal instincts. Which view one accepts depends on one's metaphysical beliefs.

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TABLE OF CONTENTS

Chapter		
I.	INTRODUCTION	1
	The Problem	2
	Need for the Study	6
	Plan of the Thesis	8
	References, Chapter I	10
II.	DETERMINISM	12
	Definition	12
	Human Action	15
	Responsibility	23
	References, Chapter II	28
III.	IMPLICATIONS OF DETERMINISM FOR EDUCATION	31
	Behaviorists	31
	Soft Determinists	37
	References, Chapter III	42
IV.	LIBERTARIANISM	44
	Causal Model Refuted	45
	General System Theory	49
	Free Action	51
	Responsibility	62
	References, Chapter IV	67
V.	IMPLICATIONS OF LIBERTARIANISM FOR EDUCATION	72
	References, Chapter V	83

VI. CONCLUSION 86

References, Chapter VI 93

BIBLIOGRAPHY 95

A. Books. 95

B. Articles and Essays. 99

Whatever the future may bear, we have to preserve human values and dignity. Contrary to the recent best seller, these are neither mystical nor obsolete and unscientific superstitions, to be managed and replaced by "scientific" techniques. They are, quite simply, what is specific to man and human culture.

Ludwig von Bertalanffy

FREEWILL VS. DETERMINISM: IMPLICATIONS FOR EDUCATION

CHAPTER I

INTRODUCTION

There are some problems in philosophy which have been around a long time. The problem whether man's actions are the result of his own free will or whether they are determined by causes not under his control is one such problem. Survey of recent literature on the subject shows that no measure of agreement has been reached despite all the debate. On the contrary, the discussions are as diverse and lively as ever. That the problem has far-reaching implications can be seen by scanning any bibliography on the subject which covers such areas as theology, jurisprudence, politics, history, physics and psychology.

> . . . the fundamental problems of mind and matter; of free will versus determinism, are still very much with us, and have acq[illegible] a new urgency not as a subject of philosophi[illegible]bate, but because of their direct bearing on political ethics and private morals, on criminal justice, psychiatry and our whole outlook on life.[1]

The problems involved also have a direct bearing on educational philosophy, on educational theory, and finally also on practice in the classrooms. As teachers and administrators rely more and more upon insights offered by psychologists, th[illegible] also have to face the conflicts which are involved in th[illegible]derlying philosophical issues.[2]

I. THE PROBLEM

The problem examined in the following discussion is this: *Either a person is in control of his own actions, that is, he is truly free to make meaningful choices for which he can justly be held responsible; or he is not in control, that is, he is not free to choose and hence is not responsible for his behavior.* Embedded in this problem are three philosophical difficulties: linguistic, moral and metaphysical.

First, the difficulty is a linguistic one. Conceptual confusion surrounding such concepts as *freewill, free action, choice, intention, could have done otherwise* not to mention *cause* and *indeterminacy* is perplexing indeed. Attempts have been made to settle how these expressions are to be understood using logical analysis. Some philosophers consider this the only way of settling the issue between determinists and freewill advocates.[3] According to them, once linguistic difficulties are solved, all other problems will disappear. Other philosophers feel that after analysis and clarification irreconcilable differences still remain.[4] Undoubtedly, linguistic analysis has made great contributions to the debate by clarifying the issues, raising important questions and removing misunderstanding. But after so-called misunderstandings have been cleared away, the fact emerges that what is left is a "profound difference in outlook"[5] which has its roots in both the moral and the metaphysical aspects.

The second difficulty, the moral one, has been

somewhat neglected by philosophers in recent years.[6] The problem is a moral one because it concerns itself not only with objective description of action, but also with reasons for action which include their justification.[7] In addition to goals, purpose and intentions, actions also include interaction with other people which involves questions of rules and norms of conduct within a culture.[8] Rules and norms also involve the concept of responsibility which in turn involves moral guilt or innocence.

But even within the apparently objective scientific descriptions and logical analyses of actions values are hidden since "science and logic, the highest objective arts, presuppose goals and significances. Truth and clarity are their key values."[9] In addition to truth and clarity, all the other values of a culture also influence descriptions and explanations simply because scientific inquiry and logical analysis are themselves human activities which are based on a wide range of cultural values.[10] These values shape the hypotheses and theories which "guide our observation, and help us to select from the innumerable objects of observation those which are of interest."[11] Most important of all, these hidden values will also strongly influence the observer's attitudes and beliefs about the nature of man. This leads to the third, the metaphysical, difficulty embedded in the freewill-determinism controversy.

Three metaphysical assumptions involving beliefs about the nature of man are currently being defended:

1) Man is a machine, very complex to be sure, but a machine nevertheless.

2) Man is an animal, and like all animals, lives according to a predetermined program genetically transmitted. He does what he does because of this program and because of the feedback he gets from the environment.

2) Man is "an entity which has freed itself from whatever has determined it (determined it in biological-psychological-sociological terms): that entity, in other words, that is unconditioned all these determinants either by ignoring them and shaping them or by deliberately submitting to them."[12]

In our time, the third image of man, that of a freed entity, is least popular among philosophers and scientists. It has been assailed by both alike. Linguistic analysis has shown the meaninglessness of concepts like the self, or the mind,[13] and impressive research in the sciences, especially in physiology, neurology,[14] and psychology[15] seems to cast grave doubts on the view that man can, in fact, break free from determining factors. Psychologists, led by Professor Skinner, have made special efforts to bury the free image of man, as the title of Skinner's popular book, *Beyond Freedom and Dignity*, suggests. Those who argue for a self, a mind, a soul, a psyche are called pre-scientific, psychotic, neurotic or at best confused and caught up in metaphysical and hence meaningless problems which can only be resolved by linguistic analysis or scientific investigation.

But not all philosophers and scientists have joined this majority. There are those who vigorously object to the deterministic image of man. These objectors maintain

that questions about the nature of man are highly speculative if for no other reason "than the simple fact that human beings are such surpassingly complex creatures."[17] To base an entire program of human and social engineering on mere speculative assumptions is extremely dangerous and, according to the defenders of freewill, in the end fatal for autonomous man. What, exactly, is it that is being objected to? At this point it might be best to quote leaders of both sides at length. Skinner, in *Beyond Freedom and Dignity*, comments on the writings of those who are afraid of the abolition of man:

> What is being abolished is autonomous man--the inner man, the homunculus, the possessing demon, the man defended by the literature of freedom and dignity.
>
> His abolition has long been overdue. Autonomous man is a device used to explain what we cannot explain in any other way. He has been constructed from our ignorance, and as our understanding increases, the very stuff of which he is composed vanishes. . . . To man *qua* man we readily say good riddance. Only by dispossessing him can we turn to the real cause of human behavior. Only then can we turn from the inferred to the observed, from the miraculous to the natural, from the inaccessible to the manipulable.[18]

In *The Abolition of Man*, C. S. Lewis, writing twenty-five years earlier, eloquently summarizes all that the defenders of freedom and dignity still are concerned about.

> I am only making clear what Man's conquest of Nature really means and especially the final stage in the conquest, which, perhaps, is not far off. The final stage is come when Man by eugenics, by prenatal conditioning, and by an education and propaganda based on a perfect applied psychology, has obtained full control over himself. Human nature will be the last part of Nature to surrender to Man. The battle will then be won. . . . But who, precisely, will have won it?
>
> For the power of Man to make himself what he pleases means . . . the power of some men to make other men what *they* please.

This, then, is the problem. Because it has linguistic, moral and metaphysical dimensions, it has far-reaching implications also for education. As C. S. Lewis pointed out, the educationalists will be the ones who will be "the man-moulders of the new age . . . who really can cut out all posterity in what shape they please."[20] Whether this is what *should be* is the question at hand. If man really is not in control of his actions, then perhaps Skinner is right. But if it should be the case that man *is* or *can be* in control of his own actions, then to rob him of that control is to rob him of part of his nature.

II. NEED FOR THE STUDY

Those who are familiar with Aldous Huxley's *Brave New World*[21] will remember that the events recorded in that novel took place some time in the sixth or seventh century after Ford. That book was written in 1931. Almost thirty years later Huxley wrote:

> In 1931 . . . I was convinced that there was still plenty of time. The completely organized society, the scientific caste system, *the abolition of free will by methodical conditioning*, the servitude made acceptable by regular doses of chemically induced happiness, the orthodoxies drummed in by nightly courses of sleep-teaching--these things were coming alright, but not in my time, not even in the time of my grandchildren.[22] [Italics not in the original]

In 1958 Huxley realized, and in 1973 we realize it even more, that the prophesies he made are no longer science fiction. Whether one considers the society of controlled men and women a threat or utopia depends on many factors,

not the least of which is whether one thinks that man has freewill. Since scientists have the tools with which to manipulate the brain, the genetic system and behavior, the problem under consideration is a very real one and also a very urgent one.

Those who oppose determinism realize that if man can be manipulated, those who do the manipulating have to exercise *their* freedom. Questions naturally arise: Who decides what the outcome will be? Who will control the controllers? These questions are being dicussed not just by philosophers but by writers for such popular magazines as *Time* which in an essay on Skinner observed that the logical dilemma in his philosophy was that "the sources of the standards of good and evil in his ideal society"[23] were not specified.

Of course, Skinner in his fictional portrayal of the controlled society in *Walden Two*[24] showed a happy, co-operative group of people, but as seen from the point of view of the controller Frazier. *Brave New World*[25] showed that world from the misfit's point of view. Both must be considered.

There is, therefore, a real need to clarify the philosophical issues of the freewill-determinism controversy before a decision can be reached on the kind of society educators and the public at large wants. According to the democratic tradition, the people should choose. As Walter Worth said to the people of Alberta in the Worth Commission Report, *A Future of Choices: A Choice of Futures*:

> There are some choices that await your agreement while others await your judgment. . . . What tomorrow holds depends on all of us--on what we foresee, on what we believe, on what we do.[26]

In order to decide, the people must know the possibilities. Educators will be in the forefront of the decision-making process; therefore, they must not only know the possibilities, but also the philosophical principles involved. With the "advances in the techniques for controlling behavior and bringing about personality change"[27] which will be incorporated in education, two alternatives are presented: a person-centered society which stresses "self-direction, self-fulfillment, individualism"[28] or a group-centered society which stresses control from the top.

It is not the purpose of the philosopher of education to tell the educator or society for that matter what the aims of education should be. His function is clarification. It should be observed, however, that adoption of the philosophical doctrines of freewill or determinism do have practical consequences for education. What these doctrines and their consequences are will be examined in the following pages.

III. PLAN OF THE THESIS

In order to present some of the implications of the freewill-determinism controversy for education, determinism will be defined in Chapter II. A determinist's interpretation of action and responsibility based on the causal model follows. The influence of determinism on educational theory

and practice are discussed in Chapter III. The libertarian's arguments against determinism are submitted in Chapter IV. In addition, a scientific model--the general system theory--is presented as a foundation for free action and responsibility. Finally, implications of freewill for education are considered in Chapter V.

In a study of this kind, more will have to be left out than can possibly be included. No attempt will be made to give a systematic conceptual analysis of key concepts involved. The literature cited has gone a long way in doing that. Nor will an attempt be made to separate the moral and metaphysical problems, although both will, of course, enter into the discussion. Finally, and most important of all, this study does not pretend to solve the problems which have been debated for centuries.

Instead, the study has a much humbler aim, namely to examine two questions: *What is an action?* and *Is a man responsible for what he does?* These two questions will be discussed on the basis of the causal model and the general system model.

REFERENCES

CHAPTER I

[1]Arthur Koestler, *The Ghost in the Machine* (London: Pan Books Ltd., 1967), p. 235.

[2]Charles Bahn, "Individual Responsibility and Psychological Determinism," *Teacher's College Record*, 68 (November, 1966), p. 146.

[3]P. H. Nowell-Smith, *Ethics* (Middlesex, England: Penguin Books Ltd., 1954), p. 281.

[4]Edward D'Angelo, *The Problem of Freedom and Determinism* (Columbia, Missouri: University of Missouri Press, 1968), p. 91.

[5]R. L. Franklin, *Free Will and Determinism* (London: Routledge & Kegan Paul, 1968), p. 62.

[6]Harald Ofstad, "Recent Work on the Free-Will Problem," *American Philosophical Quarterly*, 4 (July, 1967), p. 180.

[7]A. R. Louch, *Explanation and Human Action* (Berkeley: University of California Press, 1969), p.4.

[8]S. I. Benn and R. S. Peters, "Freedom and Responsibility," *Social Principles and the Democratic State* (New York: Free Press, 1959), p. 236.

[9]Paul Kurtz, *Decision and the Condition of Man* (Seattle: University of Washington Press, 1965), p. 16.

[10]*Ibid.*

[11]Karl S. Popper, "Unity of Method in the Natural and Social Sciences," *Philosophical Problems of the Social Sciences*, David Braybrooke, editor (New York: The Macmillan Company, 1965), p. 36.

[12]Corliss Lamont, *Freedom of Choice Affirmed* (New York: Horizon Press, 1967), p. 46, quoting Viktor E. Frankl, *The Doctor and the Soul* (New York: Knopf, 1957), p. 86.

[13]Gilbert Ryle, *The Concept of Mind* (Middlesex, England: Penguin Books Ltd., 1949), pp. 177-189.

[14]Gordon Rattray Taylor, *The Biological Time Bomb* (New York: The World Publishing Company, 1968),

[15]Perry London, *Behavior Control* (New York: Harper & Row Publisher, 1969).

[16]B. F. Skinner, *Beyond Freedom and Dignity* (New York: Alfred A. Knopf, 1972).

[17]William H. Davis, *The Freewill Question* (The Hague: Martinus Nijhoff, 1971), p. 3.

[18]Skinner, *op. cit.*, pp. 201-202.

[19]C. S. Lewis, *The Abolition of Man* (New York: New York: The Macmillan Company, 1947), p. 72.

[20]*Ibid.*, pp. 71-72.

[21]Aldous Huxley, *Brave New World* (Middlesex, England: Penguin Books Ltd., 1932).

[22]Aldous Huxley, *Brave New World Revisited* (New York: Harper & Row, Publishers, 1958), p. 3.

[23]"Skinner's Utopia: Panacea, or Path to Hell?""" *Time*, 100 (September 20, 1971), p. 61.

[24]B. F. Skinner, *Walden Two* (New York: The Macmillan Company, 1948).

[25]Huxley, *Brave New World*, *op. cit.*

[26]Walter H. Worth, "Introduction," *A Future of Choices: A Choice of Futures* (Edmonton, Alberta: L. S. Wall, Queen's Printer, 1972), n.p.

[27]Worth Commission, *A Future of Choices: A Choice of Futures*, *ibid.*, p. 18.

[28]*Ibid.*, p. 32.

CHAPTER II

DETERMINISM

In order to be able to delineate the implications of determinism for education, it first is necessary to define determinism in terms of modern scientific knowledge and contemporary philosophical thought.

I. DEFINITION

According to *The American Heritage Dictionary of the English Language*, determinism is the philosophical doctrine that every event, act, and decision is the inevitable consequence of antecedents, such as physical, psychological or environmental conditions that are independent of the human will. Thus determinism, in the minds of most people, is connected with the cause-effect model of the billiard ball variety. If one can control the direction and speed of the white ball, then one can *determine* the direction and speed of the red ball.[1] Very simply stated, determinism claims that for every event, E, there must be another distinct event, A, together with a causal law which asserts that whenever A then E.[2]

In addition to the common sense assertion that every event has a cause, science also claims that there is a law of nature which connects them. This law can be discovered, in principle at least, for every known event.

In science, the thesis of determinism has proven to be

a very fruitful working proposition whose acceptance has led to discoveries in all fields including astronomy, physics, chemistry and biology. In physics, for example, Newton's laws of gravitation and mechanics ushered in an era not only of scientific discoveries, but also of tremendous technological advances, and determinism based on causation became a familiar model to anyone working with machines. As a matter of fact, it did not take long and the machine model was applied to everything, including man. Although this model has proven to be useful in explaining the functions of the brain, for example, evidence in current writing shows that many use it not only as an analogy but as the thing itself.[3] Even the highest functions of the human brain such as self-consciousness, awareness of goals and symbolic communication are attributed to the human machine.[4]

It is at this point that the age-old problem of free-will enters, for the machine model of man, if taken to be more than a useful analogy, threatens to undermine man's moral responsibility; it makes him into a robot. It also poses the possibility that man's behavior can be predicted and controlled because it should be possible "to predict everything that exists in the universe in every context and under all possible conditions."[5] This is not Laplace speaking but a twentieth century physicist who seems to have great faith in the causal model of science.

