73-22,747

TELLES, Lawrence, 1939-
SOME PROBLEMS IN THE CONCEPT OF A THEORY OF EDUCATION.

The City University of New York, Ph.D., 1973
Philosophy

SOME PROBLEMS IN THE CONCEPT OF

A THEORY OF EDUCATION

by

Lawrence Telles

A dissertation submitted to the Graduate Faculty in Philosophy in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1973

The Graduate School and University Center
of the City University of New York

Ph.D. Program in Philosophy
Graduate Center: 33 West 42 Street, New York, N.Y. 10036
212/790-4246

This manuscript has been read and accepted for the Graduate Faculty in Philosophy in satisfaction of the dissertation requirement for the Doctor of Philosophy.

May 23, 1973
date

Andrew McLaughlin
PROF. ANDREW McLAUGHLIN LEHMAN COLLEGE
Chairman of Examining Committee

May 23, 1973
date

Abraham Edel
PROF. ABRAHAM EDEL
Executive Officer

Prof. Peter J. Caws (Hunter)

Prof. Ernest Nagel (Columbia and Graduate Cente

Prof. Andrew McLaughlin (Lehman)

Abstract

SOME PROBLEMS IN THE CONCEPT OF A THEORY OF EDUCATION

by

Lawrence Telles

Adviser: Professor Andrew McLaughlin

The thesis of this dissertation is that a theory of education ought to be viewed as a conjunction of normative principles and empirical theories such that issues of fact and issues of value can be distinguished.

I take the function of a theory of education to be to rationalize educational decisions.

The introductory chapter is a review of some issues and problems to be found in the literature on the philosophy of education.

Chapter One describes some ways in which various types of theory might or might not be relevant to educational decisions. I eliminate from consideration epistemological theories and question the value of theories and question the value of theories without distinguishable

normative and empirical parts.

Chapter Two concerns the meaning of the term 'education' taken as the goal of a process. I distinguish 'education' from 'learning' and conclude that education is a collection of learning experiences which have value.

Chapter Three through Chapter Five concerns the relationship between normative principles, the meaning of 'education' and the goals of education.

Chapter Six discusses the boundaries of the domain of education. I see this as set by the goals of education and thus in turn by the normative values we bring to educational decisions. Empirical theories often are educational theories but no empirical theory could be a theory of education.

The conclusion sketches in what a theory of education, properly so called, would be like.

TABLE OF CONTENTS

CHAPTER PAGE

I. EDUCATIONAL DECISIONS AND EDUCATIONAL THEORIES . . 8

A. Example of an educational decision

1) Considerations independent of theory

2) Considerations dependent on theory

3) Considerations dependent on educational theories

B. Theories possibly relevant to educational decisions

1) Empirical

2) Normative

3) Epistemological

C. Examples of "theories of education" in one sense of this term

II. THE MEANING OF "EDUCATION" 15

A. Distinction between "learning" and "education"

1) Technical definition of "learning"

2) Normative aspect of the meaning of "education"

B. Definition of "education" as "a collection of learning experiences which have positive value"

III. EDUCATION AND NORMATIVE PRINCIPLES 30

A. Implications for education of taking value to be determined by the benefit of persons

B. Other possibilities

1) Value determined by the benefit to the State

2) Value determined by the benefit to God

C. Implications of immoral pedagogical practice

D. Learning ought to be conscious and voluntary

E. Learning ought to lead to autonomy

IV. EDUCATION AND COGNITIVE STRUCTURES 50

A. Examples of structured learning

B. Taking "education" to be the development of the largest scale cognitive structures

C. Taking "education" to be the ongoing development of cognitive structures

D. Some technical meanings of "cognitive structure"

1) The pattern or grammar-like model

2) The cybernetic and intentional model

E. The relation of theoretical conceptions of cognitive structure to educational practice

1) The traditional teaching model

2) The progressive model

F. Axiological grounds for opting for middle sized cognitive structures as constituting education

G. Definition of "education"

V. OTHER VIEWS 65

A. Education as acculturation

B. Education as socialization

C. The paradox of education

D. Aristotle's characterization of education

VI. THE DOMAIN OF EDUCATION 71

CHAPTER PAGE

A. Implications of setting the boundaries of the domain of education

B. Ways of marking out a domain

1) Based on traditional practice

2) Based on the range of application of a theory

3) Based on the activities which lead to a goal

C. Illustrations of VI.B. 1, 2, and 3 with respect to medicine

D. Illustrations of the application of B.3 with respect to education

1) Should training be considered an educational practice?

2) Are economic problems educational problems?

3) Are social dynamics an educational concern?

4) Are individual psychodynamics an educational concern?

E. Constraint as a subjective concept

F. Function of paradigms

VII. EDUCATIONAL THEORIES AND THEORIES OF EDUCATION . . 88

A. The purpose of a theory of education is to rationalize educational decisions

B. Functions of such a theory

1) To generate explanations and testing procedures for decisions

CHAPTER PAGE

2) To provide a conceptual structure for organizing observations, beliefs and predictions

3) To demarcate the range of application of laws

C. There is no theory with education as its proper domain of education

D. Almost any theory might be usefully applied in the domain of education

E. Application and evaluation of theory in the domain of education

VIII. CONCLUSION 104

A. A theory of education

1) Is not any particular theory

2) Is a conjunction of theories

3) An idealization

4) A bounded system of theories

B. An example

C. An example from Dewey

A little Item About Education

On page five there was a little story from Washington to the effect that the senior senator from Minnesota had introduced a Federal aid bill for the construction of schools.

Oh, the assumptions underlying this! That there were known goals of education; and that we knew something about how to achieve them. That school buildings did not probably operate counter to any plausible goals and methods you might mention. That the intervention of the state in financing education was not immediately disastrous to the whole enterprise (if there were such an enterprise); and that a man like a senator from a place like Minnesota . . . well, these erroneous assumptions were so thick and ramified that one hardly knew at what word to pass a hand across his eyes and say, "Oof! It's too thick."

Paul Goodman, The Empire City, p. 503

INTRODUCTION

It has become traditional to complain about the work done in the area of philosophy of education. While it is difficult to locate just what the problem is, it is easy to say what the problem is not. It is not with the particular philosophers who have worked in this area. The list, after all, begins with Plato and includes Augustine, Kant, Mill and Dewey and on the contemporary scene includes philosophers of the stature of Peters and Ducasse. Furthermore, the problem is not an absence of direct contact with the practice that generates the metatheoretical problems. Most philosophers are educators.

Despite this, work in the philosophy of education tends to suffer from three kinds of difficulty. Much of it is composed of general recommendations so broad as to be useless; for example, Whitehead in The Aims of Education suggests that

> In the teaching of science, the art of thought should be taught; namely, the art of forming clear conceptions applying to firsthand experience, the art of divining the general truths which apply, the art of testing divinations, and the art of utilizing general truths by reasoning to more particular cases of some peculiar importance.[1]

---

[1]Alfred Whitehead, The Aims of Education (New York: Macmillan Co., 1929), p. 62.

Among the examples of more precise and careful work, classified as philosophy of education, the context of education is often used to provide examples of more general philosophic issues which could be raised indifferently by means of other subject matter. An example is the whole of Part One of Louis Reid's Philosophy of Education which would be substantially unchanged if all the references to education were removed. Further, there is no consistent building on broad philosophical views in the rest of this work to produce greater understanding of specifically educational issues. Certainly a knowledge of, say, moral philosophy might be helpful at some time to an educator, but that doesn't provide a reason for calling moral philosophy philosophy of education, only that it is not clear in what sense it is philosophy of education.

Work that escapes these two categories tends to suffer from a worse difficulty; that of being so restricted in focus that answers to critical and fundamental questions are presupposed without discussion. An example is Scheffler's The Language of Education. In that work "education" is taken as equivalent to "schooling" with no questions raised about whether conclusions about the logic of educational discourse follow from an analysis of the language which describes the phenomena of educational institutions.

Virtually, all philosophy of education written in the analytic tradition falls into either the second or the

third category. The representatives of this tradition which I have in mind are, besides Reid and Scheffler, Kingsley Price and R. S. Peters.

In writing what follows I have experienced the pull in all of the directions I have described above. Much of what follows remains unhelpfully vague. Much also concerns problems not specific to education. Moreover, I have experienced my greatest difficulties with the most fundamental definitions and distinctions even when they finally turned out to be quite simple. With respect to this last, having what most people would call an education and being myself an educator, it was necessary for me to struggle -- a struggle which is by no means over -- to become clear about what I meant by the term "education." The problem is not peculiar to me. It is a revealing exercise to survey the literature and to notice the systematic avoidance of this most basic task: that of defining "education."

There is another curiosity about the literature in the area of philosophy of education and one which is fundamental to this dissertation. The work with which I am familiar tends to mix discussion about disciplines which are not specific to education but which have application in the educational domain (e.g., psychology, sociology, political science) with some sort of educational credo. The disciplines applied to education certainly have an historical development. It is not at all curious to find

that Dewey's sociology is more sophisticated than Rousseau's to take one example.

The educational credos, on the other hand, tend to be remarkably constant in their broad recommendations. This is so even when those credos are wedded to empirical beliefs. Consider the notion that the role of teacher and the role of student ought not to be seen as active and passive roles respectively. This tends to be generally agreed upon by educational philosophers and to be stated by them as simultaneously:

1. Statements in the domain of empirical psychology, i.e., humans can only learn, or can only learn certain kinds of things, as the the result of a certain kind of activity.
2. A statement about how learners (students, children) ought to be treated.
3. An important discovery.

For example, Plato:

> Then what belongs to calculations and geometrics and all the education which is necessary as a prelude to a dialectic must be set before them while still young, and not as a scheme of instruction which they must be compelled to learn . . . the free man must not learn anything coupled with slavery. For bodily labours under compulsion do no harm to the body, but no compulsory learning can remain in the soul.[2]

---

[2]Plato, Republic, Book VII; 535 d-3, from B. Jowett, trans. The Dialogues of Plato, Vol. II (4th ed.; Oxford: Clarendon Press, 1953), p. 351.

Augustine:

> But when (the teachers) have explained, by means of words, all those subjects which they profess to teach, and even the science of virtue and wisdom, then those who are called pupils consider within themselves whether what has been said is true. This they do by gazing attentively at that interior truth, so far as they are able. Then it is that they learn. . . . And because they are quick to learn internally following the prompting of the one who speaks, they think they have learned externally from the one who was only a prompter.[3]

Rousseau:

> Teach your scholar to observe the phenomena of nature; you will soon rouse his curiosity, but if you would have it grow, do not be in too much of a hurry to satisfy this curiosity. Put the problems before him and let him solve them himself. Let him know nothing because you have told him, but because he has learnt it for himself. Let him not be taught science, let him discover it. If ever you substitute authority for reason he will cease to reason; he will be a mere plaything of other people's thoughts.[4]

Kant:

> That is most thoroughly learned and best remembered which one learns himself . . . . We must see to it, anyway, that rational knowledge be drawn out of them rather than introduced into them. The Socratic should furnish the rule for the catechetical method. It is, to be sure, rather slow; and it is difficult so to arrange it that at the same time that knowledge is being drawn out of one mind the others shall learn something.[5]

---

[3]Augustine, De Magistro, Book XIV; from J. Quasten and J. Plumpe, eds., Ancient Christian Writers, No. 9 (Westminster, Md.: Newman Press, 1950) p. 46.

[4]J. J. Rousseau, Emile, Book III, B. Foxley trans. (New York: Everymans Library, n.d.) p. 47.

[5]Immanuel Kant, "Lecture Notes on Pedagogy: from E. Bucher, The Educational Theory of Immanuel Kant (Philadelphia: J.B. Lippincott Co., 1904) p. 76.

Yet Johann Herbart and John Dewey in their time, not to speak of A. S. Neil and John Holt on the contemporary scene, were thought of as revolutionary. In terms of the educational literature, they were not. In terms of educational practice, they still are. One wonders if educators ever study the literature of education.

Similarly, the notion that the education of the individual and the state of society are inextricable is insisted upon from Plato to Skinner.[6] Piaget's notion that children are not incompetent adults likewise runs through the entire educational literature.[7]

My sense is that the same views seem always to be news because of the confusion which results from failing to separate empirical beliefs about learning from beliefs about what individuals and society ought to be like. Where statements about what humans are like are confused with statements about what they ought to be like, it is difficult to apply either the methods for evaluating scientific statements or the methods for evaluating moral statements. Such views then become perennially rediscovered opinion rather than part of the body of knowledge which exists with respect to educational practice. In this

---

[6]Plato, op. cit. and B. F. Skinner, Science and Human Behavior (New York: Macmillan Co., 1953).

[7]Jean Piaget, The Language and Thought of the Child (New York: Meridan Press, 1955).

dissertation I attempt to remedy this by suggesting a model for an integrated theory of education.

My attempt here is to do philosophy of education in the sense of dealing with philosophic questions which have central reference to the problems of educational decision making. That includes discussion of the nature and type of theories which have application to educational decision, conceptual analysis of some educational terms which would be used in talking about such normative and empirical theories and the provision of an overview of the educational domain.

Thus this dissertation deals with:

1. The question: What is the meaning of the term "education."

2. The question: What is the domain of education?

3. An examination of the nature and structure of a theory of education.

My working assumptions have been that there is some bounded definable thing or process appropriately called "education" and that there is, or could be, a theory which would appropriately be called a "theory of education." With respect to the second assumption the results of this inquiry indicate that in at least one important sense of "theory of education" I was wrong: There is no such thing. In a different, but also important, sense there is.

CHAPTER I

EDUCATIONAL DECISIONS AND EDUCATIONAL THEORIES

Consider a case in which a teacher makes an educational decision. Let us assume that in some school with one teacher and one student the teacher decides to have no school on Good Friday. Assume also that the teacher is convinced that the decision will promote educational goals.

To decide not to have school might not be an educational decision. Theological considerations might take precedence over the desirability of the school education for that day. Such a consideration requires no explanation, (it would be unfortunate not to have school but God comes first) although it might require theological defence. However, built into the example is the fact that we are working with a decision made on the basis of educational goals.

We can then infer that something educational is expected to result from not having school.