It is true that social scientists have not been able to come up with formulas for prediction which are as neat

and precise as those in the physical sciences, but this in itself is no proof that they do not exist.[6] The social scientist, just like the physical scientist, tests the validity of his theories by using them for predictions. If the predictions are confirmed, the theory gains acceptance. If not, the theories have to be changed.[7]

Once the scientists are able to predict future events, they are also able to control them. Thus control is another outcome of the causal model. Not only in the physical sciences but also in the social sciences, modern knowledge enables scientists to control events, including human behavior.[8] Many fear the result will be that persons are treated as machines. Then it follows that all talk about persons should be dropped in favour of talk about machines. And one "ought to do so for various reasons: to be in line with the unity of science because of increased efficiency in medicine and controlling people's lives, etc."[9]

The causal law has had consequences not only in the sciences but also in philosophy. Philosophers of mind, of action and of morals who espouse determinism, have concluded that the mind is non-existent, that behavior is no more than a response to physical stimuli and that no one can be held responsible for what he does. In other words, men, like all other things, are only automata.[10] If man is only a machine, he need no longer ask himself, "What should I do?" Instead, he only has to ask "What are the laws which govern my behavior?" Once he knows them, he can describe human action, he

can control it, and he can use the laws to predict it; but since he cannot alter the laws which govern human action, he cannot exercise self-control in the traditional sense. For many philosophers and most scientists "questions of caused versus uncaused in human behavior" have given way to questions of "kinds of laws and kinds of concepts related by them."[11]

These and related conclusions raise two important questions with which the determinist must deal: (1) What is a human action? (2) Is man responsible for what he does? The answer to the first question will influence the kind of answer given to the second one. Although there are many different answers which determinists give, only two will be considered here.

II. HUMAN ACTION

What is a human action? One way that the determinist will answer this question is to say that an action is behavior which is caused by either an external or internal stimulus. Behavior, in turn, can be defined as any movement of the body which can be observed by an outsider and which can be described in terms of discrete, observable events. Ideally, this description should not contain any terms which refer to mental events or states, for these are only fictionalized processes.[12]

The use of the cause-effect model in explaining behavior has led to some real breakthroughs in psychology

which seem to support the deterministic position. Impressive empirical evidence has been brought forward to show that human behavior is caused by chemicals, by subconscious drives, by genetic factors and by conditioning. All these considerations strengthen the belief that determinism is the basic law of psychology.

One area of psychological research which has lent support to the machine model of man is in cybernetics. Using the computer as a model, actions are described much as the feedback system of the computer. A man's choices in a certain circumstance are merely so many circuits open to him. Because machines, such as computers, can learn, work toward a goal and do things which in humans requires mental skills, the question naturally arises "whether man himself is anything more than a cybernetical system constructed of organic rather than inorganic parts."[13]

If behavior can be reduced to the input-output model, then obviously the traditional concept of mental events has to be revised for mental predicates refer to the unobservable and non-measurable goings-on in the mind which have no counterpart in the machine model. Consequently Skinner and other behaviorists advocate the abolition of mental event terminology or else the substitution thereof with behavioristic description. As a matter of fact

> to qualify as a behaviorist in the broad sense of that term . . . one need only believe that the following proposition expresses a necessary truth: for each mental predicate that can be employed in a psychological explanation, there must be at least one description of behavior to which it bears a logical connection.[14]

To include in a description of behavior any reference to mental events merely postpones explanation because mental terms "offer no real explanation and stand in the way of more effective analysis."[15] A further difficulty in using mental explanation is that actions cannot be explained in terms of mental events without also explaining the events themselves. To give a causal explanation of mental events is not possible; it merely interrupts the account of action; it does not explain it.[16]

Rather than face the difficulty of explaining what mental events are, the behavioristic determinist proceeds without them. According to Skinner, using mental terms gives man the impression he is autonomous, but in reality autonomous man helps to explain only those things we cannot explain in any other way.[17]

The problem which the determinists face at this point is this: if action is the result of outside forces, how is it that most people feel free? This persistent feeling of freedom while choosing is one of the most frequently used arguments against determinism. Determinists, in turn, have presented a number of explanations of the feeling of freedom.

"If the determinist is right, this feeling of freedom must be an illusion, of course. For whatever we might have done, there must have been a cause, given we had to do what we did."[18] This is the most popular explanation which the determinist gives for choice. Others call it "a phenomenological 'error' a perceptual distortion,"[19] which it is

difficult to shake just as perceptual illusions are difficult to correct. However, although perceptual illusions at least are recognized for what they are once they are pointed out to people, the illusion of freedom is not likewise so easily dispelled.

How does the determinist try to dispel it? One way is to point out to a man that just because he is not aware of the causes operating within him and on him does not mean they do not exist.[20] Once he is made aware of the fact that his actions are the result of energy which is dispensed with by forces of which he knows nothing, he will recognize the feeling of freedom for what it is--an illusion.

The more science finds out about the causes, the more apparent it becomes that even when a man feels and thinks he is choosing something in the future, his actions are actually the result of heredity and environment. If one examines the past history of a criminal, for example, one can find all sorts of conditions which serve as causes of the crime he committed and therefore his crime can be explained in terms other than his own deliberate forethought. So it was discovered that a hijacker in one recent such episode, had in his childhood been blamed by his father for the death of his little brother who was run over by a car while in his care. The strained relationship which developed between him and his father, in no wise under his control, nevertheless profoundly affected his personality development. By the time he was

planning and executing the hijacking, it was not really directly due to his decisions, but it was the result of the sum total of all his past experiences plus his heredity. His aggressive actions were merely "the wriggling of a worm on a fisherman's hook."[21]

Another response to the persistent feeling of freedom is to consider it an illusion which is necessary for purposes of conceptualization. Western man's concept of freedom results from talk about human action which is "part of the self-image of man deeply embedded in the thoughts and values of Western man."[22]

Unfortunately, talk about choice is in no way explanatory or descriptive of what actually goes on. When 'making a choice' takes place, what actually happens is that one of a number of possible responses is responded to in a particular situation. This response is conditioned by any number of stimuli. Such a situation is still referred to as 'choice' because that is how this situation was referred to in the pre-scientific age. It was this talk about choice which engendered the illusion of freedom. Today it is realized that "to speak of 'self-management' is to speak of a conceptualization for purposes of discussion, not for purposes of explanation."[23] Actually, the concept of choice is a meaningless one because there is no operation--measuring, weighing, etc., which could possibly establish whether a man has made a free choice or not.[24] Given enough time,

physiologists will discover what neurological processes are required to initiate the causal sequence which goes on when choice is made and then choices will either be considered that neurological sequence or a function of it.

The deterministic account of human action, as was indicated before, poses a real problem in conducting human affairs, including education. If it is true that actions are not originated by the agent but by the environment, by heredity and other factors, how can a man be held responsible for what he does? Traditionally it has always been thought that a man was "morally responsible for his actions in proportion as he is their originating cause."[25] Whatever was not in a man's power or control, that he was not held responsible for. If the above deterministic account is indicative of the true state of affairs, then what of responsibility?

Not all determinists are behaviorists, however. Another group, not as influential or popular as the behaviorists, takes into account the existence of mental events and includes them in an explanation of human action. Terms referring to mental events are considered legitimate and meaningful concepts. These determinists argue against the behavioristic position outlined above which limits behavior to observable events or tries to reduce it to physiological conditions of the body. Instead, they define behavior as a "function of environmental variables and mental operations."[26] These mental operations obey causal laws just like bodily

movements do, even though at present very little is known about either set of laws or the events themselves.

To deny that mental processes, such as perception, for example, take place, is to deny the possibility of a theory for perception. This in turn means that a psychological theory of the causation of behavior is also not possible, since "if it is indeed a logical truth that a motive is not a cause, then no psychological theory can hope to explain *how* motives cause behavior."[27] This would be true of all mental ascriptions whatever.

Fodor, a proponent of this position, argues that to assert that mental events do not exist leads to the conclusion that "all relevant psychological truths about mental processes are necessary truths"[28] and this in turn leads to a consideration of how we use *perceive* for example. It cannot lead to an empirical investigation about perception because "there is nothing for an empirical theory of perception to be about, no body of contingent truths for such a theory to articulate."[29] Skinner would agree with this conclusion, but according to Fodor, that leaves very little interesting work for Skinner and the rest of the behaviorists to do, for the way of action cannot be fully and satisfactorily explained without them.

Instead of denying the existence of mental events, they are given a function in psychological explanations. The constructs which refer to them are to be identified with neurological events which in turn are "the sorts of things

that are involved in causal transactions."[30] This position differs from those behaviorists who attempt to reduce all mental terms to physiological ones, thus doing away with mental ascriptions altogether. The functionalist sees a continued usefulness of mental terms and makes room for them in his theories.

The job of psychological theories of action, according to the functionalist, is to seek explanations of how psychological states and events relate to neurological states on the one hand and our talk of human action on the other. These psychological events are no different in kind from any other physical events, but their description is not restricted to behavioral designations; rather

> there are some true, contingent propositions that cannot be formulated unless mental language is employed: namely all propositions that assert of specified mental states that they are identical with specified physiological states.[31]

The functionalist, unlike the strict behaviorist, holds that there is a possibility that the phenomena under investigation are of such complexity that behavioristic methodology alone cannot deal with them.

It is perhaps safe to say that functionalism has appeared as a reaction against strict behaviorism. As was mentioned before, it has not had much impact on educational theory as yet; however, there is a growing group of philosophers as well as psychologists who advocate the use of mental ascriptions in psychological explanations. Professor Malcolm, for example, who has much praise for Skinner's work,

nevertheless suggests that there is a definite place for first person accounts of behavior which necessarily make reference to mental states whose verification is not of the same kind as third person accounts.[32]

Two influential schools of thought in psychology, each with many variations not discussed here, have been briefly described. Both consider action the result of causal factors which are explainable in terms of causal laws and which are the result of physical processes which are subject to those laws. It is now time to consider how these philosophers who hold this view of action can account for human responsibility.

III. RESPONSIBILITY

The determinist has two answers which he can give to the question: Is man responsible for his deeds? (1) He can face the facts squarely and say *No!* (2) Or else the determinist can say that the concept of responsibility is as meaningful as ever; as a matter of fact, determinism is a necessary factor for that very concept.

A survey of those philosophers who believe that man cannot be held responsible for his actions, and that therefore the concept of responsibility is meaningless, shows that their number is rather small. Known as hard determinists, these philosophers believe that since all actions are caused by factors outside the agent's control, he cannot be held responsible for them. John Hospers and Paul Edwards are perhaps the most outspoken advocates of this position.

Hospers is ready to grant that in every-day life men do speak as if people are responsible for what they do. But they do this only while engaging in the 'upper level' of discourse. Then such questions as "Could he have done otherwise?" or "Will punishment deter him?" are responded to without reflection and responsibility is ascribed. However, in more serious moments, a person will reflect on why people act as they do; in those moments he will recognize that all men are what they are because of conditions occurring outside their control. Then it is realized that 'could have done otherwise', 'that was wrong' and other moral pronouncements have no meaning at all. They simply do not apply to the situation.[33] This is the point of view taken by the famous American criminal lawyer, Clarence Darrow, who persuaded jurors that the criminal could not help being what he was because it was not his fault that he turned out the way he did. "Darrow nearly always convinced the jury that the accused could not be held morally responsible for his acts."[34]

Among the scientists who hold the hard determinist's view belong the behaviorists; their influence has been very great both in educational psychology and in popular psychology. According to them, a scientific analysis of all behavior places responsibility where it belongs, namely on heredity and the environment instead of on the person. For this reason an individual cannot be held responsible and "it is useless to praise or blame him."[35]

Not all hard determinists are willing to go so far as

to eliminate the concept of responsibility altogether. Instead of abandoning it, they suggest it be retained as "a necessary illusion" or a "convenient fiction held for the individual's well being and for the well being of the social group of which he is a part."[36] The concept has utilitarian value because it ascribes responsibility not on the basis of causes but on the basis of the effects on society.[37] This view is particularly popular among psychologists and psychiatrists.[38]

The number of those who believe responsibility is an outmoded concept, although small, is nevertheless very influential. Among philosophers, however, more adhere to the other position, namely that determinism is necessary for responsibility; they are known as soft determinists and they accept the functionalist's explanation of human action. The argument for responsibility goes something like this: If my actions are not determined, then they must be random or chance events. If they are chance events, then they are not within my control; they just happen and so I cannot be held responsible for them. It is only if my actions are the result of an orderly sequence of events which are filtered through my deliberations and decisions, that action can be said to be mine.[39] I can be held responsible for events which filter through my network of nerves and thought processes, because praise or blame will influence my decisions.

Furthermore, in ascribing responsibility it is misleading to concentrate on the causes for action; instead it

should be ascertained whether the action was free or compelled. A free action is defined not in terms of cause but in terms of restraint. When a man desires something and can carry out his actions to satisfy that desire without constraint, if he can do what he wants to, then he is free. "'Compulsion' occurs where man is prevented from realizing his natural desires."[40]

The soft determinist holds man responsible for his free actions, those not done under compulsion, and it is for these that he must be praised or blamed. The purpose of praise or blame is to tell what people are like, or to encourage them to continue in their actions or to discourage them.[41]

Another very important argument presented in connection with ascribing responsibility is that if the agent could have done otherwise than he did, then he is responsible. According to the soft determinist this means very simply that if the initial conditions at the moment of choice had been different than they in fact were--if desires had been different, if another motive had been present, if the agent could have mustered more will power--then he could have done otherwise.[42] The agent is responsible for his actions even though they are the result of causal conditions, for if the agent "willed to do otherwise, causal conditions would have been altered so that [he] would have done otherwise."[43]

Although the soft determinist's position is very popular among philosophers, it is not as widely held by the scientific community, probably because it rests essentially

on philosophic rather than scientific arguments. It revolves around the meaning of 'freedom' rather than around scientific facts. Freedom is not defined on the basis of causality or absence of causality but as the absence of restraints on voluntary actions. Free choice is defined as a voluntary action made without constraints, one which could have been otherwise if conditions had been different. Most scientists, including physicists, psychologists and psychoanalysts want to dig deeper. They are not satisfied with linguistic analysis of the meaning of the terms involved. Consequently they will align themselves with hard determinism or against determinism altogether.

The hard determinist claims that since all actions are caused, man cannot be responsible for any of them; the soft determinist also claims that all actions are caused, but that is not what one needs to know to assign responsibility. What is necessary for moral responsibility is "that the agent could have acted otherwise."[44] The moral ought implies 'I can but I need not'.

Although much more could be said, especially on behalf of the soft determinist, enough has been presented to clarify the underlying issues. It repeatedly has been mentioned that they have influenced education. That influence will now be examined.

REFERENCES

CHAPTER II

[1]Gilbert Ryle, *The Concept of Mind* (Middlesex, England: Penguin Books Ltd., 1966), p. 77

[2]Bernard Berofsky, "General Introduction: Determinism," *Free Will and Determinism*, B. Berofsky, editor (New York: Harper & Row Publishers, 1966), p. 6.

[3]Perry London, *Behavior Control* (New York: Harper & Row Publishers, 1969), p. 187.

[4]R. W. Gerard, "Your Brain and Your Behavior," *Adventures of the Mind*, Third Series (New York: Vintage Books, a Division of Random House, 1959), p. 36.

[5]David Bohm, *Causality and Chance in Modern Physics* (London: Routledge & Kegan Paul Ltd., 1957), p. 136.

[6]L. Immergluck, "Determinism-Freedom in Contemporary Psychology," *American Psychologist*, 19 (1964), p. 276.

[7]Nicholas Hobbes, "Science and Ethical Behavior," *American Psychologist*, 14 (1959), p. 222.