It might be that the intention of the decision is to have the student learn that a miracle occurred in the past and that this is evidence for some collection of theological beliefs. However, if the intention of the teacher is to have the student learn this then the teacher must make the information that the miracle in question occurred, and the relation of this information to

theological beliefs, available to the student. Having done that, we are deprived of the justification of the day off unless the lesson can be learned by giving the day off. That might well be the case. If there is a rule or a law that religion cannot be taught in school, the student might then be referred on that day to another institution which is not a school under the provisions of that rule or law; e.g., church or family. It may also be that the day off might be required to illustrate the significance of the historical event.

This example is certainly simplified over most ordinary classroom situations or even a one to one tutorial situation. Still, even in this example, a justification of the decision might be given in terms of a large number of considerations; historical beliefs about what happened two millenia ago, the theological implications thereof, the legal structure in which the teacher operates, the teacher's beliefs about what the student ought to learn as part of the education that he ought to receive, and psychological theories about the probable effects with respect to this education that the decision will have.

It is easy to see how any one of a number of different beliefs or theories, held by the teacher, could change the decision. For example, whether the teacher believes that the Son of God was capitally punished on Good Friday might well affect the educational decision although the determination of that question falls in the domain of history or theology. Or, if the student's

parents are Druids that might change the decision since the day off would not be likely to accomplish its intended goal. In that case the teacher might want to examine the moral beliefs he holds to see whether he ought to violate the law and teach the "true" religion as part of his commitment as an educator.[1] Here the teacher must make a moral decision.

It is important to notice here that the teacher's moral decision is a separate decision from axiological decision regarding the value of the learning, although how valuable the learning is may have to be weighed in making the moral decisions. In fact, the moral decision in this case would be whether to make an educational decision.

Only some considerations here are considerations of theory and only some of those refer to theories of education. Even if there is a law against teaching religion in schools it is peculiar to say that legal theory is part of the theory of education and it is obvious that meteorological theory is not a part of the theory of education even though a snow storm might force the cancellation of a school. Both civil laws and snowfalls may affect educational decisions, but it is unlikely that relevant theories would be appealed to in the making of an educational decision. Without being inconsistent, the teacher might dispute the legal theory on the basis of

---

[1]Compare the issues in John Scopes, "Monkey Trial."

which the decision to exclude religious education from school is made and still obey the law, the obeying of which law would affect the teacher's educational decisions.

Some considerations relevant to the decision whether or not to have school are theoretical in nature and with respect to those, the question is whether they are theories of education. At this point I have not made any distinction between a theory of education and an educational theory. I will follow general usage which seems to be that a theory of education is a theory with education as its domain, i.e., the boundaries of the domain of education are coextensive with the range of application of the theory. An educational theory is a theory with application in the domain of education. A beginning can be made toward understanding the nature of a theory of education by grouping the educationally relevant considerations which might be used in making a decision in the domain of education.

Reasons for giving the day off could be provided in terms of educational goals; e.g., in order that the student learn about the Son of God, or in terms of the procedures or techniques used to achieve that goal; e.g., children treat days off from school as significant events with significant causes and these are long remembered. Alternatively the relevant considerations might be put in terms of questions about possible subject matter and procedure. A teacher might wonder whether students ought to be taught

theological beliefs at some specific time and if they should be taught such beliefs, how one might best go about doing this.

Such groupings of considerations can be characterized as being in terms of goals and/or techniques. One could then take theories relevant to the determination of educational goals and educational techniques to constitute the theory of education. Providing explanations and generating predictions are functions of those empirical educational theories which are relevant to the determination of techniques. I will return to a consideration of such theories in my concluding chapters. I am also suggesting that a theory of education should contain theories relevant to determining the goals of education. I will discuss such theories in the following three chapters.

In general, speaking of the relevance of theories to goals raises issues which are both too broad and too complex for treatment here. I can, however, suggest some of the issues which call for exploration with regard to their consequences in the domain of education.

One such issue is raised by Dewey in those places where he treats axiology as though it were a social science.[2] Dewey's view essentially obviates the distinction between the kinds of theories relevant to goals and the kind

---

[2]This is clearest in: John Dewey, The Theory of Valuation, especially Chapters VI, VII and VIII, (Chicago: University of Chicago Press, 1939).

relevant to techniques in the domain of education. The antithesis of Dewey's position, a view represented by Hume[3], would deny that any rational, let alone theoretical, considerations can be brought to bear on the determination of goals.

Independent of the two positions just referred to, there is a serious question here as to the meaning of the term "theory." I am here taking theories relevant to techniques and theories relevant to goals and treating them collectively as a theory of education although the term "theory" in the two cases would be taken by some to have different meanings. This raises questions in the domain of theory of theories as to whether there is a relationship between these two types of theory and what the relationship is.

I will try to blunt the impact of these questions by making my claim that a theory of education should contain normative principles which set the goals of education. I will not be directly concerned with the origin or justification of those principles. When I talk of that part of a theory of education which is related to the goals of education I shall be referring to those normative principles which have an effect on educational decisions. I am reluctant to simply drop the use of the term "theory" altogether, in part in the interest of consonance with the literature in which normative principles

---

[3]Especially: David Hume, An Enquiry Concerning the Principles of Morals, Appendix I, (Oxford: Clarendon Press, 1894).

are often referred to as, or as part of, a theory of education.[4]

Even Dewey makes some distinctions between the "procedures and aims of education," and uses the terminology of "end" and "end in view" in much the way I will use the term "goal."[5] The problems raised by Dewey in this area occur when the focus is on the continuity between the determination of the goals of education and the broadest considerations in value theory. In what follows I will make some suggestions about the ways in which educational goals are related to broader axiological considerations.

There are several other issues which should be mentioned before moving on to characterize a theory of education in order to avoid what I write here being idiosyncratic. For to claim, as I have, that a theory of education is composed of theories relevant to the determination of techniques and goals is to eliminate at least two other possibilities from contention as components of a theory of education.

One such possibility can be illustrated in the work of Dewey. While Dewey most often talks of theories either in the sense of empirical or normative theories, or puts these two together, some of his more intriguing moments involve inference from epistemological or even metaphysical premises to pedagogical practice in ways which are as

---

[4]CF. the quotation from Makarenko below p.

[5]Dewey, Theory of Valuation, Section I.

suggestive as they are unclear. For example, at several points in My Pedagogical Creed, Dewey uses views about the nature of reality and the nature of knowledge of reality as educational directives. He says that "To prepare a child for the future it is necessary to give him command over himself since the future is unpredictable,"[6] and that "Education should incorporate rather than abstract from reality."[7] One gets a sense, if only just a sense, of the way in which, for Dewey, philosophy was the "theory of education in its most general phases."[8]

In a discussion by Price, Dewey's views are put in a context in which the claim is made that epistemological views are relevant to educational decisions, although it takes some rather free interpretation and expansion to turn what Price has written into a defense of this view. Price says:

> In order to understand the relationship between epistemology and education, we must bear in mind that epistemology concerns itself with the nature of knowledge and with the nature of the procedures by which it may be achieved. Of these two parts of epistemology, the second has been thought, primarily, to bear on education. A considerable number of philosophers have endeavored to make use of their answers to the question "What are the methods by which knowledge may be secured?" for educational purposes. Dewey believed that all knowledge is achieved by engaging in the "scientific method"--apparently the hypothetico-deductive procedure with

---

[6] In F. W. Garforth, John Dewey; Selected Educational Writings, (London: Heinemann, 1966) p. 47.

[7] Garforth, p. 51.

[8] John Dewey, Democracy and Education, (New York: Macmillan Co., 1944) p. 318.

> which we are all familiar; he recommended, accordingly, that instruction be altered to fit that pattern. In this way, some philosophers have derived from epistemological reflection a theory of learning and instruction, and a consequent recommendation of it, from the methods epistemology lays down.[9]

This is a bit vague, but it might be spelled out by relying heavily on the phrase: "Dewey believed that all knowledge is achieved by engaging in the 'scientific method'." The view would then be that the character of beliefs is different, depending on the way those beliefs are obtained. Beliefs inculcated through rote memorization of dogmas or through threat, etc., do not count as knowledge. As an example, according to this view, there would be a difference in the belief that the earth is round when that is learned by rote and when it is learned by guided observation of ships sailing over the horizon, eclipses, etc. The sentence: "The earth is round.", which is held to be true, is the same, but this sentence is held as a belief, i.e., it is fragile in some way when it is a received dogma, but it is knowledge when it is obtained through the student's personal inference from data. It might then be taken to follow that if the goal of some educational episode is to provide students with knowledge, classroom procedures ought to rely on the "scientific method."

Consider also from Price:

---

[9]Kingsley Price, Education and Philosophic Thought, 2nd edition (Boston: Allyn and Bacon, 1967), p. 14.

> Plato held that knowledge is reason's illumination of supersensible objects--the"ideas" or "forms"--and he was obliged, consequently, to contend that the method of knowledge is rationalistic in character. While he did not conclude that instruction and learning must pursue such a rationalistic route, what he did contend about the nature of coming to know is different from what it would have been had he believed that the objects of knowledge are, let us say, denizens of the observable world. Epistemological reflection on education attempts to derive from a study of teh method of knowledge and its nature a description of the procedures by which learning may be furthered, and a consequent recommendation that such courses be pursued in the schools.[10]

The view I have glossed onto Dewey embodies a stronger claim than the view that Price attributes to Plato. With respect to the Platonic position, if I take "the procedures by which learning may be furthered" to be the content of, or deductions from, a learning theory or a theory of instruction then (1) I fail to see how such theories can be derived from epistemological views and (2) if there were such derivative theories, what would be relevant to educational decisions would be the derivative theory and not the epistemological theory from which it was derived.

With respect to the inference from a pragmatist epistemology to educational practice I want to put essentially the same point in different words.

The "scientific method" involves some sort of verification procedure. If we apply such a procedure to the claim that the "scientific method" yields knowledge (as opposed to some other methods), we must find some

---

[10]Price, loc. cit.

empirical data to reveal the difference which provides the distinction between knowledge and belief and which provides information about how the various states are produced. If this can be done we would then have distinguishable belief states, scientific laws which apply to them and a recommendation that educational practice ought to promote one kind of belief state, called knowledge, in preference to others. But we have now left the domain of epistemology for empirical psychology and some value statement(s). Science and values yield decision for practice, not epistemological views.

The sense in which Price raises the question of the relation of epistemological theories to educational practice is a variety of the very difficult question of the relationship of philosophical views to scientific theories and practical action.[11] I take it as far from demonstrated what the relationship is or even that there is a relationship between epistemological views and educational decisions. I am concerned with theories which affect educational decisions. I would not consider such theories as part of a theory of education until such a relationship is demonstrated.

I want to make it clear that my claim is that there is no obvious way of inferring educational decisions from epistemological theories. I recognize that there are all sorts of connections between epistemology and education.

---

[11]The best discussion I know of this issue is in Praxis and Action by Richard Bernstein, especially Part One.

Epistemology and education do share an ontological language: the language of beliefs, facts, knowledge, etc. I was initially included to take epistemological theories as central to educational decisions on this basis.

Also, the content of the education one receives may have an effect on the covert or overt epistemological views one brings to the world. Those educated in the tradition of Duhem, Peirce and Quine are likely to view questions of truth, evidence and justification rather differently than those exposed largely to Descartes, Husserl and Merleau Ponty. Even in this case I would not make bets on what intellectual moves such disparately educated people make when they claim to know, or to justify their beliefs, with respect to educational practice. However, this is to consider the possible effect that education may have on epistemological views, not the effect that epistemological theories may have on educational decisions.

Having failed to find any systematic inferential connection between epistemological theories and educational decisions, I am included to locate the suggestiveness of claims about such a connection to the shared ontological language mentioned above, and to the area of temperament. Dewey,to take the best example, is charmingly undogmatic and he brings this characteristic to his epistemology and to his experiments in pedagogy as well as to other areas discussed in his writings. The source seems to be Dewey,

not a philosophic system.

The argument that educational practice can be inferred from epistemological theories must be provided before it can be evaluated.

Another candidate for the role of component or content of a theory of education is what is, perhaps, most often referred to under the heading "theory of education." Consider the following collection of quotations which represent some of the more sophisticated examples of what often count as theories of education.

> We can therefore hope for new findings in epistemology,[12] if we use as our starting point powers of the mind instead of memories and go on to improve our education of the coming generation by being allies of their functionings rather than followers of the justification by some adult of what he thinks.[13]

> It is now generally recognized that the education which people receive must be appropriate to the environment in which they will grow up and spend their adult lives. It is only if people understand the conditions in which they live that they can develop the ability to act intelligently and creatively.[14]

> I had ventured to question the correctness of the generally accepted theory of those days, that punishment of any sort is degrading, that it is essential to give the fullest possible scope to the sacred impulses of the child, and that the great thing is to rely solely upon self-organization and self-discipline. I had also ventured to advance the theory, to me incontrovertible, that so long as the collective and the organs of the collective,

---

[12]Epistemology" here refers to some sort of descriptive theory of learning, the details of which are never spelled out.

[13]Caleb Gattegno, What We Owe Children, (New York: Avon, 1970) p. 170.

[14]Dialogue on Education, (New York: Bobbs Merrill, 1967) p. 15.

> had not been created, so long as no traditions existed, and no elementary labour and cultural habits had been formed, the teacher was entitled--nay was bound!--to use compulsion.[15]

When such statements are referred to as theories of education, "theory" is being used in something like the original sense of theoria in Greek. A theory, in this sense, is a kind of overarching viewpoint, a stance with respect to matters pedagogical. It is around theories in this sense that "schools" of education form, often generating divergent kinds of practice with some nominal acknowledgement of dedication to the original statements of theoretical orientation or "philosophy." An example is the progressive movement, ideologically grouped around formulations by Dewey, generating some pedagogical practices which were repudiated by Dewey himself. Dewey's repudiation is significant since it points up the difficulty in inferring practice from theoretical formulations of this type.

I will return in the final chapter to reconsider statements of this sort as possible theories of education. Here I wish to offer some reasons for claiming that they are not adequate theories of education in the sense of "theory of education" offered so far.

One reason, as in the case of epistemological theories, is that there is no evident procedure for

---

[15]Anton Makarenko, The Road to Life, quoted in Bowen, Soviet Education (Madison, Wisconsin: University of Wisconsin Press, 1965) pp. 82-83.

generating practice from such theories. Even the last quotation above--from the Soviet educational theorist, Anton Makarenko--in which there is a recommendation for teachers to use compulsion, fails to make clear what the implications of this recommendation are for practice. In his practice, Makarenko did use forms of compulsion, i.e., physical force, which were out of favor, but his colleagues were using forms of compulsion which were in favor, e.g., peer group social pressures. I am not personally familiar with any educational institution which does not make use of some sort of compulsion, that is, compels certain kinds of behavior and compels the absence of other kinds of behavior. What is never made clear by Makarenko is what sort of compulsion to use and the rationale for when and why it ought to be used.

The problem here, as in other examples of such "theories" is not simply vagueness. Making such theories less vague; more specific in terms of their relation to practice, would make them theories of a different sort. The statements of educational theory in the quotations above seem to me to get their suggestive power by being amalgams of normative principles and empirical theories which resist division into their constituent parts. Their suggestive power is purchased at the expense of the utility which comes from clarity about when one is evaluating goals and when one is, say, making predictions. In so far as such theories of education can be reconstructed as principles

and theories regarding the goals and techniques of education, i.e., in so far as they provide good reasons for educational decisions, they are the kind of work I will categorize as a theory of education.

In the example given of an educational decision, we can see that one grouping of considerations relevant to educational decisions would be in terms of goals and techniques. The suggestion I will be defending in the conclusion of this dissertation is that a theory of education should be described as a conjunction of principles and theories relevant to goals and techniques.

CHAPTER II

THE MEANING OF "EDUCATION"

One of the several meanings of the term "education" is similar to such terms as "justice" and "health" in that the definition of the term is a description of a goal. In this sense of "education" talk about a theory of education calls for a description of the goals of education. I have suggested in Chapter I that a theory of education should include the principles on the basis of which those goals are set. I hope to show that finding such principles provides the basis for defining "education."

I shall begin by defining "education" in the sense above; that is where education is the result of a process. "Education" may also be used as the name of the process and in its adjectival form may modify "technique," "institution," etc. In using "education" only in the sense of the result of a process, I do not mean to rule out other usage. I only mean to restrict the discussion here to a size that I find manageable.

Whatever else is vague about the meaning of "education" it is clear that it involves learning. Where there is a distinction, "learning" is more often used non-normatively and "education" is used normatively. There seems to me to be good grounds for recommending

such a division of labor. In fact it strikes me as a curious feature of the literature on education that while some such distinction is frequently relied on between these two terms, it is rarely explicitly drawn. In Plato, for example, education is not simply learning, but learning about Reality. True education is concerned with the top half of the divided line in the Republic and the method for achieving an education is dialectic: a technique which leads to knowledge in and of that realm. This kind of distinction between learning and education is also found in Dewey where only that learning which leads to intellectual growth and the acquisition of social values of a democratic sort is termed education.

If, contrary to such usage, "education" is taken as "learning," simpliciter, then "a better education" could be taken to mean more learning and to make an educational decision would be to decide how to increase learning. That this will not do can be seen by considering what constitutes "learning more."

The notion of "learning more" would be unambiguous if there were some unit, like a "bit" in computer terminology which could be utilized. But "learning more" seems to make sense only in terms of learning more about something or learning more of some kind of thing.

In a clear sense, when I have learned the names of all the bones in the human body, I have learned more than when I have learned the names of only those in the wrist.

However, where different kinds of things may be learned, it is often unclear as to what counts as learning more. There is a sense in which I have learned more if I have learned the names of the nine endocrine glands instead of the eight bones in the wrist. By count I have one more "bit" of information. But have I learned more or less than in either of these cases when I have learned to set a fracture? This is more pointed in the question of whether I have learned more when I have learned one way of producing exquisite pain in people, one hundred and fifty way, or when I have learned that torture is wrong.

The notion of a quantifiable unit of learning is somewhat clarified by a reference to the distinction between learning how and learning that such that one might compare only one collection of learnings how with another collection of learnings how and never with a collection of learnings that.[1] Some of the oddness of comparison of amounts of learning seems to me to remain even given such a move because a comparison of the amounts of learning, in the context of making an educational decision, is often covertly, a comparison of the value of what is learned. In this lies the explanation of the fact that it is not always the case that learning more of some sorts of thing means having more, or a better, education. To put this

---

[1]For this distinction see Gilbert & Ryle, The Concept of Mind, Chapter II (London: Hutchinson Press, 1949).

another way: It is where "learning" is taken as a normative term that "learning" and "education" are difficult to distinguish.

There is a technical and non-normative sense of the term "learning." This sense, used consistently, would make it possible to refer to learning without ambiguity regarding questions of value. "Learning" is defined by psychologists, especially of the behaviorist school, as a changed probability of response or a modified and thereafter consistent response--physiological, verbal or emotional--to similar stimuli. Such a definition permits, at least potentially the quantification of learning in the sense essential for developmental and specifically learning theory.[2]

In the interest of consistency and coherence with standard technical usage, I will use "learning" as such a technical and non-normative term although that is to exclude the normative component which does occur in some usage. It is, or will become, clear that educational decisions have a normative component. It remains problematic whether "education" should be considered a normative term.

"Education" is often used in the sense that it is,

---

[2]I am leaving out, as not germane, attempts to further specify the characteristics of "learning." Any further specification would show that learning is not a single concept but rather a nest of concepts. See L. Siegal, ed., Instruction: Some Contemporary Viewpoints, (San Francisco,California: Chandler Press, 1967) pp.296-300.

or is the result of, some collection of learning experiences although not just any learning experiences. For example, when it is said that one or more students have failed to receive an education in school, what is meant is not necessarily that the students have failed to learn anything in school. They may have learned several forms of cheating, to despise poetry, how to shoot heroin, etc. Rather what may be meant is that they have failed to learn the sorts of things which the person making the remark thinks they ought to have learned. Alternatively, the same situation might be described as one in which the students were badly educated. The use of "education" to mean the "collection of what one has learned, good and bad" is one in which "education" is value neutral, but is the sort of thing which can, or rather should, be evaluated. The sense of "education" in which a bad education is no education is one in which ordinary usage carries the distinction between "learning" and "education" such that "education" is a normative term and "learning" is not. I will use "education" in the sense which has the normative component built in. That is, I will take "education" to refer to a collection of learning experiences which have value.

I do not mean to base this use, and the implicit recommendation for use, on a choice simply in the interest of consistency. "Education" used to refer to the goal of a process tends more frequently to have a normative sense than not. Further, as I suggested above, the sense of "education" as a normative term occurs in several of the

classic works on education and the philosophy of education, although it is rarely spelled out.

There is an additional reason for taking "education" as a normative term; that is the bearing this has on educational decisions. I think that it would be better to recognize "education" as a normative term and therefore recognize educational decisions as in part normative, rather than risk having what looks like a decision about increasing the amount of learning be, in fact, a decision about the worth of some learning.

To claim that educational decisions are normative is not the same as to make claims about any particular set of norms. Much of the literature on education is composed of prescriptions regarding educational values; prescriptions both about what is valuable to learn and what methods ought to be used to facilitate such learning.[3] In what follows, I will trace the implications, in terms of educational decisions, of taking education to be a collection of learning experiences which have some value. The particular examples of values and what they are instrumental for are meant to be illustrative although I believe that they incorporate contemporary norms and are defensible on that, if no other, basis.

---

[3]E.G., Edgar Friedenberg, Coming of Age in America, New York: Vintage Press, 1965), John Holt, The Underachieving School, (New York: Delta Press, 1969); Paul Goodman, Compulsory Miseducation and the Community of Scholars, (New York: Vintage Press, 1964).

CHAPTER III

EDUCATION AND NORMATIVE PRINCIPLES

I take the major implication of characterizing or defining "education" as a "collection of learning experiences which have value" to be that any attempt to characterize education will involve the imposition of the result of a choice of a choice of normative principles.

In this chapter and the two following I will explore some possible characteristics of education. I will take the normative principles upon which such characteristics are based to constitute thenormative part of a theory of education.

I will try to show that to characterize education more precisely by saying for what or whom the learning is valuable implies having made a choice of normative principles or, even more interesting, a choice with respect to the source of normative principles.

Certainly there are some things, the learning of which are valuable for everyone. That is what educational toys and liberal arts courses and designed for. However, it is not necessarily the case that everything that is desirable for someone to learn is desirable for everyone to learn. It may be valuable for me to learn what infantile fantasies operate unconsciously in my adult life.

In the most profound sense this may be educational for me. However, it not only may not be educational (i.e., valuable) for you to learn what fantasies I have, it may not even be educational for you to learn what fantasies you have. They may bear little on your feelings, thoughts and actions and might be so difficult to discover that little would be gained, in any way, from the process of finding them out.

There are other examples which illustrate how something may be educational for one person and not for another. Consider the requirement, which I had to meet, of being able to swim before I could be granted the degree of Bachelor of Arts. While I would be prepared to admit that knowledge of swimming (or auto mechanics, or juggling) can be essential to the education of some people, it does not seem to me that it stands as a valuable part of my own education.[1] To make the same point in a more controversial area: in terms of educational decisions, the following kind of question seems to me quite legitimate: given television, among other non-literary forms of communication, are reading skills a necessary part of universal education? Even if the answer to this question is: "Yes," it may not be necessarily "Yes."

Certainly there are cases where something is clearly more educational for one person than another. For example, many people have maintained that familiarity with the cultural history of Africans is more important

---

[1]Perhaps something metaphorical about sinking or swimming in the sea of life was intended.

educationally for Black students in the United States than similar material about Western Europeans. The justification of such a view could be that while it would be clearly educational for anyone to learn about culturally significant Africans (or Europeans), it would be more important for Blacks to learn about African culture because of the effect on their self image, role models, etc. This sort of information would be taken to have wider ranging payoffs in their total education and their ability to be educated than it has for others.

I will take it that "education" is not "learning simpliciter which is valuable simpliciter" but rather that educational value may be determined differentially for different people or different groups of people. It is important to notice here that to opt for a characterization of education such that what may be educational for me may not be for you is to have made a choice, if not about values per se then, at least, about the source of value. For I have been speaking about the values determined by the needs and purposes of people but there are other possibilities. As examples, consider the Platonic suggestion that the source of value that makes learning education is the requirements of a society or a State,[2] or Augustine claiming that the sources of value is the

---

[2]Plato, The Republic and The Laws, op. cit.

requirements of God.[3] In either of these last two examples one might make a case for the "educational" being the same for all.

The larger claim here is that any particular characterization of education or definition of "education" will turn out to be a choice with respect to what one takes as good or as of value. To substantiate this point consider some of the characterizations of education to be found in the literature.

R. S. Peters, in the Concept of Education, says

> . . . a teacher might try to condition children to "pick up" certain things without their realizing that they were picking anything up. In saying that this is not a process of education we would be implying that this is morally bad, because conditions of wittingness and voluntariness on the part of the pupil were missing; for we regard it as morally unjustifiable to treat others in this way. To say that we are educating people commits us, in other words, to morally legitimate procedures.[4]

The claim here is that educators must always use morally acceptable means when educating or else they are not educating. There also seems to be the claim that what results from such immoral procedures is not education. Both claims are taken to be derivable from the concept of "education."

A similar position with a shift in focus is found

---

[3]Augustine, De Ordine in The Fathers of the Church, Vol. V.

[4]R. S. Peters, The Concept of Education, p. 3.

in Louis Reid's Philosophy and Education. Reid asserts that "The whole of the process of being educated depends on the free independent initiative of the self's synthesizing activity."[5] Both in Peters and Reid and in Dewey--especially where he speaks of the nature of experience and its relation to conscious, willed activity--one assumption is that consciousness of what is being learned and willingness to learn it, by the person doing the learning, is necessary for what is being learned and willingness to learn it, by the person doing the learning, is necessary for what is learned to be a part of his education.[6] Another assumption is that teaching methods must be moral.

I am recommending using "education" in such a way that what is learned must have positive value to be counted as educational and that educational decisions are, in part, decisions about the value of some learning. This is quite different from claiming that teaching methods must be moral for the learning which results to be education. This latter claim is clearly false. There is no logical connection between either the intentions or the methods of an educator and the education received by the learner although there may well be an empirical connection which would be important to establish. Certainly the consciousness on the part of many students that teachers are not to

---

[5]Reid, p. 104.

[6]Especially John Dewey in Experience and Education, (New York: Collier, 1963).

be trusted has the most significant effects on their ability to receive an education in school, but it is not clear that those students who have repeatedly been conned by their teachers and have not realized it have had their educability impaired. Those students might just be stupid or may have been the recipients of teaching techniques of dubious morality applied with great sophistication. To belabor the point, if someone's store of valuable structured information was discovered by him to have been inculcated in morally reprehensible ways, it is not the case that he or anyone else would, on those grounds, cease to regard it as his education. It might well be a fine education.

It is to be desired that teachers, like anyone else but especially like anyone else in a position of great influence over many others, be moral and use moral means exclusively in their profession; be that as it may, such a moral directive does not follow from the meaning of "education."

The claim that learning must be conscious and voluntary to be education is more difficult to assess. Especially in early childhood much of what is learned unconsciously and much of what is learned then is taught by what can be described as highly immoral, coercive means--threat of punishment and/or loss of love. To say that what is learned in this way is not a part of one's education is certainly odd. Similarly, we all become acculturated. In the contemporary world this process may continue

throughout life as norms shift with fantastic speed. Since much, if not most, acculturation is an unconscious process we have again the oddness of claiming that this is not a part of our educations. It is, however, at least equally odd to speak of the education of a cockroach or a computer although Mother Nature and programmers, respectively, spend a great deal of their time building valuable learning (in the technical sense of "learning" introduced above) into both. At least part of the oddness here would see to have to do with the unlikeliness that such entities, and therefore such learning, are conscious. Even more odd is the notion that such entities "want" to learn.

I would claim that the definition of "education" should contain a reference to the learning being conscious, but that to insist that any learning which is to be considered education must be conscious is too stringent a restriction. No one is conscious of the totality of what would ordinarily be called his education or even of most discriminable and significant parts of it. Neither can any person be totally unconscious of all of, all of the parts of his education. Since education is a human phenomenon, it follows that parts of what is and has been learned will be tested, manipulated and rearranged in a piecemeal, somewhat random, but relatively constant fashion. Some of this will be a conscious willed process. That is what human intellectual activity is and is at least one way of distinguishing such activity from what computers and

cockroaches do. Such activity, when it is critical and productive of new learning is an important part of education.

It is not very helpful to have a description of education as learning which is sometimes conscious and/or sometimes intentional. For the purpose of illustrating my claim that to characterize education is to make a normative judgement, I would suggest, as one of the defining characteristics of education, that it consist of learning which is, in practice, available for intentional, conscious, manipulation of the elements of what is learned.