[8]Rene Dubos, "Ethical Issues Involved in Genetic Manipulation and Biologic Conditioning, *The Ethics of Change: A Symposium* (Toronto: CBC Publications, 1969), p. 13.

[9]R. E. Erwin, "Actions, Brain-Processes and Determinism," *Mind*, 77 (July, 1969), p. 417.

[10]Max Born, *Natural Philosophy of Cause and Chance* (New York: Dover Publications, Inc., 1964), p. 3.

[11]J. L. Cowan, "Deliberation and Determinism," *American Philosophical Quarterly*, 6 (January, 1969), p. 61.

[12]B. F. Skinner, *Science and Human Behavior* (New York: The Macmillan Company, 1953), p. 252.

[13]K. M. Sayre, "Philosophy and Cybernetics: Introduction," *Philosophy and Cybernetics*, F. J. Crosson and K. M. Sayre, editors (Rockefeller Center, New York: Simon and Schuster, 1968), p. 18.

[14]Jerry A. Fodor, *Psychological Explanation: An Introduction to the Philosophy of Psychology* (New York: Random House), p. 51.

[15]B. F. Skinner, "Behaviorism at Fifty," *Behaviorism and Phenomenology*, T. W. Wann, editor (Chicago: The University Press, 1964), p. 80.

[16]*Ibid.*, p. 93.

[17]B. F. Skinner, *Beyond Freedom and Dignity* (New York: Alfred A. Knopf, 1972), p. 200.

[18]Brand Blanshard, "The Case for Determinism," *Determinism and Freedom in the Age of Modern Science* Sidney Hook, editor (New York, N.Y.: Collier Books, 1961), p. 20.

[19]Immergluck, *op. cit.*, p. 229.

[20]Ernest Nagle, "Determinism in History," *Determinism, Free Will and Moral Responsibility*, Gerald Dworkin, editor (Englewood Cliffs, New Jersey: Prentice-Hall, 1971), p. 75.

[21]John Hospers, "What Means This Freedom?" *Determinism and Freedom in the Age of Modern Science*, *op. cit.*, p. 132.

[22]Walter B. Studdiford, "Willing in Androids," *The Concept of Willing*, James N. Lapsley, editor (New York: Abingdon Press, 1967), p. 150.

[23]Skinner, "Behaviorism at Fifty," *op. cit.*, p. 100.

[24]Stuart Chase, *The Tyranny of Words* (New York: Harcourt Brace & World, Inc., 1938), p. 130.

[25]Sir Walter Moberly, *Responsibility* (London: Oxford University Press, 1951), p. 5.

[26]Fodor, *op. cit.*, p. 8.

[27]*Ibid.*, p. 15.

[28]*Ibid.*, p. 18.

[29]*Ibid.*

[30]*Ibid.*, p. 33.

[31]*Ibid.*, p. 60.

[32]Norman Malcolm, "Behaviorism as a Philosophy of Psychology," *Behaviorism and Phenomenology*, *op. cit.*, p. 150.

[33]Hospers, *op. cit.*, p. 141.

[34]Paul Edwards, "Hard and Soft Determinism," *Determinism and Freedom in the Age of Modern Science*, *op. cit.*, p. 114.

[35]Skinner, *Science and Human Behavior*, *op. cit.*, p. 448.

[36]Herbert Silverman, "Determinism, Choice and Responsibility and the Psychologist's Role as an Expert Witness," *American Psychologist*, 24 (January, 1969), p. 6.

[37]Edward D'Angelo, *The Problem of Freedom and Determinism* (Columbia, Missouri: University of Missouri Press, 1968), p. 57.

[38]D. Elton Trueblood, "Contemporary Psychiatry and the Concept of Responsibility," *Psychiatry and Responsibility*, H. Schoeck and J. W. Wiggins, editors (Princeton, New Jersey: D. Van Nostrand, Inc., 1962), p. 23.

[39]D'Angelo, *op. cit.*, p. 19.

[40]Moritz Schlick, *Problems of Ethics*, translated by David Rynin (New York: Dover Publications, Inc., 1939), p. 148.

[41]J. C. Smart, "Free Will, Praise and Blame," *Mind*, 70 (July, 1961), p. 304.

[42]John Turk Saunders, "The Temptation of Powerlessness," *American Philosophical Quarterly*, 5 (April, 1968), p. 107.

[43]Keith Lehrer, "Cans Without Ifs," *Analysis*, 29 (October, 1968), p. 30.

[44]P. H. Nowell-Smith, "Free Will and Moral Responsibility," *Mind*, 57 (1948), p. 49.

CHAPTER III

IMPLICATIONS OF DETERMINISM FOR EDUCATION

The implications of the deterministic philosophy for education are twofold: the behaviorists who take the hard determinist's line will advocate an educational system which is controlled by the behavioral scientists and which uses techniques developed by those scientists exclusively; the soft determinists will continue to stress self-control, responsibility and the decision-making process by making use of the findings of the behavioral sciences, but also by stressing cognitive functions.

I. THE BEHAVIORISTS

As was shown in the previous chapter, behaviorists who explain human action in terms of overt behavior have a very simple and straightforward kind of causal explanation of action, one which has some very practical and useful consequences for education. On the other hand, behaviorism also causes much concern among philosophers and educators because the implicit aims as well as the methods used to achieve the aims are questioned.

The aim of the behavioristic educator, which is logically consistent with the thesis of determinism, is *control*.

> Control of human behavior is widely and uncritically accepted as the ultimate goal in the application of research and evaluation techniques to education. . . . the elimination of human activity that cannot be controlled is being manifested undesirable or, at best, irrelevant noise in the system.[1]

This aim, total control, naturally raises a number of questions: Who decides what behavior will constitute the result? and Who controls the controllers?

The first question reveals the moral aspect of this whole discussion for what is achieved in education is "inseparable from judgments of value."[2] Skinner and the rest of the behaviorists are not at all clear on the criteria they use in deciding on what to teach. They might be honestly convinced that they know what is best for the growing child, or what will make for a happy adult community as in *Walden Two*, but this leads naturally to the second question: Who has conditioned them to know this? Either somebody else programs the programmer or

> the educator is using his knowledge of human nature and the society in order to change and redirect them . . . must be conceived as standing outside of the deterministic stream and changing its course by outside intervention, in which case the initiator himself is assumed to be free from the deterministic process.[3]

To say, then, that the aim of education is control is not to say what the education bringing it about will consist of. Obviously much careful study and analysis is needed on this point.

Likewise, the manner of bringing the aim about, the methods used, also need examination. That operant conditioning methods work nobody doubts. For example, in the book *Operant Conditioning Techniques for the Classroom Teacher*, Mark Ackerman describes in some detail how one can use operant conditioning to alter almost any kind of undesirable behavior of your [illegible] in the classroom.[4] For a

more popular example of an educational application of the same principle one can turn to the *Reader's Digest* which contained an article some time ago explaining how methods of rewards and punishment "based on theories of learning developed from the work of Pavlov and Skinner" have been applied to altering the eating habits of obese people.[5] This type of so-called 'therapy' is just another way of educating because it is a way of changing people's lives by controlling their behavior.[6] These methods, hypothetically, can be used for learning almost anything. According to the behaviorists they are the basis not only of learning all habits and skills but of all learning generally.[7]

It should come as no surprise that learning theories based on Skinner's work have made most impressive strides. And they are not without their advantages. One is that by applying them, tangible results are quickly obtained, results which can be seen, measured, and deliberately planned. Another advantage is that teaching methods based on conditioning, the result of which can only be measured by overt behavior, remove uncertainty and insecurity both for the teachers and the students. The teacher clearly spells out the objectives on which classroom activity will be based; the students know exactly what is expected of them. The teacher selects the content, the procedures and the methods that are designed to achieve the objectives; the teacher then causes the student "to interact with appropriate learning; and finally measures . . . the student's performance."[8] *Behavior*

is defined as "any visible activity displayed by a learner."[9]

As was mentioned before, this approach brings tangible and visible results. But what about understanding, critical appraisal, appreciation and belief? To be consistent, the behaviorists cannot include them in their educational theory. But then, is teaching without these really 'teaching'? The educational philosopher Israel Scheffler for one would say *No!* For him teaching is distinguished by "its special connection with rational explanation and critical dialogue: with the enterprise of giving honest reasons and welcoming radical questions."[10]

The formulation of objectives solely in behavioral terms also threatens to resurrect the old bogy of the mere teaching of facts which is demonstrated by the repetition of appropriate statements of fact. Since the mental events which must accompany understanding and believing of those statements are non-existent in behavioristic psychology, knowing the facts cannot consist of anything but repetition. Operant conditioning and other techniques based on a theory of education which in turn is based on determinism does not seem to be consonant with teaching which "appeals to the free rational judgment of the student."[11]

Undoubtedly operant conditioning is very useful in teaching routine facts, and as such it can eliminate much drudgery for the teachers, but this should not be confused with teaching for understanding, with "knowing that."[12] Obviously 'teaching for understanding' needs analysis, but

whatever else one means by it, one certainly does not mean rote repetition of statements learned by the same methods "that Pavlov worked with,"[13] or that Skinner developed.

Aside from questioning whether the student has actually understood what he has learned, the other question is whether he has had a chance to accept or reject it. Conditioning, giving the correct response on cue, "makes the student unfree with respect to the beliefs he acquires as an outcome of any use of this educational procedure. His beliefs are what they are conditioned to be."[14] Of course, this is precisely what the behaviorists want. But what is troubling is that these beliefs do not have any other beliefs to compete with. The student is not really "free to seriously consider (even if only to reject) any other beliefs on these matters."[15]

At the high school and university level this approach results in emphasis on recitation and rewards or punishment. Students

> are trained and indoctrinated as passive, powerless recipients. Truth is often equated with techniques and regarded as revealed. Thus finality rather than doubt and wonder shapes much of the offering and climate.[16]

It will be recognized that the above criticism applies equally well to indoctrination as to conditioning. Neither should be equated with teaching: "One may try to propagate a belief in numerous ways other than teaching--for example, through deception, insinuation, advertising, hypnosis, propaganda, indoctrination, threats, bribery, and force."[17]

The stigma attached to indoctrination needs no

elaboration. However, the same type of moral objections are raised against conditioning techniques by R. S. Peters.[18] Aside from questioning whether animals 'learn' anything of significance that way outside the laboratory, much less human beings, Peters goes on to say that whatever else conditioning is, it is not education as long as understanding and knowledge are absent.

Another objection to these techniques is that unless 'understanding' and 'doing something *at will*' are involved, learning really has not taken place. "'Being conditioned' is precisely not something one does. It is something which is done to one. . . ."[19] Learning, on the other hand, is something one does. It suggests "some kind of intentionality on the part of the learner, however embryonic."[20]

Another result of the above techniques is standardisation of programs, be they computer programs, programmed learning or others. Instead of variety, diversification and novelty, the educational system threatens to produce a monotonous sameness described in the extreme in *Brave New World*. The danger is that there will not be much difference between individuals if Pavlov's or Skinner's methods are used. If conclusions to their experiments are to be believed, there even is not much difference

> between pigeons, rats, and monkeys on the one hand and human beings on the other. The same principles apply everywhere . . . Hence it is only proper that what is outstanding is cut down to size.[21]

Those who write the programs, as for example big

corporations such as IBM, not only dictate how something will be learned but also *what* will be learned. If it is considered that IBM dominates not only the North American Market but 60 per cent of the European market, the implications can be staggering. Certainly in a situation like that, it is no longer up to the people of a community, or of a province, or a country to choose either the goals or methods of education.

Enough implications of hard determinism for education have been given to show both the advantages and disadvantages. By basing their educational theories on Skinner's psychological learning theories, many educators in effect align themselves with determinism. Some, as Professor Pohlman of California, openly defend deterministic assumptions in education. He says that in the counselling situation in the school the counsellor's advice becomes part of the environmental situation which 'determines' the client's choice; he continues to speak of choice because

> choice must be regarded as a convenient but misleading illusion. As the client weighs engineering or mortuary science, causal factors lead to the decision--if any--that he makes.[22]

II. SOFT DETERMINISM

In contrast to hard determinists, the soft determinists have not had a noticeable influence on educational theory. One philosopher who has openly opted for soft determinism is R. S. Peters. In his book *Authority, Responsibility and Education* he presents the typical soft determinist's position on responsibility:

> We only ask whether a person is responsible for an action when there is a question of blaming or punishing him and when we want to rule out certain typical negative conditions, such as ignorance of fact or acting under compulsion or duress.[23]

Here the emphasis is not on causes of action, but on the effects of blame or punishment. It is evident that in order to make the best use of praise or blame, the soft determinist will make much use of behavioristic techniques. But he will go far beyond them as far as his aims and his methods are concerned, for he will include understanding, belief, critical thinking and the rest of the mental ascriptions in his aims.

Although Peters, like the hard determinists, believes that all behavior has causes, these causes cannot be considered 'exonerating circumstances'. To consider them that is first of all a logical mistake (an example of the philosophical rather than empirical approach to the problem); it is also a practical mistake, for if people believe they are not responsible, that belief will lead to irresponsible behavior.[24] This conclusion seems to be supported by empirical studies in psychology which have shown that "personal views of responsibility are significant in determining what a person is likely to do."[25]

When Peters speaks of causes of action he goes much further than the hard determinist. He includes such things as deliberation, deciding, having reasons and understanding.[26] He says that these do not lead to inevitable results for they could have been altered by praise or blame.[27]

By including mental ascriptions in causes of behavior, the soft determinist has a much broader base for his educational theories than the hard determinist. Once it is known what the cause of certain behavior is, then necessary steps to alter, modify or reinforce that behavior can be taken. This is what education is all about. It is to Peters' credit that he is not afraid of tackling the implications of this philosophy for education. He does not, on the one hand espouse determinism and on the other speak of freeing children from all controls and letting them develop on their own, without interference from the adult world. Professor Hobart of the University of Alberta for example, rejects free will, free choice and accepts determinism without qualifications. But then he goes on to say that a young child has to be "effectively stripped of the effects of his parents' training,"[28] so that he then is free to choose his own beliefs and value systems. What Peters correctly recognizes and Hobart fails to notice is that outside causes in the form of peer group pressure, mass communication and a myriad other influences will act as causes to influence that choice. Whether that choice is freely made is hardly decided by who influences it or what it is but by how it is made.

Rather than advocating a school situation in which the child is supposedly free to choose not only his own activities and studies, but his own value system as well, Peters advocates a school situation that recognizes the role

of determining influences and that therefore demands certain restraints. Thus a school child is not free but compelled: to attend school in the first place, to be in a certain room at a certain time, to study certain subject matter, to observe certain rules.[29] If complete freedom were allowed, that is, if all restraints were lifted

> it is simply not the case that children are actually able to do what they individually want. They are subject either to the arbitrary will of a bully or to the tyranny of peer-group pressure.[30]

In order to make sure that the proper causes are influencing a child's development, he advocates that their wants, their desires and their wills be controlled. Where Peters differs from the behaviorists who after all advocate the same thing, is that in addition to this, he also stresses the cognitive functions. These involve more than mere responses in a limited situation.[31] In his aim of education he includes "initiation into public traditions which are articulated in language and forms of thought,"[32] "the intentional bringing about of a desirable state of mind,"[33] "minimum comprehension,"[34] and "cognitive perspective."[35] It stands to reason that with such aims, behavioristic techniques will become subservient to learning theories which take into consideration the necessary cognitive aspects.

The implications of determinism for education have been briefly presented. Both hard and soft determinists aim for control of behavior but with a very marked difference. The hard determinist, whether he admits it or not, has as his goal control by the educator without involving the educated.

The soft determinist will involve the individual's reasoning powers and conscious assent in the educative process. In that respect he is much closer to the libertarian whose arguments will be considered next than to the hard determinist. Furthermore, the educator who accepts hard determinism will advocate control of human behavior in line with the laws of behaviorism; he will refrain from talk of responsibility, keep talk of praise and blame to a minimum and get on with the business of finding out how best to train and teach for clearly defined behavioral objectives. This he will do by carefully analysing causes and then proceeding on scientific principles to measure, to predict and to control these causes.