If it is accepted that for learning to be education it must be available to consciousness, a corrollary would be the assumption of education by the Socratic Method under such a description of education. This is encouraging since this is, traditionally, a paradigmatic case of educational procedure. I hesitate to disturb Meno's slave boy, who has already been working for twenty-four hundred years, but certainly Socrates may be seen in that episode to be making available to the boy's[7] consciousness logico-mathematical insights which previously were not thus available. It is not clear whether Socrates was teaching the boy something which was new to him but certainly the boy was being educated.[8] Such education fits under this

---

[7]It is probably significant that the fellow hasn't even a name.

[8]Plato, Meno, The Dialogues of Plato, op. cit., Vol. I 81C-85C.

last criterion for education.

I think that whatever persuasiveness such a characterization of education has is due, in large part, to the sense that for learning to be available for conscious, intentional examination is valuable and good, and for it to be unconscious and involuntary or unexaminable is bad. If this is so then this characteristic of education is derivable from t · definition of "education" as a collection of learning experiences which have value by means of a judgement with respect to what is valuable.

Here again, a description of the characteristics of "education" turns out to be based on description of personal and/or cultural values; i.e., it is a prescription about what ought to be considered education.

That there is a value choice to be made with respect to conscious versus unconscious learning may be seen by comparing two examples of "educational" systems. One, Hinayana Buddhist meditational exercises, promotes non-involvement through deliberate suspension of conscious intellectual functions.[9] The other, psychoanalytic therapy, attempts to raise to consciousness intra-psychic mechanisms which normally are not under conscious control and about which, as a result, choices cannot

---

[9] See D. T. Suzuki, The Essentials of Zen Buddhism part IV, (New York: E. P. Dutton, 1962).

normally be made.[10] To choose between such programs is not to choose between an educational and a non-educational system, but between two educational systems which place different values on certain kinds of learning being conscious.

The choice of whether to count as education unconscious learning is a choice related to the value placed on autonomy, since the notion of autonomy is related to the ability to decide for oneself, and if I am making decisions for myself, it would be well to have all the relevant data I possess accessible. Autonomy is a complex concept with moral and political as well as psychological aspects. Here it is only necessary to have pointed out the relationship it has to conscious and intentional cognitive states.

My thesis hardly needs elaboration here since these writers on education who have characterized education as the increasing of autonomy (e.g., Whitehead, Illich, Rogers) have been quite explicitly making a normative, and, in their cases, overtly moral, choice. What is worth emphasizing is that alternative choices are possible if alternative normative choices are made. To elaborate an earlier example, if the harmony of the State is the source of value, it could well be the case that a goal of

---

[10]See Charles Bremmer, An Elementary Outline of Psychoanalysis, especially Chapter I (New York: International Universities Press, 1955).

education would be the production of dependent individuals whose most important learning, or parts of it, was unconscious, unexamined and involuntary. I would expect educational decisions made under such a view to reflect this set of values.

To summarize: I am taking "learning" to be a non-normative term referring to quantifiable behavioral change. I am taking "education" to mean "a collection of learning experiences which have positive value." If that is acceptable then on the basis of typical contemporary values, I would recommend as a central characteristic of education that what is learned should be available to consciousness because it is generally preferred for learning to be conscious. I would also suggest that educational value may be different for different individuals based on the principle that the source of value is the benefit of persons. These are illustrations of the relationship between value choices and the descriptions of the characteristics of education.

By way of contrast with a clearly divergent view of the goals of education: in a text by Fitzgerald and Fitzgerald, Methods and Curricula in Elementary Education, we learn that Pope Pius XI said: "In fact, since education consists essentially in preparing man for what he must be and for what he must do here below, in order to attain the sublime end for which he was created it is clear that there can be no true education which is not wholly directed to

man's last end."[11]

It is to be expected that given the relationship between normative principles and the goals of education I've described, those goals will be described differently by those from significantly different cultural milieus or by those with significantly different sources of moral values.

---

[11]J. Fitzgerald, and P. Fitzgerald, Methods and Curricula in Elementary Education, (Milwaukee: Bruce Publishing Co., 1965) p. 4.

CHAPTER IV

EDUCATION AND COGNITIVE STRUCTURES

I shall suggest, as an additional defining characteristic of "education," that a minimal condition for learning to be education is that the learning should be organized in, at least middle sized, cognitive structures. I shall take "structure" to mean some sort of organization of information or an organizing principle. This seems to be an especially interesting characteristic of education to trace to its normative base.

This notion of cognitive structure turns up in the literature on education in several forms. It is used as that which is desirable when "rote" learning is seen as undesirable. In this sense it is information given in a context; information which is "relevant." It turns up in the context of the teaching of science where educational theorists may suggest the "experiment" method of teaching science. Here the student is expected to observe, or perform, experiments so that the structural relationship between a problem, an experiment and a solution can be perceived.

My sense is that two interrelated kinds of learning are being encouraged when the recommendation is that learning be structured or organized. One is that the development of the ability to theorize, i.e., the structuring

operation, should be encouraged, the other is that information is to be presented and hopefully retained in relationship to other information so as to facilitate recall or application.

One example of a cognitive structure would be that kind of informational network described by Dewey as produced in the Chicago school[1] when the students, beginning with questions about their own clothing, learned about fabrics, weaving, the nature of textiles, trade, etc. Another example of a cognitive structure would be a scientific, or even a metaphysical, theory; a way of organizing or a framework for perceiving what would otherwise appear as unrelated data.

To take a mundane example of the relation between education and cognitive structures; if I need to know the location of the courthouse in a city which I will never revisit, learning the location may be valuable but hardly educational in most cases. However, if the location of courthouses in cities turns out to be consistent, or consistent within societies, then additional learning regarding such consistency might be educational in a more ordinary sense of the term. I would have discovered something about courthouses in general, something which unifies a number of bits of information regarding courthouses.

---

[1]K. C. Mayhew, and A. C. Edwards, The Dewey School, (New York; Atherton Press, 1965).

This is one sense, found in ordinary usage, in which for learning to be education it must be a part of a cognitive structure.

The term "education" is sometimes restricted to the broadest scale cognitive structures. An interesting example is Malcom X saying, at the age of twenty three, while in prison, that he had just then "happened to stumble upon starting to acquire some kind of homemade education." This after being in reform school, a hustler, a thief, a pimp, and a drug pusher; all very successfully. Clearly he had learned a great deal without considering himself to be educated.[2]

The event which caused the beginning of "education" for Malcom X was the discovery of the teachings of Elijah Mohammed, which provided for him a world view in which the information gathered by him during his life until then could be consistently structured. It was the development of this structured view which Malcom X saw as the beginning of education.

It is interesting to compare Malcom's use of the term "education" with a similar criterion and a very different content, as in its use by Henry Adams in the Education of Henry Adams. In that account, the best schools, wide experience with the great and the wise, all leave Adams searching into middle age for an education which only then

---

[2]The Autobiography of Malcom X, (NY: Grove Press, 1965) p. 171.

begins, he feels, to develop within him. He recognizes the development of education by an increasing capacity to perceive the structure and articulation of social and political gestalts. Or alternately, by an increased understanding of "human nature."

Under these descriptions of "education" one has only received an education when an adequate or true or ultimate world view is achieved. The term "education" is sometimes used in this way and it may be plausible to consider the development of ultimate ethical and metaphysical views as the goal of the process of education. Still, it is a more central sense of the term to speak of the necessity of having an education in order to develop such ultimate views, even assuming such a development as a desirable goal.

It is unlikely that Malcom X would have had the sense he did of the order introduced by Muslim teachings without considerable, even if not formal, education of a wide ranging sort; i.e., education in the sense of valuable learning, somewhat organized and, at least potentially, conscious. It is similarly unlikely that Henry Adams would have been capable of achieving what he finally called his education without an education of a more mundane sort to build on. In short, to take the development of ultimate world views as the definition of "education" eliminates too many of the standard and central uses of the term to be acceptable here.

It should be noted that one could consistently opt

for a characterization of "education" exclusively in terms of the development of such ultimate views. In so doing, what would be implied would be the value judgement that one had only learned what was of "real value" when such ultimate views were achieved.

It would be worthwhile to look briefly at a related issue. There is a well known suggestion that for learning to be education, the learning must lead to further learning or must increase the capacity to learn. In a catchier phrase: education is learning to learn.

It is an empirical question whether the development of cognitive structures facilitates further learning. It may be easier (or the only condition under which it is possible) to learn that which has been placed within ordered structure, or it may be that the experience of ordering information in a structure involves learning which may transfer to new structures. If either is so, then defining "education" in terms of the development of cognitive structures implies that that which is educational increases the capacity for further learning. However, it may be that the development of, at least some, conceptual structures does not increase the capacity for further learning.

A case of this kind results if Thomas Kuhn's contention is true that the develpment of large scale theories in science[3] militates against the processing of some new

---

[3]Thomas Kuhn, The Structure of Scientific Revolutions, (Chicago: University of Chicago Press, 1962).

information and/or theories, at least for a time. A similar case is the development of "true" metaphysical views, the learning of, and belief in, which excludes the serious consideration of variants. Variants, in some cases, will be logically excluded; for example, Taoism in some of its descriptions, or the achievement of satori, or the successful emptying of consciousness in some forms of Yoga. Religious "education" in some of the Western religions would have this effect as well.

Ruling out the learning in or of such disciplines or metaphysical systems as not educational on the grounds that they inhibit further learning involves the presumption of a belief that the only kind of learning which is desirable or valuable is the kind that leads to increased capacity to learn. This, once again, is a normative judgement built into an attempt to define "education." Assuming the existence of a choice between learning which increases the capacity to learn and learning which does not or which positively restricts further learning, the choice of which kind of learning is to be encouraged and when is a decision based on normative considerations, that is, it is a decision about normative educational principles.

While I am suggesting that educational decisions are predicated on value choices, certainly there are empirical considerations which affect what it is one can choose from and what will result from the choice. Some of those considerations have to do with the characteristics of

cognitive structures.

It would be helpful here to introduce a more precise sense of the term "structure" than I have used so far. Unfortunately, given the state of confusion within psychology regarding the nature of cognitive structures, it will be necessary to settle for a little clarification from that quarter. What can be obtained from a more technical meaning of "structure" is some sense of the relation of empirical matters to educational decisions. This was touched on above and will be dealt with again in later chapters. In what follows I will outline some of the sense in which "structure" is used by psychological theorists and suggest the bearing that the acceptance of different descriptions of "structure" may have on what learning is and, therefore, the bearing on educational decisions.

The kind of thing that one might call unstructured learning is suggested by the concept of the reflex arc, or the early work by Pavlov or Watson on learning where the claim was that a "bit" of learned behavior occurred. By the late 1920's Thorndike[4] was claiming this to be an anomalous kind of learning. Most learning seemed to occur when some integration was possible between bits of information or habituations of discrete responses.

With respect to structured learning, it would be

---

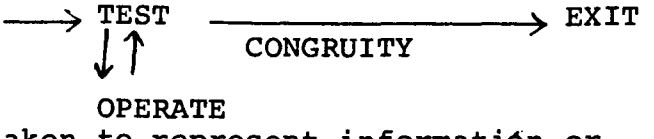
[4]In Edward Thorndike, Human Learning, (Cambridge: MIT Press, 1966).

useful to distinguish two of the sense used by theorists in this area. One is the sense used by Thorndike, among others, to locate and explain certain differences in, e.g., the rate of learning, as when a mnemonic device or a pattern facilitates learning. In this sense a cognitive structure is an organization of information like a grammar, or a theory in cannonical form, or a rhyme scheme.

There is another description of "cognitive structure" sometimes referred to as a cybernetic model, of which a good example is offered by Miller, Galanter and Pribam in Plans and the Structure of Behavior, where learning is described as resulting from the operations of a feedback loop, called a TOTE unit which is such that a way of organizing information or behavior is tested for usefulness vis a vis newly encountered data.[5] A significant feature of this model is that it is cybernetic, i.e., there is modification (learning) as a result of feedback and that it is an intentional model in the sense that the goal (EXIT) is included in the description of the process.[6]

---

[5]"TOTE" stands for Test-Operate-Exit. The model of a TOTE unit is diagrammed as follows:



The arrows are to be taken to represent information or behavior or lower level TOTE units.

[6]There is an extention of the ordinary meaning of the term "intention" here since the TOTE model has application to machines and "intention" is normally used with reference to humans and perhaps animals.

I do not mean to suggest that in the above two paragraphs I have exhausted the various sense of "cognitive structure" in current use. There are significant differences between the models of, for example, Thorndike[7] and Skinner,[8] or Hull[9] and Lewin,[10] but there is at least one central difference between senses of "structure" represented here. That is, between intentional and non-intentional learning models.

To see the import of the distinction between intentional and non-intentional learning models with respect to educational values and decisions, consider the question whether the difference between the kinds of learning I've associated with Pavlov and Thorndike, i.e., a structure of bits of information, and the cybernetic model may be related to differences between traditional and progressive teaching techniques.

The term "traditional" in the phrase "traditional teaching" is frequently a catch-all for pedagogical evils. Here I intend it to refer to a pedagogical model which

---

[7]Edward Thorndike, The Elements of Psychology, 2nd ed., (New York: A. G. Seiler, 1907) and Selected Writings from a Correctionist's Psychology, especially chapters I to V, (New York: Appleton Century Crofts, 1949).

[8]B. F. Skinner, Science and Human Behavior (New York: Macmillan, 1953). See Chapter XIII.

[9]C. L. Hull, "The Concept of the Habit-Family Hierarchy and Maze Learning," Psychological Review, 41, 1934, 33-54 and 134-152.

[10]Kurt Lewin, Field Theory in Social Science, New York: Harper & Row, Inc., 1952.

includes a conception of the student as a passive learner; a recipient of the active interventions of a teacher. The advocate of the opposed notion of learning as an activity was John Dewey. In the Reflex Arc Concept in Psychology, his defense of this view is found in its most technical phase. In his criticism of the reflex arc concept with its description of a discrete stimulus and a discrete response, he makes the point that

> [Sensation as stimulus] means simply a function, and will have its value shift according to the special work requiring to be done. . . . What the sensation will be in particular at a given time, therefore, will depend entirely upon the way in which an activity is being used. It has no fixed quality of its own. The search for the stimulus is the search for exact conditions of action; that is, for the state of things which decides how a beginning co-ordination should be completed.[11]

It is interesting that Dewey's criticism of the reflex arc concept is met by a cybernetic model because it is an intentional model. That is, operations are performed in relation to a goal and not simply as a response to an antecedent stimulus. Such a model may be seen as providing a theoretical justification of the child centered procedures which make up such a significant part of progressive educational techniques, for such procedures rely on the intentions of the student to motivate and generate the learning. Thus one implication of a choice between two models of cognitive structure would be that educational

---

[11]In Joseph Ratner, John Dewey: Philosophy, Psychology and Social Practice, (New York: Capricorn Press, 1965), p. 263.

decisions between teaching methodologies could be theoretically justified. However, such a decision, although based on some empirical investigations in the area of learning theory, must be the result of a choice with respect to what learning, or kind of learning, is valued or desired.

If Dewey's conception is an acceptable description of learning,then the concept of learning includes not only information but also a goal. If the goal is different, then the learning is different. If the goal in a learning process was the successful learning of verbal responses, as it is in rote learning, or the kind of learning tested by most examinations, the learning would be different than if the goal was solving a problem of intrinsic importance to the learner. This would be the case even if the verbal correlate of the learning was the same.[12] Both kinds of learning can be described by, e.g., a TOTE model. Therefore, the claim that an intentional model provided a theoretical justification for a particular kind of classroom procedure is only true given a particular description of what counts as education.

In other words, even if one based one's educational decisions on a cybernetic and intentional model of learning, it would be consistent with such a model to recommend the kind of rote learning procedures associated with traditional teaching. Certainly some things are learned

---

[12]See above Chapter One, p. 9.

that way. I take this as an additional illustration that to make an educational decision is to make a decision as to what ought to be learned.

It is important to emphasize that given a set of principles such that the learning of rote responses is not counted as education, intentional cybernetic learning models are able to provide grounds for recommending alternatives to traditional classroom procedures.

To return to characterizing education: let us accept, in the interest of having a common language that an acceptable model of a cognitive structure is a TOTE unit. Further, that such units can be represented by the arrows in the diagram on page 40 to form higher order TOTE units.

One feature of the TOTE model is that an "exit" might be constituted by finding the meaning of life, hitting a ball with a bat or solving a simultaneous equation. Thus, in terms of learning, there is a continuity from the smallest units to the largest. As I have mentioned, I would opt for setting as a minimal condition for learning to be education that the learning should be organized in, at least, middle sized, cognitive structures.

What I would like to do at this point is to say precisely what the denotation is of "middle sized cognitive structures." Unfortunately, I don't know how to do that. What I have attempted to do in the first part of this chapter is to suggest grounds for ruling out the development of the largest scale structures as exhausting the

category of education. The paradigm, or possibly the class of such structures, can be identified as metaphysical systems or world views. I now want to describe and exclude the smallest scale structures from the category of education. What is left over I would suggest as the appropriate content of education.

These is some usage (for example, that of Henry Adams mentioned above) in which there is the sense that a cognitive structure must have substantial scope to be considered a part of an education. The sort of thing which, in ordinary usage, might be excluded, as not <u>really</u> a part of one's education would be the results of training or instruction; the bits and collections of information and behavioral responses, uncoordinated in any valuable, substantial cognitive structures. It is said that to have an education is more than to know a lot of facts.

But ordinary usage can be given up or changed. My thesis here is that any characterization of "education" and consequently any educational decision, relies on a choice of values. It is on this basis that I would rule out low level TOTE units as comprising education.

I would claim that the possession of small scale structures has little intrinsic value, although it may have instrumental value as a base for larger structural units. This is especially so for the members of a society which possesses enormous mechanical resources for information storage and retrieval, as does ours. The ability to

structure information so as to form high order TOTE units, to theorize, I take to be a very valuable kind of learning and therefore to be an object or goal of education. In this view I find the justification for an objection to rote learning or "training" procedures except where they are appropriately designed as constituent units of larger intellectual constructions.

I shall not attempt to further defend this view. Several arguments for this position can be found in Dewey's writings. The best of these are in Democracy and Education. As that title suggests the issues raised here involve questions in political as well as moral philosophy. All I shall attempt to do is to clarify a bit this last characterization of "education."

A reference to significant cognitive structures as part of the defining characteristics of "education" would seem to call for the specification of the requisite level of size or significance of the structures in question. I could only approximate that by examples since attempting to find some sort of dividing line would certainly be idiosyncratic. On the other hand, to suggest that the goal of education is the learning of new and progressively larger scale cognitive structures, that is, some sense of an ongoing process of increasing sophistication, this, while not more precise, is at least more familiar.

I am suggesting that the goal of education should be the possession of significant cognitive structures:

significant both in the sense of large scale and in the sense of valuable. As a definition what results from the preceding analysis is that "education," in the sense of "someone's education," or the goal of the process of education, is: a collection of that which is learned and is available to consciousness and which is included in or contributes to the formation of valuable cognitive structures of significant scope.

CHAPTER V

HISTORICAL VIEWS

The literature on education contains other descriptions of the characteristics of education and other principles on the basis of which educational goals may be set. Alternative descriptions of the defining characteristics of "education" are valuable since they point to the need for an educator making overt decisions about what values and therefore what goals to adopt. Before moving to other issues, some of the more important alternative descriptions should be mentioned.

First the claim is sometimes made that education is acculturation. If acculturation is taken to be learning that collection of beliefs held in common by the society of which one is a part, certainly that makes up much of our educations by my definition. My conception of education would, in addition, include structured learning even if different from, or independent of, the beliefs of others.

I doubt that it makes sense to call learning statistical mechanics a part of the process of acculturation even though this body of scientific knowledge is a cultural product. The considerations here would be that this sort of theoretical structure is independent of any specific

culture and that few members of even the cultures that generate that theory are familiar with it. It does, however, make sense to take learning statistical mechanics as a part of someone's education since it is clearly a cognitive structure of substantial scope and value. Moreover, to learn something which someone else knows ought to count as a part of one's education. Surely, to make an original discovery is an educational experience.

Thus, I would object to the definition of "education" as "acculturation" if that is taken to mean that those two terms are equivalent. I would agree that acculturation is one of the goals of education in those cases where acculturation involves developing valuable cognitive structures of substantial scope.

A somewhat different claim is made when the goal of education is taken to be socialization. Dewey speaks of this in various places although it is necessary to deal with his describing quite different educational goals as though each were the goal of education. In Democracy and Education, Dewey says that "education, in its broadest sense is the means of [the] social continuity of life,"[1] and that "education [is] the process of forming fundamental dispositions, intellectual and emotional toward nature and fellow men,"[2] and in My Pedagogic Creed, he says that

---

[1] p. 2.

[2] p. 328.

"education is the regulation of the process of coming to share in the social consciousness. . . ."[3]

Here again there is no problem if that collection of values to which we become socialized is taken as one of the goals of education. Dewey seems comfortable with asserting along with the above that:

> . . . education means the enterprise of supplying the conditions which insure growth, or adequacy of life, irrespective of age.[4]

> . . . a technical definition of education: It is that reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.[5]

> . . . education, therefore, is a process of living and not a preparation for future living.[6]

To speak of socialization as a goal of education raises a more difficult question than can be dealt with by an appeal to overt value choices. To illustrate this consider Peters' description of the "paradox of moral education."

> The problem of moral education then, and indeed of education in general, is this: how can the necessary habits of behavior and the deep-rooted assumptions of the'literature' of various forms of good activities be acquired in a way which does not stultify the development

---

[3]Garforth, p. 57.

[4]Democracy and Education, p. 51.

[5]op. cit., p. 76.

[6]Garforth, p. 48.

> of a rational code or the mastery of the 'language' of activities at a later stage?[7]

As Peters suggests, this problem is not restricted to moral education. The encouraging of a spirit of free inquiry, or rational autonomy, in , for example, science, certainly conflicts at times with the need to pass on in a compressed form the information gained in the past, or with the need to inculcate intellectual discipline. Any attempt to produce guidelines for educational decisions must run up against the difficulty of describing rules, even rules of thumb, for deciding when to opt for free inquiry and when to opt for discipline and efficiency.

A Rousseau may provide consistency, in this area, by letting an Emile follow his inclinations and by providing aspects of culture when asked, but only because Emile is educated asocially. All real education takes place within social structures. Even if one opts for denying that discipline and efficiency are educational goals, the society in which the education occurs will insure that such goals are built into educational systems again. The other half of the paradox is necessarily present because the facts of human nature precludes the elimination of free inquiry as a component of education.[8]

---

[7]In William Frankena, Philosophy of Education, (New York: Macmillan Co., 1965), p. 108.

[8]Compare the agreement among educational thinkers evidenced by the quotations on page of the Introduction.

In the area of education and the state, this problem appears as the conflicting demand for order in the state and autonomy for the individual. Here the paradox may be eliminable, at least in theory, either in the direction of anarchy or fascism, but that these are competing claims of intellectual autonomy and intellectual discipline is not eliminable. Intellectual autonomy requires intellectual discipline, but the methods of inculcating such discipline must, to some extent, restrict autonomy. Correspondingly, the exercise of autonomy always threatens to break discipline. Here I think we can locate the art of the educator. It is the art of retaining, i.e., working within, the boundaries of the this "paradox of education." The rest of what educators do to make appropriate educational decisions depends on their choice of goals as discussed above or their views of various empirical matters as will be described below.

A final and related consideration is raised by Aristotle's definition of "education." In a description by John Burnet of Aristotle's views, education, which is considered a subdomain of politics, has two goals. "In the first place, it aims at producing such a character as will issue in acts tending to promote the happiness of the state; in the second place, it aims at preparing the soul for that enjoyment of leisure which becomes possible when practical needs have been satisfied."[9] For Aristotle,

---

[9]John Burnet, Aristotle on Education (Cambridge: Cambridge University Press, 1967), p. 1.

the "right use of leisure," i.e., that which leads to happiness, is only attainable in a well ordered state.

I do not want to leave this section of the dissertation without an acknowledgement of the full difficulty of assessing the goals of education to which Aristotle points. At a given point in time, in a given society, to assess what kind of learning is valuable may well hang on an assessment of the state of that society since the state of society has a major effect on what sort of learning is valuable and therefore affects the description of "education."

Another approach to solving problems in the domain of education would be by making changes in the social and political environment in which educational systems are located. Nevertheless, most educational decisions must be made within the boundaries of the educational domain with the social and political envionment as a given. Aristotle does not speak directly of solving educational problems through political change or vice versa, but given the intimate connection between education and politics, to which he does refer, I would suppose that one hope for social and political change is perspicacious change in educational practices.

CHAPTER VI

THE DOMAIN OF EDUCATION

So far, I have discussed the need for decisions about values which set the description of education taken as a goal. I must also deal with the empirical theories relevant to a theory of education. To do that it is first necessary to discuss the boundaries of the domain of education.

The traditional boundaries of the domain of education are in question on a number of fronts. How the boundaries of this domain are set has important implications both for what is to count as a theory of education and for educational decisions directly. It makes a difference whether children in "open classrooms" are playing or being educated. It makes a difference whether attention to social and/or individual psychodyanamics is considered a part of the professional duties of a teacher and it makes a difference whether political activities within universities are taken as intrinsic or extraneous to the legitimate functions of such institutions.

To see another dimension of this question, recall the point made by Peters with respect to ruling out "immoral" teaching procedures as education. A good deal

of what is done to students is immoral and perhaps illegal. The compulsory institutional confinement of human beings in the interest of their education would be clearly seen as violating the civil rights of anyone other than a convicted criminal or a student under the age of sixteen. John Holt has suggested the possibility of court appeals to free students from the schools they are compelled to attend.[1] It is the goal of education which is sometimes taken to provide the justification for this confinement of students where they often don't wish to be. It is thus a serious question whether the activities appropriate to the domain of education include such confinement. This is a separate question from whether such confinement ought to be permitted on moral or legal grounds, even if it is appropriate in the interest of education.

A somewhat less charged example of a decision about the boundaries of the domain of education would be with respect to what educators ought and ought not to do professionally. For example, given a distinction between "training" and "educating," one question might be: should an educator train students as part of his professional duties?

This is a question with more than semantic parameters as suggested in Chapter IV where psychological theories in combination with normative principles may be used to

---

[1] John Holt, The Underachieving School, (New York: Delta Publishing Co., 1969), p. 182.

support problem solving, as opposed to rote learning, techniques for teaching. I think that it would be helpful to know whether training should be considered a part of the business of education and how a decision about this is to be justified.

It may be reasonable to adopt the suggestion that training is not education for the reasons I've suggested in Chapter IV, but it may still be necessary to train as preparatory work for education. The question would then be whether training falls within the domain of education. Certainly, many who are called educators spend a great deal of time in training others. Training would then appear to fall under the professional purview of an educator and in that sense be a part of the domain of education. Then it would not be clear why training should not simply be considered a part of education even if there is a certain neatness in a separate classification.

The assumption here is that the domain of education may be marked off by what educators do typically or traditionally.

There are other possibilities for marking out a domain. One way is to take a domain to be the range of application of a theory. The problem with doing this is that there is no agreed upon theory of education and so there is, so to speak, no ground to stand on to specify the domain of education in terms of a theory.

Another possibility is that one could set the

boundaries of a domain in terms of a set of activities. Given the characteristics of education as a goal, we need only group the activities which lead to that goal, and we have the domain of education. However, as I will try to make clear below, the consequences of taking the boundaries of the domain as defined in that way may involve a conception of what constitutes the domain of education which is quite radical and possibly bizarre.

The problem of what counts as part of a domain is not unique to education. Medicine, like education, is a practical discipline. As such it may be unclear whether the boundaries of its domain are set by what doctors historically or contemporaneously do, or by what their goals are when they do it, or on what theories they base their practice. In the earliest formal work on education, Plato's education was usefully compared with medicine.[2] It may be helpful to return to the analogy.

To begin, it should be noted that a problem occurs, generally, only when the boundaries of a domain occur in different places depending on which basis they are set. If the domain of medicine is defined in terms of a goal such as the diagnosis, treatment and prevention of illness, then the domain of medicine extends far beyond what most doctors and even medical paraprofessionals do. For example, recently a group of doctors offered the New York City government free diagnostic equipment to locate cases

---

[2]Plato, Laws, 857 c-d and 720 c-d op. cit. and

of lead poisoning in children. For various, almost certainly political, reasons, the equipment was not accepted for almost a year. The donors of the equipment eventually used political methods to get the equipment accepted and functioning. If the domain of medicine is defined in terms of the diagnosing, preventing and treating of even clear cut cases of organic dysfunction, then it is not clear how, or if, medicine and politics could be distinguished in this case.