The educator who formulates his theory on the soft determinist's account will advocate doing very much the same thing, although there will be emphasis on responsibility, praise and blame, deliberation and above all on choice which culminates in voluntary actions and which can be greatly influenced (determined?) by education.

REFERENCES

CHAPTER III

[1]Center for New Schools, "Strengthening Alternative High Schools," *Harvard Educational Review*, 42 (August, 1972), p. 343.

[2]R. S. Peters, "What is an Educational Process?" *The Concept of Education*, R. S. Peters, editor (London: Routledge & Kegan Paul, 1967), p. 3.

[3]A. M. Mardiros, *Freedom* (Edmonton, Alberta: University of Alberta, mimeographed copy, Philosophy 351, December, 1969), p. 3.

[4]Mark Ackerman, *Operant Conditioning Techniques for the Classroom Teacher* (Glenview, Illinois: Scott Foresman and Company, 1972), p. 9.

[5]"Three Ways to Get Rid of Fat," *Reader's Digest*, 102 (January, 1973), p. 105.

[6]Perry London, *Behavior Control* (New York: Vintage Books, A Division of Random House, 1959), p. 41.

[7]*Ibid.*, p. 83.

[8]Robert F. Mager, *Preparing Instructional Objectives* (Palo Alto, California: Fearon Publishers, 1962), p. 1.

[9]*Ibid.*, p. 2.

[10]Israel Scheffler, *Conditions of Knowledge: An Introduction to Epistemology and Education* (Chicago: Scott, Foresman and Company, 1965), p. 11.

[11]*Ibid.*, p. 12.

[12]*Ibid.*, p. 13.

[13]Leonard Waks, "Knowledge and Understanding as Educational Aims," *Ed. Theor.*, 22 (January, 1968), p. 111.

[14]*Ibid.*, p. 112.

[15]*Ibid.*

[16]Robert Engler, "Social Science and Social Consciousness: The Shame of the Universities," *The Politics of Social Science*, T. Roszak, editor (New York: Pantheon Books, 1968), p. 203.

[17]Scheffler, *op. cit.*, p. 11.

[18]Peters, *op. cit.*, p. 14.

[19]Godfrey Vesey, "Conditioning and Learning," *The Concept of Education*, *op. cit.*, p. 65.

[20]Peters, *op. cit.*, p. 13.

[21]Ludwig von Bertalanffy, *Robots, Men and Minds* (New York: George Braziller, Inc., 1967), p. 8.

[22]Edward Pohlman, "Counselling Without Assuming Free Will," *Personnel and Guidance Journal*, 45 (November, 1966), p. 215.

[23]R. S. Peters, *Authority, Responsibility and Education* (New York: Atherton Press, 1967), p. 60.

[24]*Ibid.*, p. 61.

[25]Charles Bahn, "Individual Responsibility and Psychological Determinism," *Teacher's College Record*, 68 (November, 1966), p. 149.

[26]Peters, *Authority, Responsibility and Education*, *op. cit.*, p. 64.

[27]*Ibid.*, p. 68.

[28]Charles Hobart, "Freedom and the School," *Canadian Educational Research Digest*, 8 (September, 1968), p. 217.

[29]R. S. Peters, *Ethics and Education* (Atlanta: Scott, Foresman and Company, 1967), pp. 116-117.

[30]*Ibid.*, p. 117.

[31]R. S. Peters, "Education as Initiation," *Philosophical Analysis and Education*, Reginald D. Archambault, editor (London: Routledge & Kegan Paul, 1965), p. 99.

[32]*Ibid.*, p. 89.

[33]*Ibid.*, p. 91.

[34]*Ibid.*, p. 96.

[35]*Ibid.*, p. 98.

[36]*Ibid.*, p. 100.

CHAPTER IV

LIBERTARIANISM

The deterministic account of action and of responsibility, although based on everyday experience as well as on scientific observation, is not accepted by all philosophers nor by all scientists. The arguments of those who reject determinism must now be considered.

The same procedure as that used in Chapter II, "Determinism," will be followed in this chapter: first, the causal model will be examined; then free action and responsibility will be discussed in terms of the self which is given an empirical basis within the general systems theory.

The position of opponents of determinism is known in philosophical literature as libertarianism. These opponents claim that man is not determined, but that he has freewill. Freewill is defined in *The American Heritage Dictionary* as the belief that man's choices ultimately are or can be voluntary; they are not determined by external causes.

> The libertarian's point can then, I think, be put thus. In the case of an undetermined choice there is, in the whole process of deliberation, decision and consequent action, at [illegible] point of time where the total situation is not a sufficient condition for [illegible] immediately consequent one. In other words, given the existing total situation, either of at least two things might happen.

The libertarian can use many approaches to defend his position: (1) He can attack the causal model of scientific explanation; (2) He can distinguish between action and mere

bodily movement; (3) he can define freewill in such a way that it is consonant with free choice and responsibility. All three approaches are fraught with metaphysical difficulties which usually expose the libertarian to rebuttals. The greatest weakness, however, in his arguments is that none gives a satisfactory account of what freewill can possibly or mean in the real world of the scientist. An attempt will be made in the discussion that follows to present the outlines of a scientific theory which will serve as a foundation for freewill and responsibility and which will, at the same time, give support to the three defenses above.

I. CAUSAL MODEL REFUTED

The first line of argument for the libertarian is to refute the causal principle. Whereas that principle depends on nineteenth century classical physics, the arguments against it rest in part on twentieth century physics. This seems to make the libertarian's position more relevant. Unfortunately, it does not make it stronger. It only helps to question the determinist's doctrine; it does nothing to establish an alternative explanation for freewill. On the contrary, modern physics is as much a threat to freedom of choice and responsibility as is mechanical physics. Nevertheless, the argument against the causal model is important because the determinist rests his whole case on it for explaining human action. He makes [illegible] claim (...; if events are det[illegible] it doubt can be cast on this claim, then the whole

system is suspect. Furthermore, modern physics can serve as a point of departure for a theory which will adequately support freedom of choice and responsibility.

The libertarian denies that causation is a universal principle in operation in all of nature, especially human nature. He does not deny the causal principle, only that it is the universal principle. Since the causal law is based on laws of physics, it must be argued against by the laws of physics. Twentieth century physics provides such arguments.[3] Very briefly, it is impossible to ascertain both the position and velocity of an electron because the instruments of observation are the photons which when used to measure other particles, alter the mass of the observed particle.[4] Furthermore, the distinction between matter and energy is not observable at the sub-atomic level where photons exhibit once particle characteristics and at other times wave characteristics. This means that "the original idea of force as the cause of motion" has had to be abandoned. Instead of causation, the important idea in modern physics is indeterminacy: one can only use probability laws to predict at the sub-atomic level.

Three conclusions have been drawn from these findings in physics:[6] (1) Some [illegible] we will overcome the limitations which now hinder us in discovering the cause of an electron's behavior.[7] "Man's [illegible] has uncovered [illegible] matter is a [illegible] series of [illegible] which the physicist must [illegible] [illegible]." (2) The difficulties encountered at the micro-level present limitations which no amount of

technological and theoretical development can ever overcome, because no matter how low one goes in choosing an instrument of measurement, someone will want to measure the instrument for which one then must go lower yet. This position does not deny the possibility of the causal principle; it does deny that it can ever be demonstrated. (3) The third conclusion which can be drawn from Heisenberg's uncertainty principle is that "there is really indeterministic, chance-like behavior occurring in nature and that this chance-like behavior is what accounts for the permanent limitation to human knowledge of activity on the micro-level."[9]

Whichever one of the three conclusions one draws, however, everyone is agreed that at present it is impossible to set up an experimental system in the laboratory in which events occur which are predictable. No causal connection between two events can be established.[10] If prediction is not possible, then control is not either. Of course, it might be argued that whatever happens at the quantum level can have no possible effect at the macroscopic level. However, it has been shown that events at the sub-atomic level can have discernable effects [illegible]gene mutation,[11] the eye,[12] and even brain-wave excitation.[13] Unfortunately it is at this point that indeterminism also fails the libertarian, for if chance operates in the brain, then both a rational theory of action and of responsibility would be impossible.

On this analysis man ceases to be the pawn of a [illegible] causal chain which leaves no room for choice and instead becomes a victim of pure chance. The latter may not be determinism, but neither is it freedom.[14]

All that modern physics contributes to the debate is to cast doubt on determinism as the only principle operating in the universe. It is not only conceivable,[15] but according to theoretical and experimental evidence probable that chance operates at the sub-atomic level.

However, admitting chance events is not claiming that human behavior is unpredictable or chaotic or arbitrary[16] or capricious;[17] nor is it saying that no event has a cause. "Libertarians have agreed that *most* events have causes but they wish to maintain that a few events or at least some aspects of some or all events occur even though there are no conditions which are sufficient for their occurrence."[18] This claim does not preclude the possibility that overpowering physical determinants cannot interrupt a self-determining act.[19] But the converse is also possible, namely that a self-determining act can interrupt physical determinants. Herein lies the key to the whole libertarian argument: the mind can influence the body and the body the mind. There is nothing illogical about this, although it is not very popular among philosophers and scientists today.[20]

How can a libertarian make such a claim? Many do so simply because they *feel* it must be so.[21] But as one surveys the libertarian literature, a general pattern begins to emerge which attributes free action to the self. This self has also been designated as the mind, the psyche, the soul. Whatever it is called, can the libertarian give an account of such a concept?

II. GENERAL SYSTEM THEORY

Once it is admitted that both categories of determinism and chance are possibilities in explaining physical phenomena, then another category for the biological level at which human action occurs is also a possibility. Ludwig von Bertalanffy, a mathematical biologist, is one among many who has recognized the need for *"an expansion of categories, models and theory,"*[22] especially for the sciences of man.

The theory which he has proposed to deal with the empirical aspects not included in mechanistic science is the general system theory. According to this theory, organisms are not only subject to causal and probability laws, but also to organizational laws. These laws are only postulated at present, but progress in refining them is being made in such diverse fields as history,[23] biology,[24] cybernetics,[25] and also in psychology.[26]

The general system theory, under which organizational and organismic laws are subsumed, includes causal and probability laws, but goes beyond them to account for the complexity observed in living organisms. To recognize that cause and chance operate in organisms is not the same as saying that no other principle is involved.[27] The general system theory has room for such an additional principle which takes into account the interaction and maintenance of component parts and wholes, as well as "organization into [illegible] organization into systems

. . . centralization . . . teleology and goal-directedness."[28] All of these principles are observable in living organisms for "Every organism represents a *system* by which term we mean a complex of elements in mutual interaction."[29] Because it is a system, no exhaustive account of it can be given merely by putting together the various characteristics or substances of the different parts that make up the whole.[30] In studying the whole it must always be remembered that

> Each individual part and each individual event depends not only on conditions within itself but to a greater or lesser extent on the conditions within the *whole* or within superordinate units of which it is a part.[31]

Since the whole is made up of the individual units that are its parts, it cannot unambiguously be distinguished as a 'thing' "except by a purely intellectual artifice."[32]

The human being is one such 'multilevel' and 'multivariable' organism which is a whole rather than the sum of its parts and which must be viewed as a whole. To talk of parts of the self, of the person, is to speak metaphorically.

> A conscious being is a unity. . . . The paradoxes of consciousness arise because a conscious being can be aware of itself as well as of other things and yet cannot really be construed as being divisible into parts.[33]

At present the general system theory does not provide the theoretical framework to view that unity either as a whole or in parts, but it does provide the necessary theoretical foundation for such a framework.

From the organismic theory it follows that at the highest level of organic development, the human brain and

nervous system, there is the greatest range of unpredictability and freedom which do not occur randomly or even according to probability laws but according to organismic laws which entail order, organization and predictability. These laws are so complex that the scientist's present mathematical and theoretical formulations cannot encompass them; it is this very complexity, however, which allows for a theory of the self within that unity of man, which is the whole and the parts acting, reacting, interacting and most important of all, initiating action.

III. FREE ACTION

What is this action which an individual can initiate himself? According to the general system theory, a human action is an event which is not only subject to causal and chance laws, but also to organismic, to organizational laws. It issues from a complex system which is the highest form of organizational complexity known, namely the human brain. At this level freedom and autonomy are found, not in isolated events or things but on the "level of wholes."[34]

To discuss what goes on at this complex level in causal language is to oversimplify. To ignore what goes on within the whole organism, including the brain, during action is to remove from investigation the key aspect of action, namely human intelligence: the ability to remember, to foresee consequences in the future, to symbolize, to evaluate and finally to give meaning and purpose to its activity.

However, just as physicists do not know the actual mechanism by which the atom radiates light and by which light is propagated through space, so neurologists and psychologists do not know what happens when thought occurs. But that thought occurs, everyone knows. To attempt to fit that process to the causal model is straining it to fit where it is inadequate. The result is to populate the inner self "with entities whose job it is to serve the automotive functioning demanded by the causal model of intelligibility."[35] What is worse, this attempt to apply the causal model to action seems to force the libertarian to admit to some supernatural self or to abandon the concept of 'self' altogether. But by postulating a self within the organismic whole, the libertarian need not abandon the explanatory function of the 'self', neither does he have to fit it to the causal model. What then is the self? It is that

> of which poets speak, and which philosophers and theologians concern themselves with, [which] is now operationally defined by psychologists and called the Self. That the soul, or the self, is real, in the sense of existing, few can doubt. At least few would doubt its reality when we define the self as the subjective side of man--that which is private and personal which he experiences immediately and spontaneously.[36]

This self is central in discussing human action and responsibility as far as the libertarian is concerned. Whereas the hard determinist wanted to do away with the self and the soft determinist considered choice and intention merely psychological terms for subjective experience, the libertarian considers the self an organizational category within the general system

theory. Although at present the various manifestations of the self are only subjectively perceived, this should not prevent scientists from studying it with a new perspective and greater insight.

According to the general system theory the self is considered "a single functioning unit within a system in which what we term physical, mental and spiritual interpenatrate one another completely."[37] It can be studied by appropriate techniques such as self-disclosure based on introspection,[38] which is expressed in first-person accounts as well as inferentially by observation of the actions of others, which is expressed in third person accounts.[39]

The connection between consciousness, thought, bodily processes and the mind, the self, is not known. But as one scientist has pointed out, no matter how pervasive the mechanistic model is, it cannot "banish consciousness, or make it other than we know it by direct experience to be."[40] He goes on to assert that mental and material processes accompany one another, but that is not explaining the actual links which attach them. These will not be known until "we have seen more deeply into the mental process, or the material process or both."[41]

The self is known and experienced through action; the bodily movement accompanying action can be studied by ordinary scientific methodology. What goes on within the self while action goes on cannot at present be studied by the observational methods of science. If the organizational

laws of the general system theory are ever discovered, then the accompanying action also will come under scientific scrutiny. Of course, the possibility exists that these laws governing thought are beyond human conceptualization, just as the wave-particle behavior of light is beyond conceptualization at present. It would be rash to be emphatic about this, for many things considered beyond man's reach before have now become commonplace. However, the fact that consciousness, the self, is inexplicably connected with life "ought to prepare us for finding that the very problem of the distinction between the living and the dead escapes comprehension in the ordinary sense of the word."[42]

The definition of the self given above does not imply a separate entity, logically distinct from the body, but it is the body in action. This position is very close to that of the functionalist outlined earlier. He holds that mental ascriptions are necessary for an account of behavior but that they do not refer to different kinds of things nor events than physical. Where the functionalist differs with the libertarian is that he still insists on a causal explanation of the same kind as found in the traditional sciences. The libertarian wants to get away from the causal explanation of action and search for organizational explanations.