With respect to such a case, some medical professionals might well agree that social conditions sometimes contribute to the cause of illness, but that they are not obligated in their professional capacities to ameliorate illness-producing social or political conditions. This position might be appropriately based on the nature of the information and theories in which they are trained and which do not typically include training in political or socio-economic theory.

If the domain of medicine is taken as defined by the domains of theories relied on in medical practice, then much of what doctors do in their recognized professional capacity goes beyond the boundaries of the domain of medicine. Furthermore, the domains of the various theories relied on for medical practice extend beyond the domain of medicine in a clear and ordinary sense.

Werner Jaeger, Paideia, The Ideals of Greek Culture, Vol. III (New York: Oxford Press, 1944), Chapter I, passim.

Biochemical theory may be applied to many things outside the domain of medicine.

To refer to what doctors do is not very helpful here. Doctors, like everyone else, do all sorts of things that no one would regard as part of the domain of medicine. To refer to what doctors do professionally traditionally is not a solution either, for it makes sense to take it as both a real and an open question whether witch doctors practice medicine.

This is an important and illustrative case. Take a group of people for whom a typical example of a medical procedure involved the shaking of gourds and singing with, in special cases, the application of cold compresses and trepanning. Centuries later, what was once typical practice is now seen as bizarre and the odd case is now typical. Not only is it unclear, in this case, whether the gourd shaking was a medical procedure (perhaps in some cases, even successful and conceivably as successful as more modern procedures), but it is not even clear that the boundary of the domain of medicine has shifted.

A similar case is provided by the recent interest in acupuncture. It does not seem to me acceptable to deny that acupuncture is medicine on the grounds that the procedure is unfamiliar or that the theories of the biological functioning of the principles of <u>yin</u> and <u>yang</u> are ontologically incomparable with the more typical medical theories of neurophysiology or biochemistry

(familiar and typical here and now, that is).*

The problem could be solved in terms of the "family resemblance" between activities, and one could then be resigned to chivvying nuances. However, there are cases which force a harder decision.

If a workman is asked to dig a ditch and begs off on the grounds that he has a paralyzed arm, he might be sent to an M.D. If the doctor's examination reveals no organic dysfunction, at least two kinds of "medical" decisions are possible. One is that the problem is not medical. The other is that he might require a psychiatrist who could make a final determination as to whether he has a "medical" problem. The first takes the domain of medicine to include organic dysfunction only--a paralysis of an arm may only be caused by a failure of muscles or bones or nerves; any other cause does not produce paralysis defined in "medical" terms. The second includes in the domain of medicine psychogenetic dysfunction; it admits the existence of hysterical paralysis as a "medical" problem. Further, in those versions of psychoanalytic theory which assume that all psychological phenomena are caused. If the refusal/inability to dig a ditch is dysfunctional for the workman, then even if this is clearly a case of conscious lying on his part, he may be considered

---

*The tacit use of the principle of unified science has bearing on this issue, but it constitutes a digression from my task from which I fear I might never return.

to have a "medical" problem.

If the decision is that this problem does not fall in the domain of "medicine," then this has the important consequence that it cannot be treated by the doctor in the doctor's professional capacity. The doctor might berate the workman for laziness or lying, but that moves into the moral rather than the "medical" domain. Or he might attempt "non-medical" advice or treatment, e.g., psychotherapy, but this would also not be in his professional "medical" capacity.

In practice, doctors often do treat their patients in ways that they themselves would acknowledge were non-medical as when a family is consulted on moral-sexual-family problems. He may be a good choice as a consultant because of his wide experience with people in intimate situations, but his expertise can be seen to follow not from his knowledge of medicine, but rather from accidental features of the practice of medicine.

It would be useful to have a clear delimiting of the domain of medicine which might include the distinction between the psychic and the somatic and between the psychosomatic and that which is neither, e.g., the social or the moral.[3] Such a set of distinctions could be made by reference to the theories on which practice relies.

---

[3]Cf. the discussion of this issue in Thomas Szasz, The Myth of Mental Illness, (New York: Harper and Row, 1961).

Certainly classical psychoanalytic theory is not continuous with either social or biomedical theories and the respective theories have different domains.

That these distinctions may be made by reference to the domains of different theories does not close the question: What is the domain of medicine? These distinctions might be used to restrict the domain or they might be made to enlarge the domain.

In practice the domain of medicine is described variously in terms of all three of the parameters suggested. The domain of medicine is marked out by what doctors do--set fractures and practice psychotherapy; by the theories they rely on--biochemistry, neurophysiology; and by their goals--the elimination of illness or pain. In terms of these last, the goals, these may be set in various ways. For example, by what distress affects the majority or a significant minority--plague, neurosis--or by social needs of a more abstract sort like the prestige accruing to a medical center which does organ transplants.

I wish to maintain that the boundaries of education are multiply determined as in medicine or any other complex social enterprise, but that in cases in dispute the central appeal is most often, and I think ought to be, to the goals or tasks of that enterprise. I will consider two illustrations of my position from the domain of medicine before returning to my subject matter proper: education.

The first is a variant of what I have already

discussed at some length; the position of psychotherapy within medicine. Consider the problem of lay analysis. Part of this issue might be seen as a counter-example to my assertion that in problematic cases, appeal will be to the goal or task. It may be claimed in defence of lay analysis that practitioners rarely are called on to make judgements in the domain of neurophysiology or biochemistry. Thus it would be what practitioners typically do, and the theories on which they do or do not rely, that is, a defense of permitting lay analysis. Notice, however, that this is not a defense of the position that lay analysis should be included within the boundaries of medicine. If any question of boundaries arises here, it is a question about the boundaries of the psychoanalytic domain; that is, it raises questions about whether, for example, psychoanalysts should learn biochemistry.

To defend the inclusion of psychoanalysis within medicine, one is more likely to point out that psychoanalysts, whether M.D.'s or not, have as their goal the reduction of discomfort or dysfunction, and that coincides with the central goals of medicine. Then it may be pointed out that the accomplishment of this goal does not, in the case of psychoneurotic dysfunction, call for extensive knowledge or neurophysiology or biochemistry.

As another example, take the question or justifying abortion as a medical procedure. There are obvious

points of resemblance between a cut-throat cutting a throat and the surgical procedure designed to reduce the production of thyroxin. Nevertheless, they are easily assigned positions in different domains of human activity. An aspect of the complex of problems surrounding the issue of abortion is the question of which of those two domains to put the abortion procedure. Here the question of whether an abortion is a case of murder cannot be decided by fixing the boundaries of medicine; rather, since murder is not a goal of medicine, should abortion turn out to be murder, abortion will not be regarded as a medical procedure.[4]

There is a possible contradiction between claiming that the boundaries of a domain are to be settled by appeal to a goal and my claiming, in an earlier example, that a reference to goals is insufficient for then, all sorts of activities are part of the domain of medicine where their application ameliorates dysfunction.

One way out here is to emphasize that goals determine the boundaries of a domain where there is a dispute. To put this another way: a dispute about whether some activity is appropriately included in some domain has the effect of raising questions about goals,

---

[4]There is a nice argument from usage in ordinary language in favor of legalizing abortion in noticing that cutthroats, regardless of how skillful, are never accused of practicing medicine without a license. Abortionists, even if butchers, may be.

and this focus on goals reveals the pragmatic nature of traditional domain boundaries. In other cases tradition will do the job. If no one is claiming that politics is a part of medicine we needn't bother about whether the goals of doctors and the goals of politicians sometimes coincide. The two examples offered above are illustrative just because what constitutes the tradition is not clear or not present in those areas and because there are disputes about domain boundaries in those cases.

I began this chapter with the question of whether training falls within the domain of education. There were three relevant considerations. First, that I have opted for a description of education which distinguishes it from training. Second, that some amount of training may be necessary as a preparation for "education" in the sense described. Third, that many who are called educators do spend time training those they have the responsibility to educate.

At this point, in answer to the question, I would suggest that training or any other activity falls within the boundaries of the domain of education, i.e., is the professional responsibility of an educator, when and only when, it facilitates the goals of education. This is a more radical suggestion than it may at first seem. Let us spell it out with some examples.

A hoary defense of teaching classical languages has been that it "trains the mind" and that such training

is transferable. The notion of training the mind seems something like what I have referred to as the production of conceptual structures. If those structures are transferable such training would be included in the domain of education even though the training per se, the memorization of verb endings and the like, would not be examples of education. Whether there is such transfer is a rather straightforward empirical question.[5]

A more difficult case is raised by asking whether economic questions fall within the domain of education.

Economics is clearly an overwhelming consideration with respect to schooling. The last Special Education Supplement of the New York Times[6] was devoted almost exclusively to economic issues. The intuition that this is not a part of the domain of education can be defended by pointing to the traditional distinction between faculty and administration in schools such that it is the administrators, who are only by extension called educators, who deal with the economic issues. Additionally, it may be pointed out that while educational decisions are profoundly affected by economic realities, that is generally seen as unfortunate. I don't think that it

---

[5]There is some data at the present time which indicates that there is little transfer in such cases. See Herbert Klausmeier, and William Goodwin, Learning and Human Abilities, 2nd edition, (NY: Harper & Row, 1966) pp. 470-489.

[6]The Times (N.Y.) Jan. 10, 1972.

would be considered unfortunate if, for example, normative consideration of educational goals is brought to bear on educational decisions. It is constraints on decisions which are unfortunate. On the other hand, if the boundaries of the domain of education are set by reference to what facilitates the goals of education this would seem to call for the inclusion of economic questions in the domain of education.

This is so even given the requirement that the boundaries of a domain must be in question for one to appeal to goals for a decision. Economic issues impinge on educational decisions when, for example, teachers in universities are requested not to disturb the tranquility of trustees by presenting unpopular views or when they are requested to take time to solicit new students for the in order to support a flagging economic situation.

To take economics as part of the domain of education would probably rub anyone the wrong way. Other cases will be disturbing or not depending on one's tastes. For example; Social psychological dynamics may cause resistance to change in educational institutions. Such resistance may be taken as a constraint on, say a teacher's, ability to implement educational decisions. Intrapsychic defensive resistance to learning, on the part of students, would be taken by some to be the proper object of inquiry and activity within the educational domain; to be that about which technical educational decisions are properly

made. Such a distinction could be based on the view that the institution is just one of the possible technical devices for facilitating education while the intrapsychic states of people in the role of students are essential and irreducible features of the educational situation. Thus, institutional resistance would be characterized as a constraint on the domain of education while a student's psychodynamics are included in the educational domain. Here, once again, given a question about what are proper educational activities and concerns, if one relies on a determination of what facilitates the goals of education, no such distinction can be justified. Both of these areas are properly included in the domain of education.

Let me emphasize one implication of what I am suggesting here. I have used the terminology of "constraints" to describe the exclusion of certain kinds of activities from the domain of education. I should make it explicit that disturbing inclusions such as economics and social pathology in the domain of education cannot be dealt with by appeal to the category of "constraint on activities in a domain" as opposed to a proper part of a domain. The reason is that such a distinction cannot be made when the boundaries of a domain are set with reference to goals. My sense of the way the term "constraint" is used is that the notion of a constraint on activities in a domain is a subjective notion. A constraint is what is "felt" as keeping one from

accomplishing a task.

If one's task is to teach languages the limitations of human memory may be seen as a constraint. Alternatively, the facilitation of memory functions may be seen as the, or at least part of, the task. Other cases are clearer. If one were teaching brain damaged people it would be odd to speak of their intellectual limitations as a constraint on the task. Dealing with that is the task.

Just in so far as something does keep one from accomplishing a task, activities which deal with that "constraint" facilitate the goal and as such belong within the domain if the domain is defined by goals.

In consequence, establishing the domain of education in terms of goals has the potential effect of widening the boundaries of that domain possibly out of all recognition. This is because anything which affects the accomplishment of the goal of education is a part of the domain if the domain is defined by that goal. Establishing the boundaries of the domain in this way does, however, have two advantages. One is that it provides a rational way of making a decision about whether some activity belongs in the domain of education, i.e., ought to be engaged in by an educator in his professional capacity. This is not to say that it is a mechanical way of doing this. Deciding whether pleasing the trustees will facilitate the goals of education, in the long run, is unlikely to be an easy decision. Still there is a way of knowing where to look

for reasons for a decision. The second advantage is that since society changes, and with it values, we need a way to alter the conception of the domain of education on rational grounds. Locating the domain in this way permits such alterations.

CHAPTER VII

EDUCATIONAL THEORIES AND THEORIES OF EDUCATION

Having argued for goals as the court of appeal when setting the boundaries of a domain I now have to deal with the consequence that locating those empirical theories which make up the theory of education has become a rather unwieldly problem. Early in the last chapter I suggested that one difficulty in defining the domain of education in terms of its goals is that what constitutes the domain may become unrecognizable. One aspect of that is that many types of theories may be taken to be theories of that domain or that there will be no distinguishable set of theories which counts as a theory of education.

In one sense of "theory of education" I shall accept this consequence but it seems to me worthwhile to find those senses and those criteria according to which talk about theories of education <u>is</u> useful talk.

The question is whether there is such a thing as a theory of education. Prior to that it would be helpful to address the question as to what the relationship is between empirical theories (mainly social scientific theories) and educational decisions.

I take the purpose of an educational theory to be the rationalizing of educational decisions. That is, I take the function of a theory, in a practical domain like education, to be to provide good reasons for decisions.

This is not to say that to have good reasons for a decision is necessarily to have a theory but rather that in the ideal case, at least, one has a theory. The reason for deciding to do one thing rather than another might be a belief in a regularity with no sense of a theory which explains that regularity. Or, some decision might be made on moral grounds where appeal is to a principle or rule without a moral theory from which that rule can be justified.