Since the category of the self is essential to a discussion of free action, this category must very briefly be explored. The self can never be known directly except by the person experiencing.[43] Furthermore, the self is known not

by observation but immediately, directly.[44] It follows that all the facets of the self--feelings, thoughts, dreams, etc.--also are not known by observation. They cannot be known from inference either since nothing in fact can serve as observational verification of such inference.[45] That is why the behaviorist will never discover them. However, if the self cannot be known by observation, how does one know about another person's self? One of the ways is if the other person tells what he is experiencing. This he can only do by using language which is the symbolic expression of all human experience both of the outer world and the inner thoughts and feelings. 'Public' language may refer to 'private' events because "there is no good reason not to think anthropomorphically about men."[47]

Talking and understanding language is a distinctly human activity which is characterized by great flexibility and freedom of choice. Whether the general system theory can ever give a full and adequate account of this process remains to be seen. As Professor Miller, a psycholinguist, has pointed out, although syntax "seems well within our grasp . . . *understanding and belief raise problems well beyond the scope of linguistics. Perhaps it is there that scientific progress will be forced to halt.*"[48] [Italics not in the original]

Language is considered a patterned configuration of symbols which make sense, which have meaning.[49] A patterned response is defined as "no more than the appropriation of

separate responses of which they are composed."[50] [Italics not in the original]. Even the simplest organism is capable of "patterned responses to its sensory environment,"[51] but only man can symbolically represent not only patterns picked up by the senses, but also those perceived subjectively. Not only can he represent these experiences symbolically, but he can give meaning to them, he can understand them. Meaning and understanding enter into the formulation of intentions and decisions which lead to action. The libertarian maintains that not only the forming of intentions, the making of choices and the carrying out of those choices are non-determined, but he also claims that the language with which he expresses those choices is freely chosen,[52] and that the connection between the symbol and the object is not "biologically enforced from outside,"[53] but that *meaning* is given to a symbol by the individual himself and by the society of men. Most important of all *meaning* embedded in symbols cannot be explained by the brain's activity, by DNA messages or electro-chemical changes for it exists on another plane.[54]

It is time to apply what has been said about the self to free action. The cognitive system--intention, choice, volition--is central to action.[55] Since thought is part of the bodily movement which is called action, description of action is more than description of mere bodily movement.[56] A description of action (which itself is an action using language) must include physical description, but it is not complete without mental descriptions such as intention, choice

or volition.[57] These mental ascriptions which the behaviorist labelled 'hypothetical constructs' will now be discussed. It should be kept in mind that none of the categories can be mentioned without including the others since they are all indivisible parts of the self.

Intention leads to choice which the will translates into action. "Actions, in one way or another, involve a reference to thought or purpose."[58] Description of bodily movement, on the other hand, only tells what was done. The rising of my arm tells the observer nothing except that my arm is rising. Only I can tell whether I am waving, signalling or if my arm is just rising in response to a reflex or electrical stimulus. Intention or purpose in acting answers the question, "Why did you do that?" The answer gives the reason for acting. Reasons embody social standards and conventions. Hence explanations of actions will follow a rule or purposive model; "In this respect they are quite unlike sciences which imply a mechanical model of explanation."[59] The why of action gives reasons for doing something and these will, of course, involve motives. But motives cannot be considered causes in any sense of the word because they do not compell, they do not necessitate the action in question, they only explain it.[60]

Intentions are formulated on different levels,[61] from rather abstract general strivings such as for happiness, security or recognition, to the very concrete intention of getting a book from the library. These levels overlap so

that one action is describable in more than one manner: I get into the car to drive to the library to get a book in order to read it for the writing of my thesis which I want to complete for self-satisfaction or for academic recognition or for more pay.

The intention is very often based on desires, which has led many philosophers to speculate that the desires determine the intention, but examples abound of intentions formulated after deliberation, after thought processes which weigh the various desires until the one which seems most practical or the one which ought to be followed is decided upon. Even in the most extreme cases of torture, for example, when one can well imagine that the desire for physical relief would be the strongest, people have chosen to resist, and this not because of another physical desire, but because of some meaning which they have attached to suffering and resistance. Viktor Frankl, the famous Viennese psychiatrist, attested to this from his personal experience in a Nazi concentration camp. Other studies corroborate his finding.[62] He said of his experiences:

> We who lived in concentration camps can remember the men who walked through the huts comforting others, giving their last piece of bread. They may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of the human freedoms--to choose one's attitude in any given set of circumstances, to choose one's own way.

Making a choice in the sense relevant for action is a conscious activity of the self which accompanies or is part of formulating intentions and carrying them out in action.

It is when one chooses or decides what to do that the feeling of freedom is the strongest. "Indeed . . . deciding between alternative courses lies at the heart of freedom."[64] Again, the determinist says that desires or motives, which have been molded from infancy on, cause me to choose what I choose.[65] But the libertarian denies the causal relationship between desires and choice. He maintains that "it is the choice which determines what the strongest motive is to be."[66] That is not the same as saying that motives are not causes, but it is saying that they are not the sufficient cause. "Thus *some* motive preceded choosing, but choosing preceded that moment when the motive which brings about observable actions becomes strongest."[67]

Nowell-Smith and others claim that this makes choice inexplicable, a mere random event, since the 'self' which is supposedly making the choice "is neither an empirical object nor displayed in characteristic action."[68] The libertarian answers that the self is the activity, the experience of that organismic whole which expresses itself in meaningful action--meaningful not only to others but to himself also. That self is not discovered inside the human brain, but in his acts. What is needed to understand the acts is to find out how different experiences are turned into knowledge and understanding. "This is critical, because once knowledge is [illegible] fixed for action, the biological machine must [illegible]."[69]

The question whether choice consists of two equally

possible choices will be discussed under "Responsibility." Suffice it to say that choice makes sense only if there actually are at least two open possibilities. One must be able to forbear doing something as well as be able to do it if one really thinks one has a choice.[70]

Ideally, choice should be unhindered by social or political pressures, by subconscious drives or physical restraints. In reality these all act to reduce the range of choices and unfortunately sometimes even to surpress choice altogether. Although every experience of free choice will be to some extent circumscribed by determining factors, which makes every experience to some degree illusory, nevertheless there is a difference. It is to be found in the starting point of action. In the illusion the starting point lies outside man, whereas in the true feeling of free choice it lies within man himself.[71] "The difference between these two feelings is objective not subjective."[72] The illusion remains as long as the person is not conscious of the role of the outside forces impinging on him.

In discussing choice, the libertarian avoids the term 'cause,' simply because of deterministic overtones. If he is hard pressed he will call reasons for action causes, only not the kind found in mechanical physics. "Our reasons can move us even if they do not do so in the way the billiard ball moves another."[73] If reasons are thought of as causes in the deterministic sense, then one can only conclude [illegible]

the thoughts no less than the desires and other factors that either issue or fail to issue in conduct."[74]

A man's choice then has both its reason and its cause, but they are to be found within man, in his physical-psychical structure. A free choice originates within man in a manner in which "things in the physical world, so far as we know, are never done or brought about."[75] A free choice is determined from within conscious man, an unfree choice--if one can speak of that at all--lies outside of man.[76]

Intention and choice are put into action by the will which is a category designating special executions or performances and special actions belonging to the entire person, namely those intentional actions deliberately chosen.[77] Any attempt to investigate the subjective experience of the will meets with the usual difficulties of introspection. The very characteristics which make up the will--spontaneity, creativity, and the actual choice of a goal--are destroyed in the very act of examination.[78] The only way that the will can be distinguished from other categories of the self is in action: "The will, then, is every performance of a subject toward a goal which is intended by him directly."[79]

The feeling of freedom takes on a positive aspect in the will since it is so closely connected to action. Wherever there is talk of volition, there also is talk of freedom and action.[80] The determinist called this freedom an illusion, but the libertarian maintains it is not an illusion but an integral part of the life process, since without

action there would be no experience and hence no knowledge whatever.[81] This feeling of freedom is as much the result of psychic experience as is the feeling of causality.[82] Since both are based on *repeated* experience which is the basis of all science,[83] it could be assumed that both are *real*. This is what the libertarian maintains, while the determinist believes freewill to be an illusion. He does so on the metaphysical assumption that causation is an absolute and final principle; this does not admit to any kind of experimental proof.[84]

The libertarian's account of free action depends on the concept of a self which because it cannot at present be empirically designated, also is a metaphysical concept. However, there are reasons for believing that the self can have objective reality within the general system theory. At any rate, without this concept of the self too many human experiences remain unexplainable. One of the tests of a scientific theory is its explanatory power; the libertarian finds that power in the concept of self, or of agent, or person or psyche to account for free action which emanates from a physical body subject to determinate laws but which also enjoys that range of freedom necessary to be responsible for that action.

IV. RESPONSIBILITY

In the light of the discussion above, the libertarian's answer to the question "Is man responsible for his actions?" is rather obvious. Both the action and the result of the

action are a man's responsibility insofar as they were in his power. As John Dewey said: "Each man is *responsible* for making the best choice available to him *within the scope of his limitations and his powers.*"[85] On the other hand, one is not held responsible for something that happens or that is done to one as for example a knee jerk, sudden blindness, neurotic compulsive impulses or the movement of the arm that is being lifted by someone else. The dividing line between responsible action and determined action is by no means clear-cut just because determinants are always present in all actions. The important question is whether the agent had these determinants under his control, whether he could have done otherwise.

The question, "Could he have done otherwise?" has received extensive treatment in philosophical literature by both libertarians and deterministsⁿ[86] The libertarian, of course, will answer with an unequivocal *Yes!* He believes that men are free not only in the sense that they can do what they choose to do "but in the sense of not being determined to choose what they choose by causes outside their control."[87] The libertarian will go so far as to claim that even when the circumstances for a free choice seem almost totally absent, as for example on the rack, or at the point of a gun, even there an individual can exercise free choice. No better witness can be called on than one who has experienced this kind of choice first hand as did Dr. Frankl who concluded from his concentration camp experiences:

> And there were always choices to make. Every day, every hour, offered the opportunity to make a decision, a decision which determined whether you would or would not submit to those powers which threatened to rob you of your very self, your inner freedom; which determined whether or not you would become the plaything of circumstances.[88]

That even in such extreme cases a person at any one time has the opportunity to choose either one of two or more ways of acting can never be proven empirically, of course. The entire debate is beyond proof because nothing that ever happens "can prove or have any bearing on the question whether something else *could have happened*."[89] Even if scientists are able to predict the future behavior of men or atoms, this still does not answer the question whether it was inevitable. No possible experiment will ever have any bearing on the question.[90]

The upshot of this dilemma is that the question is and always will be speculative; that does not make it meaningless or less urgent, but it does mean that the freewill-determinism debate cannot, in the foreseeable future, be settled by experiments. Nor can it be settled by appeal to linguistic analysis. Soft-determinists like Nowell-Smith and Schlick claim to have discovered the implication in every-day usage that the ordinary man while considering choice means "I could have done otherwise if....." Libertarians, on the other hand, claim that the common sense notion is that a person who says "I can" believes that he has the power to act in more than one way in a certain situation and no [illegible] about it.[91] This "I can," so the argument goes, has an entirely

different meaning than the 'can' used for physical phenomena.[92] "This stone is so hot it can fry an egg,"[93] is hypothetical but the 'can' of human agency is neither hypothetical nor causally contingent.[94] Instead "there is an essential difference between *my* moving my finger, and my finger merely moving."[95] This depends on whether *I* move my finger.

As has been mentioned before, the libertarian affirms that causal factors are operative in human actions, but he also maintains that the more he knows about them the more free he will be.[96] It is conscious reflection and not conditioned response which makes the difference between a responsible action and a mere happening.[97]

If a man can be held responsible for the actions which are under his control, then it follows that everyone should attempt to increase his self-control as much as possible. The result will be the opposite of doing as one pleases, because everyone is responsible not only for what he does, but also for the reasons he chooses to do as he does. If he can increase his knowledge, if he can make use of opportunities which will increase his range of choices in the future, then he is responsible.[98] Those who equate today's lack of agreed-upon values, permissiveness and related social ills to libertarianism have done so because they think libertarianism means that one is free to do as he pleases. But that makes desires and motives the causes of action and that belongs to the determinist's doctrines, not the libertarian's. Furthermore, because the causes and desires are

beyond one's control according to the determinist, therefore one cannot be held responsible for them. Irresponsible behavior is the result of sound logical deduction; it is in that sense no perversion.[99]

An analysis of the libertarian's position shows two weaknesses, one linguistic and the other metaphysical. Although the libertarian would like to get away from a causal account of action, he does not quite succeed. He still ends up by saying that the self *causes* action without giving a clear definition of the self.

The metaphysical problem is closely connected with the linguistic one: "What is the self?" All the problems of the philosophy of mind need settling before that can be answered. Today philosophers still disagree as violently as ever as to "what characterizes the essence of the mind and of consciousness."[100] Even with the help of the organizational theory the libertarian does not really come close to solving the metaphysical problems. But he can take heart in the fact that the determinist cannot solve the problem either without the aid of metaphysical assumptions.

As a rational explanation of action the libertarian's account has appeal even if it is difficult to defend philosophically. It does account for responsibility in the ordinary sense in which most people use it. It does correspond to subjective experience which most people claim to have. Above all it does preserve for the individual his freedom and his dignity.

REFERENCES

CHAPTER IV

[1]R. L. Franklin, *Free Will and Determinism* (London: Routledge & Kegan Paul, 1968), p. 12.

[2]Willard F. Enteman, "Microphysics and Freewill," *The Problem of Free Will*, Willard F. Enteman, editor (New York: Charles Scribner's Sons, 1967), p. 299.

[3]Niels Bohr, *Atomic Theory and the Description of Nature* (Cambridge: University Press, 1934), p. 2.

[4]Max Born, *Natural Philosophy of Cause and Chance* (New York: Dover Publications, Inc.; 1964), p. 105.

[5]*Ibid.*, p. 75.

[6]Enteman, *op. cit.*, p. 294.

[7]David Bohm, *Causality and Chance in Modern Physics* (London: Routledge & Kegan Paul Ltd., 1957), p. 94.

[8]Enteman, *op. cit.*, p. 294.

[9]*Ibid.*

[10]Percey W. Bridgman, "Determinism and Punishment," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor (New York, N.Y.: Collier Books, 1961), p. 58.

[11]Allan Munn, *Free Will and Determinism* (Toronto: University of Toronto Press, 1960), pp. 179-180.

[12]Niels Bohr, *Atomic Physics and Human Knowledge* (New York: John Wiley & Sons, Inc., 1958), p. 8.

[13]Munn, *op. cit.*, p. 193.

[14]Kenneth A. Strike, "Freedom, Autonomy and Teaching," *Educational Theory*, 22 (Spring, 1972), p. 268.

[15]F. C. S. Schiller, "Freedom and Responsibility," *The Problem of Free Will*, *op. cit.*, p. 245.

[16]Paul Kurtz, *Decision and the Condition of Man* (Seattle: University of Washington Press, 1965), p. 101.

[17]Strike, *op. cit.*, p. 267.

[18]Rem Blanshard Edward, *Freedom, Responsibility and Obligation* (The Hague: Martinus Nijhoff, 1969), p. 2.

[19]Austin Farrer, *The Freedom of the Will* (London: Adam & Charles Black, 1958), p. 96.

[20]Richard B. Brandt, "Doubts about the Identity Theory," *Dimensions of Mind*, Sidney Hook, editor (London: Collier-Macmillan Ltd., 1960), p. 66.

[21]Roderick W. Chisholm, "Responsibility and Avoidability," *Determinism and Freedom in the Age of Modern Science*, *op. cit.*, p. 159.

[22]Ludwig von Bertalanffy, *Robots, Men and Minds* (New York: George Braziller, 1967), p. 62.

[23]Ludwig von Bertalanffy, *General System Theory* (New York: George Braziller, 1968), p. 109ff.

[24]*Ibid.*, p. 134ff. [25]*Ibid.*, p. 149ff.

[26]*Ibid.*, p. 186ff.

[27]Alfred North Whitehead, *The Function of Reason* (Beacon Hill, Boston: Beacon Press, 1929), p. 10.

[28]Bertalanffy, *Robots, Men and Minds*, *op. cit.*, p. 68.

[29]Ludwig von Bertalanffy, *The Problems of Life* (New York: John Wiley & Sons, Inc., 1952), p. 11.

[30]A. C. Ewing, *The Fundamental Questions of Philosophy* (New York: Collier Books, 1962), p. 192.

[31]Bertalanffy, *The Problems of Life*, *op. cit.*, p. 12.