There are certainly some grounds on which the possession of a theory is desirable. I am concerned now just with empirical theories. For one, theories may explain and/or predict events by means of lawlike generalizations and, in that way, provide reasons for a decision. One of the functions of theories is to provide just such sorts of explanation and prediction. The notion of "explanation" in this case is to be taken in the deductive-nomological sense; i.e., where explanandum is deducible in some relatively straightforward sense from some sentence(s) in a theory; possibly a "law"[1] Thus, one might decide to teach French by having students see French films and hear French songs as well as writing, reading and speaking French. The decision to present the material in this way could be based on generalizations in a learning theory regarding the relationship between the use of more

---

[1]A brief description of "explanation" in this sense can be found in Carl Hempel, Philosophy of Natural Science, Chapter V, (Englewood Cliffs, N.J.: Prentice Hall, 1966).

than one type of sensory input and the rate of learning. Should students learn French faster in this way than by the standard reading and writing exercises that would be explainable by those generalizations. Despite the looseness here--any number of explanations might fit, from the personality of the particular teacher to the Hawthorne effect[2]--such a theory is somewhat testable by standard procedures and therefore presents the promise of further and more precise hypotheses.

Even without some relatively formalized theory the same sort of thing is occuring when a teacher says, "My theory is that students get the 'feel' of French" where the "feel" of French is the hypothetical result of exposure to some significantly varied collection of the uses of the French language. Even such a vague formulation provides some reasons for a decision and/or an explanation for success, or the lack of it, in teaching. Assuming a method of comparative evaluation (admittedly a rather large assumption in this domain) such a "theory" is testable.

Another function of a theory, or another sense of "theory," in a domain like education is to provide a classificational schema and typology for organizing observations, beliefs, predictions, etc. One example of

---

[2]For a description of the Hawthorne effect see John Morgan, Managing Change, (NY: McGraw Hill, 1921) p. 23.

a theory in this sense is provided by the typology described by the authors of The College Classroom.[3] There an idealization is provided of the multiple functional roles of a teacher in a classroom. The major roles of a teacher are taken to be: Expert, Formal Authority, Socializing Agent, Facilitator, Ego Ideal, and Person. This catalogue provides a way of organizing perceptions of what is going on in certain educational settings as when a teacher is presenting information (Expert) and insisting on student's raising their hands to be recognized (Formal Authority). This must be taken as suggestive, at best, since the identification of the category, given a situation, may be rather intuitive. I am not sure whether a teacher insisting on rigorous research procedures is in the role of a Formal Authority or an Expert. Still, such a typology is certainly tighter than the descriptive categories in ordinary language: That was a good class. He is a pedant.

A way of tightening up and increasing the usefulness of predictive descriptive and explanatory theoretical machinery like that to which I've referred might be borrowed from the psychoanalyst Wilfred Bion who suggests that the practicing analyst list his theories and classify his theoretical terms and compare them with his practice in an ongoing fashion. Those concepts, models, structures

---

[3] R. Mann, S. Arnold, J. Binder, S. Cytrynbaum, B. Newman, B. Ringwald, J. Ringwald, R. Rosenwein, The College Classroom, Chapter I, (NY: John Wiley, 1970).

and terms which help in facilitating his goals should be kept, those which do not should be dropped and in areas of practice which have no corresponding descriptive or explanatory or predictive theory an attempt should be made to generate one.[4]

Such a procedure in education could not but be helpful although it might be disheartening to discover how little there is of useful or genuinely used, theory.

In addition to providing explanations for and descriptions and predictions of, educational phenomena theorists are required to know the boundaries of the application of laws so as to make more effective predictions. In order to know why some regularity fails in some observed instance it is necessary to know a covering law, or ideally a theory, from which that law can be inferred. This is simply the correlate of one of the processes by which theories are changed or generated in the first place; that is, that some law fails in its application.

All of these descriptions of the functioning of social scientific theories, but especially this last, may sound a bit like science fiction. It would be irresponsible to make consequential decisions in the domain of education domain of education based on straightforward

---

[4]Wilfred Bion, Learning From Experience, (London: Heinemann, 1962), p. 40.

inference from available social scientific theories given the state of the social sciences, especially with respect to their predictive power. On the other hand, it is useful to borrow such procedures from more formalized sciences for the purpose of approximation if not achievement.[5]

This sketchy discussion of the function of social scientific theories is clearly not adequate to the complexity of the subject matter, but it will do as background for the central question of whether there is such a thing as a theory of education. I will assume that there are empirical theories with application in the domain of education. What I mean here by "application" is the rationalizing of educational decisions by appeal to law-like generalizations, ideally derived from theories.

One question which remains is: which theories shall we take as the empirical part of a theory of education? That is, is there a way of distinguishing those theories which ought to be applied in the making of educational decisions from those which ought not to be?

If one thought in terms of which kinds of knowledge would qualify one to make decisions (e.g., in the domain of space flight technology, descriptions of the characteristics of metals under the stresses of space flight,

---

[5]A brief discussion of "artial formulation" can be found in Richard Rudner, Philosophy of Social Science, (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), pp. 47-53

or about space medicine), these could be taken to be the content of the "theories" of a domain. These would be the kind of "theories," in so far as these are theories at all, which one would have to be most adept at manipulating and applying in goal related decisions for which one had responsibility. In education, a theory of this sort might be learning theory.

It will be helpful to know what theories have possible application in the domain of education so that we know what options are available. It is also helpful to know what theories are, in fact, made use of so that we can pay attention to what happens when they are used; that is, whether such theories facilitate the accomplishment of the goals of education. The answer to the question: What theories shall we take as the empirical part of a theory of education, is, in one sense, obvious; the ones that work.

Consider the analogy with space flight technology again. If it should turn out that considerations described by the special theory of relativity seriously affected calculations, previously made on the basis of Newtonian theory, about sending an object to the moon, it is clear that relativity theory ought to be appealed to, at least in some calculations, in this domain. By analogy, if the intrapsychic dynamics of students are significant factors in learning, and educational decisions are being made on the basis of operant conditioning theories which do not

deal with such factors, psychoanalytic theories ought to be considered a part of the theory of education in so far as such theories can aid an educator in facilitating educational learning.

Potentially, virtually any theory might be a part of a theory of education where "theory of education" means that collection of theories which may usefully be applied in the educational domain. Given a domain of education described in terms of its goals that domain can be seen as the point of intersection of all sorts of theories: learning theories, economic theories, anthropological theories, social psychological theories, etc. Empirical data would supply the information regarding which theories and/or types of theories, when applied, make a difference to the accomplishment of educational goals and therefore ought to be included as a part of the collection of theories used in making educational decisions.

It is worth noting that while the point I am making here is obvious, even trivial, in an area like space flight technology, it does have a certain oddness in the domain of education. This seems to me quite important. It is beyond the scope of this dissertation, but certainly there is needed an explanation of why so little is done to compare the results, in educational settings, of the application of social scientific research. My suspicion is that the socializing function of educational institutions entails a kind of methodological conservatism. In

effect the method may be a message.

In any case, it seems clear that it would be useful to keep track of whether, e.g., rewards, punishment or the reduction of transference phenomena yields better educational results in the classroom.

The remaining question is: Is there a theory which has education as its proper domain; that is, a theory, the range of application of which coincides with the boundaries of the domain of education.

Consider again our comparison domain. Let us take two kinds of answer to the question: How would one get an object from the earth to the moon?

1) Make a container out of metal M and insert propellant P. . .

2) Accelerate the object in accordance with the formula F (where"F" is a sentence which can be inferred from a gravitational theory plus the initial conditions of physical bodies with the mass and position of the earth and moon.)

We might want to call (2) the theorėtical answer and rewrite (1) as a set of practical problems in the domain of applied physics, e.g., to have a container that could stand the stresses involved in achieving the velocity described by "F" a metal must be used with the characteristics "C." If there is no metal with "C" this will prevent the accomplishment of what "F" describes. If

there is such a metal, but it is too expensive for me to buy, then there is a constraint on my ability to send an object to the moon.

(2) is a sentence in a theory in the domain of physics. It is stretching things a bit, but one might be able to explain my personal economic situation in terms of some economic theory.

We have described a domain defined by the goal of sending objects to the moon. Theories of this domain, in the sense of having application in this domain, will include physical theories, chemical theories, economic theories, and if the object to be sent to the moon is, from time to time, a live man, also biological theories and perhaps psychological theories. In this practical domain, all the theories mentioned have application in the domain, all have application outside the domain, and all could be described as theories which describe, explain or predict with respect to phenomena which affect decisions in this domain.

In general, one would not want to permit usage such that any theory with possible application in a domain is a theory of that domain. If one did permit that usage, then the general theory of relativity becomes a theory of plumbing, since suspending pipes is a matter of some gravity.

One might try a more austere sense of "theory of 'X'". There is a sense in which "theory of a domain" may

be taken to refer to a theory which has that domain as its range of application. If this is taken in the sense in which a theory of 'X', where 'X' contains a subdomain 'a', is not a theory of 'a', there is no such thing as a theory of education. In this sense of "theory of 'X'", sending an object to the moon is part of the domain of theories such as physics and chemistry, but neither of those theories are theories of that domain.

The sense of "theory of'X'", in which a theory of 'X' has 'X' as its proper domain, permits a theory of physics or chemistry, but not of rocket construction. It permits a theory of learning, but not of education. Aerospace engineers do, sometimes, talk of having theories with respect to rocket construction, and educators talk about their theories as well. In the sense in which such people do speak of theories, "theory of 'X'" often refers to generalizations and other law-like sentences, regarding some phenomenon or collection of phenomena in that domain. The use of the term "theory" in this context is a bit gratuitous. Still, I will rely on a similar sense for a meaning for the phrase "theory of education" in my conclusion.

Apart from the issues just raised, one answer to the question: is there a theory which has education as its proper domain? follows directly from the definition of "education."

The objects of the educational domain are someone's

or some group's education(s), the sources of the education and the activities related to such education. Thus, if K is some educational content and S is a person, then S learns K from A is a relationship in the domain of education. Generalized descriptions of this relationship, that is, descriptions that fit this relationship as a type, would be part of a theory which had education as its proper domain.[6]

Given this description of objects and relations in the domain of education and the definition of education, the answer to the question whether any theory has education as its proper domain is: "No."

With the domain of education specified by the goal of causing valuable learning to occur, there is no reason to assume that a theory which described or explained the relationship S learns K from A would be any different if K was non-educational, i.e., learning with no or with negative value. Therefore, any theory with application to educational learning activities should apply equally to non-educational learning activities and thus have a domain larger than that of education as its range of application.

An interesting variation is seen if one turns to some idealized or paradigm case of educational activity

---

[6] 'A' need not be a person; that is, a human teacher. 'A' might be a Skinnerian teaching machine or the event of sitting in poison ivy.

like the interactions of a teacher with a student or a class of students. It is useful to consider the range of phenomena included in such a paradigm as subject matter for educational theories. The College Classroom by Richard Mann, et al., is the most completely worked out venture in this direction with which I am familiar. The subject matter of this book might be taken to be the basis for a theory of education on the grounds that it takes as phenomena to be explained and described the behavior of people when they are in roles defined as teacher and student.

Consider the following paragraph from that book in which a particular interaction between a teacher and his students is being described.

> It is simply not true that Mr. C. (the teacher) was attempting to be the "good guy" only as a way of atoning for or neutralizing the effects of the exam. His move toward being the facilitator and especially his move toward being the expert are bound up in the great struggle over values which had broken out in the previous session. Mr. C and at least some of the class are in the midst of a battle over what to conclude regarding the genetic heritage of Negroes, and this battle has cast Mr. C in the role of socializing agent. Thus we would need to remain aware of this key issue as we ask why Mr. C is trying to de-emphasize the formal aspects of his role. In the context of a struggle against especially one student whose attitudes seem to Mr. C to be racist and unscientific, it becomes especially important to Mr. C that the battle not become one in which "What the teacher says goes" simply by virtue of his power to grade the students. Segment A (of the class session under discussion) seems to represent Mr. C's desire to clear the decks, to focus primarily on himself as

> expert and, for reasons soon to be made clear, as facilitator, the better to pursue his more basic teaching goal as the socializing agent.[7,8]

In this account the goal of the teacher's action and decisions is acculturation of the students to "liberal" social values. Although theoretical material, or law-like sentences, or hypotheses, generated regarding such phenomena would be sui generis to an educational situation with a teacher and students, they would not necessarily apply to all educational situations. Such theoretical material would also apply to non-educational situations, i.e., learning situations with non-educational goals. For the teacher's expert and socializing functions could be directed at the goal of student's coming to believe that Negroes are genetically inferior to, and should be isolated from, Caucasian communities, i.e., learning which would not ordinarily be taken to further the goals of education.

Thus, if "theory of education" means that theory which has education as its proper domain, no one theory is a theory of education since all the empirical theories applicable to educational decisions have domains which

---

[7]The terms "facilitator," "expert," and socializing agent are technical terms used to divide up several of the tasks or functions of the teacher role. See above pp. 74-75.

[8]Mann, The College Classroom, pp. 98-99.

have different boundaries than the domain of education. This includes those theories which made reference to terms such as "students," "teacher," "classroom," etc. Consider again the quotation from the College Classroom. There the educational paradigm is composed of typical activities in a classroom. However, it may turn out that the goals of education are met by leaving students pretty much alone (Rousseau, Goodman) or by having them learn from machines (Skinner). Thus, an educational theory may have a domain larger in some respects than the domain of education and also, as in this case, simultaneously have a domain which is, in other respects, smaller than the domain of education. For descriptive theoretical notions like Mann's apply to the educational domain when education is going on in classrooms and not when one is being taught by, for example, a machine.

Such theories as Mann's, with paradigm cases of education as their content, have an important role to play as part of a theory of education since regularities observed in such activities can generate just the kind of generalizations which can provide good reasons for decisions in the domain of education. Such theories cannot be taken as exhausting the category of the theory of education because they do not include explicit normative principles and because other theories with domains larger than the domain of education may be at least and possibly even more important to the rationalizing of educational decision

making.

To summarize: theories like those of Richard Mann are appropriately referred to as educational theories. They involve theorizing about educational phenomena, or at least centrally about educational phenomena. Other theories, not necessarily focused centrally on educational phenomena, certainly have application in the work of rationalizing educational decisions. The choice of which of these theories to appeal to is a choice of major significance in the domain of education. In my next and final chapter I will take such theories with significant application in the domain of education to be parts of a theory of education.

One sense of "theory of education" has, I think, been shown to be empty; the sense of a single theory, the range of application of which is coextensive with the domain of education.

There may be other reasons, having to do with the relation of theory to practice, for the domain of education not having a theory of it. In any case, the major reason that there is no theory with its range of application coextensive with the boundaries of the domain of education is that educational decisions are always partly normative.