[32]Floyd Allport, "Logical Complexities of Group Activities," *Philosophical Problems of the Social Sciences*, David Braybrooke, editor (New York: The Macmillan Company, 1965), p. 31.

[33]J. R. Lucas, *The Freedom of the Will* (Oxford: Clarendon Press, 1970), pp. 164-165.

[34]Yves R. Simon, *Freedom of Choice*, translated by Peter Wolff (New York: Fordham University Press, 1969), p. 12.

[35]Arthur C. Danto, "Basic Actions," *American Philosophical Quarterly*, 2 (April, 1965), p. 148.

[36]Sidney M. Jourard, *Personal Adjustment* (New York: Von Nostrand Reinhold Company, 1964), p. 9.

[37]T. M. Kitwood, *What is Human?* (London: Inter-Varsity Press, 1970), p. 100.

[38]Jourard, *op. cit.*, p. 10.

[39]Jerome A. Shaffer, *Philosophy of Mind* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968), pp. 16-17.

[40]Farrer, *op. cit.*, p. 6.

[41]*Ibid.*

[42]Bohr, *Atomic Theory and the Description of Nature*, *op. cit.*, p. 119.

[43]Jourard, *op. cit.*, p. 9.

[44]Rudolph Steiner, *Die Philosophie der Freiheit* (Stuttgart: Verlag Freies Geistesleben, 1884, 1955), p. 36.

[45]G. E. M. Anscombe, *Intention* (Ithaca, New York: Cornell University, 1963), p. 14.

[46]Stuart Hampshire, *Freedom of the Individual* (London: Chatto and Windus, 1965), p. 70.

[47]Franklin, *op. cit.*, p. 106.

[48]George A. Miller, *The Psychology of Communication* (Middlesex, England: Penguin Books Ltd., 1967), p. 69.

[49]Kenneth M. Sayre, *Cybernetics and the Philosophy of Mind* (New York: Random House, 1969), p. 138.

[50]*Ibid.*, p. 137. [51]*Ibid.*, p. 130.

[52]Bertalanffy, *Robots, Men and Minds*, *op. cit.*, p. 25.

[53]*Ibid.*, p. 26.

[54]Lewis Mumford, *The Myth of the Machine: Technics and Human Development* (New York: Harcourt Brace & World, Inc., 1966), p. 27.

[55]Wilhelm Keller, *Das Leib-Seele-Problem und die Philosophie der Gegenwart* (München, Basel: Ernst Reinhardt Verlag, 1954), p. 25.

[56]Farrer, *op. cit.*, p. 88.

[57]Keller, *op. cit.*, p. 23.

[58]May Brodbeck, "Meaning and Action," *Philosophy and Ordinary Language*, C. E. Caton, editor (London: Oxford University Press, 1968), p. 122.

[59]R. S. Peters, *The Concept of Motivation* (London: Routledge & Kegan Paul, 1958), p. 7.

[60]Philippa Foot, "Free Will as Involving Determinism," *Free Will*, Sidney Morgenbesser and James Walsh, editors (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), p. 75.

[61]Keller, *op. cit.*, p. 75.

[62]William Sargant, *Battle for the Mind* (London: Pan Books Ltd., 1957), p. 209.

[63]Viktor E. Frankl, *Man's Search for Meaning: An Introduction to Logotherapy*, Part One translated by Ilse Lasch (New York: Washington Square Press, 1959), p. 104.

[64]Keller, *op. cit.*, p. 66.

[65]P. H. Nowell-Smith, "Free Will and Moral Responsibility," *Mind*, 57 (1948), p. 50.

[66]Rem Blanshard Edwards, "Is Choice Determined by the Strongest Motive?" *American Philosophical Quarterly*, 4 (January, 1967), p. 72.

[67]R. B. Edwards, *Freedom, Responsibility and Obligation*, *op. cit.*, p. 30.

[68]P. H. Nowell-Smith, *Ethics* (Middlesex England: Penguin Books Ltd., 1954), p. 283.

[69]J. Bronowski, *The Identity of Man* (Garden City, New York: Horizon Press, 1967), p. 21.

[70]Corliss Lamont, *Freedom of Choice Affirmed* (New York: Horizon Press, 1967), p. 148.

[71]Anatol von Spakovsky, *Freedom-Determinism-Indeterminism* (The Hague: Martinus Nijhoff, 1963), p. 4.

[72]*Ibid.*

[73]Shaffer, *op. cit.*, p. 104.

[74]A. I. Melden, *Free Action* (London: Routledge & Kegan Paul, 1961), p. 130.

[75]Richard Taylor, "Determinism and the Theory of Agency," *Determinism and Freedom in the Age of Modern Science*, *op. cit.*, p. 228.

[76]Spakovsky, *op. cit.*, p. 1.

[77]Keller, *op. cit.*, p. 18.

[78] *Ibid.*, p. 40.

[79] *Ibid.*, p. 50.

[80] *Ibid.*, p. 59.

[81] *Ibid.*

[82] Bohr, *op. cit.*, p. 6.

[83] Enteman, *op. cit.*, p. 14.

[84] Bohm, *op. cit.*, p. 141.

[85] Howard W. Hintz, "Some Further Reflections on Moral Responsibility," *Determinism and Freedom in the Age of Modern Science*, *op. cit.*, p. 177. (Reference for Dewey quote not given.)

[86] Harald Ofstad, "Recent Work on the Free-Will Problem," *American Philosophical Quarterly*, 4 (July, 1967), pp. 179-207.

[87] Isaiah Berlin, *Four Essays on Liberty* (London: Oxford University Press, 1969), p. xi.

[88] Frankl, *op. cit.*, p. 104.

[89] William H. Davis, *The Freewill Question* (The Hague: Martinus Nijhoff, 1971), p. 4.

[90] *Ibid.*

[91] Frank B. Dilley, "Predictability and Free Will," *International Philosophical Quarterly*, 9 (June, 1969), p. 205.

[92] C. A. Campbell, "Is 'Free Will' a Pseudo-Problem?" *Contemporary Philosophy*, Joseph Margolis, editor (New York: Random House, 1966), p. 382.

[93] Richard Taylor, "I Can," *Free Will*, *op. cit.*, p. 89.

[94] *Ibid.*, p. 84.

[95] *Ibid.*, p. 89.

[96] Simon, *op. cit.*, p. 126.

[97] B. A. O. Williamson, "Freedom and the Will," *Freedom and the Will*, D. F. Pears, editor (London: Macmillan, 1969), p. 12.

[98] John Laird, *A Theory of Freedom* (London: George Allen and Unwin Ltd., 1947), p. 50.

[99] D. Elton Trueblood, "Contemporary Psychiatry and the Concept of Responsibility," *Responsibility*, H. Schoeck and J. W. Wiggins, editors (Princeton, New Jersey: D. Van Nostrand, Inc., 1961), p. 50.

[100] Shaffer, *op. cit.*, p. 11.

CHAPTER V

IMPLICATIONS OF LIBERTARIANISM FOR EDUCATION

The implications of libertarianism for education cannot be as easily described as those for determinism. The determinist can use his teaching machines, his test scores, his prediction curves and a certain amount of research in psychology to back up his educational theory based on determinism. The libertarian, on the other hand, seems to have nothing concrete to offer. However, appearances can be deceiving.

For one thing, the libertarian philosopher can act as a foil against the behaviorists who still "man the academy."[1] He can question the aims and methods used by the determinist. He can certainly expose the philosophical assumptions underlying those aims and methods.

The libertarian also has a positive contribution to make. Aims of education which arise out of libertarianism can be emphasized, as for example in Paul Nash's book, [illegible], in which he lists "Education for Better Choice," for "Living with the [illegible]," for "Imaginative Action," and for "[illegible]."[2] These seem to be logical outcomes of a libertarian philosophy. In addition, the libertarian can encourage research in those areas of learning and teaching which will achieve those aims. In that connection he can contribute by carefully analyzing the categories, concepts and models

used to talk about aims and methods.

Perhaps the most important contribution of the libertarian will be to rescue the Ghost in the Machine, the (-) of the S-R sequence. He will advocate the nurturing of the intellect, the dispositions, the desires and the emotions so that as the child grows into adulthood, he will be in control of himself and his environment. Since self-control is best achieved by intelligent choice, the intelligence will be the focus. In this aim, the libertarian has one of the most influential of all educators on his side. Dr. Bhattacharya in his article "The Concept of 'Intelligence' in John Dewey's Philosophy and Educational Theory" quotes Dewey:

> For education, according to Dewey, is not just the acquisition of knowledge but "the process of forming fundamental dispositions, intellectual and emotional toward nature and fellow men."[7]

The intelligence of which Dewey speaks and which the libertarian also stresses has to operate in a world that is

> . . . entirely plastic, that is to say, there must be real conflict and indeterminacy, precariousness and uncertainty, in the world. In Dewey's [philosophy], nature is such a wide-open world; conflict and indeterminacy are its definite traits.[8]

Furthermore, the libertarian will agree with Dewey that the intelligence to be fostered is to be creative and not mechanical;[9] consequently this creativity should also be fostered.[10]

Knowledge, intelligence, critical thinking are also what the educational philosophers Israel Scheffler and

R. S. Peters stress. Scheffler warns against methods such as "propaganda, conditioning and suggestion which are aimed at modifying the person"[11] but avoid his intellectual involvement. Instead he holds up as the ideal of successful education a student who has gained a full understanding, a true knowledge of whatever is learned. What that knowledge consists of Scheffler so well analyzed in his book *Conditions of Knowledge: An Introduction to Epistemology and Education.* Likewise, R. S. Pet[illegible] out rote learning and stresses knowledge which "[illegible]derstanding of principles."[12]

The knowledge gained in education should be one that fosters the feeling of freedom in the child. This feeling of freedom is basic for his actions and thinking.[13] Studies have shown that the feeling of freedom has a positive influence in situations in which people are apt to succumb to group pressure.[14] Those who resisted (and by the way, Pavlov also had dogs who did not succumb to stress[15]) were self-contained and autonomous in their thinking.[16]

The implication of this study is that the person who feels free, who is conscious of his responsible choice [illegible] to be controlled by [illegible] to the point of [illegible]."[17] Psychologists instead of trying to apply their findings from animal research to human learning, should turn their attention to those factors which lead to more self-contained and autonomous individuals. Today more than ever, the forces at work trying to control children's as well as adults' desires and thoughts

are found everywhere, and not all controllers are of the benign Frazier type who said in *Walden Two*:

> We see to it that they will want to do precisely the things which are best for themselves and the community. Their behavior is determined and yet they are free.[18]

The libertarian rejects that kind of freedom. Besides, he would question whether Frazier (or Skinner or anyone else, for that matter) is in a position to decide what is best for society.

One way that the feeling of freedom can be increased is to expose the maturing child to a wide range of choices. Freedom can only be found "in that kind of interaction which maintains an environment in which human desire and choice count for something."[19] This has some very concrete applications in the classroom. John Holt in his latest popular book on education, *Freedom and Beyond*, recounts a visit to an elementary classroom where the children had been told to do anything they liked, but aside from a series of traditional texts, there was nothing for them to choose from.[20] Similar situations occur in classrooms all the way up to the university level. The professor says: "You can believe what you want to," but then fails to present possible alternatives or he does so unfairly.

Besides fostering the feeling of freedom, the libertarian educator will also be concerned about fostering the intelligent development of the deliberating and deciding processes which are necessary for free action. For this the critical abilities must be developed, which according to

Dewey are also imaginative faculties.[21] How this can best be done is for the educational theorist and practitioner to find out.

One of the elements involved in deliberation is an understanding of the rules and criteria involved "according to which judgments are made."[22] Here the libertarian can again help with his analysis. But it is not enough to teach the rules and principles involved in making decisions. They must also become internalized. This process takes on special importance in moral education. The libertarian aims for moral behavior based on the learner's own decisions of principles. R. M. Hare, for example, in discussing the question "How shall I bring up my children?" says:

> To become morally adult . . . is to learn to use 'ought'-sentences in the realisation that they can only be verified by reference to a standard or set of principles which we have by our own decision accepted and made our own.[23]

At some point in the child's development he should begin to feel accountable for what he does. At present our society tends to give children great 'freedom' without the attendant responsibility. Confusion is the result.

Closely related to the aims of education is the attitude toward education and toward the individual to be educated which teachers and researchers as well as philosophers reflect. Since responsibility is located in the self--the total human being--and not in events, a libertarian will of necessity approach education not only from the practical or scientific point of view but also from the moral:

the educator is responsible for the choices he makes in education because "A moral situation is one in which judgment and choice are required antecedently to overt action."[24] As the child develops his judgments and makes choices based on them, he should learn to take responsibility for them. This is contrary to current trends. No one wants to take responsibility for his weaknesses and shortcomings. But the radical consequences of freewill are "that every man is what he is because of his past free choices and every man may become any kind of man whatever, starting now."[25] He could have been something else, he can still become something else. However, the choices made in the past will restrict the range of freedom in the present.[26] If he is no longer able to change, it is in part because of his wrong choices in the past which include perhaps the choosing of an unrealistic goal which is not attainable because of existing determinants.

Unfortunately most of our schools do not provide the necessary opportunities for students to make genuine choices. Either the students' behavior is achieved by "so closely controlling the child's native interests and drives that whatever [illegible] or their 'choice' is imposed from above. The most vocal and justified criticism of older students today is that they are not given responsibility, by which they mean an opportunity to make their own choices and bear the full responsibility for them.

In order that everyone can make intelligent choices,

educators should provide everyone with the best means available to do so, since everyone can, through education in the broadest sense, continually improve his habits and his powers of discretion.[29] In that connection, a student should also learn that habits can become determinate, "but if anything breaks them it is 'reason'." A moral struggle is involved in exercising one's freedom in establishing good habits and overpowering bad ones.[30] Here education has an important role to play in helping youngsters to establish worthwhile habits and breaking poor ones. "Freedom is concomitant of mental and moral growth, a consequence of an incomplete and therefore plastic n[illegible]

The methods which the libertarian educator will use to achieve his aims will not differ radically from those used by determinists. Since he recognizes the determining influences existing both within and without a person, he will make use of these to increase the student's control over himself and his environment. The purpose for which they will be used differs radically from the determinist's; the purpose is self-control rather than control over another. Also his attitude toward the child will influence the way he uses conditioning techniques, programmed learning and all the rest. The libertarian will consider the child not as a machine to be programmed or "it" to be [illegible] but as a [illegible] to be [illegible] to control itself," but "as a free, self-ready, conscious entity [illegible] but before and beyond all else a [illegible] person."[32]

One area in which the implications for methods of teaching are particularly significant is in language learning. It will be remembered that the ability to use language to represent the existence of the intervening variable which Skinner avoids in his theory enables man to symbolically represent the existence of the past, present and future. If the production of language is a creative, free act, then it should be impossible to teach it by operant conditioning. Psycholinguistic studies have shown that language does not originate as Skinner would have it. He maintains that verbal behavior "is a very special kind of behavior but [that] there is nothing by way of process or law involved that would distinguish man from other animals."[13] Psycho-linguists, on the other hand, have shown that "[man's] performance is not, for example, the result of [an] ... act of conditioning ... but rather that ... language is not learned by imitation, by stimulus-response, but it emanates from an innate ability to formulate language." This ability to [illegible] and hence cannot be learned by conditioning.