CONCLUSION

At the beginning of this enquiry I sorted out the considerations relevant to the making of educational decisions in terms of goals and techniques. A theory of education, I suggested, would collect those theories relevant to decisions about goals and techniques, and I have given an indication of how goals create the boundaries of the domain of education and therefore effect the question of which kinds of empirical theories are to be used in making educational decisions. Now, at the end of this enquiry. it is not at all clear that we yet have anything, appropriately, to be called a theory of education. Moreover, some grounds have been supplied for claiming that, in some senses, there is no such thing and even that there could be no such thing.

In the first chapter I referred to theories which are often called "theories of education" as amalgams of normative and empirical theories which buy their suggestive power by resisting division into their separate parts. I would recommend for the category of "theory of education," a conjunction of normative principles and empirical theories which had distinguishable parts so that one could be clear about when one was applying--and therefore testing--an empirical theory and when one was using and perhaps

evaluating a normative principle.

With respect to a theory of education, in that sense, such a "theory" is not an explanatory and/or predictive theory, nor is it a conceptual schema or a classificatory schema, rather it contains such types of empirical theory as parts. It should also be pointed out that with respect to what is familiarly denoted by "theory of education," the parts of such a conjunction are not always theories, even in the loosest sense. Taking the educational theories of Montessori or Makarenko or Dewey as examples, we find low level generalizations, practices from other systems, beliefs about human nature and just idiosyncratic practice as parts of such "theories."

I am suggesting as an ideal that educational decisions should be justified by reference to the implications of theories. Real theories of education, we must acknowledge, will be must looser collections of that which is known and believed with respect to education.

Whatever is included, for a theory of education to be useful at all, it should be bounded; that is, it should be clear which theories, etc., were being conjoined and which were being excluded.

Given such a collection, the empirical parts of a theory of education, could be confirmed piecemeal while the validity of a total theory would be determined by its effectiveness in accomplishing what could be described as the goals of education or its effectiveness relative to

some competing theory.

Take as an example the problem of teaching people how to read. One might hold that there is a correlation between competiveness and efficient learning such that to encourage students to compete maximizes learning.

The results of situations in which students help each other to read could be compared with the results when students compete to see who reads best. Should a competitive model prove more efficient in teaching reading, the question would then be: do we want to develop competitive attitudes toward the possession of knowledge? Deciding this last would be a part of the process of validating a total theory of education. To do that we would have to consider what sorts of people, society or state a particular educational system contributes toward producing. We would have to ask such questions as: Does it produce the working staff that the economy needs to be viable? Does it produce people capable of the right use of leisure? and so forth.

Such a progression from piecemeal confirmation of the parts of a collection of educational theories to validation of a theory of education would be difficult to do with respect to most historical theories of education because, as I have suggested, most historical theories resist division into their normative and empirical parts. Plato, in the Laws, is probably the only important

exception. He is, usually, clear about when he is addressing a value question and when an empirical one.

However, consider Dewey in Democracy and Education:

> We thus reach a technical definition of education: It is that reconstruction or reorganization or experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience. (1) . . . By doing certain things, [the student] make perceptible certain connections . . . with other things, which had previously been ignored. Thus his acts in relation to these things get more meaning . . . (2) The other side of an educative experience is an added power of subsequent direction or control.[1]

It is just not clear whether (1) is a tautology, i.e., whether "doing certain things" is what"getting more meaning" means, or whether it is possible to test if one who does more gets more meaning than one who does less. It is equally unclear that "getting more meaning," whatever that means, is somehow necessarily a part of education, instrumental toward achieving a societal goal, or simply one goal that we might opt for among alternatives. Similarly, (2) might be a tautology, an empirical belief or one of several possible short or long range educational goals.

The result of sorting out these various options would be the possibility of evaluating both its parts and the whole.

A systematic and ongoing evaluation of various

---

[1]pp. 76-77.

theories of education both in terms of the constituent educational theories and normative principles and in terms of a collective theory of education would, I think,make it unnecessary for educators and educational philosophers to rediscover the same pedagogical truths every generation. This will only be possible if educational theorists make clear what they are taking as fact and what values they bring to their view of what the goals of education ought to be.

BIBLIOGRAPHY

PHILOSOPHY OF EDUCATION

Archambault, R. D., ed. Philosophical Analysis and Education, London: Routledge and Kegan Paul Ltd., 1966.

Augustine. "De Magistro," in J. Quasten, and J. Plumpe, eds. Ancient Christian Writers. Westminster, Md.: Newman Press, 1950.

_____. The Writings of St. Augustine, Vol. I. R. P. Russell, trans. New York: Cima Publishing Co., 1948.

Bernstein, Richard, John Dewey, New York: Washington Square Press, 1966.

Buchner, E., ed. The Educational Theory of Immanuel Kant. Philadelphia: J. B. Lippincott Co., 1904.

Burnet, John. Aristotle on Education. Cambridge: Cambridge University Press, 1967.

Dewey, John. Psychology. Third rev. ed. New York: American Press, 1886.

_____. Leibnitz's New Essays Concerning Human Understanding. Chicago: Griggs and Co., 1888.

_____. Democracy and Education. New York: Macmillan Co., 1916.

_____. Early Works. Southern Illinois Press, 1967.

_____. Experience and Education. New York: Macmillan Co., 1938.

_____. How We Think. Boston: Heath Press, 1910.

_____, and Arthur Bently. Knowing and the Known. Boston: Beacon Press, 1910.

_____. The Sources of a Science of Education. Liveright. 1929.

_____. Theory of Valuation. Chicago: University of Chicago Press, 1939.

Frankena, William. Philosophy of Education. New York: Macmillan Co., 1965.

Garforth, F. W., ed. John Dewey: Selected Educational Writings. London: Heinemann, 1966.

Hook, Sidney, ed. John Dewey: Philosopher of Science and Freedom. New York: Dial Press, 1950.

Komisar, B. P. and Macmillan C., eds. Psychological Concepts in Education. Chicago: Rand McNally and Co., 1967.

Levitt, Morton. Freud and Dewey on the Nature of Man. New York: Philosophical Library, 1960.

Lucas, Christopher. What is Philosophy of Education. New York: Macmillan Co., 1969.

Macmillan, C. and Nelson Thomas. Concepts of Teaching. Chicago: Rand McNally and Co., 1968.

Mayhew, K.C. and Edwards, A. C. The Dewey School. New York: Atherton Press, 1965.

Nagel, Ernest. "Philosophy and Educational Theory," Studies in Philosophy and Education, VII, 1, Fall 1969.

Peters, R. S. Authority, Responsibility and Education. London: Allen and Unwin, Ltd., 1959.

_____. The Concept of Education. London: Routledge and Kegan Paul Ltd., 1967.

Plato. The Dialogues of Plato. Vol. I and II. Translated by B. Jowett. New York: Random House, Inc. 1937

Price, Kingsley. Education and Philosophic Thought. 2nd ed. Boston: Allyn and Bacon, Inc., 1967.

Ratner, Joseph. John Dewey: Philosophy, Psychology and Social Practice. New York: Putnam and Co., 1963.

Reid, Louis. Philosophy and Education. London: Heinemann, Ltd., 1962.

Rousseau, J. J. Emile or Education. Translated by B. Foxley. New York: Everyman's Library, 1961.

Scheffler, Israel. The Language of Education. Springfield, Mass.: Charles Thomas Press, 1960.

_____. Philosophy and Education. 2nd ed. Boston: Allyn and Bacon, Inc., 1966.

Schlipp, Paul. The Philosophy of John Dewey. 2nd ed. New York: Tudor Press, 1951.

Whitehead, Alfred. The Aims of Education. New York: Macmillan Co., 1929.

EDUCATION

Bode, Boyd. Modern Educational Theories. New York: Macmillan Co., 1927.

Bower, James. Soviet Education. Wisconsin: University of Wisconsin Press, 1962.

Dennison, George. The Lives of Children. New York: Random House, 1967.

Dialogue on Education. New York: Bobbs-Merrill Co., 1967.

Dropkin, S., Full, H., Schwartz, E. Contemporary American Education. New York: Macmillan Co., 1965.

Featherstone, Joseph. Schools Where Children Learn. New York: Liveright, 1971.

Fitzgerald, J., Fitzgerald, P. Methods and Curricula in Elementary Education. Milwaukee: Bruce Publishing 1965.

Friedenberg, Edgar. Coming of Age in America. New York: Vintage Press, 1965.

Gattegno, Caleb. What We Owe Children. New York: Avon Press, 1971.

Goodman, Paul. Compulsory Miseducation and the Community of Scholars. New York: Vintage Press, 1964.

_____. Growing Up Absurd. New York: Random House, 1960.

Herndon, James. The Way It Spozed To Be. New York: Simon & Schuster, 1968.

Holt, John. How Children Fail. New York: Pitman Co., 1967.

_____. How Children Learn. New York: Pitman Co., 1967.

_____. The Underachieving School. New York: Dell Publishing Co., 1969.

Jaeger, Werner. Paideia: The Ideals of Greek Culture. New York: Oxford Press, 1944.

Kohl, Herbert. 36 Children. New York: New American Library, 1967.

Mead, Margaret. The School in American Culture. Cambridge, Mass.: Harvard University Press, 1964.

Montessori, Maria. The Montessori Method. New York: Schoken Press, 1964.

Thayer, V. T. Formative Ideas in American Education. New York: Dodd Mead and Co., 1968.

PHILOSOPHY OF SCIENCE

Braybrook, David. Philosophical Problems of the Social Sciences. New York: Macmillan Co., 1965.

Brodbeck, May. Readings in the Philosophy of the Social Sciences. New York: Macmillan Co., 1968.

Caws, Peter. Science and the Theory of Value. New York: Random House, 1967.

_____. Aspects of Scientific Explanation. New York: Free Press, 1965.

Hempel, Carl, Philosophy of Natural Science. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1966.

Gibson, Quentin. The Logic of Social Inquiry. New York: Humanities Press, 1960.

Kuhn, Thomas. The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1962.

Nagel, Ernest. The Structure of Science. London: Routledge and Kegan Paul Ltd., 1961.

Popper, Carl. The Poverty of Historicism. London: Routledge and Kegan Paul Ltd., 1960.

Rudner, Richard. Philosophy of Social Science. Englewood Cliffs, N. J.: Prentice-Hall, Inc.

Smart, J. J. C. Between Science and Philosophy. New York: Random House, 1968.

Winch, Peter. The Idea of A Social Science. New York: Routledge and Kegan Paul Ltd., 1958.

PSYCHOLOGY

Ausubel, David. Educational Psychology. New York: Holt Rinehart and Winston, Inc., 1968.

_____. Elements of Psychoanalysis. London: William Heinemann Ltd. 1963.

Bion, W. R. Learning from Experience. London: William Heinemann, Ltd. 1962.

Bruner, Jerome. The Process of Education. New York: Vintage Press, 1963.

_____. The Relevance of Education. New York: W. W. Norton & Co., Inc., 1971.

_____. Towards a Theory of Instruction. Cambridge: Belnap Press, 1966.

Freud, Anna. The Ego and the Mechanism of Defence. New York: International Universities Press, 1966.

Hull, C. L. "The Concept of the Habit-Family Hierarchy and Maze Learning," Psychological Review, 41, 1934.

James, William. Psychology. (Briefer Course) London: Collier Books, 1969.

Jones, Richard. An Application of Psychoanalysis to Education.

_____, ed. Contemporary Educational Psychology. New York: Harper and Row, Inc. 1966.

_____. Fantasy and Feeling in Education. New York: Harper & Row, Inc. 1968.

Klausmeier, Herbert and Goodwin, William. Learning and Human Abilities. 2nd ed. New York: Harper & Row, 1966.

Lewin, Kurt. Field Theory in Social Science. New York: Harper & Row, Inc. 1952.

Mann, R., Arnold, S., Binder, J., Cytrynbaum, S., Newman, B., Ringwald, B., Ringwald, J. Rosenwein, R. The College Classroom. New York: John Wiley and Sons Inc., 1970.

Miller, C., Galanter, E., Pribam, K. Plans and the Structure of Behavior. Holt, Rinehard and Winston, Inc. 1960.

Piaget, Jean. The Language and Thought of the Child. New York: Meridan Press, 1955.

_____. The Science of Education and the Psychology of the Child. New York: Viking Press, 1971.

Reynolds, Maynard, ed. Psychology and the Process of Schooling in the Next Decade. U. S. Office of Education Publication, 1971

Rice, A. K. The Modern University. London: Tavistock Press. 1971

Richardson, Elisabeth. The Environment of Learning. New York: Weybright and Tally, Inc. 1967.

Rogers, Carl. Freedom to Learn. Columbus: Merrill Press, 1969.

Siegal, L., ed. Instruction: Some Contemporary Viewpoints. San Francisco: Chandler Press, 1967.

Skinner, B. F. Science and Human Behavior. New York: Macmillan Co., 1953.

Slater, Phillip. Microcosm. New York: John Wiley and Sons, Inc., 1966.

Szasz, Thomas. The Myth of Mental Illness. New York: Paul Hoeber, Inc. 1961.

_____. The Elements of Psychology. 2nd ed. New York: A. G. Seiler Press, 1907.

Thorndike, Edward. Human Learning. Cambridge, Mass.: M.I.T. Press, 1966.

_____. Selected Writings from a Connectionist's Psychology. New York: Appleton Century Crofts, 1949.

MISCELLANEOUS

Adams, Henry. The Education of Henry Adams. New York: Twayne Inc., 1963.

Bernstein, Richard. Praxis and Action. Philadelphia: University of Pennsylvania Press, 1971.

Brenner,Charles. An Elementary Textbook of Psychoanalysis. New York: International Universities Press, 1955.

Churchman, C. W. Challenge to Reason. New York: McGraw-Hill Co., 1968.

Goodman, Paul. The Empire City. New York: Bobbs Merrill Co., Inc. 1942.

Hume, David. An Enquiry Concerning Human Understanding. Illinois: Open Court Publishing Co., 1958.

Morgan, John. Managing Change. New York: McGraw-Hill Co., 1921.

Ryle, Gilbert. The Concept of Mind. London: Hutchinson and Co., Ltd. 1949.

Scopes, John. Center of the Storm. New York: Holt Rinehart and Winston, Inc. 1967.

Susuki, Daisetz. The Essentials of Zen Buddhism. New York: E. P. Dutton and Co., Inc. 1962.

X, Malcolm, The Autobiography of Malcolm X. New York: Grove Press, Inc. 1964.