The [illegible] psycholinguists [illegible] who believe [illegible] the [illegible] language, critical thinking [illegible] children to [illegible] cultures. [illegible] Bruner, for example,

cites work done by psychologists all over the world which seems to point to the development in the child of the reflective functions which reach their final state at adolescence when language becomes more important as a medium of thought. Language then is used "to consider propositions rather than objects; . . . alternative possibilities can be handled in combinatorial fashion."[39]

Jerome Bruner himself advocates as the most general objective of education the cultivation of excellence: *"helping each student achieve his optimum intellectual development."*[39] At present psycholinguists and cognitive psychologists are working with little hard factual support of the kind the determinists can boast of, but then, Copernicus did not have that either. It took 150 years before independent observational support was forthcoming for his theory.[40]

If language acquisition cannot be accomplished by popular learning theories because it is freely created, then the thought processes which give rise to language are also beyond the methodology of behaviorism. The libertarian will object to the routine, stultifying methods used to teach creative thinking and intuitive insight because these are the highest forms of thinking which are not merely one form of problem solving of the rat-in-the-maze type [illegible] and tested by popular intelligence tests. As Professor Kneller said:

> an element of mystery in the act of creation that will elude analysis.[42]

One criticism which is likely to be raised against the libertarian philosopher, especially as it relates to education, is that libertarianism will lead to license and permissiveness. The discussion thus far should have dispelled that fear. With emphasis on self-control, on rule-governed behavior, on intelligent deliberation there is no room for mis-used freedom. These two scourges of contemporary education as well as social life--license and permissiveness--can be attributed to the confused thinking of most teachers and educational theorists who on the one hand believe a child should be free and on the other hand accept the deterministic theories of behaviorism. A 'free child' without a sense of responsibility is a menace to himself and society. Add to that the soft determinist's doctrine that freedom means absence of restraint which many educators have picked up, considering such a state as "[illegible]," and the confusion is compounded.

There is no state of human existence that is free from restraints or from determinants. The libertarian who recognises both determinants and free choice at least will not suffer from the same conceptual confusions. Of course, for him the question "[illegible]" is just as difficult to answer as for the muddled person. The dilemma in modern education which faces both the libertarian and the determinist alike, is that education,

including moral education "oscillation between Autonomist and non Autonomist presuppositions."[45] The libertarian philosopher can begin to unravel this dilemma by reconciling the deterministic features of education with those of freewill. In that connection he has nothing to fear from the findings of psychology which reveal more and more determining factors operant in human behavior. On the contrary, he welcomes them because once he knows them, he can act accordingly after deliberating and thinking about them.[46]

To conclude, although the libertarian philosophy has not had strong impact on education today, it has fulfilled the function of a critic for deterministic behaviorism. There are many physicists, biologists, psychologists and educators who find they have no difficulty in studying the behavior of man as caused by determining factors but who at the same time maintain that man is free in the libertarian sense. Perhaps the best example of this apparent contradictory attitude is that of Carl Rogers, Professor of Psychology, who said

[illegible]

REFERENCES

CHAPTER V

[1] "Second Thoughts About Man: The Rediscovery of Human Nature," *Time*, 102 (April 2, 1973), p. 49.

[2] Paul Nash, "Authority and Determinism: The Freedom to Choose," *Authority and Freedom in Education* (New York: John Wiley & Sons, Inc., 1966), pp. 211-243.

[3] *Ibid.*, p. 230.

[4] *Ibid.*, p. 232.

[5] *Ibid.*, p. 235.

[6] *Ibid.*, p. 237.

[7] N. C. Bhattacharyya, "The Concept of 'Intelligence' in John Dewey's Philosophy and Education Theory," *Educational Theory*, 19 (Spring, 1969), p. 186, John Dewey, *Democracy and Education* (New York: The Macmillan Company, 1964), p. 238.

[8] *Ibid.*, p. 186.

[9] *Ibid.*, p. 188.

[10] *Ibid.*, p. 191

[11] Israel Scheffler, "Philosophical Models of Teaching," [illegible], R. S. Peters, editor (London: Routledge & Kegan Paul, 1967), p. 120.

[12] Israel Scheffler, [illegible] (Chicago: Scott, Foresman and Company, 1965).

[13] R. S. Peters, "What Is an Educational Process?" [illegible], p. 6.

[14] Carl Kaplus, [illegible] (Columbus, Ohio: A Bell & Howell Company, 1967), p. 269.

[15] William Carnes, [illegible] (Boston: [illegible], 1971), p. 12.

[16] Kaplus, *op. cit.*, p. 270.

[20]John Holt, *Freedom and Beyond* (New York: E. P. Dutton & Co., Inc., 1972), p. 86.

[21]Bhattacharyya, *op. cit.*, p. 191.

[22]Kenneth A. Strike, "Freedom, Autonomy and Teaching," *Educational Theory*, 22 (Spring, 1972), p. 265.

[23]William Hare, *The Tyranny of Morals* (New York: Oxford University Press, 1964), p. 78.

[24]John Dewey, *Reconstruction in Philosophy* (Boston: Beacon Press, 1920), p. 163.

[25]William Davis, *Theories of Education* (The Hague: Martinus Nijhoff, 1971), p. 13.

[26]P. A. Bertocci, "Personality, Free Will and Moral Obligation," *[illegible]*, Willard E. Enteman, editor (New York: Charles Scribner's Sons, 1967), p. 23.

[27]Carl Bereiter, "Schools Without Education," *Harvard Educational Review*, 42 (August, 1972), p. 403.

[28]William Hare, "Responsibility and Rights in Contemporary Educational Theory," *Educational Theory*, 22 (Summer, 1972), p. 304.

[29]F. C. S. Schiller, "Freedom and Responsibility," *The [illegible]*, W. E. Enteman, editor (New York: Charles Scribner's Sons, 1971), p. 251.

[30] [31]*Ibid.*

[32]Rollo E. Bond, "The Operational Interest Man," [illegible], 14 (March-April, 1968), p. [illegible] quoting the Joint Study Commission on Education, Report to the World Council of Churches.

[33]H. F. Clarizio, "[illegible]"

[34] [illegible]

[39]Jerome Bruner, *The Process of Education* (New York: Vintage Books, A Division of Random House, 1960), p. 9.

[40]Frank S. Kessel, "The Philosophy of Science as Proclaimed and Science as Practised: 'Identity' or 'Dualism'?" *American Psychologist*, 24 (1969), p. 1000.

[41]George E. Kneller, *The Art and Science of Creativity* (New York: Holt, Rinehart and Winston, Inc., 1967), p. 11.

[42]*Ibid.*, p. 16.

[43]Holt, *op. cit.*, p. 17.

[44]*Ibid.*

[45]Alan Montifiore, "Moral Philosophy and the Teaching of Morality," *Harvard Educational Review*, 35 (Fall, 1965), p. 449.

[46]S. I. Benn and R. S. Peters, "Freedom and Responsibility," *The Principles of Political Thought* (New York: The Free Press, 1968), p. 235.

[47]Rogers, *op. cit.*, p. 269.

CHAPTER VI

CONCLUSION

The problem of free action and responsibility which has been discussed in this thesis has brought many related problems to the surface. Some of the linguistic difficulties which became apparent related to such concepts as causality, indeterminacy, self, freewill, choice, intention, understanding, and above all action and responsibility. The determinist explained the meaning of each of these terms on the basis of the causality principle which restricts the causes of human action to physical stimuli only, which in turn obey causal laws. Furthermore, responsibility was defined as a concept useful for social control, for praise and blame, reward and punishment, but as more is discovered about the biological machine called man, talk about responsibility will diminish.

Most determinists also consider the referent of 'the self' a fiction because according to them the human machine is no more than the sum of its isolated parts working together under physical laws which in no way can account for mental events. A few philosophers, who want to consider themselves determinists, speak of moral responsibility, but if the agent is determined on the macro-level, they do not differ from [illegible]

[illegible]

The libertarian in his linguistic analysis of action starts out with that 'meaningless entity, the self,' and defines it as that which is more than the sum total of its parts, that which because of the tremendous organizational complexity of the body and nervous system displays behavior which cannot be compared to mechanical models, nor to biological systems of lesser complexity. To account for that complexity, the libertarian proposes some kind of general system theory which includes the organizational and organismic laws governing man. Within this theory he attempts to account for the tremendous complexity of the human being, including the relative non-determinacy and freedom of the human psyche.

However, this study has also shown that linguistic analysis is not enough to settle the problems involved. After all the terms have been clarified, after the models for human action have been explained, differences still remain. Agreement cannot be reached on the meaning of freedom, responsibility and action because the language of introspection is very abstract and vague.

some libertarians maintain, everyone is fully responsible for the choices he makes, perhaps the concept of responsibility places too much of a burden on the individual. After all, there is no getting away from heredity, environment and upbringing.

Moral considerations also enter into the discussion because talk about education is inseparable from talk about what is worth while. In addition, the notion "is written into it that what is worth while be learned or in being transmitted in a morally unobjectionable manner." It has been argued that both the aim and the method of deterministic behaviorism is objectionable because

Whether it is right and good to "[illegible]" cannot be decided upon by fiat. Ethical considerations are involved which cannot [illegible] aside as meaningless. Many people today feel that the time has come [illegible]

psychotherapy and *education*."[6] [Italics not in the original.] The libertarian tries to account for the will by showing the complex interaction of choice, intention and will. Perhaps he can be helped in this by psychologists in the future. If psychologists who now wield so much influence and direct so much money for their research were to direct their attention to the whole complex system that is man, perhaps they could add to that evidence which is already in, which leads to the conclusion that

> man is also complicated enough, psychologically, to be capable of that form of self-criticism and self-control which we call accountability. In other words, there are no longer grounds for assuming that 'science' necessarily requires us to take a narrowly deterministic view of human conduct and to turn our back upon the whole moral enterprise.[7]

Fortunately, many psychologists, psychiatrists and other social scientists, including Piaget, Bruner and Rogers, have already gone beyond the narrow confines of behaviorism in their work, but very much remains to be done.

Perhaps the most perplexing problem touched on in this thesis has been how to view man. Is he a machine, an animal, or something more than that? It was shown that the answer given depended not so much on empirical considerations as on one's framework, one's model of the world. That is not given by experience or observation but it is shaped by the culture and the times. One's model of the world is "a framework within which the data themselves are interpreted--a general conception which determines a priori what shall be considered as data, what shall be considered as problems and what shall count

as solutions."[8] Fundamental attitudes not only determine "what problems the investigator is able to see," but also the experimental method used in the investigation.[9] At any rate, at no point in their work do scientists begin without some kind of theory, hypothesis or problem which guides their observation and helps them "to select from the innumerable objects of observation those which may be of interest."[10]

Today it is the scientific model of causal explanation which is the most acceptable one because it fits and it works, but it is arbitrary.[11] The model for freedom does not fit popular scientific explanatory methods; it is rejected.

The metaphysical problem persists because despite our tremendous scientific advances, we still do not know what nature is.[12] Much less do we know why things happen as they do, and yet as humans we want to know, and we also want to understand why we and others do what we do. If man in the '70s has discovered anything at all, it is that "man and his universe are more complex than he recently thought."[13] Because of this, the *how* and *why* continue to escape him.

No amount of scientific research will prove either the determinist or the libertarian right. Anyone who accepts determinism or libertarianism does so not because the arguments in its favor are overwhelming, but as an act of faith.[14]

It is unfortunate that a problem which has such far-reaching as well as immediate implications not only for education but for the future of society, should involve

practically all branches of philosophy. Perhaps this is what discourages so many from thinking about it at all. Others consider anyone who does express an interest in the freewill problem as rather odd. The educator, however, cannot afford to remain neutral or indifferent to the problems brought up in this discussion because, as has been shown, one's attitude toward the freewill-determinism controversy does influence both the educational aims and the methods one adopts to achieve those aims.

The conclusion reached in this thesis is that "man is not fixed by hereditarily given mechanisms. In other words *human existence and freedom are from the beginning inseparable.*"[15] This belief in the freedom and autonomy of the individual, especially as it influences education, needs much more careful analysis than has been given it in these pages. The purpose of this thesis was not to solve the problems, but first of all to raise important questions and then to clarify the issues involved. The most fundamental of all the problems, one's view of man, defies either explanation or analysis: another writer, reading the same books, writing on the same topic could just as well have come to the opposite conclusion.

The view of man which has been defended has been one that considers a human being not as

> one thing among others; things determine each other, but man is ultimately self-determining. What he becomes--within the limits of endowment and environment--he has made himself.

Whether that view, in turn, is acceptable to others will depend on their metaphysical assumptions.

> Perhaps here, as elsewhere in metaphysics, we should be content with discovering difficulties, with seeing what is and what is not consistent with such convictions as we happen to have, and then drawing such satisfaction as we can from the realization that, no matter where we begin, the world is mysterious and the men who try to understand it are even more so. This realization can, with some justification, make one feel wise, even in the full realization of his ignorance.[17]

REFERENCES

CHAPTER VI

[1]Allan Munn, *Free Will and Determinism* (Toronto: University of Toronto Press, 1960), p. 171

[2]R. S. Peters, "What is an Educational Process?" *The Concept of Education*, R. S. Peters, editor (London: Routledge & Kegan Paul, 1967), p. 5.

[3]Nicholas D. Rizzo, "The Significance of Von Bertalanffy for Psychology," *The Relevance of General Systems Theory*, Ervin Laszlo, editor (New York: George Braziller, 1972), p. 142.

[4]"Second Thoughts About Man: The Rediscovery of Human Nature," *Time*, 102 (April 12, 1973), p. 49.

[5]*Ibid.*

[6]*Ibid.*

[7]O. H. Mower, "Guilt in the Social Sciences," *Psychiatry and Responsibility*, H. Schoeck and J. W. Wiggins, editors (Princeton, New Jersey: D. Van Nostrand Company, 1962), p. 62.

[8]R. Taylor, *Action and Purpose* (Englewood Cliffs, New Jersey, 1966), p. 5.

[9]Ludwig von Bertalanffy, *Problems of Life* (New York: John Wiley & Sons, Inc., 1952), p. 21.

[10]Karl Popper, "Unity of Method in the Natural and Social Sciences," *The Philosophical Problems of the Social Sciences*, David Braybrooke, editor (New York: The Macmillan Company, 1965), p. 36.

[11]Taylor, *op. cit.*, p. 6.

[12]William Davis, *The Freedom Question* (The Hague: Martinus Nijhoff, 1971), p. 22.

[13]"Second Thoughts About Man," *op. cit.*, p. 49.

[14]Max Born, *Natural Philosophy of Cause and Chance* (New York: Dover Publications, Inc., 1964), p. 7.

[15]Erich Fromm, *Escape from Freedom* (New York, New York: Avon Books, A Division of the Hearst Corporation, 1941), p. 48.

[16]Viktor E. Frankl, *Man's Search for Meaning: An Introduction to Logotherapy*, Part One translated by Ilse Lasch (New York: Washington Square Press, 1959), p. 213.

[17]Richard Taylor, *Metaphysics* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), p. 53.

SELECTED BIBLIOGRAPHY

A. BOOKS:

Ackerman, Mark J. *Operant Conditioning Techniques for the Classroom Teacher.* Glenview, Illinois: Scott, Foresman and Company, 1972.

Anscombe, G. E. M. *Intention.* Ithaca, New York: Cornell University, 1961.

Bohm, S. I. and R. S. Peters, "Freedom and Responsibility," *The Principles of Political Thought.* New York: The Free Press, 1959, 1968. Pp. 229-246.

Berlin, Isaiah. *Four Essays on Liberty.* London: Oxford University Press, 1969.

Bertalanffy, Ludwig von. *General System Theory.* New York: George Braziller, 1968.

_____. *Problems of Life.* New York: John Wiley & Sons, Inc., 1952.

_____. *Robots, Men and Minds.* New York: George Braziller, 1967.

Bohm, David. *Causality and Chance in Modern Physics.* London: Routledge & Kegan Paul Ltd., 1957.

Bohr, Niels. *Atomic Physics and Human Knowledge.* New York: John Wiley & Sons, Inc., 1958.

_____. *Atomic Theory and the Description of Nature.* Cambridge: University Press, 1934.

Born, Max. *Natural Philosophy of Cause and Chance.* New York: Dover Publications, Inc., 1964.

Bronowski, J. *The Identity of Man.* Middlesex, England: Penguin Books Ltd., 1958.

Bruner, Jerome S. *The Process of Education.* New York: Vintage Books, A Division of Random House, 1960.

_____. *Toward a Theory of Instruction.* New York: W. W. Norton & Company, Inc., 1966.

Chase, Stuart. *The Tyranny of Words.* New York: Harcourt Brace & World Inc., 1938.

D'Angelo, Edward. *The Problem of Freedom and Determinism.* Columbia, Missouri: University of Missouri Press, 1968.

Davis, William H. *The Freewill Question.* The Hague: Martinus Nijhoff, 1971.

Deese, James. *Psycholinguistics.* Boston: Allyn and Bacon, Inc., 1970.

Dewey, John. *Reconstruction in Philosophy.* Boston: Beacon Press, 1920.

Edwards, Rem Blanshard. *Freedom, Responsibility and Obligation.* The Hague: Martinus Nijhoff, 1969.

Ewing, A. C. *The Fundamental Questions of Philosophy.* New York: Collier Books, 1962.

Farrer, Austin. *The Freedom of the Will.* London: Adam and Charles Black, 1958.

Fodor, Jerry.A. *Psychological Explanation: An Introduction to the Philosophy of Psychology.* New York: Random House, 1968.

Frankl, Viktor E. *Man's Search for Meaning: An Introduction to Logotherapy.* Part One translated by Ilse Lasch. New York: Washington Square Press, 1959.

Franklin, R. L. *Free Will and Determinism.* London: Routledge & Kegan Paul, 1968.

Fromm, Erich. *Escape from Freedom.* New York, New York: Avon Books, a Division of The Hearst Corporation, 1941.

Hampshire, Stuart. *Freedom of the Individual.* London: Chatto and Windus, 1965.

Hare, R. M. *The Language of Morals.* New York: Oxford University Press, 1964.

Holt, John. *Freedom and Beyond.* New York: E. P. Dutton & Co., Inc., 1972.

Huxley, Aldous. *Brave New World.* Middlesex, England: Penguin Books Ltd., 1932.

_____. *Brave New World Revisited.* New York: Harper & Row, Publishers, 1958.

Jourard, Sidney M. *The Transparent Self.* New York: Van Nostrand Reinhold Company, 1964.

Keller, Wilhelm. *Psychologie und Philosophie des Wollens.* Munchen, Ba[illegible]: Ernst Reinhardt Verlag, 1954.

Kitwood, T. M. *[illegible] is Human?* London: Inter-Varsity Press, 1970.

Kneller, George E. *The Art and Science of Creativity.* New York: Holt, Rinehart and Winston, Inc., 1967.

Koestler, Arthur. *The Ghost in the Machine.* London: Pan Books Ltd., 1967.

Kurtz, Paul. *Decision and the Condition of Man.* Seattle: University of Washington Press, 1965.

Laird, John, *[illegible] Human Freedom.* London: George Allen and Unwin Ltd., 1947.

Lamont, Corliss. *Freedom of Choice Affirmed.* New York: Horizon Press, 1967.

Lewis, C. S. *The Abolition of Man.* New York, New York: The Macmillan Company, 1947.

London, Perry. *Behavior Control.* New York: Harper & Row, Publishers, 1969.

Louch, A. R. *Explanation and Human Action.* Berkeley: University of California Press, 1966.

Lucas, J. F. *The Freedom of the Will.* Oxford: Clarendon Press, 1970.

Mager, Robert F. *Preparing Instructional Objectives.* Palo Alto, California: Fearon Publishers, 1962.

Melden, A. I. *Free Action.* London: Routledge & Kegan Paul, 1961.

Miller, George A. *The Psychology of Communication.* Middlesex, England: Penguin Books Ltd., 1967.

Moberly, Sir Walter. *Responsibility.* London: Oxford University Press, 1951.

Mumford, Lewis. *The Myth of the Machine: Technics and Human Development.* New York: Harcourt Brace & World, Inc., 1966.

Munn, Allan. *Free Will and Determinism.* Toronto: University Press, 1960.

Nowell-Smith, P. H. *Ethics.* Middlesex, England: Penguin Books Ltd., 1954.

[redacted]ters, R. S. *Authority, Responsibility and Education.* New York: Atherton Press, 1967.

_____. *The Concept of Motivation.* London: Routledge & Kegan Paul, 1958.

_____. *Ethics and Education.* Atlanta: Scott, Foresman and Company, 1967.

Rogers, Carl R. *Freedom to Learn.* Columbus, Ohio: A Bell & Howell Company, 1969.

Ryle, Gilbert. *The Concept of Mind.* Middlesex, England: Penguin Books Ltd., 1949.

Sargant, William. *Battle for the Mind.* London: Pan Books Ltd., 1957.

Sayre, Kenneth M. *Consciousness: A Philosophic Study of Man and Machines.* New York: Random House, 1969.

Shaffer, Jerome A. *Philosophy of Mind.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968.

Scheffler, Israel. *Conditions of Knowledge: An Introduction to Epistemology and Education.* Chicago: Scott Foresman and Company, 1965.

Schlick, Moritz. *Problems of Ethics*, translated by David Rynin. New York: Dover Publications, Inc., 1939.

Simon, Yves R. *Freedom of Choice*, translated by Peter Wolff. New York: Fordham Univ[redacted]y Press, 1969.

Skinner, B. F. *Beyond Freedom and Dignity.* New York: Alfred A. Knopf, 1972.

_____. *Science and Human Behavior.* New York: The Macmillan Company, 1953.

_____. *Walden Two.* New York: The Macmillan Company, 1948.

Spakovsky, Anatol von. *Freedom-Determinism-Indeterminism.* The Hague: Martinus Nijhoff, 1963.

Steiner, Rudolph. *Die Philosophie der Freiheit.* Stuttgart: Verlag Freies Geistesleben, 1894, 1955.

Taylor, Gordon Rattray. *The Biological Time Bomb.* New York: The World Publishing Company, 1968.

Taylor, Richard. *Action and Purpose.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966.

Taylor, Richard. *Metaphysics*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

Whitehead, Alfred North. *The Function of Reason*. Beacon Hill, Boston: Beacon Press, 1929.

Worth Commission. *A Future of Choices: A Choice of Futures*. Edmonton, Alberta: L. S. Wall, Queen's Printer for the Province of Alberta, 1972.

B. ARTICLES AND ESSAYS

Allport, Floyd. "Logical Complexities of Group Activity," *Philosophical Problems of the Social Sciences*, David Braybrooke, editor. New York: The Macmillan Company, 1965. Pp. 27-31.

Bahn, Charles. "Individual Responsibility and Psychological Determinism," *Teachers College Record*, 68 (November, 1966), pp. 146-149.

Bereiter, Carl. "Schools Without Education," *Harvard Educational Review*, 42 (August, 1972), pp. 390-413.

Berofsky, Bernard. "General Introduction: Determinism," *Free Will and Determinism*, B. Berofsky, editor. New York: Harper & Row Publisher, 1966. Pp. 1-19.

Bertalanffy, Ludwig von. "Response," *The Relevance of General Systems Theory*, Ervin Laszlo, editor. New York: George Braziller, 1972. Pp. 183-191.

Bertocci, P. A. "Personality, Free Will and Moral Obligation," *The Problem of Free Will*, W. F. Enteman, editor. New York: Charles Scribner's Sons, 1967. Pp. 19-31.

Bhattacharrya, N. C. "The Concept of 'Intelligence' in John Dewey's Philosophy and Educational Theory," *Educational Theory*, 19 (Spring, 1969), pp. 185-195.

Blanshard, Brand. "The Case for Determinism," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 155-159.

Brandt, Richard B. "Doubts about the Identity Theory," *Dimensions of Mind*, Sidney Hook, editor. London: Collier-Macmillan Ltd., 1960. Pp. 62-70.

Bridgman Percey, W. "Determinism and Punishment," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 155-159.

Brodbeck, May. "Meaning and Action," *The Philosophy of Science*, P. H. Nidditsch, editor. London: Oxford University Press, 1968. Pp. 97-120.

Campbell, C. A. "Is 'Free Will' a Pseudo-Problem?" *Contemporary Ethical Theory*, Joseph Margolis, editor. New York: Random House, 1966. Pp. 371-399.

Center for New Schools. "Strengthening Alternative High Schools," *Harvard Educational Review*, 42 (August, 1972), pp. 313-350.

Chisholm, Roderick W. "Responsibility and Avoidability," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 157-159.

Cowan, J. L. "Deliberation and Determinism," *American Philosophical Quarterly*, 6 (January, 1969), pp. 53-61.

Danto, Arthur C. "Basic Actions," *American Philosophical Quarterly*, 2 (April, 1965), pp. 141-148.

Dewey, John, "Human Nature and Conduct," *John Dewey on Education*, R. D. Archambault, editor. New York: Modern Library, 1964. Pp. 61-69.

Dilley, Frank B. "Predictability and Free Will," *International Philosophical Quarterly*, 9 (June, 1969), pp. 205-213.

Dubos, Rene. "Ethical Issues Involved in Genetic Manipulation and Biologic Conditioning," *The Ethics of Change: A Symposium*. Toronto: CBC Publications, 1969. Pp. 13-29.

Edwards, Paul. "Hard and Soft Determinism," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 117-125.

Edwards, Rem Blanshard. "Is Choice Determined by the Strongest Motive?" *American Philosophical Quarterly*, 4 (January, 1967), pp. 72-78.

Engler, Robert. "Social Science and Social Consciousness: The Shame of the Universities," *The Unsilent Academy*, Theodor Roszak, editor. New York: Pantheon Books, 1968. Pp. 182-207.

Enteman, Williard T. "Microphysics and Free Will," *The Problem of Free Will*, W. Enteman, editor. New York: Charles Scribner's Sons, 1967. Pp. 281-299.

Ewin, R. E. "Actions, Brain-Processes and Determinism," *Mind*, 77 (July, 1968), pp. 417-419.

Foot, Philippa. "Free Will as Involving Determinism," *Free Will*, S. Morbenbesser and J. Walsh, editors. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962. Pp. 71-80.

Gerard, R. W. "Your Brain and Your Behavior," *Adventures of the Mind*, Third Series. New York: Vintage Books, a Division of Random House, 1959. Pp. 81-93.

Hare, William. "Responsibility and Rights in Contemporary Educational Theory," *Educational Theory*, 22 (Summer, 1972), pp. 303-308.

Hintz, Howard W. "Some Further Reflections on Responsibility," *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 176-179.

Hobart, Charles W. "Freedom and the School," *Canadian Educational Research Digest*, 8 (September, 1968), pp. 269-282.

Hobbes, Nicholas. "Science and Ethical Behavior," *American Psychologist*, 14 (1959), pp. 217-225.

Hospers, John. "What Means This Freedom?" *Determinism and Freedom in the Age of Modern Science*, Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 126-142.

Hunt, Rolf E. "The Operating Image of Man," *International Journal of Religious Education*, 44 (March-April, 1968), pp. 3-4.

Immergluck, L. "Determinism-Freedom in Contemporary Psychology," *American Psychologist*, 19 (1964), p. 276.

Kessel, Frank S. "The Philosophy of Science as Proclaimed and Science as Practiced: 'Identity' or Dualism'?" *American Psychologist*, 24 (1969), pp. 999-1005.

Lehrer, Keith. "'Cans Without Ifs," *Analysis*, 29 (October, 1968), pp. 2-32.

Malcolm, Norman. "Behaviorism as a Philosophy of Psychology," *Behaviorism and Phenomenology*, T. W. Wann, editor. Chicago: The University of Chicago Press, 1964. Pp. 141-162.

Mardiros, A. M. *Freedom.* Edmonton, Alberta: University of Alberta. Mimeographed copy, Philosophy 351 (December, 1969),

Montifiore, Alan. "Moral Philosophy and the Teaching of Morality," *Harvard Educational Review*, 35 (Fall, 1965), pp. 435-449.

Mowrer, O. H. "Guilt in the Social Sciences," *Psychiatry and Responsibility*, H. Schoeck and J. W. Wiggins, editors. Princeton, New Jersey: D. Van Nostrand Company, Inc., 1962. Pp. 39-61.

Nagel, Ernest. "Determinism in History," *Determinism, Free Will and Moral Responsibility*, Gerald Dworkin, editor. Englewood Cliffs, N.J.: Prentice-Hall, 1971. Pp. 49-81.

Nash, Paul. "Authority of Determinism: The Freedom to Choose," *Authority and Freedom in Education: An Introduction to the Philosophy of Education*. New York: John Wiley & Sons, Inc., 1966. Pp. 211-287.

Nowell-Smith, P. H. "Free Will and Moral Responsibility," *Mind*, 57 (1948), pp. 45-61.

Ofstad, Harald. "Recent Work on the Free-Will Problem," *American Philosophical Quarterly*, 4 (July, 1967), pp. 179-207.

Peters, R. S. "Education as Initiation," *Philosophical Analysis and Education*, R. D. Archambault, editor. London: Routledge & Kegan Paul, 1965. Pp. 87-110

_____. "What is an Educational Process?" *The Concept of Education*, R. S. Peters, editor. London: Routledge & Kegan Paul, 1967. Pp. 1-23.

Pohlman, Edward. "Counselling Without Assuming Free Will," *Personnel and Guidance Journal*, 45 (November, 1966), pp. 212-216.

Popper, Karl R. "Unity of Method in the Natural and Social Sciences," *Philosophical Problems of the Social Sciences*, David Braybrooke, editor. New York: The Macmillan Company, 1965. Pp. 32-41.

Rizzo, Nichola D. "The Significance of von Bertalanffy for Psychology," *The Relevance of General Systems Theory*, Ervin Laszlo, editor. New York: George Braziller, 1972. Pp. 137-144.

Saunders, John Turk. "The Temptations of 'Powerlessness'," *American Philosophical Quarterly*, 5 (April, 1968), pp. 100-108.

Sayre, K. M. "Philosophy and Cybernetics: Introduction," *Philosophy and Cybernetics*, Frederick J. Crosson and Kenneth M. Sayre, editors. New York, New York: Simon and Schuster, 1967. Pp. 3-33.

Scheffler, Israel. "Philosophical Models of Teaching," *The Concept of Education*, R. S. Peters, editor. London: Routledge & Kegan Paul, 1967. Pp. 120-134.

Schiller, F. C. S. "Freedom and Responsibility," *The Problem of Free Will*, W. F. Enteman, editor. New York: Charles Scribner's Sons, 1971. Pp. 240-254.

"Second Thoughts About Man: The Discovery of Human Nature," *Time*, 102 (April 2, 1973), pp. 48-51.

Sher, George. "Causal Explanation and the Vocabulary of Action," *Mind*, 82 (January, 1973), pp. 22-30.

Silverman, Herbert. "Determinism, Choice and Responsibility and the Psychologist's Role as an Expert Witness," *American Psychologist*, 24 (January 2, 1969), pp. 5-9.

Skinner, B. F. "Behaviorism at Fifty," *Behaviorism and Phenomenology*, T. W. Wann, editor. Chicago: The University Press, 1964. Pp. 79-108.

"Skinner's Utopia: Panacea, or Path to Hell?" *Time*, 100 (September 20, 1971), pp. 55-66.

Smart, J. J. C. "Free Will, Praise and Blame," *Mind*, 70 (July, 1961), pp. 291-306.

Strike, Kenneth . "Freedom, Autonomy and Teaching," *Educational Theory*, 22 (Spring, 1972), pp. 262-277.

Studdiford, Walter B. "Willing in Androids," *The Concept of Willing*, James Lapsley, editor. Nashville, New York: Abingdon Press, 1967. Pp. 116-176.

Taylor, Richard. "Determinism and the Theory of Agency," *Determinism and Freedom in the Age of Modern Science*. Sidney Hook, editor. New York, N.Y.: Collier Books, 1961. Pp. 224-230.

_____. "I Can," *Free Will*, Sidney Morgenbesser and James Walsh, editors. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962. Pp. 81-90.

"Three Ways to Get Rid of Fat," *Reader's Digest*, 102 (January, 1973), pp. 105-110.

Trueblood, Elton D. "Contemporary Psychiatry and the Concept of Responsibility," *Psychiatry and the Concept of Responsibility*, H. Schoeck and J. W. Wiggins, editors. Princeton, New Jersey: D. Van Nostrand Company, Inc., 1962. Pp. 20-35.

Vesey, Godfrey. "Conditioning and Learning," *The Concept of Education*, R. S. Peters, editor. London: Routledge & Kegan Paul, 1967. Pp. 61-72.

Waks, Leonard. "Knowledge and Understanding as Educational Aims," *The Monist*, 52 (January, 1968), pp. 104-119.

Williams, B. A. O. "Freedom and the Will," *Freedom and the Will*, D. F. Pears, editor. London: Macmillan, 1969. Pp. 1-13.